MTR Corporation Limited

Shatin to Central Link –
Tai Wai to Hung Hom Section and
Mong Kok East to Hung Hom Section

Monthly EM&A Report No. 99

[Period from 1 to 30 November 2020]

(December 2020)

Verified by: Claudine LEE

Position: Independent Environmental Checker

Date: 11 December 2020

MTR Corporation Limited

Shatin to Central Link –
Tai Wai to Hung Hom Section and
Mong Kok East to Hung Hom Section

Monthly EM&A Report No. 99

[Period from 1 to 30 November 2020]

(December 2020)

Certified by: Lisa Poon

Position: Environmental Team Leader

Date: 11 Dec 2020

MTR Corporation Limited

Shatin to Central Link –
Tai Wai to Hung Hom Section and
MongKok East to Hung Hom Section

Monthly EM&A Report No. 99

[Period from 1 to 30 November 2020]

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1 INTRODUCTION

1.1 Background

1.1.1 The Shatin to Central Link (SCL) is a 17km extension of the existing Ma On Shan Line (MOL) and East Rail Line (EAL) comprising (i) The East-West Corridor which extends the MOL from Tai Wai to Hung Hom via East Kowloon to connect with the West Rail Line (WRL) at Hung Hom Station (HUH) and Stabling Sidings at Hung Hom Freight Yard (HHS); and (ii) The North-South Corridor which is an extension of the East Rail Line (EAL) at Hung Hom across the harbour to Admiralty Station (ADM).

1.1.2 Shatin to Central Link – Tai Wai to Hung Hom Section [SCL (TAW-HUH)] and Shatin to Central Link – Mong Kok East to Hung Hom Section [SCL (MKK-HUH) (hereafter referred to as "the Project") are parts of the SCL. Shatin to Central Link – Stabling Sidings at Hung Hom Freight Yard [SCL (HHS)] is a proposed stabling sidings option for SCL (TAW – HUH) at the former freight yard in Hung Hom.

1.1.3 The Environmental Impact Assessment (EIA) Reports for SCL (TAW-HUH) (Register No.: AEIAR-167/2012), SCL (MKK-HUH) (Register No.: AEIAR-165/2012) and SCL (HHS) (Register No.: AEIAR-164/2012) were approved on 17 February 2012 under the Environmental Impact Assessment Ordinance (EIAO). Following the approval of the EIA Reports, two Environmental Permits (EPs) were granted on 22 March 2012, one covers SCL (TAW-HUH) and SCL (HHS) (EP No: EP-438/2012) and the other covers SCL (MKK-HUH) and SCL (HHS) (EP No.: EP-437/2012), for their construction and operation. Variations of environmental permit (VEP) were subsequently applied for EP-438/2012 and EP-437/2012. The latest Environmental Permits (EP Nos.: EP-438/2012/K and EP-437/2012/A) were issued by Director of Environmental Protection (DEP) on 4 October 2016 and 28 November 2017, respectively.

1.2 Project Programme

1.2.1 Eleven civil construction works contracts of the Project have been awarded since July 2012. The construction of the Project commenced in September 2012. **Table 1.1** summarises the information of the awarded Works Contracts. All major construction works under these eleven civil construction works contracts have been completed.

Table 1.1 Summary of Awarded Works Contracts

Works Contract	Description	Construction Start Date	Contractor	Environmental Team
1101(1)	Ma On Shan Line Modification Works	December 2012	Sun Fook Kong Joint Venture (SFKJV)	ANewR Consulting Ltd. (ANewR)
1102(6)	Hin Keng Station and Approach Structures	October 2013	Penta-Ocean Construction Co. Ltd.	Wellab Limited (Wellab)
1103(7)	Hin Keng to Diamond Hill Tunnels	February 2013	Vinci Construction Grands Projets	Ove Arup & Partners Hong Kong Ltd. (Arup)
		October 2019	Wing Ho Yuen Landscaping Co. Ltd.	MTR Co. Limited
1106(8)	Diamond Hill Station	March 2013	Leader Joint Venture	Cinotech Consultants Ltd. (Cinotech)
1107(4)	Diamond Hill to Kai Tak Tunnels	May 2013	Chun Wo - SELI Joint Venture	Cinotech Consultants Ltd. (Cinotech)
1108(5)	Kai Tak Station and Associated Tunnels	June 2013	Kaden -Chun Wo Joint Venture	Environmental Pioneers & Solutions Ltd.

Works Contract	Description	Construction Start Date	Contractor	Environmental Team
1108A(2)	Kai Tak Barging Point Facilities	September 2012	Concentric – Hong Kong River Joint Venture (CCL-HKR JV)	Cinotech Consultants Ltd. (Cinotech)
1109(10)	Stations and Tunnels of Kowloon City Section	September 2012	Samsung-Hsin Chong JV (SSHCJV)	ERM-Hong Kong Limited (ERM)
1111(9)	Hung Hom North Approach Tunnels	January 2013	Gammon-Kaden SCL1111 JV	AECOM Asia Co. Ltd.
1112(11)	Hung Hom Station and Stabling Sidings	June 2013	Leighton Contractors (Asia) Limited	SMEC Asia Ltd., HK
11240(3)	Excavation, Sorting and Disposal of Stockpiled Spoils to Approved Receptor Site	October 2017	Crown Asia Engineering Limited (CAEL)	MTR Co. Limited

Notes:

(1) All construction works (works areas at Tai Wai Mei Tin Road and the offsite temporary storage areas) under Works Contract 1101 were completed on 29 February 2016.

(2) All construction works (Kai Tak Barging Point Facilities) under Works Contract 1108A were completed on 29 September 2016.

(3) All construction works (Excavation, Sorting and Disposal of Stockpiled Spoils to Approved Receptor Site) under Works Contract 11240 were completed on 3 January 2018.

(4) All construction works (Diamond Hill to Kai Tak Tunnels) under Works Contract 1107 were completed on 22 February 2018.

(5) All construction works (Kai Tak Station and associated tunnels) under Works Contract 1108 were completed in July 2018.

(6) All construction works (Hin Keng Station and Approach Structures) under Works Contract 1102 were completed in December 2018. The Environmental Team was taken over by Wellab Limited starting from 1 January 2019.

(7) All construction works (Hin Keng to Diamond Hill Tunnels) under Works Contract 1103 were completed in June 2019. Minor landscaping works at Fung Tak had been commenced in mid-October and all the works were completed at the end of October 2019.

(8) All construction works (Diamond Hill Station) under Works Contract 1106 with significant environmental impacts were substantially completed by 25 June 2019.

(9) All major construction works (Hung Hom North Approach Tunnels) under Works Contract 1111 have been substantially completed since 18 November 2018 with only minor works remaining.

(10) All construction works (Stations and Tunnels of Kowloon City Section) under Works Contract 1109 have been substantially completed on 12 August 2020.

(11) All major construction works (Hung Hom Station and Stabling Sidings) under Works Contract 1112 have been substantially completed by 17 September 2020 with only minor works remaining.

1.2.2 All major construction works for SCL (TAW-HUH) and SCL (HHS) covered by EP No. EP-438/2012/K have been completed. Moreover, several remaining works, including provision of recreational facilities at Ma Chai Hang, outstanding works of access in Sung Wong Toi area for connection from Sung Wong Toi Station to Pak Tai Street and tree planting at Kai Tak Station Square, would be carried out in later stage and undertaken by another works contracts in 2022 tentatively, subject to further liaison with Railway Development Office (RDO), relevant government departments and stakeholders.

1.2.3 All major construction works for SCL (MKK-HUH) and SCL (HHS) covered by EP No. EP-437/2012/A have been completed. Moreover, it is proposed to plant additional tree seedlings at Ha Fa Shan in Tsuen Wan as compensation for the shortfall of compensatory planting. Such planting works would be carried out at later stage and undertaken by another works contract in 2022 tentatively, subject to further liaison with RDO, relevant government departments and stakeholders.

1.3 Purpose of the Report

1.3.1 The Environmental Monitoring and Audit (EM&A) programme for the Project commenced in September 2012. This is the ninety-ninth EM&A Report for the Project which summarises the EM&A works undertaken by the respective Contractor's ETs during the period from 1 to 30 November 2020.

2 ENVIRONMENTAL MONITORING AND AUDIT

2.1.1 The construction of SCL has been divided into different civil construction works contracts which are covered by EP No. EP-437/2012/A and/or EP-438/2012/K. As per the EP Conditions, EM&A Reports for the works contracts as shown in the table below have been prepared by the respective Contractor's ETs.

Table 2.1 Summary of Works Contracts and Respective EPs

Works Contract	Contract Title	Works Covered in Environmental Permit No.
1101	Ma On Shan Modification Works	EP-438/2012/K
1102	Hin Keng Station and Approach Structures	EP-438/2012/K
1103	Hin Keng to Diamond Hill Tunnels	EP-438/2012/K
1106	Diamond Hill Station	EP-438/2012/K
1107	Diamond Hill to Kai Tak Tunnels	EP-438/2012/K
1108	Kai Tak Station and Associated Tunnels	EP-438/2012/K
1108A	Kai Tak Barging Point Facilities	EP-438/2012/K
1109	Stations and Tunnels of Kowloon City Section	EP-438/2012/K
1111	Hung Hom North Approach Tunnels	EP-437/2012/A & EP-438/2012/K
1112	Hung Hom Station and Stabling Sidings	EP-437/2012/A & EP-438/2012/K
11240	Excavation, Sorting and Disposal of Stockpiled Spoils to Approved Receptor Site	EP-438/2012/K

2.1.2 Major construction works of Works Contract 1112 were substantially completed by 17 September 2020, with only minor works remaining. Hence, the cessation of EM&A programme under this Contract was proposed on 21 October 2020 and EPD expressed no objection on 29 October 2020 to the proposed cessation. The Final EM&A Review Report for Works Contract 1112 summarising the waste management details, site inspection findings, environmental complaint records and investigations, and any notification of summons, prosecutions and corrective actions throughout the whole construction period are provided in **Appendix A**.

2.1.3 Final EM&A Review Reports for other Works Contracts above have also been provided in previous monthly EM&A reports of SCL (TAW-HUH) and SCL (MKK-HUH) under EP Nos. EP-438/2012/K and EP-437/2012/A accordingly.

2.1.4 As mentioned in Section 1.2.2, all major construction works for SCL (TAW-HUH) and SCL (HHS) covered by EP No. EP-438/2012/K have been completed as well as the Final EM&A Review Reports of respective work contracts have also been submitted. Therefore, it is proposed that EM&A programme in accordance with the SCL(TAW-HUH) and SCL(HHS) EM&A Manuals covered by EP No.: EP-438/2012/K will be suspended since 1 December 2020 and would be resumed if necessary when the remaining works would be carried out in 2022 tentatively. **Table 2.2** summarises the information of the remaining works.

2.1.5 As mentioned in Section 1.2.3, all major construction works for SCL (MKK-HUH) and SCL (HHS) covered by EP No. EP-437/2012/A have been completed as well as the Final EM&A Review Reports of respective work contracts have also been submitted. Therefore, it is proposed that EM&A programme in accordance with the SCL(TAW-HUH) and SCL(HHS) EM&A Manuals covered by EP No. EP-437/2012/A will be suspended since 1 December 2020 and would be resumed if necessary when the landscaping works at Ha Fa Shan would be carried out in 2022 tentatively. **Table 2.2** summarises the information of the landscaping works.

Table 2.2 Summary of Remaining Works

Remaining Works	Location	Tentative Start Date of Works & EM&A Programme Re-activation	Works Covered in Environmental Permit No.
Provision of recreational facilities at Ma Chai Hang	Ma Chai Hang	2022	EP-438/2012/K
Outstanding works of access in Sung Wong Toi area for connection from Sung Wong Toi Station to Pak Tai Street	Sung Wong Toi Station	2022	EP-438/2012/K
Tree planting works at Kai Tak Station Square	Kai Tak Station	2022	EP-438/2012/K
Proposed tree seedlings planting at Ha Fa Shan	Ha Fa Shan in Tsuen Wan	2022	EP-437/2012/A

3 IMPLEMENTATION STATUS ON THE ENVIRONMENTAL PROTECTION REQUIREMENTS

3.1.1 The respective Contractors have implemented all mitigation measures and requirements as stated in the EIA Reports, EM&A Manuals and EPs (EP-437/2012/A and EP-438/2012/K). The status of required submissions under the EPs as of the reporting period are summarised in **Tables 2.1**.

