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	<u>Position</u>	Name	<u>Telephone</u>
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	Valid	Period	Status	Remarks		
No. / Notification/ Reference No.	From	То				
	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 m³ inert C&D material was generated in the reporting month. 0 m³ 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 m³.

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

<u>Parameters</u>	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

JATO Dack Landslip Preventive and Mitigation Pro Contract No.: <u>GE/2013/35</u> Works (Slope No. & Location: 11SW-A/FR218 J

andslip Preventive and Mitigation Works

Mitigation Works

Contractor: Geotech Engineering Limited

Programme Date: 17/04/2017 Revision No.: 10

Commencement Date: 13/01/2017 Anticipated Completion Date: 08/07/2017

ussup rreventive and Mingation Programme, 2012, Package A - tract No. : <u>GE/2013/35</u> Works Order Nos. : <u>LPM201335/62/AFR218</u> pe No. & Location : <u>11SW-A/FR218 Pathological Institute. Caine Lane, Mid-Levels</u>	
iusiip rreve ntive and i tract No. : <u>GE/2013/35</u> se No. & Location : <u>111S</u>	
usinp rre tract No. e No. & 1	

UPDATED WORKS PROGRAMME

9	Description					
	The state of the s	Communic	Duration	Start	Finish	20174
-	Peature No.11SW-A/FR218 Pathological Institute, Caine Lane, Mid-Levels		253 days	2016/8/29	2017/7/8	Jul Aug Zuld Sep Zuld Oct Zuld I New Zuld Du. Zuld Jan Zul Feb Zul Mar Zul Arr Zul May 2ul Inn 2ul Jul 2ul Aug 2ul A
2	PRHJMINARY		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	
٧.	Awaiting for AMO's consent for commencement of works	1 item	35 days	2016/10/12	2016/11/21	
9	Application of Temporary Traffic Arrangement (TTA) for Works Area & Loading Theloading Arriving	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	
oc	Protection Works	l item	80 days	2016/12/10	2017/3/20	
6	Erection of Hoarding and Project Signboard	70m & 1 no.	12 days	2017/3/21	2017/4/3	
2	General Site Clearance and Clearance of Vegetation	160 sq.m.	12 days	2017/3/21	2017/4/3	- Control
Ξ	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	
***	Install Dowel bars and Fixing steel reinforcement	42 nos. & 4	40 days	2017/4/11	2017/6/2	TO SEE OF THE SEE OF T
15	Backfilling with Mass Concrete		40 days	2017/4/20	2017/6/8	
10	Construction for Planter Wall (1.55m(V/) x 2.4m(D))	18m (L)	25 days	2017/5/22	2017/6/20	
ĬĮ.	Filling of compacted fill	73.5 cu.m.	12 days	2017/6/21	2017/7/5	
81	MISCELLANEOUS		15 days	2017/6/21	2017/7/8	
61	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	- 16
21	Hydroseeding & PlantingWorks	120.0 .vg.m.	3 days	2017/7/6	2017/7/8	10000
22	Reinstatement of Flood Light	1 iftem	3 days	2017/1/6	2017/7/8	
Domork	The second secon		The second secon			

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

Prepared By:

Geotech Engineering Limited Programme Date: 17/04/2017 Revision No.: 10 Landslip Preventive and Mitigation Works Landslip Preventive and Mitigation Programme, 2012, Package A -Contract No. : <u>GE22013/35</u> Works Order No. : <u>LPM201335/14/AR94</u> Slope No. & Location : <u>11SW-AR94 Hong Kong Museum of Medical Science, No.2 Caine Lane, Mid-Levels</u>

_Completion Date: 13/01/2017 Anticipated Completion Date: 30/06/2017 Commencement Date: 29/08/2016

Jul 2017 Feb 2017 Mar 2017 Apr 2017 May 2017 Jun 2017 Dec 2016 Jan 2017 Nov 2016 Jul 2016 Aug 2016 Sep 2016 Oct 2016 2016/12/12 2016/12/12 2017/6/30 2016/12/12 2017/3/22 2016/9/21 2016/11/21 2017/3/22 2017/6/26 2016/10/1 2016/12/2 2016/12/7 2017/5/26 2017/6/2 2017/6/14 2017/6/21 Flmish 2016/10/12 2016/8/29 2016/8/29 2016/8/29 2016/11/22 2016/9/22 2016/12/3 2016/12/8 2016/12/8 2016/12/8 2017/3/23 2017/6/15 2016/12/3 2017/4/11 2017/3/23 2017/4/5 Start 247 days 168 days 20 days 15 days 35 days 88 days 75 days 50 days 10 days Duration 4 days 50 days 4 days 4 days 4 days 45 days 6 days 150 sq.m. l item l item l item 60 sq.m. 313 ST FEES. l item I item Ircm 100 m 1 them 4 nrs. Quantity Erection and modification of Base Scaffolding and Temporary Working Platform Application for Temporary Traffic Arrangement (TTA) for Awaiting for AMO's consent for commencement of works Underground Utilities Detection and Topo Suriey Mobilization of Construction Plants and Materials Erection of Hoarding and Project Signboard Take up and store existing Masonry Stones Hong Kong Museum of Medical Science, Installation of Monitoring Points UPDATED WORKS PROGRAMME Installation of Raking Drains GEOTECHNICAL WORKS No.2 Caine Lane, Mid-Levels General Site Clearance Feature No.11SW-A/R94 Soil Nailing Works Condition Survey Protection Works **PRELIMINARY** Caine Lane ID Description

2

2

3

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

2017/6/30

2017/5/10

44 days

2017/6/30

2017/5/10

44 days

150 sq.m.

Reinstatement of Masonry Stones

2017/6/26

2017/5/4

45 days

62 m.,

Construction of Soil Nail Heads

MISCELLANBOUS

Prepared By:

Appendix B

Environmental Mitigation Implementation Schedule

Appendix B Environmental Mitigation Implementation Schedule

	ential 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
Noi	se	
•	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
Wat	ter 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 Committe Practice (ProPECC) Note PN 1/94 "Construction Site Drainage"
Was	ste 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
-	logy	
•	No adverse ecological impact is expected.	Not required
Cult	tural 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
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Appendix C

Record of Disposal

Records of Disposal of INERT C & D Materials Month April year 2017

GEO / CEDD Disvision:

Contract No.: GE/2013/35

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

(Inert)

Form 28A

Site Location: 1) 115W-A/FR218

Geotech Engineering Limited Contractor

Late Return of Vol. (m³)/ T DDF and/or Wt. (t) Receipt (where applicable) Nil 8.12 t Nil 8.56 t Nil 8.32 t Nil 8.34 t Nil 8.34 t Nil 8.24 t Nil 8.27 t	170041822 Nii 8.22 t 66.17 t 170042092 Nii 7.90 t 74.07 t	12 Nil 8.02 t 82.09 t
Late Return of DDF and/or Receipt Nil Nil Nil Nil Nil Nil Nil	Nii Nii	II.N
5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	0041822	12
	17	170042212
Date of DDF & Receipt submitted by Contractor 27/4/2017 27/4/2017 28/4/2017 28/4/2017 29/4/2017 29/4/2017 29/4/2017	4/5/2017	4/5/2017
Time of Disposal 10:23 12:06 14:20 09:52 15:00 15:00 15:00 15:00 15:00	15:29	14:17
Proportion of Truckload 3/4 3/4 3/4 3/4 3/4 3/4 3/4 3/4 3/4 3/4	3/4	3/4
Time of Departure 09:55 11:30 13:40 09:15 14:20 11:15 11:15	10:35	13:35
CZ9006	CZ9006	CZ9006
Date of Disposal Vehicle Disposal Vehicle Disposal Site ² No. No. 5/4/2017 CW-PFBP CZ9 CZ9 5/4/2017 CW-PFBP CZ9 CZ9 6/4/2017 CW-PFBP CZ9 CZ9 7/4/2017 CW-PFBP CZ9 CZ9 7/4/2017 CW-PFBP CZ9 CZ9 8/4/2017 CW-PFBP CZ9 CZ9 8/4/2017 CW-PFBP CZ9 CZ9	CW-FFBF	CW-PFBP
Date of Disposal 25/4/2017 25/4/2017 26/4/2017 26/4/2017 26/4/2017 27/4/2017	29/4/2017	29/4/2017
16898748 16898749 16898750 16898751 16898751 17220142 16898765	17220135	17220136

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

GEO / CEDD Disvision:

Contract No.: GE/2013/35

(Inert)

Form 28A

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

Site Location: 1) 115W-A/FR218

Contractor:	Geotech E	Geotech Engineering Limited.	Limited.								
DDF No.1	Date of	Disposal	Disposal Vehicle Reg. Time of	Time of	Proportion of	Time of	Time of Date of DDF & Receipt No.	Receipt No.	Late Return of	Vol. (m ³)/	Total Vol.
	Disposal	Site ²	Ŋ.	Departure	Truckload	Disposal	Receipt		DDF and/or	Wt. (t)	(m ³)/
							submitted		Receipt	(where	W£(f)
							by Contractor		1	applicable)	(where
											applicable)
17220137	29/4/2017	29/4/2017 CW-PFBP	CZ9006	15:05	3/4	15:41	4/5/2017	170042274	Ϊ́Ζ	8.25	90.34
					┰	4					
					116						

Date: 4/5/2017

Name/Post: Cyrus Li / Safety Manager

Signature:

Submitted by: Geotech Engineering Limited.

