

**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 December 2017

AECOM Asia Co. Ltd.

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EXECUTIVE SUMMARY

The Project comprises two features 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, carried out the design and construction supervision of the Project. The Architectural Service Department (ArchSD) is the maintenance department.

The EM&A programme commenced on 5 April 2017.

This report document the findings of EM&A works conducted in the period between 1 and 31 December 2017. As informed by the Contractor, the major activities in the reporting period were:

Location	Site Activities
11SW-A/R94	<ul style="list-style-type: none">- Reinstatement of the masonry stone facing- Dismantle temporary working platform and base scaffolding- Construction of u channel
11SW-A/FR218	<ul style="list-style-type: none">- Erection of handrailing- Dismantle temporary working platform and temporary hoarding- Hydroseeding and planting works

Complaint, Notification of Summons and Successful Prosecution

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

Reporting Changes

There was no reporting change in the reporting month.

Site Inspection by External Parties

No any site inspection by external parties in this Reporting Month.

Future Key Issues

Nil

1 INTRODUCTION

1.1 Purpose of the Report

- 1.1.1 This is the eighth monthly EM&A Report which summaries audit findings for the project during the reporting period between 1 and 31 December 2017.

1.2 Report Structure

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

Section 1: Introduction

Section 2: Project Information

Section 3: Implementation Status of Environmental Mitigation Measures

Section 4: Monitoring Results

Section 5: Environmental Site Inspection and Audit

Section 6: Environmental Non-conformance

Section 7: Government Authority Inspection

Section 8: Future Key Issues

Section 9: Conclusions and Recommendations

Section 10: Adjustment

2 PROJECT INFORMATION

2.1 Background

- 2.1.1 The Project comprises Feature Nos. 11SW-A/R94 and 11SW-A/FR218 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-A/FR218.

2.2 Site Description

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

Feature no. 11SW-A/R94

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

Feature no. 11SW-A/FR218

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

2.3 Construction Programme and Activities

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

Location	Site Activities
11SW-A/R94	<ul style="list-style-type: none"> - Reinststate the masonry stone facing - Dismantle temporary working platform and base scaffolding - Construction of u channel
11SW-A/FR218	<ul style="list-style-type: none"> - Erection of handrailing - Dismantle temporary working platform and temporary hoarding - Hydroseeding and planting works

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

2.4 Project Personnel

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

Table 2.1 Contact Information of Key Personnel

<u>Party</u>	<u>Position</u>	<u>Name</u>	<u>Telephone</u>
AECOM Asia Co. Ltd.	IEC	Gigi Lam	3922 9000
AECOM Asia Co. Ltd.	Engineer's Representative	Patrice Lai	5664 0760
Contractor - Geotech Engineering Ltd.	Project Manager	Danise Tang	9183 2621
	Site Agent	Benny Li	6343 1976

2.5 Status of Environmental Licenses, Notification and Permits

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

Table 2.2 Status of Environmental Licenses, Notifications and Permits

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

3 IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES

- 3.1.1 The Contractor had implemented 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 was summarized in **Appendix B**. Status of required submissions under the EP during the reporting period was summarised in **Table 3.1**.

Table 3.1 Status of Required Submission under Environmental Permit

<u>EP Condition</u>	<u>Submission</u>	<u>Submission Due Date</u>
Condition 3.2	Monthly Monitoring Report	15 January 2018

4 MONITORING RESULTS

4.1 Waste Management

- 4.1.1 The 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, some of the inert C&D material had reused on site and both features had limited works which affected by inclement weather in this report month. 3.33 tons inert C&D material and 15.31 tons non-inert C&D waste were generated in the reporting month. No paper/cardboard packaging material, metal or plastic was collected by recycling contractor in the reporting month.
- 4.1.3 The record of disposal was summarized in **Appendix C**.
- 4.1.4 The Contractor was advised to properly maintain on site sorting for the C&D materials and wastes collection and recording system and maximize reuse / recycle of the C&D materials and wastes. The Contractor was 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 features were revised as 310m³.

4.2 Noise Management

- 4.2.1 Noise mitigation measures, which mentioned in PP, had strictly implemented.
- 4.2.2 Noise monitoring was conducted in every week at 6 Noise Sensitive Receiver which mentioned in the PP. The results of the noise level had fully complied with the standard as in the 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. The reading of the above monitoring had fully complied with the standard in the PP.

4.4 Wastewater Management

- 4.4.1 All wastewater generated from construction activities was collected and pumped to the storage tanks for reuse on site. The Surplus water was temporarily stored in the water tanks, when necessary, the suction truck would be displayed to collect the surplus water by a licensed discharged sub-contractor.