Table 3.1 Summary of Status of Required Submissions for EP-437/2012/A

EP Condition (EP-437/2012/A)	Submission	Submission date
Condition 1.11	Notification of Commencement Date of Construction of the Project	30 Nov 2012
Condition 2.3	Notification of Information of Community Liaison Groups	30 Nov 2012
Condition 2.5	Management Organisation of Main Construction Companies	19 Dec 2012 (1st submission) 30 Apr 2013 (2nd submission)
Condition 2.6	Construction Programme and EP Submission Schedule	19 Dec 2012
Condition 2.7	Construction Noise Mitigation Measures Plan (CNMMP)	30 Nov 2012 (1st submission) 8 Feb 2013 (Approved) 26 Apr 2013 (2nd submission) 11 Jun 2013 (3rd submission) 27 Aug 2013 (Approved) 20 Jan 2014 (4th submission) 28 Apr 2016 (Approved)
Condition 2.8	Continuous Noise Monitoring Plan (CNMP)	30 Nov 2012 (1st submission) 11 Jan 2013 (2nd submission) 8 Feb 2013 (Approved) 20 Jan 2014 (3rd submission) 28 Apr 2016 (Approved)
Condition 2.9	Construction and Demolition Materials Management Plan (C&DMMP)	6 Jul 2012 (1st submission) 12 Sep 2012 (2nd submission) 15 Oct 2012 (Approved)
Condition 2.10	Sediment Management Plan	6 Jul 2012 (1st submission) 12 Sep 2012 (2nd submission) 5 Oct 2012 (3rd submission) 15 Oct 2012 (Approved)
Condition 2.11	Visual, Landscape, Tree Planting & Tree Protection Plan (VLTTP)	14 Nov 2012 (1st submission) 8 Feb 2013 (2nd submission) 4 Feb 2015 (3rd submission) 26 Jun 2015 (4th submission) 12 May 2017 (5th submission) 17 Apr 2018 (6th submission) 17 Apr 2019 (7th submission) 9 Apr 2020 (8th submission)
Condition 2.16	Operational Ground-borne Noise Mitigation Measures Plan	23 Mar 2017 (1st submission) 17 May 2017 (2nd submission) 28 Jun 2017 (3rd submission) 20 Jul 2017 (Approved)
Condition 2.19	As-built drawing(s) for Operation Air-borne Noise Mitigation Measure	10 Jan 2018 (1st submission) 9 Feb 2018 (Approved)
Condition 2.21	Proposal for Updating Maximum Allowable Sound Power Levels of Fixed Plant Sources	26 Jul 2019 (Batch 1 Version A submission) 14 Aug 2019 (Batch 1 Version A approved)
Condition 2.21	Fixed Plant Noise Audit Report	29 Aug 2019 (Batch 1 Version A submission) 11 Oct 2019 (Approved)
Condition 3.1	Proposal for Cessation of EM&A Programme at Hung Hom North Approach Tunnels	25 Jul 2019 (1st submission) 31 Jul 2019 (Approved)

EP Condition (EP-437/2012/A)	Submission	Submission date
Condition 3.1	Proposal for Cessation of EM&A Programme at Hung Hom Station and Stabling Sidings	21 Oct 2020 (1st submission) 29 Oct 2020 (Approved)
Condition 3.3	Baseline Monitoring Report (Works Contracts 1103, 1106 and 1111 – Hin Keng to Diamond Hill Tunnels, Diamond Hill Station, and Hung Hom North Approach Tunnels)	19 Oct 2012
Condition 3.4	Monthly EM&A Reports No. 5-97 Monthly EM&A Report No. 98	Reported in previous Monthly EM&A Reports 12 Nov 2020

Table 3.2 Summary of Status of Required Submissions for EP-438/2012/K

EP Condition (EP-438/2012/K)	Submission	Submission date
Condition 1.12	Notification of Commencement Date of Construction of the Project	1 Aug 2012
Condition 2.3	Notification of Information of Community Liaison Groups	13 Jul 2012 (1st submission) 31 Aug 2012 (2nd submission) 30 Nov 2012 (3rd submission)
Condition 2.7	Management Organisation of Main Construction Companies	27 Jul 2012 (1st submission) 21 Aug 2012 (2nd submission) 19 Dec 2012 (3rd submission) 22 Jan 2013 (4th submission) 30 Apr 2013 (5th submission) 21 May 2013 (6th submission)
Condition 2.8	Construction Programme and EP Submission Schedule	27 Jul 2012
Condition 2.9	Construction Noise Mitigation Measures Plan (CNMMP)	1 Aug 2012 (1st submission) 28 Sep 2012 (2nd submission) 30 Nov 2012 (3rd submission) 11 Jan 2013 (4th submission) 8 Feb 2013 (Approved) 8 Feb 2013 (5th submission) 26 Apr 2013 (6th submission) 11 Jun 2013 (7th submission) 12 Jul 2013 (Approved) 26 Jul 2013 (8th submission) 22 Aug 2013 (Approved) 23 Aug 2013 (9th submission) 13 Sep 2013 (Approved) 20 Jan 2014 (10th submission) 26 Feb 2014 (Approved) 31 Mar 2015 (Contract 1106 submission only) 13 Apr 2015 (Contract 1106 submission only) 15 Apr 2015 (Approved)
Condition 2.10	Continuous Noise Monitoring Plan (CNMP)	1 Aug 2012 (1st submission) 28 Sep 2012 (2nd submission) 30 Nov 2012 (3rd submission) 11 Jan 2013 (4th submission) 8 Feb 2013 (Approved) 8 Feb 2013 (5th submission) 26 Apr 2013 (6th submission) 11 Jun 2013 (7th submission) 12 Jul 2013 (Approved) 26 Jul 2013 (8th submission) 22 Aug 2013 (Approved) 23 Aug 2013 (9th submission) 13 Sep 2013 (Approved)

EP Condition (EP-438/2012/K)	Submission	Submission date
		20 Jan 2014 (10th submission) 26 Feb 2014 (Approved) 7 Oct 2014 (11th submission) 23 Oct 2014 (Approved)
Condition 2.11	Construction and Demolition Materials Management Plan (C&DMMP)	6 Jul 2012 (1st submission) 12 Sep 2012 (2nd submission) 10 Oct 2012 (Approved)
Condition 2.12	Sediment Management Plan	6 Jul 2012 (1st submission) 12 Sep 2012 (2nd submission) 5 Oct 2012 (3rd submission) 10 Oct 2012 (Approved) 4 Mar 2013 (4th submission) 9 May 2013 (5th submission) 24 Jul 2013 (6th submission) 26 Jul 2013 (Approved)
Condition 2.13	Visual, Landscape, Tree Planting & Tree Protection Plan	6 Jul 2012 (1st submission) 30 Aug 2012 (2nd submission) 3 Oct 2012 (3rd submission) 13 Nov 2013 (Approved) 14 Nov 2012 (4th submission) 8 Feb 2013 (5th submission) 18 Mar 2013 (6th submission) 18 Jun 2013 (7th submission) 12 Jul 2013 (Approved) 23 Mar 2017 (8th submission) 7 Mar 2018 (9th submission) 30 Jul 2018 (10th submission) 28 Feb 2019 (11th submission) 5 Mar 2019 (12th submission) 29 May 2019 (13th submission) 19 Jul 2019 (Approved)
Condition 2.14	Transplantation Proposal for Plant Species of Conservation Importance	22 Aug 2012 (1st submission) 5 Oct 2012 (2nd submission) 26 Nov 2012 (3rd submission) 4 Dec 2012 (Approved)
Condition 2.15	Conservation Plan	31 Jan 2013 (1st submission) 18 Mar 2013 (2nd submission) 24 Apr 2013 (Approved)
Condition 2.16	Archaeological Action Plan(s) (AAP(s)) for Works Contract 1109	10 Aug 2012 (1st submission) 3 Sep 2012 (2nd submission) 21 Sep 2012 (Approved) 11 Oct 2013 (3rd submission) 1 Nov 2013 (Approved)
Condition 2.16	Archaeological Action Plan(s) (AAP(s)) for Works Contract 1106	29 Jan 2013 (1st submission) 19 Mar 2013 (2nd submission) 8 Apr 2013 (Approved)
Condition 2.23	Supplementary Contamination Assessment Report for New Territories South Animal Centre	28 Sep 2012 25 Oct 2012 (Approved)
Condition 2.27	Operational Ground-borne Noise Mitigation Measures Plan	18 Mar 2016 (Batch 1 Version A submission) 28 Apr 2016 (Batch 1 Version B submission) 28 Apr 2016 (Batch 2 Version A submission) 1 Jun 2016 (Batch 1 Version C submission) 1 Jun 2016 (Batch 2 Version B submission) 23 Jun 2016 (Batch 1 Version D submission) 23 Jun 2016 (Batch 2 Version C submission)

EP Condition (EP-438/2012/K)	Submission	Submission date
		15 Jul 2016 (Batch 1 Version D approved) 15 Jul 2016 (Batch 2 Version C approved) 15 Sep 2016 (Batch 3 Version A submission) 4 Oct 2016 (Batch 3 Version A approved) 8 Mar 2017 (Batch 4 Version A) 7 Apr 2017 (Batch 4 Version A approved) 7 Jun 2017 (Final) 20 Jul 2017 (Approved)
Condition 2.28	As-built Drawings for Operational Ground-borne Noise Mitigation Measures	10 Aug 2017 (1st submission) 15 Sep 2017 (Approved)
Condition 2.30	As-built Drawings for Operational Air-borne Noise Mitigation Measures	4 Dec 2015 (1st submission) 28 Dec 2015 (2nd submission) 4 Feb 2016 (Approved) 20 Mar 2018 (3rd submission) 18 Jul 2018 (Approved) 4 May 2018 (4th submission) 23 Jul 2018 (Approved) 20 Feb 2020 (5th submission) 17 Mar 2020 (Approved)
Condition 2.31	Performance Test Report for Train Noise – Operational Airborne Railway and Ground-borne Noise	15 Nov 2018 (Batch 1 Version A submission) 30 Jan 2019 (Batch 2 Version A submission) 29 Mar 2019 (Batch 1 Version A & Batch 2 Version B submission) 15 April 2019 (Approved)
Condition 2.32	Proposal for Updating Maximum Allowable Sound Power Levels of Fixed Plant Sources	30 Jan 2019 (Batch 1 Version A submission) 27 Feb 2019 (Batch 1 Version B submission) 13 Mar 2019 (Batch 1 Version B approved) 15 Mar 2019 (Batch 2 Version A submission) 8 Apr 2019 (Batch 2 Version A approved) 24 April 2019 (Batch 3 & 4 Version A submission) 21 May 2019 (Batch 3 Version B submission) 11 Jun 2019 (Batch 3 Version B & Batch 4 Version A approved) 21 Jun 2019 (Batch 5 Version A submission) 17 Jul 2019 (Batch 5 Version A approved) 19 Jul 2019 (Batch 6 Version A submission) 26 Jul 2019 (Batch 7 Version A submission) 29 Jul 2019 (Batch 6 Version A approved) 14 Aug 2019 (Batch 7 Version A approved)
Condition 2.32	Fixed Plant Noise Audit Report	30 Jan 2019 (Batch 1 Version A submission)