Appendix D IEC Site Audit Checklist

Date: Time Inspe Area: PAR1 Weati	F A: her: dity:	Landslip Prevention and Mitigation Works at Feature Nos. 11SW-A/R94 and 11SW-A/FR218, HKMMS, Caine Lane, Mid-Levels 7 April 2017 3:00pm Feature No. 11SW-A/R94 Feature No. 11SW-A/R94 HKMMS & its Annex Block GENERAL INFORMATION Sunny	Clie ER: IEC: ET: Con		AEC N/A	OD COM COM stech Engine	eering Ltd.	
PART	ГВ:	SITE AUDIT						
			Not Obs.	Yes	No	Follow	N/A	Photo/
Secti	on 1: Wa	ter Quality	003.			up		Remarks
1.01	Obtaine	ed an effluent discharge license.					\boxtimes	
1.02	Provisio	on of sedimentation tank.						
1.03		els, sandbags or bunds should be provided to direct surface run-off nentation tanks.						
1.04	Open s	tockpiles of construction materials on site should be covered with n or similar fabric as necessary during rainstorms.		\boxtimes			п -	
1.05	Good s	ite practices should be adopted to remove rubbish and litter from ction site so as to prevent the rubbish and litter from spreading the a. And, It is would be cleaned the construction sites on a regular		\boxtimes				
1.06	Manhol	es are adequately covered and temporarily sealed.		\boxtimes				
1.07	Some p	rocedures and equipment for rainstorm protection are provided.	\boxtimes					
1.08	Measur provided	es to prevent leaked oil from entering the drainage system are d.	\boxtimes					
1.09	Notices not to di	should be posted at conspicuous locations to remind the workers ischarge any sewage or wastewater into the nearby environment.	\boxtimes					
Section	on 2: Air	Quality						
2.01		regular watering/tarpaulin, with coverage to reduce dust emissions posed site surfaces, particularly during dry weather.		\boxtimes				
2.02	-	requent watering for particularly dusty static construction area.	\boxtimes					
2.03	Dusty methe site.	naterials transported on trucks with tarpaulin covering to and from	\boxtimes					
2.04	Hoardin	g are not less than 2.4m tall provided at areas with public access.		\boxtimes				
2.05	Public redust.	oad around the site entrance should be kept clean and free from		\boxtimes				
2.06		possible, routing of vehicles and positioning of construction plant on the maximum possible distance from ASRs.		X				
2.07	Mechani services	ical covers of all dump trucks entering or leaving the site are in good conditions.	\boxtimes					
2.08	Dark sm	oke emission from plant/equipment should be avoided.	\boxtimes					
2.09	De-bagg areas du	ging, batching and mixing processes are carried out in sheltered uring the use of bagged cement.	\boxtimes					

0		Not Obs.	Yes	No	Follow	N/A	Photo/ Remarks
	ion 3: Noise						
3.01	All plants are well maintained and in good operating condition.		\boxtimes				
3.02	All the plants should be serviced regularly during the construction program.		\boxtimes				
3.03	Use of noise enclosure for static PME.				\boxtimes		See Page 3
3.04	Use movable noise barrier only for feature no. 11SW-A/R94.	\boxtimes					
3.05	Use of noise insulating fabric for certain PME (e.g. handheld electric saw and use in designated area with noise barrier).	\boxtimes					
3.06	Idle equipment should be turned off or throttled down.		\boxtimes				
3.07	Where possible, quieter PME should be used.						
			<u>ن</u>	ш	Ш		
Secti	ion 4: Waste/Chemical Management						
4.01	Training of site personnel in site cleanliness and proper waste management.		\boxtimes	П			
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						
4.06	waste reduction, reuse and recycle. Waste should be handled and stores well to ensure secure containment		\square		_		
4.07	thus minimizing the potential of pollution. Storage area should be provided with covers and, if necessary, water						
4.00	spraying system to prevent materials for wind-blown or being washed away.			Ш		\boxtimes	
4.08	The construction waste generated on-site would be transported to the designated disposal facilities managed by EPD or CEDD.		\boxtimes				
4.09	On-site sorting of all C&D materials to inert or non-inert.	\boxtimes					
4.10	The panels have hold legible red English words and Chinese characters "CHEMMICAL WASTE" "仁學廢物" note less than 60mm high on a while						
	background.						
Sectio 5.01	Temporary 6. Visual Temporary hoarding would be erected along the boundary of the works site to provide some screening effect to the surrounding sensitive receivers.						
Section	on 6: Culture Heritage						
6.01	Provide tarpaulin curtain or similar materials to protect the Annex Block						
6.02	(Feature No. 11SW-A/R94) during the construction phase. Install ground settlement makers, tilting monitor makers and vibration					Ц.	
6.03	monitoring points during the active construction period and obtain readings at a daily interval. Operate drilling process manually under full-time supervision of experienced				\boxtimes	Ш.	See Page 3
6.04	works supervisor at Feature No. 11SW-A/R94. Reserve clearance distance, 600mm, between the proposed soil nails at	\boxtimes					
J. # 1	Feature No. 11SW-A/R94 and the Annex Block (including the columns in front of the masonry wall).		\boxtimes				
6.05	Adopt manual plt by pit excavation at Feature No. 11SW-A/FR218.	\boxtimes					
6.06	Adopt non-excavation type of hoardings at Feature No. 11SW-A/FR218 between the slope and main building.		\boxtimes				

	Not Obs.	Yes	No	Follow	N/A	Photo/ Remarks
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?		\boxtimes				

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.

Sangher Su	ctor
() (Tommy Pour) (Ms. Gigi Lam) () (Bac	Ho YIN

P.1 of 3

Dispection 12 April 2017	Projec	ot:	Landslip Prevention and Mitigation Works at Feature Nos. 11SW-A/R94 and 11SW-A/FR218, HKMMS, Caine Lane, Mid-Levels	insp	ected by	,			
Final		ction	12 April 2017	Clie	nt:	CED	D		
Selecture No. 118/W-A/R2/4 IEC: ACOM			3:30 pm	ER;		AEC	OM		
BHKMMS & Its Annex Block Contractor: Geotech Engineering Ltd. PART A: GENERAL INFORMATION Weather: Sunny Fine Cloudy Rainy Temperature: 24		ction	⊠Feature No. 11SW-A/R94	IEC:		AEC	OM		
PART A: GENERAL INFORMATION Cloudy Relny Temperature: -24			⊠Feature No. 11SW-A/R218	ET:					
Veesther: Sunny Fine Cloudy Rainy Ferrepretative: 24			⊠HKMMS & its Annex Block	Con	tractor:	Geo	tech Engine	ering Ltd.	
Veesther: Sunny Fine Cloudy Rainy Ferrepretative: 24									
Temperature: 24	PART	A:	GENERAL INFORMATION						
Humidity:	Weath	ier:		/					
Not Calm Strong Part Breeze Light Calm									
PART B: SITE AUDIT Not Obs. Yes No Follow N/A Photof		lity:							
Not Class. Yes No Follow Up N/A Photof Remarks	AAIIIO.		Strong & Breeze Light Cann						
1.01 Obtained an effluent discharge license.	PART	В:	SITE AUDIT						
Section 1: Water Quality 1.01 Obtained an effluent discharge license. 1.02 Provision of sedimentation tank. 1.03 Channels, sandbage or bunds should be provided to direct surface run-off to sedimentation tanks. 1.04 Open stockolles of construction materials on site should be covered with tarpsulin or similar fabric as necessary during rainstorms. 1.05 Good site practices should be adopted to remove rubbish and litter from construction site as as to prevent the rubbish and litter from geneading the after 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 tarpsulin covering to and from the site. 2.04 Hoarding are not less than 2.4m tall provided at areas with public access. 2.05 Whene possible, routing of vehicles and positioning of construction plant dust. 2.06 Whene possible, routing of vehicles and positioning of construction plant around be at the maximum possible distance from ASRs. 2.08 Dark smoke emission from plant/equipment should be avoided.			Γ		Yes	No		N/A	
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2.08 Dark smoke emission from plant/equipment should be avoided.	2.07			\boxtimes					• • • • • • • • • • • • • • • • • • • •
2.09 De-bagging, batching and mixing processes are carried out in sheltered	2.08								
CORRECTION OF SECTION COMPAST	2.09		iging, batching and mixing processes are carried out in sheltered during the use of bagged cement.					$\overline{\Box}$	