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. The summary of the mitigation measures implementation schedule was provided in **Appendix B**.
- 5.1.2 In this reporting month, three joint site inspections with the IEC, RE's representatives and the Contractor were carried out on 7, 14 and 21 Dec 2017. The IEC site audit checklists were provided in **Appendix D**. No non-compliance was recorded during the site inspections. Details of observations recorded during the site inspections was summarized in **Table 5.1**.

Table 5.1 Observations and Recommendations of Site Audit

Parameters	Date	Observations and Recommendations	Follow-up
Air Quality	Nil	Nil	Nil
Noise	Nil	Nil	Nil
Water Quality	Nil	Nil	Nil
Waste	Nil	Nil	Nil
Cultural Heritage	Nil	Nil	Nil
Permits/Licenses	Nil	Nil	Nil

6 ENVIRONMENTAL NON-CONFORMANCE

6.1 Summary of Environmental Non-Compliance

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

6.2 Summary of Environmental Complaints

6.2.1 No environmental complaint was 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 GOVERNMENT AUTHORITY INSPECTION

- 7.1.1 Environmental Protection Department (EPD) inspected Feature Nos. 11SW-A/R94 and 11SW-AFR218 on 19/12/2017.

8 FUTURE KEY ISSUES

8.1 Construction Programme for the Forthcoming Month

8.1.1 All works was completed on 23 December 2017.

9 CONCLUSIONS AND RECOMMENDATIONS

9.1 Conclusions

- 9.1.1 Three environmental site inspections were carried out in December 2017. Recommendations on remedial actions were given to the Contractor for the deficiencies identified during the site audits.
- 9.1.2 Referring to the Contractor's information, no environmental complaint, notification of summons and successful prosecution was received in this reporting month.

9.2 Recommendations

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

Air Quality Impact

- No specific observation was identified in this reporting month.

Construction Noise Impact

- No specific observation was identified in this reporting month.

Water Quality Impact

- No specific observation was identified in this reporting month.

Waste Management

- No specific observation was identified in this reporting month.

Cultural Heritage

- No specific observation was identified in this reporting month.

Permits/licenses

- No specific observation was identified in this reporting month.

10 ADJUSTMENT

10.1.1 No adjustment of the PME would be updated in the monthly report.

Appendix A

Construction Programme

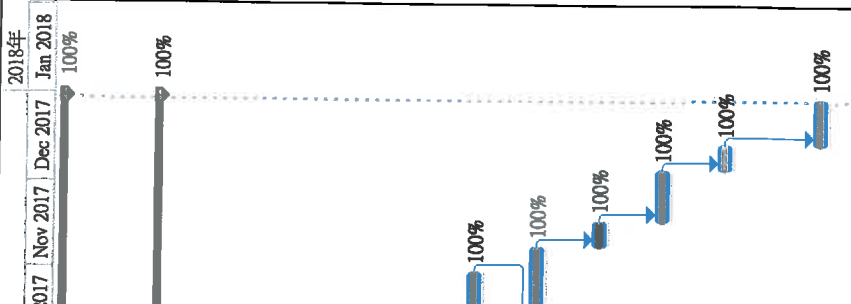
Landslip Preventive and Mitigation Works

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

Contractor : Geotech Engineering Limited
 Programme Date : 08/01/2018 Revision No. : 18
 Commencement Date : 05/04/2017 Completion Date : 30/12/2017

UPDATED WORKS PROGRAMME

ID	Description	Quantity	Duration	Start	Finish
1	Feature No.11SW-A/R94 Hong Kong Museum of Medical Science		220 days	2017/4/5	2017/12/30
2	GEOTECHNICAL WORKS		220 days	2017/4/5	2017/12/30
3	Erection and modification of Base Scaffolding and Temporary Working Platform	1 item	3 days	2017/4/5	2017/4/7
4	Take up and store existing Masonry Stones (approx. 0.5m x 0.5m each no.)	70 nos.	12 days	2017/4/8	2017/4/25
5	Install Test Nails and carry out Pull Out Test	2 nos.	4 days	2017/4/11	2017/4/18
6	Soil Nailing Works	62 mrs.	160 days	2017/4/19	2017/10/30
7	Construction of Soil Nail Heads	62 mrs.	80 days	2017/8/4	2017/11/8
8	Installation of Raking Drains	4 nr.	8 days	2017/11/9	2017/11/17
9	Reinstatement of existing Masonry Stones	70 nos.	15 days	2017/11/18	2017/12/5
10	Dismantle Temporary Working Platform and Base Scaffolding	1 item	8 days	2017/12/6	2017/12/14
11	Construction of U-channel		12 days	2017/12/15	2017/12/30