EP Condition (EP-438/2012/K)	Submission	Submission date
		15 Mar 2019 (Batch 1 Version B submission) 4 Apr 2019 (Batch 1 Version B approved) 16 Apr 2019 (Batch 2 Version A submission) 7 May 2019 (Batch 2 Version A approved) 24 Jun 2019 (Batch 3 Version A and Batch 4 Version A submission) 6 Jul 2019 (Batch 3 Version A and Batch 4 Version A approved) 2 Aug 2019 (Batch 5 Version A submission) 27 Aug 2019 (Batch 6 Version A submission) 29 Aug 2019 (Batch 7 Version A submission) 3 Sep 2019 (Batch 5 Version A approved) 13 Sep 2019 (Batch 6 Version B approved) 23 Sep 2019 (Batch 7 Version B submission) 11 Oct 2019 (Batch 7 Version B approved)
Condition 2.33	As-built Drawings for Landscape and Visual Mitigation Measures	4 Dec 2015 (1st submission) 28 Dec 2015 (2nd submission) 4 Feb 2016 (Approved) 22 Aug 2018 (3rd submission) 5 Nov 2018 (4th submission) 6 Sep 2019 (5th submission) 11 Sep 2019 (Approved) 27 Sep 2019 (6th submission) 21 Feb 2020 (7th submission) 17 Sep 2020 (8th submission) 4 Nov 2020 (9th submission)
Condition 2.36	Contamination Assessment Plan (CAP) for the Temporary Magazine Site at TKO Area 137	23 Mar 2016 (1st submission) 20 Apr 2016 (2nd submission) 22 Apr 2016 (Approved)
Condition 2.36	Contamination Assessment Report (CAR) for the Temporary Magazine Site at TKO Area 137	19 May 2016 (1st submission) 3 Jun 2016 (2nd submission) 15 Jun 2016 (Approved)
Condition 3.1	Proposal for Termination of Environmental Monitoring and Audit (EM&A) Programme for Kai Tak Barging Point Facilities	7 Oct 2016 (Approved)
Condition 3.1	Proposal for Cessation of EM&A Works at Hin Keng	9 May 2018 (1st submission) 16 Jul 2018 (Approved)
Condition 3.1	Proposal for Cessation of EM&A Programme at Diamond Hill Station	25 Jul 2019 (1st submission) 31 Jul 2019 (Approved)
Condition 3.1	Proposal for Cessation of EM&A Programme at Hung Hom North Approach Tunnels	25 Jul 2019 (1st submission) 31 Jul 2019 (Approved)
Condition 3.1	Proposal for Cessation of EM&A Programme at Stations and Tunnels of Kowloon City Section	24 Aug 2020 (1st submission) 28 Aug 2020 (Approved)

EP Condition (EP-438/2012/K)	Submission	Submission date
Condition 3.1	Proposal for Cessation of EM&A Programme at Hung Hom Station and Stabling Sidings	21 Oct 2020 (1st submission) 29 Oct 2020 (Approved)
Condition 3.3	Baseline Monitoring Report (Works Contract 1109 - Stations and Tunnels of Kowloon City Section)	27 Jul 2012
Condition 3.3	Baseline Monitoring Report (Works Contract 1108A – Kai Tak Barging Point Facilities)	31 Jul 2012
Condition 3.3	Baseline Monitoring Report (Works Contracts 1103, 1106 and 1111 – Hin Keng to Diamond Hill Tunnels, Diamond Hill Station, and Hung Hom North Approach Tunnels)	19 Oct 2012
Condition 3.4	Monthly EM&A Reports No. 1-97 Monthly EM&A Report No. 98	Reported in previous Monthly EM&A Reports 12 Nov 2020
Condition 3.4	Monthly Operational Airborne Rail Noise Monitoring Report (Festival City) No. 1-6	Reported in previous Monthly EM&A Reports

Appendix A

Final EM&A Review Report for Works Contract 1112 – Hung Hom Station and Stabling Sidings Tunnels

MTR Corporation Limited

Shatin to Central Link –
Tai Wai to Hung Hom Section and
Mong Kok East to Hung Hom Section

Final EM&A Review Report

[Period from 3 June 2013 to 31 October 2020]

(December 2020)

Certified by: Vivian Chan

Position: Environmental Team Leader

Date: 11 December 2020

SMEC
Member of the Surbana Jurong Group

local people
global experience

D266 Final EM&A Review Report

Shatin to Central Link – Works Contract 1112 Hung Hom Station and Stabling Sidings

Prepared for Leighton Contractors (Asia) Limited
11 December 2020

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EXECUTIVE SUMMARY

Introduction

The construction works of MTRC Shatin to Central Link Works Contract 1112- Hung Hom Station and Stabling Sidings (the Project) comprise permanent works and the necessary temporary works for Hung Hom Station (HUH), Hung Hom Stabling Sidings (HHS), the South Approach Tunnels (SAT) and the North Approach Tunnels (NAT) to the new station, HHS and any reprovisioning remedial and improvement works (RRIW).

Construction works of the Project commenced on 3 June 2013. The construction stage EM&A programme was carried out in accordance with the EM&A manual.

Major construction works of Works Contract 1112 were substantially completed by 17 September 2020, with only minor works remaining. Hence, the cessation of EM&A programme under this Contract was proposed on 21 October 2020 and EPD expressed no objection on 29 October 2020 to the proposed cessation.

This final review report documents the overall findings of EM&A works that were conducted throughout the entire period from 3 June 2013 to 31 October 2020.

During the past 12 reporting months, the following activities took place for the Project:

- Gate 2 & 3 drainage pipe installation
- Minor services connection at G.L J of HUH
- Platform ABWF and E&M works at HUH
- Modification works at Concourse level, mid-level walkway
- Landscape works
- Remedial works at HUH/HHS/NAT
- Minor external works
- Paving block outside concourse
- Noise enclosure remedial works

Landscape and Visual Monitoring

Monthly inspection of the implementation of landscape and visual mitigation measures was conducted bi-weekly. All necessary mitigation measures have been implemented by the Contractor.

Air Quality Monitoring

No exceedance of Action and Limit Level of 24-hour TSP monitoring was recorded at the monitoring location during the entire monitoring period.

Noise Monitoring

Construction airborne noise monitoring can be referred to the Monthly EM&A Report for Contract 1111.

Waste Management

Receptacles for collection of general refuse were provided at the site. As advised by the Contractor, a total of 22,099,000 kg of general refuse was generated from the Project and disposed of at NENT landfill. A total of 457,930 m^3 inert construction and demolition (C&D) materials were generated from the Project, 420 m^3 was reused in the contract, 239,630 m^3 was reused in other projects, 4,860 m^3 was disposed at KTE1001 Barging Point, 3,430 m^3 was disposed as public fills at TKO137 and 3,430 m^3 was disposed as public fills at TM38. 6,740 kg and 8,110 L of chemical waste was disposed. 42, 670 m^3 of Type 1 and 22,570 m^3 of Type 2 marine sediments were generated from SCL1112, which were delivered to the Barging Point at SCL1121 for disposal. 9,793,740 kg metals, 21,340 kg paper/cardboard packaging, 3,790,760 kg asphalt and 3,180 kg plastics were recycled from the Project.

Environmental Auditing

Weekly environmental site audits were conducted by representatives of the Contractor, Engineer and Contractor's ET throughout the construction period. The representative of IEC joined the site audit once per month.

Complaint, Notification of Summons and Successful Prosecution

There were eleven (11) environmental complaints received during the reporting period, including seven (7) noise related complaints, one (1) complaint regarding dust nuisance and three (3) odour complaints were received. Investigations were conducted for each complaint and Investigation Reports were prepared and submitted to EPD. All complaints were settled and investigation findings were reported in the respective monthly EM&A reports.

There was one summon that was received on 3 October 2016 regarding an incident where a worker operated a hand-held electric breaker outside the Concourse during night time on 1 April 2016, in violation of Section 6 (1) (a) and 6 (5) of the Noise Control Ordinance (Cap. 400). This resulted in a successful prosecution of the worker who pleaded guilty during the hearing on 3 November 2016 and paid a HKD 15,000 fine. The details of the summon and prosecution were reported in 41st and 42nd Monthly EM&A Reports of October and November 2016 respectively.

Future Key Issues

Major works at all works areas of Works Contract 1112 have been substantially completed and there are only minor works remaining. Based on the joint site inspection attended by the Contractor, ER, ET and IEC on 17 September 2020, it was observed that all major construction activities have been completed, no noise or dust generating activity was observed undergoing. No significant environmental impacts arising from this Project are anticipated.

Summary of the Overall EM&A Programme

The overall EM&A programme was considered to have been conducted to satisfaction with compliance with all requirements in the EM&A Manual. Mitigation measures were provided by the Contractor to reduce environmental impacts from construction works to acceptable levels and were considered to be generally effective. Any identified environmental observations were rectified timely to avoid any significant impacts.

1 INTRODUCTION

1.1 Project Background

1.1.1 The Shatin to Central Link (SCL) is a designated project (DP) under the Environmental Impact Assessment Ordinance (EIAO). For the purposes of the Environmental Impact Assessment (EIA), five EIA studies have been conducted to cover different sections of the SCL. These are Tai Wai to Hung Hom Section (SCL (TAW-HUH)), Mong Kok East to Hung Hom Section (SCL (MKK-HUH)), Hung Hom to Admiralty Section (SCL (HUH-ADM)), Protection Works at Causeway Bay Typhoon Shelter and Stabling Sidings at Hung Hom Freight Yard (SCL (HHS)).

1.1.2 Three EIA reports are of relevance to Works Contract 1112 (the Project), namely EIA for SCL (TAW-HUH) (Register No. AEIAR-167/2012), EIA for SCL (MKK-HUH) (Register No. AEIAR-165/2012) and EIA for SCL (HHS) (Register No. AEIAR-164/2012). These were submitted and subsequently approved with conditions by the Environmental Protection Department (EPD) on 17 March 2012. Two Environmental Permits (EPs), Environmental Permit No. EP-437/2012 for SCL (MKK-HUH) and Environmental Permit No. EP-438/2012 for SCL (TAW-HUH) were subsequently obtained on 22 March 2012. An application for variation of the EP for SCL (TAW-HUH) was approved and a varied EP (EP No. EP-438/2012/K) was issued by Director of Environmental Protection (DEP) on 4 October 2016. An application for variation of the EP for SCL (MKK-HUH) was approved and a varied EP (EP No. EP-437/2012/A) was issued on 28 November 2017.

1.1.3 Construction of the SCL has been divided into a number of works contracts. This Works Contract 1112 was awarded to Leighton Contractors (Asia) Limited (the Contractor) in March 2013. Leighton has engaged SMEC Asia Limited as the Environmental Team under the EIAO for Works Contract 1112.

1.2 Purpose of the Report

1.2.1 This is the Final EM&A Review Report which summarizes the monitoring results and audit findings during the reporting period from 3 June 2013 to 31 October 2020.

1.3 Report Structure

- Section 1: Introduction
- Section 2: Project Information
- Section 3: Environmental Monitoring Parameters
- Section 4: Implementation Status of Environmental Mitigation Measures
- Section 5: Monitoring Results
- Section 6: Environmental Site Inspection and Audit
- Section 7: Environmental Non-conformance
- Section 8: Future Key Issues
- Section 9: Conclusions and Recommendations

2 PROJECT INFORMATION

2.1 General Site Description

2.1.1 The works under Works Contract 1112 comprise permanent works and the necessary temporary works for Hung Hom Station (HUH), Hung Hom Stabling Sidings (HHS), the South Approach Tunnels (SAT) and the North Approach Tunnels (NAT) to the new station, HHS and any reprovisioning remedial and improvement works (RRIW). The major permanent works under Works Contract 1112 generally comprise the following:

- New HUH integrated with the existing HUH station, with associated entrances, ventilation facilities, plant rooms, other ancillary facilities, and ABWF works.
- Modification of the existing HUH station to allow interchange between Existing East Rail Line and SCL(TAW-HUH), and between SCL(MKK-HUH) and SCL(TAW-HUH) comprising alteration and addition works at podium level, mid-level, and platform level.
- Running tunnels of the SCL(TAW-HUH) at the south and north ends of the new HUH to the existing stub tunnel of Existing West Rail and interface with Works Contract 1111.
- Running tunnels of the SCL(MKK-HUH) at the south and north ends of the new HUH to the proposed North Ventilation Building and interface with Works Contract 1111.
- Extensive underpinning and modification of the existing podium structure of HUH and the Hong Kong Coliseum, and associated protection works.
- Diversion, modification and dismantling of existing building services associated with underpinning and modification of existing structures.
- Demolition and clearance of the majority of the existing Hung Hom Freight Terminal infrastructure.
- Protection, diversion, and modification of utilities and services.
- Launching and retrieval track connecting the SCL(TAW-HUH) to HHS from the turnout close to WRL at the south and interface with Works Contract 1111 at the north.
- CLP Transformer Building.
- Demolition of the existing International Mail Centre adjacent to Salisbury Road, the MTR Freight Operations Building within the southern end of the Hung Hom Freight Terminal, and other ancillary buildings.
- Reconstruction of Cheong Wan Road Viaduct.
- Civil, BS and ABWF provisions for designated and interfacing contracts.
- Landscape works.
- Modification to various parts of existing disused Freight Yard structure for provision of HHS, comprising alteration and addition works at underground level, ground level, mezzanine level and podium level including new accommodation and plant areas and stablings and associated track provisions connecting to the interface with Works Contract 1111.
- Extensive underpinning of the podium structures above the existing disused Freight Yard for provision of HHS and its associated works.
- Construct part of the shunting track.
- Construct the emergency track and its associated works which connect the stabling siding to the mainline which run parallel with the northern approach of HUH.
- Construct the semi-enclosed noise enclosure and its associated works over the entire HHS north fan area.
- Preparation works, operation, and reinstatement of an additional storage area near Muk Chui Street, Kai Tak.