		Not Obs.	Yes	No	Follow	N/A	Photo/ Remarks
	ion 3: Noise			···	up		Nemarks
3.01	All plants are well maintained and in good operating condition.		\boxtimes				
3.02	All the plants should be serviced regularly during the construction program.		\boxtimes				-
3.03	Use of noise enclosure for static PME.				\boxtimes		See Page 3
3.04	Use movable noise barrier only for feature no. 11SW-A/R94.	\boxtimes					
3.05	Use of noise insulating fabric for certain PME (e.g. handheld electric saw and use in designated area with noise barrier).	\boxtimes					
3.06	idle equipment should be turned off or throttled down.		\boxtimes				
3.07	Where possible, quieter PME should be used.						
			_				
Secti	on 4: Waste/Chemical Management						
4.01	Training of site personnel in site cleanliness and proper waste management.		\boxtimes				
4.02	Provision of sufficient waste disposal point and regular collection of waste.		\boxtimes				
4.03	Regular cleaning and maintenance for drainage systems.		\boxtimes				
4.04	Proper storage and site practices to minimize the potential for damage or contamination of construction materials.		\boxtimes				
4.05	Training should be provided to workers about the concepts of site cleanliness and appropriate waste management procedures, including		\boxtimes				
4.06	waste reduction, reuse and recycle. Waste should be handled and stores well to ensure secure containment, thus minimizing the potential of pollution.		\boxtimes	. 🗀			
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.		\boxtimes				
4.09	On-site sorting of all C&D materials to inert or non-inert.	\boxtimes					
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.	_		hand			
Section 5.01	Temporary hoarding would be erected along the boundary of the works site to provide some screening effect to the surrounding sensitive receivers.		\boxtimes				
Section	on 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.		\boxtimes				
6.02	Install ground settlement makers, tilting monitor makers and vibration monitoring points during the active construction period and obtain readings				\boxtimes		See Page 3
6.03	at a daily interval. Operate drilling process manually under full-time supervision of experienced works supervisor at Feature No. 11SW-A/R94.	\boxtimes				<u></u>	
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						
6.05	front of the masonry wall). Adopt manual plt 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.		\boxtimes				

		Not Obs.	Yes	No	Follow up	N/A	Photo/ Remarks
Sectio 7.01	on 7: Others 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	-ENITOMEC	EF	Contractor
) . ~			
		Sangh	D		1/4
()	(Tommy Poon)	(Ms. Gigi Lam)	()	1 (Bao Ho Yin)

P.1 of 3

Project Inspector Inspector Area:	ction ction A:	Landslip Prevention and Mitigation Works at Feature Nos. 11SW-A/R94 and 11SW-A/FR218, HKMMS, Caine Lane, Mid-Levels 20 April 2017 3 pm Seature No. 11SW-A/R94 Feature No. 11SW-A/R218 HKMMS & its Annex Block GENERAL INFORMATION Sunny Fine Cloudy Rain				Clief ER: IEC: ET: Con		AEC N/A	OM	ering Ltd.		
Tempe	erature:	~ 26	0℃									
Humid	lity:	High	Moderat	е [Low							
Wind:		Strong	Breeze		Light	Calı	m					
PART	B:	SITE AUDIT	·								<u> </u>	
							Not	Yes	No	Follow	N/A	Photo/
Section	on 1: Wa	ter Quality					Obs.			up		Remarks
1.01	Obtaine	ed an effluent disc	harge license.								\boxtimes	
1.02	Provision	on of sedimentation	on tank.					\boxtimes				· · · · · · · · · · · · · · · · · · ·
1.03		Channels, sandbags or bunds should be provided to direct surface run-off to sedimentation tanks.			face run-off		\boxtimes					
1.04		en stockpiles of construction materials on site should be covered with paulin or similar fabric as necessary during rainstorms.			overed with		\boxtimes					
1.05				reading the		\boxtimes						
1.06		les are adequately	covered and tem	porarily	sealed.			\boxtimes				
1.07	Some	procedures and ed	quipment for rainst	orm pro	tection are pr	rovided.		\boxtimes				
1.08	Measu provide	res to prevent lead.	aked oil from ent	ering th	e drainage	system are	\boxtimes					
1.09		s should be poste discharge any sew						\boxtimes				
											,	
Section	on 2: Air	Quality										
2.01		regular watering/toposed site surfac				t emissions		\boxtimes				
2.02		frequent watering		-			\boxtimes					
2.03	the site				-		\boxtimes					
2.04		ng are not less tha						\boxtimes				
2.05	dust.	road around the			•			X				
2.06	should	possible, routing be at the maximu	m possible distant	ce from .	ASRs.			\boxtimes				
2.07		nical covers of all or some some some conditions.	dump trucks enter	ng or lea	aving the site	are in good	\boxtimes					
2.08	Dark si	moke emission fro	m plant/equipmen	t should	l be avoided.		\boxtimes					
2.09		ging, batching ar		ses are	carried out i	n sheltered	\boxtimes					



		Not Obs.	Yes	No	Follow	N/A	Photo/ Remarks
	ion 3: Noise						Kernarks
3.01	All plants are well maintained and in good operating condition.		\boxtimes				
3.02	All the plants should be serviced regularly during the construction program.		\boxtimes				
3.03	Use of noise enclosure for static PME.				\boxtimes		See Page 3
3.04	Use movable noise barrier only for feature no. 11SW-A/R94.	\boxtimes					
3.05	Use of noise insulating fabric for certain PME (e.g. handheld electric saw and use in designated area with noise barrier).	\boxtimes					
3.06	Idle equipment should be turned off or throttled down.		\boxtimes				
3.07	Where possible, quieter PME should be used.						
Secti	on 4: Waste/Chemical Management						
4.01	Training of site personnel in site cleanliness and proper waste management.		\boxtimes				
4.02	Provision of sufficient waste disposal point and regular collection of waste.		\boxtimes				
4.03	Regular cleaning and maintenance for drainage systems.		\boxtimes				
4.04	Proper storage and site practices to minimize the potential for damage or contamination of construction materials.		\boxtimes				·
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.		\boxtimes				
4.06	Waste should be handled and stores well to ensure secure containment, thus minimizing the potential of pollution.		\boxtimes				
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.					\boxtimes	
4.08	The construction waste generated on-site would be transported to the designated disposal facilities managed by EPD or CEDD.		\boxtimes				
4.09	On-site sorting of all C&D materials to inert or non-inert.	\boxtimes					ı
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					\boxtimes	
	background.						
Section 5.01	on 5: Landscape & Visual Temporary hoarding would be erected along the boundary of the works site to provide some screening effect to the surrounding sensitive receivers.		\boxtimes				
Section	on 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.		\boxtimes			П	
6.02	Install ground settlement makers, tilting monitor makers and vibration monitoring points during the active construction period and obtain readings				\boxtimes		See Page 3
6.03	at a daily interval. Operate drilling process manually under full-time supervision of experienced works supervisor at Feature No. 11SW-A/R94.	\boxtimes		9			
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		\boxtimes				
6.05	front of the masonry wall). Adopt manual pit by pit excavation at Feature No. 11SW-A/FR218.	\boxtimes					įs.
6.06	Adopt non-excavation type of hoardings at Feature No. 11SW-A/FR218 between the slope and main building.		\square				
		السيبا				Ш	

		Not Obs.	Yes	No	Follow up	N/A	Photo/ Remarks
Secti 7.01	on 7: Others 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	-SMR B/IEC	- ET	Contractor
()	(Tommy Poon)	(Ms. Gigi Lam)	()	Oly (Gao Ho Yin)

P.1 of 3

Projec	Landslip Prevention and Mitigation Works at Feature Nos. 11SV A/R94 and 11SW-A/FR218, HKMMS, Caine Lane, Mid-Levels			Inspected by						
Inspe		28 April 2017		Client:		CEDD				
Time:		10 am	ER		AECOM					
Insped Area:		⊠Feature No. 11SW-A/R94	IEC	:	AEC	OM				
		⊠Feature No. 11SW-A/R218	ET:		N/A					
		⊠HKMMS & its Annex Block	Co	ntractor:	Geo	tech Engine	ering Ltd.			
PART	'A:	GENERAL INFORMATION								
Weath	ner:	Sunny Fine Cloudy Rain	У							
Tempe	erature:	~ <u>22</u> °C								
Humid	•	High Moderate Low								
Wind:		Strong Breeze Light Caln	n 							
PART	В:	SITE AUDIT								
			Not	Yes	No	Follow	N/A	Photo/		
Saction	ng 1: We	ter Quality	Obs.			up		Remarks		
366176	<i>)11 1.</i> 9990	tor wanty								
1.01	Obtaine	ed an effluent discharge license.					5-7			
4.00		on of sedimentation tank.					\boxtimes -			
1.02	Provisio	n of sedimentation wirk.		\boxtimes						
1.03	Channels, sandbags or bunds should be provided to direct surface run-off to sedimentation tanks.			\boxtimes						
1.04	1.04 Open stockpiles of construction materials on site should be covered with tarpaulin or similar fabric as necessary during rainstorms.			\boxtimes						
1.05	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									
1.06	basis. Manhol	es are adequately covered and temporarily sealed.		\boxtimes				· · · · · · · · · · · · · · · · · ·		
1.07	Some p	procedures and equipment for rainstorm protection are provided.		\boxtimes		70.				
1.08	Measur provide	res to prevent leaked oil from entering the drainage system are d.	\boxtimes							
1.09		should be posted at conspicuous locations to remind the workers ischarge any sewage or wastewater into the nearby environment.		\boxtimes						
Section	on 2: Alr	Quality								
2.01		regular watering/tarpaulin, with coverage to reduce dust emissions posed site surfaces, particularly during dry weather.		\boxtimes						
2.02	Use of	frequent watering for particularly dusty static construction area.	\boxtimes							
2.03	Dusty r	naterials transported on trucks with tarpaulin covering to and from .	\boxtimes							
2.04	Hoardir	ng are not less than 2.4m tall provided at areas with public access.		\boxtimes						
2.05	Public dust.	road around the site entrance should be kept clean and free from		\boxtimes						
2.06	should	possible, routing of vehicles and positioning of construction plant be at the maximum possible distance from ASRs.		\boxtimes						
2.07		nical covers of all dump trucks entering or leaving the site are in good s conditions.	\boxtimes							
2.08	Dark sr	noke emission from plant/equipment should be avoided.	\boxtimes							
2.09		ging, batching and mixing processes are carried out in sheltered luring the use of bagged cement.		\boxtimes						