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

Prepared By :

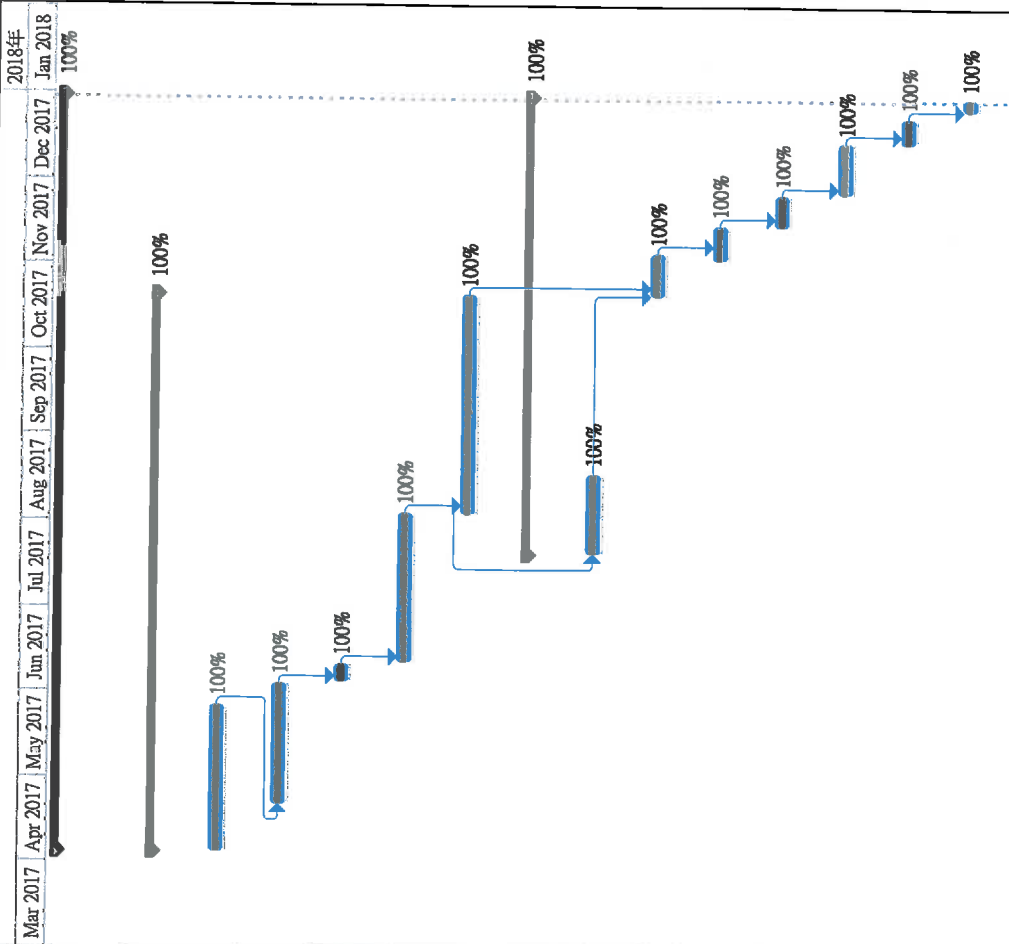
Landslip Preventive and Mitigation Works

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

Contractor : Geotech Engineering Limited
 Programme Date : 08/01/2017 Revision No. : 18
 Commencement Date : 05/04/2017 Completion Date : 30/12/2017

UPDATED WORKS PROGRAMME

ID	Description	Quantity	Duration	Start	Finish
1	Feature No.11SW-A/FR218 Pathological Institute, Caine Lane, Mid-Levels		220 days	2017/4/5	2017/12/30
2	GEOTECHNICAL WORKS		162 days	2017/4/5	2017/10/20
3	Pit Excavation and install shoring system	360 cu.m.	40 days	2017/4/5	2017/5/26
4	Backfilling with Mass Concrete	250 cu.m.	34 days	2017/4/22	2017/6/3
5	Construction Wall Stem of Wall Thickening	18m (L)	6 days	2017/6/5	2017/6/10
6	Construction for Mass Concrete Planter Wall	18m (L)	45 days	2017/6/12	2017/8/3
7	Filling of compacted fill	73.5 cu.m.	65 days	2017/8/4	2017/10/20
8	MISCELLANEOUS		135 days	2017/7/21	2017/12/30
9	Construction of concrete staircase	8.0m	24 days	2017/7/21	2017/8/17
10	Masonry Works for Wing Wall and Planter Wall	80.0 sq.m.	12 days	2017/10/21	2017/11/4
11	Backfilling of TopSoil	1 item	10 days	2017/11/3	2017/11/14
12	Coring holes and installation of raking drains	4 nrs	10 days	2017/11/15	2017/11/25
13	Erection of Handrailing	4 nrs	16 days	2017/11/27	2017/12/14
14	Dismantle Temporary Working Platform and Temporary Hoarding	1 item	8 days	2017/12/15	2017/12/23
15	Hydroseeding & Planting Works	120.0 sq.m. & 960 nrs	4 days	2017/12/27	2017/12/30