2.1.2 The works area for the Works Contract 1112 is shown in ***Appendix A***.

2.2 Construction Programme and Activities

2.2.1 Major construction works of Works Contract 1112 were substantially completed by 17 September 2020, with only minor works remaining. Hence, the cessation of EM&A programme under this Contract was proposed on 21 October 2020 and EPD expressed no objection on 29 October 2020 to the proposed cessation.

2.2.2 The major construction activities carried out by the Contractor in the past twelve reporting months are summarized as below:

- Gate 2 & 3 drainage pipe installation
- Minor services connection at G.L J of HUH
- Platform ABWF and E&M works at HUH
- Modification works at Concourse level, mid-level walkway
- Landscape works
- Remedial works at HUH/HHS/NAT
- Minor external works
- Paving block outside concourse
- Noise enclosure remedial works

2.2.3 The summary of construction programme during the reporting period can be referred to in their respective monthly EM&A reports.

2.3 Project Organisation

2.3.1 The project organization structure is presented in ***Appendix B***. The contact names and numbers for key personnel of the Project are summarized in ***Table 2-1***.

Table 2-1 Contact Information of Key Personnel

COMPANY	POSITION	NAME	TELEPHONE	FAX
MTR	Construction Manager	Mr Oscar WONG	3127 6201	3127 6422
	SCL Project Environmental Team Leader	Ms Lisa POON	3127 6295	2993 7577
Meinhardt	Independent Environmental Checker	Ms Claudine LEE	2859 5409	2540 1580
Leighton	Environmental Manager	Mr Kevin HARMAN	3973 0270	2356 9355
SMEC	ET Leader	Ms Vivian CHAN	3995 8140	3995 8101

3 ENVIRONMENTAL MONITORING PARAMETERS

3.1 Landscape and Visual Impact Monitoring

3.1.1 In accordance with the EM&A Manual, the landscape and visual mitigation measures shall be implemented and a site inspection shall be conducted once every two weeks throughout the construction period.

3.2 Air Quality Monitoring

Parameter, Frequency and Duration

3.2.1 In accordance with the EM&A Manual, 24-hour Total Suspended Particulates (TSP) level at the designated air quality monitoring station is required throughout the construction period. The monitoring parameters and frequency are provided in ***Table 3-1***.

Table 3-1 Air Quality Monitoring Parameters and Frequency

PARAMETER	FREQUENCY
1-hour TSP	3 times in every 6 days when one documented valid complaint is received
24-hour TSP [1]	Once per 6 days

Note:

1. 24-hour TSP will be conducted when project-related construction activities are being undertaken within a radius of 500m from monitoring stations.

Monitoring Location

3.2.2 One air quality monitoring station was set up at the location in accordance with the approved EM&A Manuals. The location of the construction dust monitoring station is summarised in ***Table 3-2*** and shown in ***Appendix C***.

3.2.3 The monitoring location of AM2 has been located on the roof of the Site Office Building next to Harbourfront Horizon since 19 March 2014.

Table 3-2 Air Quality Monitoring Location

ID	LOCATION
AM2 [1]	Harbourfront Horizon [2]

Note:

1. Different IDs were used in various EM&A Manuals for dust monitoring location at Harbourfront Horizon, DMS-12 was used in EM&A Manual for SCL(TAW-HUH), AM2 were used in EM&A Manual and EIA report for SCL(MKK-HUH), and DMS-1 Works Contract 1112 were used in EM&A Manual and EIA report for HHS. For ease of future reference, AM2 will be adopted for EM&A reporting for Works Contract 1112 when referring to this monitoring location.
2. Air quality monitoring location at Harbourfront Horizon is the same as monitoring station CD6a as proposed in the EM&A Manual for "Kwun Tong Line Extension (KTE)". Access to Harbourfront Horizon was rejected by the owner during preparation for baseline monitoring for the KTE in early 2011. A representative monitoring location at the adjacent Finger Pier, at about 25m from Harbourfront Horizon, was adopted as an alternative monitoring location for KTE. This monitoring location is considered the most appropriate alternative monitoring location for AM2 and have been adopted for dust monitoring for Contract 1112.

Monitoring Equipment

3.2.4 The air quality monitoring was performed using High Volume Sampler (HVS). The HVS meets all the requirements of the EM&A Manual. Detail of the HVS used in air quality monitoring is provided in ***Table 3-3***.

Table 3-3 Air Quality Monitoring Equipment

EQUIPMENT	BRAND AND MODEL	SERIAL NUMBER
High Volume Sampler	GS-2310 Accu-vol	694-0665
Calibration Kit	Tisch (TE-5025A)	1941

3.2.5 The HVS were calibrated in every six months interval using calibration kit which is re-calibrated by the manufacturer after one year of use. The calibration certificate of the calibration kit and the calibration spreadsheet of the HVS can be referred to in the respective EM&A report.

Monitoring Procedures

3.2.6 Specifications of HVS are as follow:

i. 0.6 - 1.7m^3 per minute adjustable flow range

ii. Equipped with a timing / control device with +/- 5 minutes accuracy for 24 hours operation

iii. Installed with elapsed-time meter with +/- 2 minutes accuracy for 24 hours operation

iv. Capable of providing a minimum exposed area of 406cm2

v. Flow control accuracy: +/- 2.5% deviation over 24-hour sampling period

vi. Equipped with a shelter to protect the filter and sampler

vii. Incorporated with an electronic mass flow rate controller or other equivalent devices

viii. Equipped with a flow recorder for continuous monitoring

ix. Provided with a peaked roof inlet

x. Incorporated with a manometer

xi. Able to hold and seal the filter paper to the sampler housing at horizontal position

xii. Easily changeable filter and

xiii. Capable of operating continuously for a 24-hour period.

3.2.7 Preparation of Filter Papers

i. Glass fibre filters, G810 were labelled and sufficient filters that were clean and without pinholes were selected.

ii. All filters were equilibrated in the conditioning environment for 24 hours before weighing. The conditioning environment temperature was around 25°C and not variable by more than ±3 °C; the relative humidity (RH) was < 50% and not variable by more than ±5%. A convenient working RH was 40%.

iii. All filter papers were prepared and analysed by ALS Technichem (HK) Pty Ltd., which is a HOKLAS accredited laboratory and has comprehensive quality assurance and quality control programmes.

3.2.8 Field Monitoring

i. The power supply was checked to ensure the HVS works properly.

ii. The filter holder and the area surrounding the filter were cleaned.

iii. The filter holder was removed by loosening the four bolts and a new filter, with stamped number upward, on a supporting screen was aligned carefully.

iv. The filter was properly aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter.

v. The swing bolts were fastened to hold the filter holder down to the frame. The pressure applied was sufficient to avoid air leakage at the edges.

vi. Then the shelter lid was closed and was secured with the aluminium strip.

vii. The HVS was warmed-up for about 5 minutes to establish run-temperature conditions.

viii. A new flow rate record sheet was set into the flow recorder.

ix. On site temperature and atmospheric pressure readings were taken and the flow rate of the HVS was checked and adjusted at around 1.3 m^3/min, and complied with the range specified in the EM&A Manual (i.e. 0.6-1.7 m^3/min).

x. The programmable digital timer was set for a sampling period of 24 hrs, and the starting time, weather condition and the filter number were recorded.

xi. The initial elapsed time was recorded.

xii. At the end of sampling, on site temperature and atmospheric pressure readings were taken and the final flow rate of the HVS was checked and recorded.

xiii. The final elapsed time was recorded.

xiv. The sampled filter was removed carefully and folded in half-length so that only surfaces with collected particulate matter were in contact.

xv. It was then placed in a clean plastic envelope and sealed.

xvi. All monitoring information was recorded on a standard data sheet.

xvii. Filters were then sent to ALS Technichem (HK) Pty Ltd. for analysis.

Wind Data Monitoring

3.2.9 Average wind data (wind speed and direction) at the King's Park meteorological station during the monitoring period were obtained from the Hong Kong Observatory (HKO) and can be referred to the respective monthly EM&A reports.

Monitoring Schedule

3.2.10 The monitoring schedule during the reporting period with respect to the construction programme can be referred to the respective monthly EM&A reports.

3.3 Construction Noise Monitoring

3.3.1 In accordance with the approved EM&A Manuals for SCL (TAW-HUH), SCL (MKK-HUH) and SCL (HHS), construction noise monitoring is required at No. 234-238 Chatham Road North (originally proposed as Wing Fung Building in the approved EM&A Manuals).

3.3.2 Construction airborne noise monitoring requirement details at No. 234 -238 Chatham Road North (NM2) can be referred to the Monthly EM&A Report for Contract 1111.

4 IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES

4.1.1 All environmental mitigation measures and requirements as stated in EIA Reports, Environmental Permits and EM&A Manuals are implemented. The implementation status of the environmental mitigation measures for this Works Contract during the reporting period is summarized in ***Appendix D***.

5 MONITORING RESULTS

5.1 Landscape and Visual

5.1.1 Monthly inspection of the implementation of landscape and visual mitigation measures was conducted bi-weekly throughout the reporting period. All necessary mitigation measures have been implemented by the Contractor. Summary of the site inspections throughout the reporting period can be referred to in the respective monthly EM&A reports.

5.1.2 The Event and Action Plan for Landscape and Visual Impact Monitoring is provided in ***Appendix E***.

5.2 Air Quality Monitoring

5.2.1 The summary of 24-hour TSP monitoring results and graphical representation of air quality monitoring results are presented in ***Appendix F***.

5.2.2 No Action and Limit Level exceedance was recorded during the entire monitoring period.

5.2.3 The Event and Action Plan is provided in ***Appendix E***.

5.2.4 The cessation of monitoring works at AM 2 was approved by EPD on 29 October 2020. The last monitoring date was conducted on 29 October 2020.

5.3 Regular Construction Noise Monitoring

5.3.1 Construction airborne noise monitoring results can be referred to the Monthly EM&A Report for Contract 1111. The cessation of monitoring works at NM 2 was approved by EPD on 31 July 2019. The last monitoring date was conducted on 23 July 2019.

5.3.2 The Action and Limit levels for construction noise are summarised in **Error! Reference source not found.**.

Table 5-1 Action and Limit Levels

TIME PERIOD	ACTION LEVEL	LIMIT LEVEL
07:00-19:00 hours on normal weekdays	When one documented valid complaint is received	75dB(A)*

Note:

If works are to be carried out during restricted hours, the conditions stipulated in the construction noise permit issued by the Noise Control Authority have to be followed.

* Reduce to 70 dB(A) for schools and 65 dB(A) during school examination periods.

5.3.3 The Event and Action Plan for construction noise is provided in ***Appendix E***.

5.4 Waste Management

5.4.1 Receptacles for collection of general refuse were provided at the site. As advised by the Contractor, a total of 22,099,000 kg of general refuse was generated from the Project and disposed of at NENT landfill. A total of 457,930 m^3 inert construction and demolition (C&D) materials were generated from the Project, 420 m^3 was reused in the contract, 239,630 m^3 was reused in other projects, 4,860 m^3 was disposed at KTE1001 Barging Point, 3,430 m^3 was disposed as public fills at TKO137 and 3,430 m^3 was disposed as public fills at TM38. 6,740 kg and 8,110 L of chemical waste was disposed. 42, 670 m^3 of Type 1 and 22,570 m^3 of Type 2 marine sediments were generated from SCL1112, which were delivered to the Barging Point at SCL1121 for disposal. 9,793,740 kg metals, 21,340 kg paper/cardboard packaging, 3,790,760 kg asphalt and 3,180 kg plastics were recycled from the Project. The waste flow table and marine sediment flow table were presented in ***Appendix G***.