		Not Obs.	Yes	No	Follow	N/A	Photo/ Remarks
	on 3: Noise			·	-		
3.01	All plants are well maintained and in good operating condition.		\boxtimes				
3.02	All the plants should be serviced regularly during the construction program.		\boxtimes				
3.03	Use of noise enclosure for static PME.				\boxtimes		See Page 3
3.04	Use movable noise barrier only for feature no. 11SW-A/R94.	\boxtimes					
3.05	Use of noise insulating fabric for certain PME (e.g. handheld electric saw and use in designated area with noise barrier).	\boxtimes					
3.06	Idle equipment should be turned off or throttled down.		\boxtimes				
3.07	Where possible, quieter PME should be used.					\boxtimes	
							
Section	on 4: Waste/Chemical Management						
4.01	Training of site personnel in site cleanliness and proper waste management.		\boxtimes				
4.02	Provision of sufficient waste disposal point and regular collection of waste.		\boxtimes				
4.03	Regular cleaning and maintenance for drainage systems.		\boxtimes				
4.04	Proper storage and site practices to minimize the potential for damage or contamination of construction materials.		\boxtimes				
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.		\boxtimes				
4.06	Waste should be handled and stores well to ensure secure containment, thus minimizing the potential of pollution.		\boxtimes				
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.					\boxtimes	
4.08	The construction waste generated on-site would be transported to the designated disposal facilities managed by EPD or CEDD.		\boxtimes				
4.09	On-site sorting of all C&D materials to inert or non-inert.	\boxtimes					
4.10	The panels have hold legible red English words and Chinese characters "CHEMMICAL WASTE" "仁學廢物" note less than 60mm high on a while background.					\boxtimes	
						,	
Sectio 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	nn 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.		\boxtimes				
6.02	Install ground settlement makers, tilting monitor makers and vibration monitoring points during the active construction period and obtain readings		\boxtimes				
6.03	at a daily interval. Operate drilling process manually under full-time supervision of experienced works supervisor at Feature No. 11SW-A/R94.	\boxtimes					
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).		\boxtimes				
6.05	Adopt manual pit by pit excavation at Feature No. 11SW-A/FR218.	\boxtimes					
6.06	Adopt non-excavation type of hoardings at Feature No. 11SW-A/FR218 between the slope and main building.		\boxtimes				
	-		-	_			

	Not Obs.	Yes	No	Follow up	N/A	Photo/ Remarks
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?		\boxtimes				
·					_	

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	GMP0/IEC	-ET-	Contractor
()	(Tonny Post)	(Ms. Gilgi Lam)	()	Bao Ho (in)

Appendix E

Adjustment of PME

1 Site clearance, UU detection and Preparation

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	OCNP	1	105	60%	2	0	103	
	weight ≤ 38 tonne	00111	•	103	00.0	2			
							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								
1	Powered Mechanical Equipment	Ref. [1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A)	
	Generator	CNP101	1	108	80	1	0	107	
	Dump truck with grab, 5.5 tone < gross vehicle	OCNP	1	105	60	2	0	103	
	weight ≤ 38 tonne Breaker, hand-held, mass > 10kg and < 20kg	CNP024	1	108	80	1	0	107	
	Water Pump (electric)	CNP281	1	83	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	I	88	10	10	0 Total	78 111	
5	Installation of soil nails and raking drains						Total	111	
	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 Group 1	, dB(A) ^[2] 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	ŧ
	Dump truck with grab, 5.5 tone < gross vehicle weight \$\leq\$ 38 tonne	OCNP	1	105	80	1	0	104	Ę.
	Air compressor, air flow > 10m³/min and ≤ 30m³/min	CNP002	1	102	100	0	0	102	*:
	Drill rig, rotary type (diesel)	OCNP	1	110	100	0	0	110	+0
	Concrete lorry mixer	CNP044	1	109	80	1	0	-	108
	Grout mixer Grout pump	OCNP OCNP	1	90 105	100 80	0 1	0 0	90	104
	Water Pump (electric)	CNP281	1	88	10	10	0	78	104 78
					-		Total	114	109
							Maximum	114	

Construction of soil nail head

Powered Mechanical Equipment	Ref. [1]	No. of items	SWL/item, dB(A)	On-time %	On-time	Barrier Correction,		, dB(A) [2]
		ICHIS	* *		Correction, dB(A)	dB(A)	Group 1	Group 2
Generator	CNP101	1	108	100	0	0	108	
Crane lorry, 5.5 tonne < gross vehicle weight <a>S 38 tonne	OCNP	1	105	80	1	0	104	-
Dump truck with grab, 5.5 tone	OCNP	1	105	80	1	0	104	-
Air compressor, air flow > 10m³/min and ≤ 30m²/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	101
Water Pump (electric)	CNP281	1	88	10	10	ð	78	78
				-		Total	114	109
						Maximum	114	107

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

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

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.

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)
	np truck with grab, 5.5 tone < gross vehicle tht ≤ 38 tonne	OCNP	1	105	60	2	0	103
							Total	103
Initi	al approx and areation of boarding							

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	EJA Ref, 1	1	78	80	1	0 Total	77 1 08

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, Group 1	dB(A) [2] 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 Maximum	95 109	109

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, Group 1	dB(A) [2] Group 2
Generator	CNP101	1	108	80	1	0	107	Gloup Z
	-	1			1	U		-
Breaker, hand-held, mass > 10kg and < 20kg	CNP024	1	108	10	10	0	98	-
Concrete lorry mixer	CNP044	1	109	30	5	0	-	104
Saw, circular, wood	CNP201	1	108	10	10	0	98	_
Poker	CNP170	1	113	10	10	0	_	103
Concrete pump	CNP047	1	109	10	10	0	-	99
						Total	108	107
						Maximum	108	

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	I	78	10	10	0	68	
	Breaker, hand-held, mass > 10kg and < 20kg	CNP024	1	103	10	10	0	98	
	Encavator	CNP081	1	112	20	7	0	105	
	Water Pump (electric)	CNP281	2	83	10	10	0	81	
	Winch (electric)	CNP262	2	95	50	3	0	95	
							Total	106	
				627					
	5.2 PME will operate at "area for bulky PME for	works at Ba							
	Powered Mechanical Equipment	Ref. [1]	No. of	SWL/item,	On-time	On-time	Barrier Correction,	Total SWL,	dB(A) [2]
			items	dB(A)	%	Correction, dB(A)	dB(A)	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	OCNP	1	105	50	3	0	_	102
	38 tonne				20	,	V	-	102
	Dump truck with grab, 5.5 tone < gross vehicle weight ≤ 38 tonne	OCNP	1	105	80	1	0	104	_
	weight ≤ 36 tonne								
							Total Maximum	104 111	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,	
	Generator	CNP101	1	108	80	1	0	Group 1 107	Group 2
	Breaker, hand-held, mass > 10kg and < 20kg	CNP024	î	108	15	8	0	100	-
	Concrete long mixer	CNP044	1	109	10	10	e e	100	99
	Saw, circular, v.ood	CNP201	1	108	50	3	0	105	-
	Poker	CNP170	1	113	10	10	0	-	103
	Concrete pump	CNP047	1	109	10	10	0	w.	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	Barrier Correction,	Total SWL,	
			1001113	m(v)	70	Correction, dB(A)	dB(A)	dB(A)	
	Generator	CNP101	1	108	100	0	0 Total	108 108	
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,	
	Generator	CNP101	1	108	100	0	0	Group 1	Group 2
	Crane lorry, 5.5 tonne < gross wehicle weight ≤							-	108
	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	Ö	99	-
	Saw, circular, wood	CNP201	1	108	80	1	0	107	-
							Total	108	110
							Maximum	110	
0	I andeceme sycolog								
9	Landscape works								
	Powered Mechanical Equipment	Ref. [1]	No. of items	SWL/item, dB(A)	On-time	On-time Correction, dB(A)	Barrier Correction,	Total SWL,	
	Generator	CNP101	1	108	100	0	dB(A)	dB(A)	
	Crane lorry, 5.5 tonne < gross vehicle weight						0	108	
	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 Crane lorry, 5.5 tonne < gross vehicle weight	CNP101	1	108	100	0	0	108
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 Total	78 111

Notes:

- 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.