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

Prepared By :

Appendix B

Environmental Mitigation Implementation Schedule

Appendix B Environmental Mitigation Implementation Schedule

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

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

Record of Disposal

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

(Inert)

Division: GEO / CEDD
 Contract No.: GE/2013/35
 Contract Title: Landslip Prevention and Mitigation Programme, 2012, Package A, Landslip Prevention and Mitigation Works.
 Site Location: 1) 11SW-A/FR218

Contractor: Geotech Engineering Limited.

DDF No. ¹	Date of Disposal	Disposal Site ²	Vehicle Reg. No.	Time of Departure	Proportion of Truckload	Time of Disposal	Date of DDF & Receipt submitted by Contractor	Receipt No.	Late Return of DDF and / or Receipt	Vol. (m ³) / Wt. (t) (Where applicable)	Total Vol. (m ³) / Wt. (t) (Where applicable)
17630282	9/12/2017	CW-PFBP	CZ9006	8:15	3/4	09:14	12/12/2017	170109100	Nil	3.33 t	3.33 t

Submitted by: Geotech Engineering Limited. Signature:  Name/Post: Cyrus Li / Safety Officer Date: 5-1-18

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

Division: GEO / CEDD
 Contract No.: GE/2013/35
 Contract Title: Landslip Prevention and Mitigation Programme, 2012, Package A, Landslip Prevention and Mitigation Works.
 Site Location: 1) 11SW-A/R94

(Inert)

Contractor: Geotech Engineering Limited.

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

Submitted by: Geotech Engineering Limited. Signature:  Name/Post: Cyrus Li / Safety Officer Date: 5-1-18

Records of Disposal of WASTE C & D Materials
 Month December year 2017

(Inert)

Division: GEO / CEDD
 Contract No.: GE/2013/35
 Contract Title: Landslip Prevention and Mitigation Programme, 2012, Package A, Landslip Prevention and Mitigation Works.
 Site Location: 1) 11SW-A/FR218

Contractor: Geotech Engineering Limited.

DDF No. ¹	Date of Disposal	Disposal Site ²	Vehicle Reg. No.	Time of Departure	Proportion of Truckload	Time of Disposal	Date of DDF & Receipt submitted by Contractor	Receipt No.	Late Return of DDF and / or Receipt	Vol. (m ³) / Wt. (t) (Where applicable)	Total Vol. (m ³) / Wt. (t) (Where applicable)
17630280	8/12/2017	SENT	CZ9006	13:30	3/4	14:42	12/12/2017	11860811	Nil	4.87 t	4.87 t
17630281	9/12/2017	SENT	CZ9006	10:30	3/4	11:35	12/12/2017	11861299	Nil	1.96 t	6.83 t
17630297	20/12/2017	SENT	CZ9006	13:05	3/4	13:58	22/12/2017	11867729	Nil	3.61 t	10.44 t
17630298	20/12/2017	SENT	CZ9006	16:10	3/4	17:11	22/12/2017	11867906	Nil	3.88 t	14.32 t
17630299	21/12/2017	SENT	CZ9006	11:03	3/4	12:03	23/12/2017	11868288	Nil	0.99 t	15.31 t

Submitted by: Geotech Engineering Limited. Signature:  Name/Post: Cyrus Li / Safety Officer Date: 5-1-18

Records of Disposal of WASTE C & D Materials
 Month December year 2017

Division: GEO / CEDD
 Contract No.: GE/2013/35

(Inert)

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

Site Location: 1) 11SW-A/R94

Contractor: Geotech Engineering Limited.

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

Submitted by: Geotech Engineering Limited.