5.4.2 A billing account for construction waste disposal has been approved and a trip ticket system was implemented to record the waste generated from the Project in the reporting month.

6 ENVIRONMENTAL SITE INSPECTION AND AUDIT

6.1.1 Weekly site audits were conducted by the ET and attended by the ER and the Contractor to monitor the timely implementation of proper environmental management practices and mitigation measures at the site. Representative of the IEC joined the site inspection once per month. A summary of the implementation schedule of environmental mitigation measures is provided in ***Appendix D***. Summary of the site inspections throughout the reporting period can be referred to in the respective monthly EM&A reports.

7 ENVIRONMENTAL NON-CONFORMANCE

7.1 Summary of Monitoring Exceedances

7.1.1 All 24-hour TSP results were below the Action and Limit level at all monitoring locations in the reporting period.

7.2 Summary of Environmental Non-Compliance

7.2.1 No environmental non-compliance event was recorded during the reporting period.

7.3 Summary of Environmental Complaint

7.3.1 There were eleven (11) environmental complaints received during reporting period, including seven (7) noise related complaints, one (1) complaint regarding dust nuisance and three (3) odour complaints were received. Investigations were conducted for each complaint and Investigation Reports were prepared and submitted to EPD. All complaints were settled and investigation findings were reported in the respective monthly EM&A reports.

7.3.2 Details and cumulative statistics on environmental complaints can be referred to ***Appendix H***.

7.4 Summary of Environmental Summons and Successful Prosecution

7.4.1 There was one summon that was received on 3 October 2016 regarding an incident where a worker operated a hand-held electric breaker outside the Concourse during night time on 1 April 2016, in violation of Section 6 (1) (a) and 6 (5) of the Noise Control Ordinance (Cap. 400). This resulted in a successful prosecution of the worker who pleaded guilty during the hearing on 3 November 2016 and paid a HKD 15,000 fine. The details of the summon and prosecution were reported in 41st and 42nd Monthly EM&A Reports of October and November 2016 respectively.

7.4.2 The cumulative statistics on notification of summons and successful prosecutions is provided in ***Appendix H***.

8 FUTURE KEY ISSUES

8.1 Construction Programme for the Project

8.1.1 Major construction works of Works Contract 1112 were substantially completed by 17 September 2020, with only minor works remaining. Hence, the cessation of EM&A programme under this Contract was proposed on 21 October 2020 and EPD expressed no objection on 29 October 2020 to the proposed cessation.

9 REVIEW OF EIA AND COMMENTS

9.1 Validity of EIA Predictions and Identification of Shortcomings in EIA Recommendations

9.1.1 All of the air quality monitoring results in the reporting period were below the Action and Limit Levels. This shows that the results were in line with the predictions in the EIA that with the implementation of mitigation measures, there would be no unacceptable impacts from the Project.

9.1.2 During the reporting period, environmental site inspections were carried out to monitor and audit the environmental performance of the project. The Contractor implemented environmental mitigation measures and good site practices timely and properly. Environmental deficiencies were identified during site audits, and remedial actions were implemented timely and properly wherever necessary.

9.1.3 The mitigation measures recommended in the EIA and the approved EM&A manuals were found to be effective. Thus, it is observed that there are no shortcomings in the EIA recommendations.

9.2 Comments on the Overall EM&A Programme

9.2.1 The EM&A programme was conducted satisfactorily to ensure the compliance of environmental requirements and the proper implementation of all necessary mitigation measures. Mitigation measures were provided by the Contractor to reduce environmental impacts from construction works to acceptable levels and were considered to be generally effective. Any identified environmental observations were rectified timely to avoid any significant impacts.

9.2.2 The air quality monitoring was properly carried out in accordance to the approved EM&A manuals. The monitoring results showed that there were no unacceptable impact to sensitive receivers.

9.2.3 The overall environmental performance of the Project was considered to be satisfactorily with no unacceptable impacts from the construction-related activities.

10 CONCLUSIONS AND RECOMMENDATIONS

10.1 Conclusions

10.1.1 24-hour TSP monitoring were carried out during the entire EM&A period.

10.1.2 No exceedance of the Action and Limit Levels of air quality monitoring was recorded at the designated monitoring stations during reporting period.

10.1.3 Bi-weekly landscape and visual monitoring and weekly environmental site audits were conducted in the reporting periods. Recommendations on remedial actions were provided to the Contractor for deficiencies identified during the site audits.

10.1.4 No environmental non-compliance event was recorded during the reporting period.

10.1.5 There were eleven (11) environmental complaints received during reporting period, including seven (7) noise related complaints, one (1) complaint regarding dust nuisance and three (3) odour complaints were received. Investigations were conducted for each complaint and Investigation Reports were prepared and submitted to EPD. All complaints were settled and investigation findings were reported in the respective monthly EM&A reports.

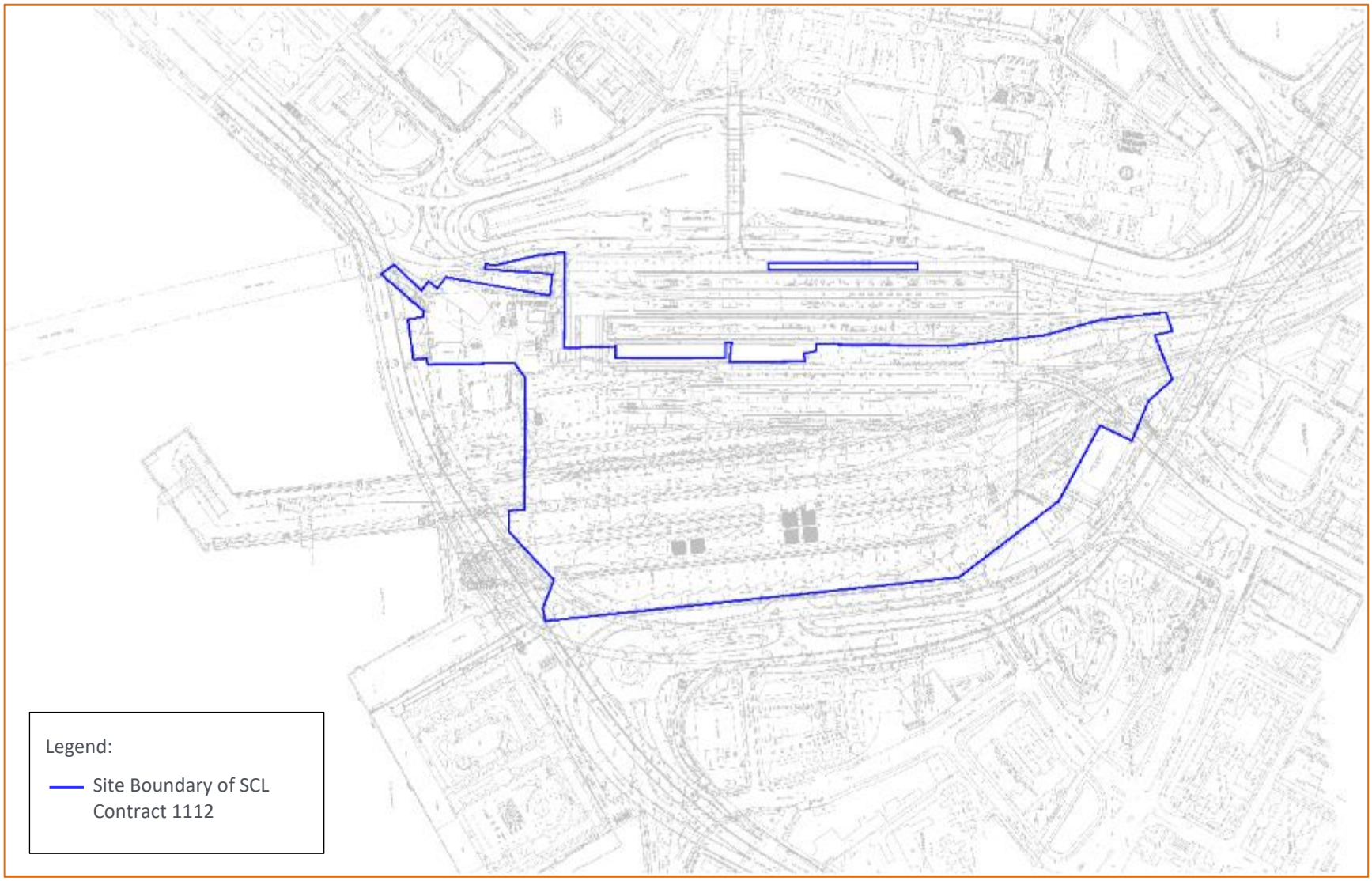
10.1.6 There was one summon that was received on 3 October 2016 regarding an incident where a worker operated a hand-held electric breaker outside the Concourse during night time on 1 April 2016, in violation of Section 6 (1) (a) and 6 (5) of the Noise Control Ordinance (Cap. 400). This resulted in a successful prosecution of the worker who pleaded guilty during the hearing on 3 November 2016 and paid a HKD 15,000 fine. The details of the summon and prosecution were reported in 41st and 42nd Monthly EM&A Reports of October and November 2016 respectively.

10.1.7 The cessation of construction phase EM&A was proposed on 16 October 2020 and EPD expressed no objection to the cessation proposal on 29 October 2020.

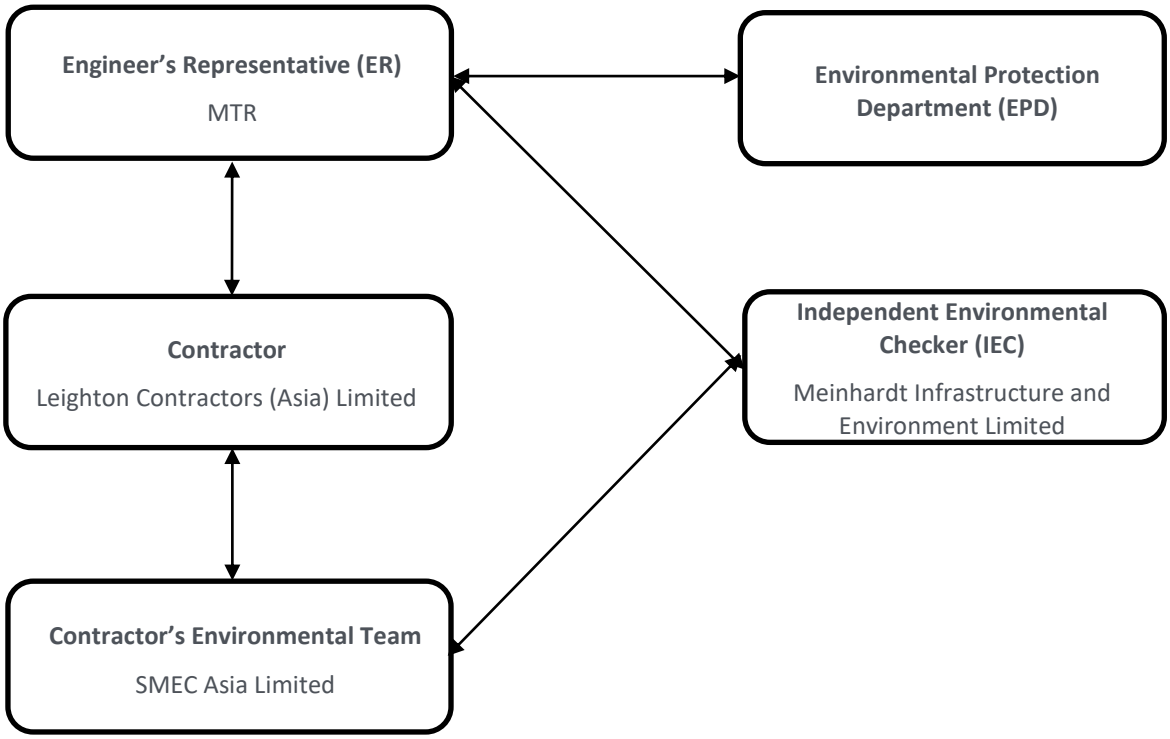
10.1.8 The EM&A programme was conducted satisfactorily to ensure the compliance of environmental requirements and the proper implementation of all necessary mitigation measures. The overall environmental performance of the Project was considered to be satisfactorily with no unacceptable impacts from the construction-related activities.