1	Site clearance.	IIII	detection	and	Preparation	

	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	OCNP	1	105	60¢	2	5	98	
	weight ≤ 38 tonne		-	102	00.1	-			
							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	60	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	73	80	1	0	77	
	Water Pump (electric)	CNP281	1	83	10	10	5	73	
							Total	98	
3	Ground in estigation v orks								
	Powered Mechanical Equipment	Ref. [1]	No. of items	SWL/item, dB(A)	On-time %	On-time Correction, dB(A)	Barrier Correction, dB(A)	Total SWL, dB(A)	
	Generator	OPME EPD-02677	1	91	80	1	10	30	
	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	32	10	10	5	73	
						10	Total	100	
4	Take off existing macoury 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	28	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 Group 1	, dB(A) ^[2] Group 2
	Generator	OPME EPD-02677	1	91	100	0	10	81	8
	Crane lorry, 5.5 tonne < gross \tehicle weight ≤ 38 tonne	OCNP	1	105	80	1	5	99	8
	Dump truck with grab, 5.5 tone < gross vehicle weight \(\le 3\) tonne	OCNP	1	105	80	1	5	99	-
	Air compressor, air flow > 10m³/min and ≤ 30m²/min	CNP002	1	102	100	0	10	92	22
		00010	1	110	100	0	10	100	
	Drill rig, rotary type (diesel)	OCNP	1			•	10	100	**
	Drill rig, rotary type (diesel) Concrete lon'y mixer	CNP044	1	109	80	1	5	_	103
					80 100	0	5 0	90	103
	Concrete lorr y mixer	CNP044	1	109					103 - 99
	Concrete lon y mixer Grout mixer	CNP044 OCNP	1	109 90	100	0	0	90	
	Concrete lon y mixer Grout mixer Grout pump	CNP044 OCNP OCNP	1 1 1	109 90 105	100 80	0 1	0 5	90	99

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 SWI Group 1	, dB(A) [2] Group 2
Generator	OPI-IE EPD-02677	1	91	100	0	10	81	-
Crane lorry, 5.5 tonne « gross vehicle seight ≤ 38 tonne	OCNP	1	105	50	1	5	99	27.
Dump truck with grab, 5.5 tone < gross vehicle weight ± 38 tonne	OCNP	1	105	80	1	5	99	-
Air compressor, air flo w > 10m³/min and ≤ 30m³/min	CNP002	1	102	100	0	10	92	24
Breaker, hand-held, mass > 10kg and < 20kg	ELA 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	
Viater Pump (electric)	CNP2%1	1	88	10	10	5	73	73
						Total Maximum	104 104	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 SW L, dB(A)
Generator Breaker, hand-held, mass > 10kg and < 20kg Water Pump (electric)	OPME EPD-02677 EIA Ref. 2 CNP231	1 1 1	91 100 88	100 100 10	0 0 10	10 5 5 Total	91 95 73 95

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 Crane lorry, 5.5 tonne < gross vehicle weight ≤ 38 tonne	QPME EPD-02677 OCNP	1	91 105	100 80	0	10 5	81 99
Dump truck with grab, 5.5 tone < gross vehicle weight ± 38 tonne Welding set	OCNP EIA Ref. 1	1	105 78	80 100	1	5	99 78
Water Pamp (electric)	CNP251	1	85	10	10	5 Total	73 102

Notes:

CNP - Table 3, Technical Memorandum on Noise from Construction Work Other than Percussive Piling (GW-TM)

CNP - Other PME documented by the Noise Control Authority

(http://www.epd.gov.ht/cpd/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)

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.

1	Site clearance	IIII detection	and Preparation

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	03	1	10	30	
	Crane lorry, 5.5 tonne < gross vehicle weight ≤ 38 tonne	OCNP	1	105	60	2	5	98	
	Welding set	ELA Ref. 1	1	78	80	1	5 Total	72 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	ELA 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	CNPu31	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 w	orks 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, o	dB(A) [[] Grou
	Generator	QPME EPD-02677	1	91	100	Ū	10	- Oromb 1	81
	Crane lorry, 5.5 tonne < gross vehicle weight 33 tonne	OCNP	1	105	10	10	5	-	91
	Comparison to the comparison of the comparison o	ET D.C.O.		4.00	1.75				

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, Group 1	dB(A) [2] Group 2
Generator	QPME EPD-02677	1	91	100	Ū	10	Olomb 1	81
Crane lorry, 5.5 tonne < gross vehicle weight 38 tonne	OCNP	1	105	10	10	5	-	97
Saw, circular, wood	Ela Ref. 2	1	103	10	10	5	_	85
Dump truck with grab, 5.5 tone < gross vehicle weight ≤ 38 tonne	OCNP	1	105	10	10	5	90	-
						Total Maximum	90 92	92

4 Installation of doviel 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, Group 1	dB(A) [2] Group 2
Generator	QPME EPD-02677	1	91	80	1	10	ö0	- C10Mp Z
Breaker, hand-held, mass > 10kg and < 20kg	EIA Ref. 2	1	100	10	10	5	25	
Concrete lorry mixer	CNP044	1	109	30	5	5	-	99
Saw, circular, a ood	EIA Ref. 2	Ĩ.	103	10	10	5	88	
Poker Poker	CNP170	1	113	10	10	5	-	98
Concrete pump	CNP047	1	109	10	10	5	-	94
						Total Maximum	90 102	102

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	Ela Ref. 1	1	78	10	10	5	63
Breaker, hand-held, mass > 10kg and < 20kg	ELA Ref. 2	1	100	10	10	5	85
Excavator	CNP081	1	112	20	7	5	100
Water Pump (electric)	CNP281	2	\$8	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 Powered Mechanical Equipment	works at Bay 1 to Bay 3" Ref. [1]	No. of	SWL/item.	On-time	On-time	Barrier Correction,	Total SWL,	4D(A) [2]
			items	dB(A)	%	Correction, dB(A)		Group 1	Group 2
	Generator	OPME EPD-02677	1	91	100	0	10	•	81
	Saw, circular, wood Crane lorry, 5.5 tonne < gross vehicle weight	ELA Ref. 2	1	103	60	2	5	8	96
	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 vorks								
	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 2
	Generator	OP: IE EPD-02677	1	91	80	1	10	80	-
	Breaker, hand-held, mass > 10kg and < 20kg	EL4 Ref. 2	1	100	15	8	5	87	==
	Concrete lorry mixer	CNP044	1	109	10	10	5	\$	94
	Saw, circular, wood Poker	ELA Ref. 2 CNP170	1	103	50	3	5	95	-
	Concrete pump	CNP047	1	113 109	16 10	10 10	5	-	98
	Concrete pullif	CITIOTA	1	109	10	10	5 Tetal	96	94
							Total Maximum	101	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	QPME EPD-02677	1	91	100	0	10 Total	81 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, Group 1	dB(A) ^[2] Group 2
	Generator	QPME EPD-02677	1	91	100	0	10	CHOMP I	81
	Crane lorry, 5.5 tonne < gross vehicle weight ≤	OCNP	1	105	80	1	5		99
	38 tonne							-	99
	Breaker, hand-held, mass > 10kg and < 20kg Concrete lorry mixer	EIA Ref. 2	1	100	15	8	0		92
	Saw, circular, wood	CNP044 ELA Ref. 2	1 1	109 103	10	16	5	94	-
	Davi, Cilculat, wood	EIN Rei. Z	1	105	80	1	5 Total	97 99	100
		•					Maximum	100	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	\$1	
	Crane lorry, 5.5 tonne < gross vehicle weight ≤ 38 tonne	OCNP	1	105	30	1	5	99	
	To confic						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	QPME EPD-02677	3	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 < gress vehicle	OCNP	1	105	80	1	5	99	
	weight ≤ 38 tonne Welding set	EIA Ref. 1	1	78	100	0	0	78	
		man a sabilit d	120	, 0	100	v	Total	102	

Notes:

Notes:

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.go.w.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

			I	Horizonta	distance	to notional	source po	sition, m
NSR	Description	Land use	Feature No.			eature No.		
	Description	Dane uso	11SW-A/R94	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
		Educational					- 37	
N6	Island Christian Academy	Institution	68	58	56	62	69	59