Signature:



Name/Post: Cyrus Li / Safety Officer

Date: 5-1-18

Appendix D

IEC Site Audit Checklist

IEC Site Audit Checklist

Project: Landslip Prevention and Mitigation Works at Feature Nos. 11SW-A/R94 and 11SW-A/FR218, HKMMS, Caine Lane, Mid-Levels Inspection Date: 7 December 2017 Time: 16:00 pm Inspection Area: <input checked="" type="checkbox"/> Feature No. 11SW-A/R94 <input checked="" type="checkbox"/> Feature No. 11SW-A/FR218 <input checked="" type="checkbox"/> HKMMS & its Annex Block	Inspected by Client: CEDD ER: AECOM IEC: AECOM ET: N/A Contractor: Geotech Engineering Ltd.
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PART A: GENERAL INFORMATION

Weather: Sunny Fine Cloudy Rainy
 Temperature: ~ 20 °C
 Humidity: High Moderate Low
 Wind: Strong Breezy Light Calm

PART B: SITE AUDIT

	Not Obs.	Yes	No	Follow up	N/A	Photo/Remarks
Section 1: Water Quality						
1.01	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Item (A)
1.02	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1.03	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1.04	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1.05	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.06	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1.07	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1.08	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1.09	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Section 2: Air Quality						
2.01	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.02	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2.03	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2.04	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.05	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.06	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2.07	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2.08	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2.09	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

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

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

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

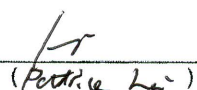

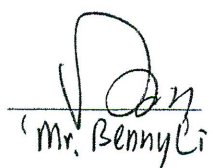
Remarks

Item (A) Wastewater and runoff is collected and pumped to storage tanks for reuse on the site. Suction truck will be arranged to collect any surplus water temporarily stored in the storage tanks, where necessary. With the implementation of the above measures, no effluent discharge license is required.

Construction works at both Feature No. 11SW-A/R94 and 11SW-A/FR218 were substantially completed, the Contractor had started to clean up the site.

Follow-up Observation(s)

N/A

Client	ER	ENPO/IEC	ET	Contractor
()	 (Patricia Li)	 (Ms. Gigi Lam)	()	 (Mr. Benny Li)

IEC Site Audit Checklist

Project: Landslip Prevention and Mitigation Works at Feature Nos. 11SW-A/R94 and 11SW-A/FR218, HKMMS, Caine Lane, Mid-Levels
 Inspection Date: 14 December 2017
 Time: 16:00 pm
 Inspection Area: Feature No. 11SW-A/R94
 Feature No. 11SW-A/FR218
 HKMMS & its Annex Block

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

PART A: GENERAL INFORMATION

Weather: Sunny Fine Cloudy Rainy
 Temperature: ~ 20 °C
 Humidity: High Moderate Low
 Wind: Strong Breezy Light Calm

PART B: SITE AUDIT

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

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

Section 2: Air Quality

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

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

IEC Site Audit Checklist

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

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

Remarks

Item (A) Wastewater and runoff is collected and pumped to storage tanks for reuse on the site. Suction truck will be arranged to collect any surplus water temporarily stored in the storage tanks, where necessary. With the implementation of the above measures, no effluent discharge license is required.

Construction works at both Feature No. 11SW-A/R94 and 11SW-A/FR218 were substantially completed, the Contractor continued to clean up the site.

Follow-up Observation(s)
N/A

~~Client~~


ER

ENPO/IEC

~~ET~~

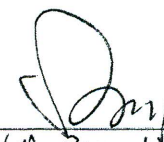
Contractor

()


(Patricia Lee)


(Ms. Gigi Lam)

()


(Mr. Benny W)

IEC Site Audit Checklist

Project: Landslip Prevention and Mitigation Works at Feature Nos. 11SW-A/R94 and 11SW-A/FR218, HKMMS, Caine Lane, Mid-Levels
 Inspection Date: 21 December 2017
 Time: 15:00 pm
 Inspection Area: Feature No. 11SW-A/R94
 Feature No. 11SW-A/FR218
 HKMMS & its Annex Block

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

PART A: GENERAL INFORMATION

Weather: Sunny Fine Cloudy Rainy
 Temperature: ~ 15 °C
 Humidity: High Moderate Low
 Wind: Strong Breezy Light Calm

PART B: SITE AUDIT

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

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

Section 2: Air Quality

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

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

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

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

Remarks

Item (A) Wastewater and runoff is collected and pumped to storage tanks for reuse on the site. Suction truck will be arranged to collect any surplus water temporarily stored in the storage tanks, where necessary. With the implementation of the above measures, no effluent discharge license is required.

Construction works at both Feature No. 11SW-A/R94 and 11SW-A/FR218 were completed.

No further site audit is considered necessary.

Follow-up Observation(s)

N/A

~~Client~~


ER

ENPO/IEC

~~ET~~

Contractor

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( Patricia Lee)

( Ms. Gigi Lam)

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( Mr. Benny Kwok)