10.1.9 The overall EM&A programme was successful and was able to cost-effetely identify deterioration of the environment caused by the Project and then initiate prompt remedial actions to reduce impact to acceptable levels.

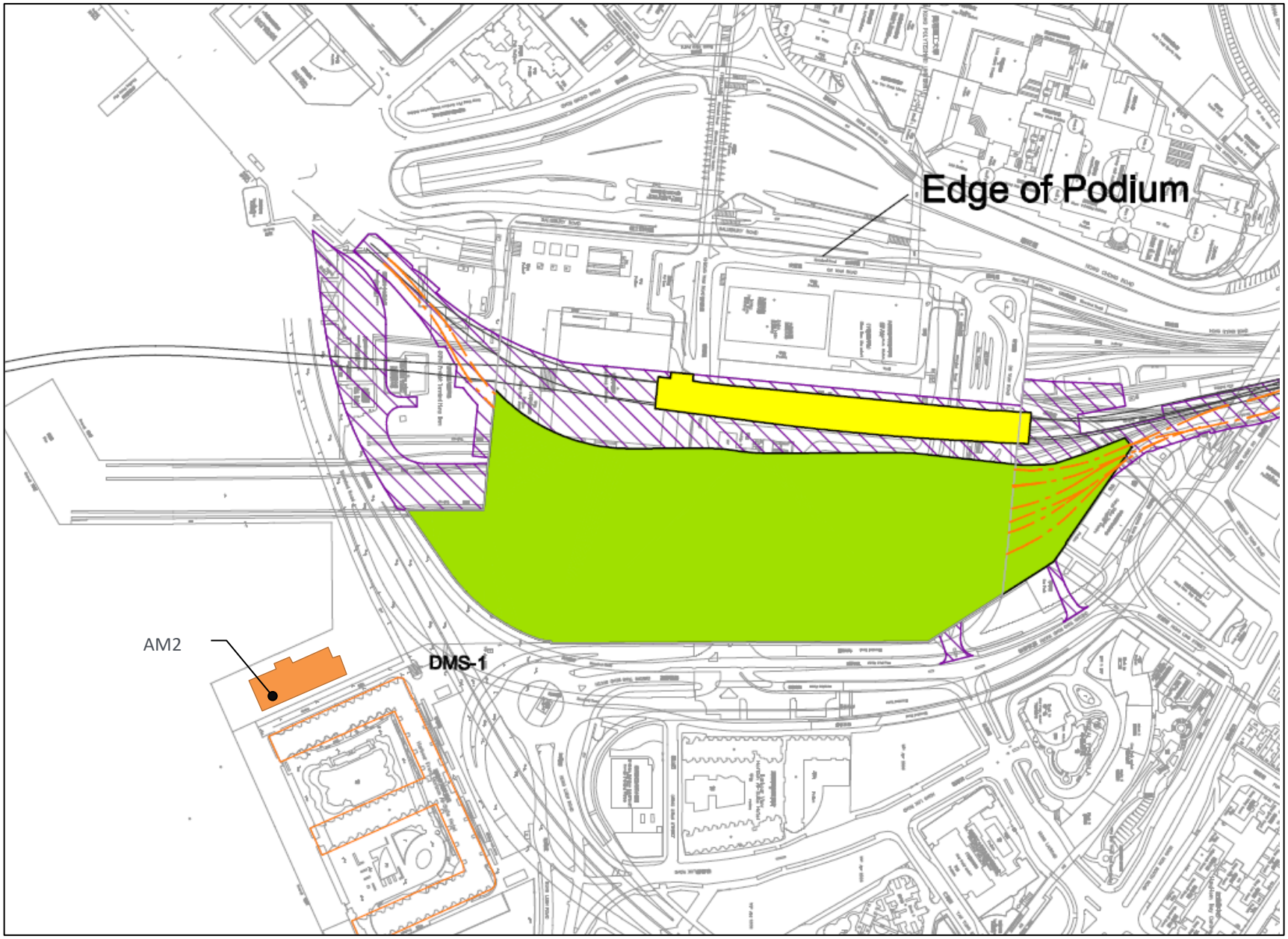
Appendix A PROJECT WORKS BOUNDARY


Legend:
Site Boundary of SCL Contract 1112

Appendix B PROJECT ORGANISATION FOR ENVIRONMENTAL WORKS


Engineer's Representative (ER)
MTR
Environmental Protection Department (EPD)
Contractor
Leighton Contractors (Asia) Limited
Independent Environmental Checker (IEC)
Meinhardt Infrastructure and Environment Limited
Contractor's Environmental Team
SMEC Asia Limited

Appendix C LOCATION OF AIR QUALITY MONITORING STATION


Edge of Podium
AM2
DMS-1

Appendix D IMPLEMENTATION SCHEDULE OF ENVIRONMENTAL MITIGATION MEASURES

EIA REF.	RECOMMENDED MITIGATION MEASURES FOR WORKS CONTRACT 1112	OBJECTIVES OF THE RECOMMENDED MEASURES & MAIN CONCERNS TO ADDRESS	WHO TO IMPLEMENT THE MEASURES?	LOCATION OF THE MEASURES	WHEN TO IMPLEMENT THE MEASURES?	WHAT REQUIREMENTS OR STANDARDS FOR MEASURES TO ACHIEVE?	STATUS
Landscape & Visual (Construction Phase)							
S6.9.3 and S6.12 of Ref.1; Table 4.9 of Ref. 2; S6.12 of Ref. 3	The following good site practices and measures for minimisation and avoidance of potential impacts are recommended: <u>Re-use of existing soil</u> • For soil conservation, existing topsoil will be re-used where possible for new planting areas within the project. The construction programme will consider using the soil removed from one phase for backfilling another. Suitable storage ground, gathering ground and mixing ground may be set up onsite as necessary. <u>No-intrusion zone</u> • To maximise protection to existing trees, ground vegetation and the associated under storey habitats, construction contracts may designate "No-intrusion Zone" to various areas within the site boundary with rigid and durable fencing for each individual no-intrusion zone. The contractor will closely monitor and restrict the site working staff from entering the "no-intrusion zone", even for indirect construction activities and storage of equipment. <u>Protection of retained trees</u> • All retained trees will be recorded photographically at the commencement of the contract, and carefully protected during the construction period. o The contractor will be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in contractor's works sites.	Minimise visual and landscape impact	Contractor	Within project site	Construction Stage	EIAO-TM	^ ^ ^ ^
S6.12 of Ref.1; Table 4.9 of Ref. 2; Table 6.9 of Ref. 3	<u>Decorative hoarding</u> • Erection of decorative screen during construction stage to screen off undesirable views of the construction site for visual and landscape sensitive areas. Hoarding will be designed to be compatible with the existing urban context. <u>Management of facilities on work sites</u> • To provide proper management of the facilities on the site, give control on the height and disposition/ arrangement of all facilities on the works site to minimise visual impact to adjacent VSRs.	Minimise the visual and landscape impact of the Project during construction phase	Contractor	Within project site	Detailed design and construction stage	EIAO-TM ETWB TCW 2/2004 ETWB TCW 3/2006	^ ^

EIA REF.	RECOMMENDED MITIGATION MEASURES FOR WORKS CONTRACT 1112	OBJECTIVES OF THE RECOMMENDED MEASURES & MAIN CONCERNS TO ADDRESS	WHO TO IMPLEMENT THE MEASURES?	LOCATION OF THE MEASURES	WHEN TO IMPLEMENT THE MEASURES?	WHAT REQUIREMENTS OR STANDARDS FOR MEASURES TO ACHIEVE?	STATUS
	<u>Tree transplanting</u> • Trees of medium to high survival rate that would be affected by the works will be transplanted where possible and practicable. Tree transplanting proposal including final location for transplanted trees will be submitted separately to seek relevant government department's approval, in accordance with ETWB TCW No 3/2006.						^
Air Quality (Construction Phase)							
N.A.	Emission from Vehicles and Plants: • All vehicles shall be shut down in intermittent use. • Only well-maintained plant should be operated on-site and plant should be serviced regularly to avoid emission of black smoke. • All diesel fuelled construction plant within the works areas shall be powered by ultra-low sulphur diesel fuel (ULSD).	Reduce air pollution emission from construction vehicles and plants	Contractor	All constructions sites	Construction stage	Air Pollution Control Ordinance (APCO)	^ ^ ^
Construction Dust Impact							
S7.6.5 of Ref. 1; S7.6.6 of Ref. 3	The contractor will follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation.	Minimise dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction stage	APCO To control the dust impact to meet HKAQO and EIAO-TM criteria	^
S5.20, S5.21, S5.50 and Table 5.4 of Ref. 2	Barging Facility: • Unloading of spoils to barge – the unloading process should be undertaken within a 3-sided screen with top tipping hall. Water spraying and flexible dust curtains should be provided at the discharge point for dust suppression. • Transportation of the spoil from the construction sites to the Barging Point – watering once along all paved haul roads to reduce dust emission by 91.7%. This dust suppression efficiency is derived based on the average haul road traffic, average evaporation rate and an assumed application intensity of 1.7 L/m^2 once every working hour. Any potential dust impact and watering mitigation would be subject to the actual site condition. For example, a construction activity that produces inherently wet conditions or in cases under rainy weather, the above water application intensity may not be unreservedly applied. While the above watering frequency is to be followed, the extent of watering may vary depending on actual site conditions but should be sufficient to maintain an equivalent	To minimize the construction dust impacts to the nearby sensitive receivers	Contractor	Barging point at Hung Hom Freight Pier	Construction stage	APCO	N/A N/A

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	intensity of no less than 1.7L/m² to achieve the removal efficiency. The dust levels would be monitored and managed under an EM&A programme as specified in the EM&A Manual. • Vehicles leaving the barging facilities – vehicles would be required to pass through the wheel washing facilities to be provided at site exit.						N/A
S7.6.5 of Ref. 1; S5.50 of Ref. 2; S7.6.6 of Ref. 3	Mitigation measures in form of regular watering under a good site practice will be adopted. Watering once per hour on exposed worksites and haul road will be conducted to achieve dust removal efficiencies of 91.7%. While the above watering frequencies are to be followed, the extent of watering may vary depending on actual site conditions but will be sufficient to maintain an equivalent intensity of no less than 1.8 L/m² to achieve the dust removal efficiency.	Minimise dust impact at the nearby sensitive receivers	Contractor	Active works areas, exposed areas and paved haul roads	Construction stage	APCO To control the dust impact to meet HKAQO and EIAO-TM criteria	^
S7.6.5 of Ref. 1; S5.51 of Ref. 2; S7.6.6 of Ref. 3	• Any excavated or stockpile of dusty material will be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading. • Any dusty materials remaining after stockpiles are removed will be wetted and cleared from the surface of roads. • A stockpile of dusty material will not be extended beyond the pedestrian barriers, fencing or traffic cones. • The load of dusty materials on a vehicle leaving a construction site will be covered entirely by impervious sheeting to ensure that the dusty materials do not leak from the vehicle. • Where practicable, vehicle washing facilities with high pressure water jet will be provided at every discernible or designated vehicle exit point. The area where vehicle washing takes place and the road section between the washing facilities and the exit point will be paved with concrete, bituminous materials or hardcore. • When there are open excavation and reinstatement works, hoarding of not less than 2.4m high will be provided and properly maintained as far as practicable along the site boundary with provision for public crossing; Good site practice will also be adopted by the contractor to ensure the conditions of the hoardings are properly maintained in construction period. • The portion of any road leading only to construction site that is within 30m of a vehicle entrance or exit will be kept clear of dusty materials.	Minimise dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction stage	APCO Air Pollution Control (Construction Dust) Regulation To control the dust impact to meet HKAQO and EIAO-TM criteria	^ ^ ^ ^ ^ ^ ^ ^