Unmitigated Scenario NSR N1

N1 Silver Jubilee Mansion Description

63 63 68 68 68 68 68 71 71 71 71 71 71 71 71 71 71 71 71 71					P. of the second				Cons	truction	Construction Period (Tentative)	(Tenta	tive)		
E. UU detection and preparation 103 58 43 68 68 68 68 68 68 68 68 68 68 68 68 68	Š.	Main Construction Elements	ZW.	Distance,		(DI					2017			ŀ	
e, UVI detection and preparation 103 58 43 68 68 68 68 68 68 68 68 68 68 68 68 68				目	dR(A)	1 10	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
c., UU detection and preparation 103 58 43 63 63 68					(v)(m		4	5	9	7	00	6	10	=	12
ce, UU detection and preparation 103 58 43 63 63 68 74 74 74 74 74 74 74 74 74 74 74 74 74 74 74 74 74	Vo. 11S	W-A/R94													
y and erection of hoarding 108 58 43 68 71 71 71 71 71 71 72 <t< td=""><td></td><td>Site clearance, UU detection and preparation</td><td>103</td><td>58</td><td>43</td><td>63</td><td>83</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>		Site clearance, UU detection and preparation	103	58	43	63	83								
stigation works stiff gransomy stone facing 111 58 43 71 71 71 71 74 74 74 10f soil nails and raking drains 111 58 43 71 71 71 74 74 74 10f soil nail head calcing 111 58 43 71 71 74 74 74 112 58 43 71 71 74 74 74 113 58 43 71 71 71 74 74 114 58 43 71 71 71 71 74 115 58 43 71 71 71 71 71 117 58 74 72 72 72 118 58 74 72 72 72 119 34 72 72 72 110 109 17 33 78 78 78 111 17 33 81 81 81 111 17 33 81 77 77 77 112 cavation works (Bay 2) 113 17 33 81 77 77 77 114 17 33 81 77 77 115 106 22 35 74 77 116 109 34 77 117 17 33 81 78 79 118 109 34 77 119 34 77 110 19 34 77 110 19 34 77 110 19 34 77 111 17 18 80 80 79 80 111 19 34 80 79 111 19 34 80 79 111 19 34 80 79 111 19 34 80 111 19 34 87 111 19 34 80 111 19 34 87 111 19 34 80 111 19 34 80 111 19 34 80 111 19 34 80 111 19 34 80 111 19 34 80 111 19 34 80 111 19 34 80 111 19 34 80 111 19 34 80 111 19 34 80 111 19 34 80 111 101 101 101 101 101 101 101 101 1		Initial survey and erection of hoarding	108	58	43	89		86							
sting masonry stone facing 111 58 43 74 74 74 74 74 74 10 f soil nail head 114 58 43 74 74 74 74 74 74 74 74 74 74 74 74 74		Ground investigation works	111	58	43	71		71							
of soil nails and raking drains		Take off existing masonry stone facing	111	58	43	71			71						
1 of soil nail head 1 11		Installation of soil nails and raking drains	114	58	43	74				74	74	74		T	
e and dismantle of hoarding 111 58 43 71 71 72 72 72 72 74 74 74 77 74 7		Construction of soil nail head	114	58	43	74							7.4		
e and dismantle of hoarding 111 58 43 71		Reinstatement of existing masonry stone facing	111	58	43	71								7.1	
2e, UU detection and preparation 103 19 34 72 </td <td></td> <td>Site clearance and dismantle of hoarding</td> <td>111</td> <td>28</td> <td>43</td> <td>71</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>7.1</td>		Site clearance and dismantle of hoarding	111	28	43	71									7.1
Site clearance, UU detection and preparation 103 19 34 72 73 78 78 78 78 78 78 78 78 78 78 79 73 74 73 73 74 77 74 77 74 77 74 77 74 74 77 74 74 74 74 74 74	No. 11S	W-A/FR218						100					18		
Initial survey and erection of hoarding 106 22 35 74 74 74 74 77 78 78 78 78 78 78 78 78 78 78 78 78 <td></td> <td>Site clearance, UU detection and preparation</td> <td>103</td> <td>19</td> <td>34</td> <td>72</td> <td>72</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>		Site clearance, UU detection and preparation	103	19	34	72	72								
Excavation works (Bay 1) 106 22 35 74 74 76 7 Excavation works (Bay 3) 106 24 36 73 79 78 79 79 79 79 79 79 79 79 79 78 79 78 <td< td=""><td></td><td>Initial survey and erection of hoarding</td><td>108</td><td>19</td><td>33</td><td>78</td><td>78</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>T</td></td<>		Initial survey and erection of hoarding	108	19	33	78	78								T
Excavation works (Bay 3) 106 24 36 73 73 9 9 9 Excavation works (Bulky PME area) 109 17 33 79 77 9 9 9 Pit by pit excavation works (Bay 2) 106 22 35 74 9 74 9 9 Pit by pit excavation works (Bulky PME area) 111 17 33 81 74 74 9 74 9 Pit by pit excavation works (Bulky PME area) 111 17 33 81 79 74 79 79 70<		Excavation works (Bay 1)	106	22	35	74		74							
Excavation works (Bulky PME area) 109 17 33 79 79 79 70		Excavation works (Bay 3)	106	24	36	73		73							
Installation of dowel bars and concrete works 108 19 34 77 74 74 76 76 77 76 77 74 74 77 74 77 74 77 74 77 74 77 74 77 77 77 77 77 77 77 77 77 77 77 78 <th< td=""><td></td><td>Excavation works (Bulky PME area)</td><td>109</td><td>17</td><td>33</td><td>79</td><td></td><td>79</td><td></td><td></td><td></td><td></td><td></td><td></td><td>Ī</td></th<>		Excavation works (Bulky PME area)	109	17	33	79		79							Ī
Pit by pit excavation works (Bay 2) 106 22 35 74 74 77 74 77 79 77 78 77 78 77 78 77 78		Installation of dowel bars and concrete works	108	19	34	77			LL						
Pit by pit excavation works (Bulky PME area) 111 17 33 81 6 81 6 79 79 79 79 79 79 79 79 79 79 77 79 77 79 77 78 79 77 78		Pit by pit excavation works (Bay 2)	106	22	35	74				74					T
Installation of dowel bars and concrete works 110 19 34 79 79 79 70 Back filling of top soil 108 19 34 77 70 77 77 77 77 77 77 77 77 78 <		Pit by pit excavation works (Bulky PME area)	111	17	33	81									Γ
Back filling of top soil 108 19 34 77 6 77 79 77 79 77 79 79 79 79 79 79 78 79 70		Installation of dowel bars and concrete works	110	19	34	79					7.9			r	
Construction of concrete staircase 110 19 34 79 79 79 78 Landscape works 109 19 34 78 78 78 78 78 Site clearance and dismantle of hoarding 111 19 34 80 79 80 79 80 79 Exceedance: 4 6 3 7 5 4 5 4		Back filling of top soil	108	19	34	77				T		77	T		Γ
Landscape works 109 19 34 78 78 78 78 Site clearance and dismantle of hoarding 111 19 34 80 79 80 79 Total SPL, dB(A): 79 81 78 82 80 79 80 79 Exceedance: 4 6 3 7 5 4 5 4		Construction of concrete staircase	110	19	34	79							70		
Site clearance and dismantle of hoarding 111 19 34 80 178 82 80 79 Total SPL, dB(A): 79 81 78 82 80 79 Exceedance: 4 6 3 7 5 4 5 4		Landscape works	109	19	34	78								32	Γ
79 81 78 82 80 79 80 79 4 6 3 7 5 4 5 4		Site clearance and dismantle of hoarding	111	19	34	80									8
4 6 3 7 5 4 5 4					Total SP	L, dB(A):	79	81	78	82	8	62	8	62	8
					Ex	ceedance:	4	9	3	7	5	4	2	4	2

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

Construction Noise Impact Unmitigated Scenario NSR N2

N2 Cherry Crest Description

				i				Cons	truction	Construction Period (Tentative)	Tenta	five)		
A of Mo			Distance,							2017				
ACLINO.	Main Construction Elements	2WL	日	Correction,	SPL	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
				(A)Qm		4	5	9	7	00	6	10	Ξ	12
Feature No. 11SW-A/R94	SW-A/R94													
1	Site clearance, UU detection and preparation	103	53	43	63	63								
2	Initial survey and erection of hoarding	108	53	43	89		89							
3	Ground investigation works	111	53	43	71		7.1							
4	Take off existing masonry stone facing	111	53	43	71			7.1						
ν.	Installation of soil nails and raking drains	114	53	43	74				74	47	74			
9	Construction of soil nail head	114	53	43	74							74.		
7	Reinstatement of existing masonry stone facing	111	53	43	71								7.1	
8	Site clearance and dismantle of hoarding	111	53	43	71									71
Feature No. 11SW-A/FR218	SW-A/FR218						2	,	2 H 4	,	*			
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		17.							
3.1	Excavation works (Bay 3)	106	29	37	72		7.2							
3.2	Excavation works (Bulky PME area)	109	17	33	79		25							
4	Installation of dowel bars and concrete works	108	18	33	78			2,5						
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					
9	Installation of dowel bars and concrete works	110	18	33	08					08				
7	Back filling of top soil	108	18	33	78						20		T	
8	Construction of concrete staircase	110	18	33	08							0%		
6	Landscape works	109	18	33	79				Г				62	Γ
10	Site clearance and dismantle of hoarding	111	18	33	81									87

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

81

81

82

79

82

80 %

Unmitigated Scenario NSR N3

N3 No.1, U Lam Terrace Description

			,					Cons	truction	Period	Construction Period (Tentative)	ive)		
A of Mo		2,22,0	Distance,							2017				
ACI INO.	Main Construction Elements	SWL	目	<u>ت</u>	SPL	Apr	May	Jun	Jul	Aug	Sep	Ö	Nov	Dec
				(A)qn		4	5	9	7	00	6	10	=	12
Feature No. 11SW-A/R94	W-A/R94		* **							Yuman)		,		
1	Site clearance, UU detection and preparation	103	39	43	63	63								
2	Initial survey and erection of hoarding	108	39	43	89		89							
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	7.4	7.4		T	
9	Construction of soil nail head	114	39	43	74							74		
7	Reinstatement of existing masonry stone facing	111	39	43	71								7.1	
∞	Site clearance and dismantle of hoarding	111	39	43	71									11
Feature No. 11SW-A/FR218	W-A/FR218									1000				1
1	Site clearance, UU detection and preparation	103	24	36	70	0,5							r	
2	Initial survey and erection of hoarding	108	24	36	75	35				Γ				
3.1	Excavation works (Bay 1)	106	25	36	73		73						T	
3.1	Excavation works (Bay 3)	106	34	39	70		70							
3.2	Excavation works (Bulky PME area)	109	53	37	75		7.5							Γ
4	Installation of dowel bars and concrete works	108	24	36	75			52						
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	11				11					
9	Installation of dowel bars and concrete works	110	24	36	77					LL				
7	Back filling of top soil	108	24	36	75						75			
00	Construction of concrete staircase	110	24	36	77							7.7		
6	Landscape works	109	24	36	9/								76	
10	Site clearance and dismantle of hoarding	111	24	36	78									78
				Total SP	Total SPL, dB(A):	77	79	76	79	78	77	79	28	78
				Ex	Exceedance:	2	4		4	3	2	4	3	3