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	• Surfaces where any pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operation takes place will be sprayed with water or a dust suppression chemical continuously. • Any area that involves demolition activities will be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet. • Where scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting will be provided to enclose the scaffolding from the ground floor level of the building, or a canopy will be provided from the first floor level up to the highest level of the scaffolding. • Any skip hoist for material transport will be totally enclosed by impervious sheeting. • Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) will be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides. • Cement or dry PFA delivered in bulk will be stored in a closed silo fitted with an audible high level alarm which is interlocked with the material filling line and no overfilling is allowed. • Loading, unloading, transfer, handling or storage of bulk cement or dry PFA will be carried out in a totally enclosed system or facility, and any vent or exhaust will be fitted with an effective fabric filter or equivalent air pollution control system. • Exposed earth will be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shotcrete or other suitable surface stabiliser within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies.						^ N/A ^ ^ ^ ^ ^
S7.6.5 of Ref. 1; S5.57 of Ref. 2; S7.6.6 of Ref. 3	Implement regular dust monitoring under EM&A programme during the construction stage.	Monitoring of dust impact	Contractor	Harbourfront Horizon	Construction stage	EIAO-TM APCO	^

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Construction Airborne Noise							
S8.3.6 of Ref. 1; S6.61 of Ref. 2; S8.5.6 of Ref. 3	Implement the following good site practices: • Only well-maintained plant will be operated on-site and plant will be serviced regularly during the construction programme. • Machines and plant (such as trucks, cranes) that may be in intermittent use will be shut down between work periods or will be throttled down to a minimum. • Plant known to emit noise strongly in one direction, where possible; be orientated so that the noise is directed away from nearby NSRs. • Silencers or mufflers on construction equipment will be properly fitted and maintained during the construction works. • Mobile plant will be sited as far away from NSRs as possible and practicable. • Material stockpiles, mobile container site office and other structures will be effectively utilised, where practicable, to screen noise from onsite construction activities.	Control construction airborne noise	Contractor	All construction sites where practicable	Construction stage	Annex 5, EIAO-TM	^ ^ ^ ^ ^ ^
S8.3.6 of Ref. 1; S6.68 of Ref. 2; S8.5.6 of Ref. 3	Install temporary hoarding located on the site boundaries between noisy construction activities and NSRs. The conditions of the hoardings will be properly maintained throughout the construction period.	Reduce the construction noise levels at low-level zone of NSRs through partial screening.	Contractor	All construction sites where practicable	Construction stage	Annex 5, EIAO-TM	^
S8.3.6 of Ref. 1; S6.64 – 6.67 and Table 6.20 of Ref. 2; S8.5.6 of Ref. 3	Install movable noise barriers (typical design is wooden framed barrier with a small-cantilevered on a skid footing with 25mm thick internal sound absorptive lining), acoustic mat or full enclosure, screen the noisy plants including air compressor, generators and saw.	Screen the noisy plant items to be used at all construction sites	Contractor	All construction sites where practicable	Construction stage	Annex 5, EIAO-TM	^
S8.3.6 of Ref. 1; S6.62 – 6.63 and Table 6.19 of Ref. 2; S8.5.6 of Ref. 3	The following quiet PME should be used: • Asphalt Paver (SWL=101dB(A)) • Backhoe (SWL=106dB(A)) • Backhoe with Hydraulic Breaker (SWL=110dB(A)) • Concrete lorry mixer (SWL=96dB(A)) • Concrete mixer truck (SWL=96dB(A)) • Concrete Pump (SWL=106dB(A)) • Concrete Pump Truck (SWL=106dB(A)) • Crane, mobile (SWL=94dB(A)) • Crawler Crane (SWL=102dB(A)) • Drill, hand-held (SWL=98dB(A))	Reduce the noise levels of plant items	Contractor	All construction sites where practicable	Construction stage	Annex 5, EIAO-TM	^

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	• Dump truck (SWL=104dB(A)) • Excavator (SWL=106dB(A)) • Flat Bed Lorry (SWL=102dB(A)) • Generator (SWL=95dB(A)) • Giken Piler and Power-pack (SWL=94dB(A)) • Hydraulic breaker (SWL=110dB(A)) • Hydraulic excavator (SWL=106dB(A)) • Lorry (SWL=102dB(A)) • Lorry with crane/ grab (SWL=94dB(A)) • Mini Piling Rig (SWL=112dB(A)) • Piling Rig (SWL=112dB(A)) • Poker, vibrator, hand-held (SWL=98dB(A)) • Road Roller (SWL=101dB(A)) • Rock Drill (SWL = 108dB(A) • Roller (SWL = 101dB(A) • Truck (SWL=103dB(A)) • Vibratory Hammer (SWL=118dB(A))						
S8.3.6 of Ref. 1; S8.5.6 of Ref. 3	Sequencing operation of construction plants where practicable.	Operate sequentially within the same work site to reduce the construction airborne noise	Contractor	All construction sites where practicable	Construction stage	Annex 5, EIAO-TM	^
S8.3.6 of Ref. 1; S8.5.6 of Ref. 3	Implement noise monitoring under EM&A programme.	Monitoring of construction noise impact	Contractor	Wing Fung Building	Construction stage as required by IEC	TM-EIA	^

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Water Quality (Construction Phase)							
S10.7.1 of Ref. 1;S8.41 – 8.39 and S8.50 of Ref. 2; S10.7.1 of Ref. 3	In accordance with the Practice Noise for Professional Persons on Construction Site Drainage, EPD, 1994 (ProPECC PN1/94), construction phase mitigation measures will include the following: <u>Construction runoff and site drainage</u> • At the start of site establishment, perimeter cut-off drains to direct off-site water around the site will be constructed with internal drainage works and erosion and sedimentation control facilities implemented. Channels (both temporary and permanent drainage pipes and culverts), earth bunds or sand bag barriers will be provided onsite to direct stormwater to silt removal facilities. The design of the temporary onsite drainage system will be undertaken by the contractor prior to commencement of construction. • The dikes or embankments for flood protection will be implemented around the boundaries of earthwork areas. Temporary ditches will be provided to facilitate the runoff discharge into an appropriate watercourse, through a site/sediment trap. The sediment/silt traps will be incorporated in the permanent drainage channels to enhance deposition rates. • The design of silt removal facilities will be based on the guidelines in Appendix A1 of ProPECC PN 1/94, which states that the retention time for silt/sand traps will be 5 minutes under maximum flow conditions. Sizes may vary depending upon the flow rate, but for a flow rate of 0.1m^3/s a sedimentation basin of 30m^3 would be required and for a flow rate of 0.5m^3/s the basin would be 150m^3. Detailed design of the sand/silt traps will be undertaken by the contractor prior to the commencement of works. • All exposed earth areas will be completed and vegetated as soon as possible after earthworks have been completed, or alternatively, within 14 days of the cessation of earthworks where practicable. Exposed slope surfaces will be covered by tarpaulin or other means. • All drainage facilities and erosion and sediment control structures will be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rainstorms. Deposited silt and grit will be removed regularly and disposed of by spreading evenly over stable, vegetated areas.	To minimize water quality impact from construction site runoff and general construction activities	Contractor	All construction sites where practicable	Construction stage	Water Pollution Control Ordinance (WPCO) ProPECC PN1/94 EIAO-TM TM-Water Technical Memorandum on Effluent Discharge Standard (TM-DSS)	^ ^ ^ ^ ^

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	• Measures will be taken to minimise the ingress of site drainage into excavations. If the excavation of trenches in wet periods is necessary, they will be dug and backfilled in short sections wherever practicable. Water pumped out from trenches or foundation excavations will be discharged into storm drains via silt removal facilities. • Open stockpiles of construction materials (for example, aggregates, sand and fill material) of more than 50m^3 will be covered with tarpaulin or similar fabric during rainstorms. • Measures will be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system. • Manholes (including newly constructed ones) will always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed into foul sewers. • Precautions be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecasted, and actions to be taken during or after rainstorms are summarised in Appendix A2 of ProPECC PN 1/94. Particular attention will be paid to the control of silty surface runoff during storms, especially areas near steep slopes. • All vehicles and plant will be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing facilities will be provided at every construction site exit where practicable. Wash-water will have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road will be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains. • Oil interceptors will be provided in the drainage system downstream of any oil/fuel pollution sources. The oil interceptors will be emptied and cleaned regularly to prevent the release of oil and grease into the storm water drainage system after accidental spillage. A bypass will be provided for the oil interceptors to prevent flushing during heavy rain. • Construction solid waste, debris and rubbish on site will be collected, handled and disposed of properly to avoid water quality impacts.						^ ^ ^ ^ ^ ^ ^ ^

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	• All fuel tanks and storage areas will be provided with locks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled fuel oils from reaching water sensitive receivers nearby. • All the earth works involving will be conducted sequentially to limit the amount of construction runoff generated from exposed areas during the wet season (April to September) as far as practicable. • Adopt Best Management Practices.						^ ^
S10.7.1 of Ref. 1; S10.7.1 of Ref. 3	<u>Tunnelling works</u> • Cut-and-cover/ open-cut tunnelling work will be conducted sequentially to limit the amount of construction runoff generated from exposed areas during the wet season (April to September) as far as practicable. • Uncontaminated discharge will pass through sedimentation tanks prior to off-site discharge. • The wastewater with a high concentration of SS will be treated (eg, by sedimentation tanks with sufficient retention time) before discharge. Oil interceptors would also be required to remove the oil, lubricants and grease from the wastewater. • Direct discharge of the bentonite slurry (as a result of D-wall and bored tunnelling construction) is not allowed. It will be reconditioned and reused wherever practicable. Temporary storage locations (typically a properly closed warehouse) will be provided on site for any unused bentonite that needs to be transported away after all the related construction activities are completed. The requirements in ProPECC PN 1/94 will be adhered to in the handling and disposal of bentonite slurries.	To minimize construction water quality impact from tunnelling works	Contractor	All tunnelling portion	Construction stage	WPCO ProPECC PN1/94 EIAO-TM TM-Water	^ ^ ^ ^

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S8.68 of Ref. 2; S10.7.1 of Ref. 1	<u>Operation of Barging Facilities</u> The following good practice shall apply for the barging facilities operations: • All barges should be fitted with tight bottom seals to prevent leakage of materials during transport; • Barges or hoppers should not be filled to a level that will cause overflow of materials or polluted water during loading or transportation; • All vessels should be sized so that adequate clearance is maintained between vessels and the seabed in all tide conditions, to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash; and • Loading of barges and hoppers should be controlled to prevent splashing of material into the surrounding water. • Mitigation measures as outlined for control of *construction runoff and site drainage* provide above should be applied to minimise water quality impacts from site runoff and open stockpile spoils at the proposed barging facilities where appropriate.	To minimize water quality impact from operation of barging facility	Contractor	All barging facilities	Construction stage	WPCO TM-EIA	N/A N/A N/A N/A N/A
S8.51 – 8.52 of Ref. 2	<u>Bentonite Slurries:</u> • Bentonite slurries used in diaphragm wall construction should be reconditioned and used again wherever practicable. If the disposal of a certain residual quantity cannot be avoided, the used slurry should either be dewatered or mixed with inert fill material for disposal to a public filling area. • If the used bentonite slurry is intended to be disposed of through the public drainage system, it should be treated to the respective effluent standards applicable to foul sewer, storm drains or the receiving waters as set out in the TM-DSS.	To minimize water quality impact from bentonite slurries	Contractor	All works area	Construction stage	WPCO TM-EIA	^ ^
S8.53 – 8.54 of Ref. 2	<u>Wastewater from Building Construction:</u> • Before commencing any demolition works, all sewer and drainage connections should be sealed to prevent building debris, soil, sand etc. from entering public sewers/drains • Wastewater generated from building construction activities including concreting, plastering, internal decoration, cleaning of works and similar activities should not be discharged into the stormwater drainage system. If the wastewater is to be discharged into foul sewers, it should undergo the removal of settleable solids in a silt removal facility, and pH adjustment as washing and general cleaning etc., can minimise water consumption and reduce the effluent discharge volume. If	To minimize water quality impact from building construction	Contractor	All construction sites where practicable	Construction stage	WPCO EIAO-TM	^ N/A