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

Unmitigated Scenario NSR

N5 Briar-Caine Co-Op Building Description

				2				Con	truction	Period	Construction Period (Tentative)	hive)		
A of Mo		1200	Distance,		į					2017				
Act No.	Main Construction Elements	SWL	目	<u> </u>	SPL	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
				(A) du		4	5	9	7	00	6	10	=	12
Feature No. 11SW-A/R94	SW-A/R94	- ñ.												DISCOUNT.
1	Site clearance, UU detection and preparation	103	23	35	71	17								
2	Initial survey and erection of hoarding	108	23	35	76		92							
3	Ground investigation works	111	23	35	79		66.							
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			
9	Construction of soil nail head	114	23	35	82							CS		
7	Reinstatement of existing masonry stone facing	111	23	35	79								70	
00	Site clearance and dismantle of hoarding	111	23	35	79									70
Feature No. 11SW-A/FR218	W-A/FR218	1							b	0.00	f f			1
	Site clearance, UU detection and preparation	103	99	44	62	. 79								
2	Initial survey and erection of hoarding	108	99	4	1.9	67							T	
3.1	Excavation works (Bay 1)	106	72	45	64		- 49							
3.1	Excavation works (Bay 3)	106	69	45	49		64							
3.2	Excavation works (Bulky PME area)	109	75	46	99		66							Γ
4	Installation of dowel bars and concrete works	108	99	44	19			67						
5.1	Pit by pit excavation works (Bay 2)	106	70	45	2				64					
5.2	Pit by pit excavation works (Bulky PME area)	111	75	46	89				68					
9	Installation of dowel bars and concrete works	110	99	44	69					69				
7	Back filling of top soil	108	99	44	29						67		\dagger	Γ
∞.	Construction of concrete staircase	110	99	44	69							59		
6	Landscape works	109	99	44	89								89	
10	Site clearance and dismantle of hoarding	111	99	44	70						T		S	20
				Total SP	Total SPL, dB(A):	73	81	79	82	82	82	82	79	26
				Ex	Exceedance:	ı	9	4	7	7	7	7	4	4

Note: Figures in red denote exceedance of the $\operatorname{EIAO-TM}$ construction noise criteria.

Unmitigated Scenario NSR N6 Description Island

N6 Island Christian Academy

				i				Cons	fruction	Period	Construction Period (Tentative)	five)		
N ·			Distance.							2017	1 1 04	(2)		T
Act No.	Main Construction Elements	SWL	E CANADA	0	SPL	Ž	Mean	T	1.7	107			;	1
			3	dB(A)		Apr	May	un v	E .	Aug	Nep o	5 5	<u>Ş</u>	3
Feature No. 11SW-A/R94	3W-A/R94					4		0	-	×	7	IOI	11	77
1	Site clearance, UU detection and preparation	103	89	45	19	19								
2	Initial survey and erection of hoarding	108	89	45	99		66						T	
3	Ground investigation works	111	89	45	69		69							
4	Take off existing masonry stone facing	111	89	45	69			69						
5	Installation of soil nails and raking drains	114	89	45	72				7.7	7.2	7.2			
9	Construction of soil nail head	114	89	45	72					1		77.	T	
7	Reinstatement of existing masonry stone facing	111	89	45	69								60	
∞	Site clearance and dismantle of hoarding	111	89	45	69									60
Feature No. 11SW-A/FR218	;W-A/FR218													3
1	Site clearance, UU detection and preparation	103	58	43	63	63								
2	Initial survey and erection of hoarding	108	58	43	89	89								
3.1	Excavation works (Bay 1)	106	56	43	99		99						T	
3.1	Excavation works (Bay 3)	106	69	45	2		2							
3.2	Excavation works (Bulky PME area)	109	59	43	69		69					T		
4	Installation of dowel bars and concrete works	108	58	43	89			8,9					T	
5.1	Pit by pit excavation works (Bay 2)	106	62	44	65				65				t	
5.2	Pit by pit excavation works (Bulky PME area)	111	59	43	71				7.1					
9	Installation of dowel bars and concrete works	110	58	43	70			T		02				Γ
7	Back filling of top soil	108	58	43	89						80			
00	Construction of concrete staircase	110	58	43	202						3	70		
6	Landscape works	109	58	43	69				T	1			69	T
10	Site clearance and dismantle of hoarding	111	58	43	71				T		1		3	71
	使			Total SP	Total SPL, dB(A):	2	74	72	75	74	73	74	72	73
				Ex	Exceedance:	1	4	2	2	4	3	4	7	3

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

Mitigated Scenario NSR N1

N1 Silver Jubilee Mansion Description

				Dietono				Const	Construction Period (Tentative)	Period	(Tentat	ive)		
Act No.	Main Construction Elements	SWI	Distance,		Ido					2017		,		
			目	dR(A)	7	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
				(U)Cm		4	2	9	7	00	6	10	11	12
e No. 11S	Feature No. 11SW-A/R94												:	X
-	Site clearance, UU detection and preparation	86	58	43	58	58								
2	Initial survey and erection of hoarding	86	58	43	58		58						T	
3	Ground investigation works	100	58	43	99		99		T			T	T	
4	Take off existing masonry stone facing	95	28	43	55			55	_		T			
5	Installation of soil nails and raking drains	105	58	43	65				55	65	65	T		
9	Construction of soil nail head	104	58	43	64		r					5.4		
7	Reinstatement of existing masonry stone facing	95	58	43	55				-				5,5	Γ
∞	Site clearance and dismantle of hoarding	102	58	43	62								3	67
e No. 11S	Feature No. 11SW-A/FR218										100			
1	Site clearance, UU detection and preparation	86	19	34	1.9	129	-				r			
2	Initial survey and erection of hoarding	86	19	33	89	99						T		
3.1	Excavation works (Bay 1)	101	22	35	69		69						-	
3.1	Excavation works (Bay 3)	101	24	36	89		89	\vdash	\vdash	t	T		T	
3.2	Excavation works (Bulky PME area)	92	17	33	62		62		\vdash					
4	Installation of dowel bars and concrete works	102	19	34	71		200	7.1				T		
5.1	Pit by pit excavation works (Bay 2)	101	22	35	69				69		\vdash			Γ
5.2	Pit by pit excavation works (Bulky PME area)	66	17	33	69		-		63					Γ
9	Installation of dowel bars and concrete works	101	19	34	20					70	\dagger			
7	Back filling of top soil	81	19	34	50						50	T		
∞	Construction of concrete staircase	100	19	34	69							69		
	Landscape works	66	19	34	89					\vdash			89	
10	Site clearance and dismantle of hoarding	102	19	34	7.1	_				\vdash				Į:n-
								1						

Note: Figures in red denote exceedance of the $\operatorname{EIAO-TM}$ construction noise criteria.

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Construction Noise Impact Mitigated Scenario
NSR N2
Description Che

N2 Cherry Crest

								Come	Totion	Perior	Construction Period (Tentative)	(eve)		
A of Mo	Main Committee of	2220	Distance,	Distance	į					2017	7.1.0110	Transfer of the second		T
ACLINO.	Main Construction Elements	SWL	日	Correction,	SPL	Apr	May	Jun	In	Aug	Sen	Oct	Nov	Jec
				ab(A)		4	, 7	9	7	oc	6	10	=	12
Feature No. 11SW-A/R94	SW-A/R94							2					44	
1	Site clearance, UU detection and preparation	86	53	43	58	585			Г					
2	Initial survey and erection of hoarding	86	53	43	58		58							
33	Ground investigation works	100	53	43	09		99						T	
4	Take off existing masonry stone facing	95	53	43	55			55						
λ)	Installation of soil nails and raking drains	105	53	43 ;	65				65	56	65			
9	Construction of soil nail head	104	53	43	49							6.4		
7	Reinstatement of existing masonry stone facing	95	53	43	55								55	
∞	Site clearance and dismantle of hoarding	102	53	43	62								3	S
Feature No. 115	Feature No. 11SW-A/FR218												-	70
1	Site clearance, UU detection and preparation	86	18	33	89	89								
2	Initial survey and erection of hoarding	86	18	33	89	33								
3.1	Excavation works (Bay 1)	101	15	32	72		72							T
3.1	Excavation works (Bay 3)	101	29	37	1.9		67						T	
3.2	Excavation works (Bulky PME area)	92	17	33	62		62						\vdash	T .
4	Installation of dowel bars and concrete works	102	18	33	72			7.5					T	Γ
5.1	Pit by pit excavation works (Bay 2)	101	22	35	69				69			Г	T	
5.2	Pit by pit excavation works (Bulky PME area)	66	17	33	69				69					
9	Installation of dowel bars and concrete works	101	18	33	71					71				
7	Back filling of top soil	81	18	33	51						51			
∞	Construction of concrete staircase	100	18	33	70							02		T
6	Landscape works	66	18	33	69								69	
10	Site clearance and dismantle of hoarding	102	18	33	72									(2)

Note: Figures in red denote exceedance of the $\overline{\mathrm{EIAO}}$ -TM construction noise criteria.

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88

Total SPL, dB(A): Exceedance:

Min Max

Dec 12 62 3 8 Nov 1 25 99 5 S \$ 19 Construction Period (Tentative) Sep 9 6 3 Aug 2017 9 00 89 E 65 8 3 Jun 55 9 60 May 30 8 8 8 8 Apr 30 65 30 4 SPL 8888 છ 55 69 4 જ 59 89 65 28 67 65 8 48 67 99 6 Correction, Distance dB(A) 2 2 2 2 43 43 43 36 38 36 33 33 43 36 37 37 36 38 36 36 Distance, 8 8 39 39 39 Ħ 39 88 8 8 24 24 24 25 24 62 24 29 24 24 24 SWL 8 8 8 105 2 2 2 92 8 13 95 88 101 101 101 8 101 81 Reinstatement of existing masonry stone facing Pit by pit excavation works (Bulky PME area) Installation of dowel bars and concrete works Installation of dowel bars and concrete works Site clearance, UU detection and preparation Site clearance, UU detection and preparation Installation of soil nails and raking drains Main Construction Elements Site clearance and dismantle of hoarding Site clearance and dismantle of hoarding Take off existing masonry stone facing Initial survey and erection of hoarding Initial survey and erection of hoarding Excavation works (Bulky PME area) Pit by pit excavation works (Bay 2) Construction of concrete staircase Construction of soil nail head Ground investigation works Excavation works (Bay 1) Excavation works (Bay 3) Back filling of top soil Landscape works Feature No. 11SW-A/FR218 Feature No. 11SW-A/R94 Act No. 3.2 3.1 3.1 5.2 10 4 5.1 9 00 0

N3 No.1, U Lam Terrace

Description

NSR

Construction Noise Impact

Mitigated Scenario

Note:

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

Mitigated Scenario NSR N4 Description The

N4 The Bellevue Place

				, in the second				Const	Construction Period (Tentative)	Period	(Tenta	tive)		
Act No.	Main Construction Flements	CWI	Distance,	Correction	CDI					2017				
			Ħ	dR(A)	SFL	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
				לעיותה		4	3	9	7	00	6	10	11	12
Feature No. 11SW-A/R94	3W-A/R94					ij								
1	Site clearance, UU detection and preparation	86	34	39	62	62								
2	Initial survey and erection of hoarding	86	34	39	62		62							
3	Ground investigation works	100	34	39	64		75							
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	9,0	09			
9	Construction of soil nail head	104	34	39	89							6,8		Γ
7	Reinstatement of existing masonry stone facing	95	34	39	59				r			1	40	
∞	Site clearance and dismantle of hoarding	102	34	39	99									66
Feature No. 11SW-A/FR218	:W-A/FR218													3
1	Site clearance, UU detection and preparation	86	54	43	58	58		r						
2	Initial survey and erection of hoarding	86	54	43	58	58								Γ
3.1	Excavation works (Bay 1)	101	57	43	61		[9]			T				
3.1	Excavation works (Bay 3)	101	63	44	09		3		T			ľ		
3.2	Excavation works (Bulky PME area)	92	09	44	51		51		T	T				
4	Installation of dowel bars and concrete works	102	54	43	62			62						Γ
5.1	Pit by pit excavation works (Bay 2)	101	59	43	61		T		19					
5.2	Pit by pit excavation works (Bulky PME area)	66	09	44	58	-			× ×					Γ
9	Installation of dowel bars and concrete works	101	54	43	61			T		100		T		
7	Back filling of top soil	81	54	43	41		T		T	;	41			
00	Construction of concrete staircase	100	54	43	09			\vdash				09	\dagger	
6	Landscape works	66	54	43	59				T				59	
10	Site clearance and dismantle of hoarding	102	54	43	62					T				63
							1		1	1				3

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

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Mitigated Scenario
NSR NS
Description Brian

N5 Briar-Caine Co-Op Building

				i				Cons	michor	Period	Construction Period (Tentative)	hive)		
Act No	Main Construction Florments	CTAT	Distance,	_	זמט					2017		G in		
120110		2 4 7	Ħ	Correction,	SFL SFL	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
				(v)m		4	5	9	7	00	6	10	Ξ	12
Feature No. 11SW-A/R94	SW-A/R94						1			U.				Target a
1	Site clearance, UU detection and preparation	86	23	35	99	9,0								
2	Initial survey and erection of hoarding	86	23	35	99		99						T	
3	Ground investigation works	100	23	35	89		39							
4	Take off existing masonry stone facing	95	23	35	63			63						
ν.	Installation of soil nails and raking drains	105	23	35	73				7.5	73	73			Γ
9	Construction of soil nail head	104	23	35	72							C.C.		
7	Reinstatement of existing masonry stone facing	95	23	35	63								63	
80	Site clearance and dismantle of hoarding	102	23	35	70								3	02
Feature No. 11SW-A/FR218	W-A/FR218	Marin Marin							Ti.			0		2
1	Site clearance, UV detection and preparation	86	99	44	57	57								
2	Initial survey and erection of hoarding	86	99	44	57	57								
3.1	Excavation works (Bay 1)	101	72	45	59		59							
3.1	Excavation works (Bay 3)	101	69	45	59		05	T			Γ		-	
3.2	Excavation works (Bulky PME area)	92	75	46	49		65							
4	Installation of dowel bars and concrete works	102	99	44	61			19					T	
5.1	Pit by pit excavation works (Bay 2)	101	20	45	59				59					Γ
5.2	Pit by pit excavation works (Bulky PME area)	66	75	46	56				56				T	
9	Installation of dowel bars and concrete works	101	99	4	99			r		9				T
7	Back filling of top soil	81	99	4	40						40	T	T	Τ
00	Construction of concrete staircase	100	99	44	59							65		
	Landscape works	66	99	44	58							3	500	
10	Site clearance and dismantle of hoarding	102	99	44	61									19

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

64

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Mitigated Scenario
NSR N5
Description Briar-Caine Co-Op Building

			L					Cons	truction	Period	Construction Period (Tentative)	five)		Γ
A of No	Maria Company of the	04474	Distance,		ì					2017				
ACI INO.	Main Constitution Elements	2WL	E	Correction,	SPL	Apr	May	Jun	Juf	Aug	Sep	Oct	Nov	Dec
				(y)		4	2	9	7	00	6	10	=	12
Feature No. 11SW-A/R94	SW-A/R94		The state of the s								No.			
1	Site clearance, UU detection and preparation	86	23	35	99	99								
2	Initial survey and erection of hoarding	86	23	35	99		99							
3	Ground investigation works	100	23	35	89		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			
9	Construction of soil nail head	104	23	35	72							77		
7	Reinstatement of existing masonry stone facing	95	23	35	63								63	
80	Site clearance and dismantle of hoarding	102	23	35	0/								3	01
Feature No. 11SW-A/FR218	:W-A/FR218											X		
₩.	Site clearance, UU detection and preparation	86	99	4	57	57								
2	Initial survey and erection of hoarding	86	99	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	99	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)	66	75	46	56				36					
9	Installation of dowel bars and concrete works	101	99	44	09					.99				
7	Back filling of top soil	81	99	44	40						40			
00	Construction of concrete staircase	100	99	44	59							59		Γ
6	Landscape works	66	99	44	58					Γ			30	
10	Site clearance and dismantle of hoarding	102	99	44	61									61
				Total SP	Total SPL, dB(A):	29	71	65	73	73	73	73	22	71
				EX	Exceedance:				·	ı				1

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

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83

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62

Exceedance:

Min Max

28 9 12 62 Nov 23 65 **E** S 79 9 Construction Period (Tentative) Sep 63 6 7 Aug 2017 3 00 61 E 63 39 65 -Jun 53 25 9 May 28 56 52 59 61 Apr 35 280 200 Total SPL, dB(A): SPL 26 56 23 28 63 53 62 8 28 28 53 52 29 59 61 61 41 88 62 Correction, Distance dB(A) **\$** \$ 45 5 5 45 45 45 5 5 43 45 43 43 43 43 44 43 43 43 43 Distance, Ħ 89 88 8 89 89 89 26 89 89 28 28 69 59 28 88 200 28 28 28 28 SWL 8 8 2 105 104 102 95 95 8 8 5 2 2 102 66 101 8 Reinstatement of existing masonry stone facing Pit by pit excavation works (Bulky PME area) Installation of dowel bars and concrete works Installation of dowel bars and concrete works Site clearance, UU detection and preparation Site clearance, UU detection and preparation Installation of soil nails and raking drains Main Construction Elements Site clearance and dismantle of hoarding Site clearance and dismantle of hoarding Take off existing masonry stone facing Initial survey and erection of hoarding Initial survey and erection of hoarding Excavation works (Bulky PME area) Pit by pit excavation works (Bay 2) Construction of concrete staircase Construction of soil nail head Ground investigation works Excavation works (Bay 1) Excavation works (Bay 3) Back filling of top soil Landscape works Feature No. 11SW-A/FR218 Feature No. 11SW-A/R94 Act No. 3.2 3.1 3.1 5.2 10 5.1

Island Christian Academy

Description

Construction Noise Impact

Mmitigated Scenario

9 8

NSR

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