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	monitoring of the treated effluent quality from the works areas is required during the construction phase of the Project, the monitoring should be carried out in accordance with the relevant WPCO licence which is under the ambit of regional office of EPD.						
S8.62 of Ref. 2	<u>Excavation Activities:</u> • The construction programme should be properly planned to minimise soil excavation, if any, in rainy seasons. This prevents soil erosion from exposed soil surfaces. Any exposed soil surfaces should also be properly protected to minimise the potential for dust emission, increased siltation and contamination of runoff. In areas where a large amount of exposed soils exist, earth bunds or sand bags should be provided. Exposed stockpiles should be covered with tarpaulin or impervious sheets at all times. The stockpiles of materials should be placed at locations away from water environment so as to avoid releasing materials into the water bodies. Final surfaces of earthworks should be compacted and protected by permanent work.	To minimize water quality impact from excavation activities	Contractor	All excavation works areas	Construction stage	WPCO EIAO-TM	^
S8.63 of Ref. 2	<u>Diaphragm Wall</u> • The mitigation measures as outlined in the ProPECC PN 1/94 Construction Site Drainage should be implemented to control site run-off and drainage as well as any site effluents generated from the works areas, and to prevent run-off and construction wastes from entering nearby water environment. Proper handling of bentonite slurries used in diaphragm wall construction should be adopted.	To minimize water quality impact from diaphragm walling	Contractor	All diaphragm walling works areas	Construction stage	WPCO EIAO-TM	^
S8.60 – 8.61 of Ref. 2; S10.7.1 of Ref. 3	<u>Sewage effluent</u> Portable chemical toilets are recommended for handling the construction sewage generated by the workforce. A licensed contractor will be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance.	To minimize water quality from sewage effluent	Contractor	All construction sites where practicable	Construction stage	WPCO TM-Water	^
S8.64 of Ref. 2; S10.7.1 of Ref. 3	<u>Groundwater seepage</u> As some proposed works areas at Hung Hom are near Victoria Harbour, high ground water level regime due to both tidal effects and rainwater infiltration is anticipated. Appropriate measures will be deployed to minimise the intrusion of groundwater into excavation works areas. In case seepage of groundwater occurs, groundwater will be pumped out from the works areas and discharged into the storm system via silt removal facilities. Groundwater from dewatering process will also be discharged into the storm system via silt traps.	To minimize groundwater quality impact from contaminated area	Contractor	Excavation areas where contamination is found.	Construction stage	WPCO TM-Water EIAO-TM	^

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S10.7.1 of Ref. 1; S8.57 – 8.59 of Ref. 2; S10.7.1 of Ref. 3	<u>Accidental spillage</u> To prevent accidental spillage of chemicals, the following is recommended: • Proper storage and handling facilities will be provided. • All the tanks, containers, storage area will be bunded and the locations will be locked as far as possible from the sensitive watercourse and stormwater drains. • The contractor will register as a chemical waste producer if chemical wastes would be generated. Storage of chemical waste arising from the construction activities will be stored with suitable labels and warnings. • Disposal of chemical wastes will be conducted in compliance with the requirements as stated in the Waste disposal (Chemical Waste) (General) Regulation.	To minimize water quality impact from accidental spillage	Contractor	All construction sites where practicable	Construction stage	WPCO ProPECC PN1/94 EIAO-TM TM-Water	^ ^ ^
S8.72 of Ref.2	Regular site inspections should be undertaken to inspect the construction activities and works areas	To ensure the recommended water quality mitigation measures are properly implemented	Contractor	All construction sites	Construction stage	EIAO-TM WPCO ProPECC PN 1/94 TM-DSS WDO	^

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Waste Management (Construction Phase)							
S11.4.1.1 of Ref. 1; S9.80 – 9.83 of Ref. 2; S11.4.1.1 of Ref.3	Onsite sorting of C&D material Geological assessment will be carried out by competent persons onsite during excavation to identify materials which are not suitable to use as aggregate in structural concrete (eg, volcanic rock, Aplite dyke rock, etc). Volcanic rock and Aplite dyke rock will be separated at the source sites as far as practicable and stored at designated stockpile areas preventing them from delivering to crushing facilities. The crushing plant operator will also be reminded to set up measures to prevent unsuitable rock from ended up at concrete batching plants and be turned into concrete for structural use. Details regarding control measures at source site and crushing facilities will be submitted by the Contractors for the Engineer to review and agree. In addition, site records will also be kept for the types of rock materials excavated and the traceability of delivery will be ensured with the implementation of Trip Ticket System and enforced by site supervisory staff as stipulated under DEVB TC(W) ref: 6/2010 for tracking of the correct delivery to the rock crushing facilities for processing into aggregates. Alternative disposal option for the reuse of volcanic rock and Aplite Dyke rock, etc will also be explored.	Separation of unsuitable rock from ending up at concrete batching plants and be turned into concrete for structural use	Contractor	All construction sites	Construction stage	DEVB TC(W) ref. 6/2010	^
S11.5.1 of Ref.1; S9.72 – 9.74 of Ref. 2; S11.5.1 of Ref.3	Construction and demolition material • Maintain temporary stockpiles and reuse excavated fill material for backfilling and reinstatement. • Carry out onsite sorting. • Make provisions in the Contract documents to allow and promote • The use of recycled aggregates where appropriate. • Adopt 'selective demolition' technique to demolish the existing structures and facilities with a view to recovering broken concrete effectively for recycling purpose, where possible. • Implement a trip-ticket system for each works contract to ensure that the disposal of C&D materials are properly documented and verified. • Implement an enhanced Waste Management Plan similar to ETWBTC (Works) ref 19/2005 – "Environmental Management on Construction Sites" to encourage on-site sorting of C&D materials and to minimize their generation during the course of construction. • In addition, disposal of the C&D materials onto any sensitive locations such as agricultural lands, etc. will be avoided. The contractor will propose the final disposal sites to the Project	Good site practice to minimise the waste generation and recycle the C&D materials as far as practicable so as to reduce the amount for final disposal	Contractor	All construction sites	Construction stage	Land (Miscellaneous Provisions) Ordinance Waste Disposal Ordinance ETWB TCW Ref 19/2005	^ ^ ^ ^ ^ ^ ^ ^

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	Proponent and EPD and get their approval before implementation.						
S11.5.1 of Ref.1; S9.73 of Ref. 2; S11.5.1 of Ref.3	<u>C&D waste</u> • Standard formwork or pre-fabrication will be used as far as practicable in order to minimise the arising of C&D materials. The use of more durable formwork or plastic facing for the construction works will be considered. Use of wooden hoardings will not be used, as in other projects. Metal hoarding will be used to enhance the possibility of recycling. The purchasing of construction materials will be carefully planned in order to avoid over ordering and wastage. • The contractor will recycle as much of the C&D materials as possible onsite. Public fill and C&D waste will be segregated and stored in different containers or skips to enhance reuse or recycling of materials and their proper disposal. Where practicable, concrete and masonry can be crushed and used as fill. Steel reinforcement bar can be used by scrap steel mills. Different areas of the sites will be considered for such segregation and storage.	Good site practice to minimise the waste generation and recycle the C&D materials as far as practicable so as to reduce the amount for final disposal	Contractor	All construction sites	Construction stage	Land (Miscellaneous Provisions) Ordinance Waste Disposal Ordinance ETWB TCW Ref 19/2005	^ ^
S11.5.1 of Ref.1; S9.100-9.102 of Ref.2; S11.5.1 of Ref. 3	<u>General refuse</u> • General refuse generated onsite will be stored in enclosed bins or compaction units separately from construction and chemical wastes. • A reputable waste collector will be employed by the contractor to remove general refuse from the site, separately from construction and chemical wastes, on a daily basis to minimise odour, pest and litter impacts. Burning of refuse on construction sites is prohibited by law. • Aluminium cans will be often recovered from the waste stream by individual collectors if they are segregated and made easily accessible. Separate labelled bins for their deposit will be provided if feasible. • Office wastes will be reduced through the recycling of paper if volumes are large enough to warrant collection. Participation in a local collection scheme will be considered by the contractor.	Minimize production of the general refuse and avoid odour, pest and litter impacts	Contractor	All construction sites	Construction stage	Waste Disposal Ordinance	^ ^ ^ ^

S11.5.1 of Ref.1; S9.84 – 9.93 of Ref. 2	Land-based sediment • The basic requirements and procedures for excavated sediment disposal specified under ETWB TC(W) No. 34/2002 shall be followed. • The Project Proponent should agree in advance with MFC of CEDD on the site allocation. Subject to the final decision by MFC, Type 1 sediments are typically disposed to South Cheung Chau and/or East of Ninepin as open sea disposal while Type 2 sediments are disposed to East Sha Chau as confined marine disposal. • Sampling and Testing Plan(s) should be prepared in accordance with ETWB TC(W) No. 34/2002. Site investigation, based on the Sediment Sampling and Testing Plan(s), should be carried out in order to confirm the disposal arrangements for the proposed excavated sediments. A Sediment Quality Report (SQR) should then be submitted to EPD for agreement prior to the tendering of the construction contract, discussing in details the site investigation, testing results as well as the delineation of each of the categories of excavated materials and the corresponding types of disposal. • The excavated sediments is expected to be loaded onto the dumping trucks and transferred to the barging point where the sediments would be transported via barge to the existing designated disposal sites allocated by the MFC. The excavated sediment would be disposed of according to its determined disposal options and ETWB TC(W) No. 34/2002. • Requirements of the Air Pollution Ordinance (Construction Dust) Regulation, where relevant, shall be adhered to during excavation, transportation and disposal of sediments. • Stockpiling of contaminated sediments should be avoided as far as possible. If temporary stockpiling of contaminated sediments is necessary, the excavated sediment should be covered by tarpaulin and the area should be placed within earth bunds or sand bags to prevent leachate from entering the ground, nearby drains and/or surrounding water bodies. The stockpiling areas should be completely paved or covered by linings in order to avoid contamination to underlying soil or groundwater. Separate and clearly defined areas should be provided for stockpiling of contaminated and uncontaminated materials. Leachate, if any, should be collected and discharged according to the Water Pollution Control Ordinance (WPCO). • In order to minimize the potential odour / dust emissions during excavation and transportation of the sediment, the excavated sediments should be wetted during excavation / material handling and should be properly covered when placed on trucks or barges. Loading of the excavated sediment to the barge should be controlled to avoid splashing and overflowing of the sediment slurry to the surrounding water.	To ensure the sediment is handled and disposed of in a least impacted way and in accordance to the statutory	Contractor	All construction sites	Construction stage	ETWB TC(W) NO. 34/2002 Dumping at Sea Ordinance (DASO) APCO WPCO	N/A N/A N/A N/A N/A N/A N/A

EIA REF.	RECOMMENDED MITIGATION MEASURES FOR WORKS CONTRACT 1112	OBJECTIVES OF THE RECOMMENDED MEASURES & MAIN CONCERNS TO ADDRESS	WHO TO IMPLEMENT THE MEASURES?	LOCATION OF THE MEASURES	WHEN TO IMPLEMENT THE MEASURES?	WHAT REQUIREMENTS OR STANDARDS FOR MEASURES TO ACHIEVE?	STATUS
	• The barge transporting the sediments to the designated disposal sites should be equipped with tight fitting seals to prevent leakage and should not be filled to a level that would cause overflow of materials or laden water during loading or transportation. • In order to minimize the exposure to contaminated materials, workers should, when necessary, wear appropriate personal protective equipment (PPE) when handling contaminated sediments. Adequate washing and cleaning facilities should also be provided on site.						N/A N/A
S11.5.1 of Ref.1; S8.94 – 9.97 of Ref. 2; S11.5.1 of Ref. 3	<u>Chemical waste</u> • Chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, will be handled in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. • Containers used for the storage of chemical wastes will be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed; have a capacity of less than 450L unless the specification has been approved by the EPD; and display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the regulation. • The storage area for chemical wastes will be clearly labelled and used solely for the storage of chemical waste; be enclosed on at least 3 sides; have an impermeable floor and bunding of sufficient capacity to accommodate 110% of the volume of the largest container or 20 % of the total volume of waste stored in that area, whichever is the greatest; have adequate ventilation; be covered to prevent rainfall entering; and be arranged so that incompatible materials are adequately separated. • Disposal of chemical waste will be via a licensed waste collector; and be to a facility licensed to receive chemical waste, such as the Chemical Waste Treatment Centre which also offers a chemical waste collection service and can supply the necessary storage containers; or be to a reuser of the waste, under approval from the EPD.	Control the chemical waste and ensure proper storage, handling and disposal.	Contractor	All construction sites	Construction stage	Waste Disposal (Chemical Waste) General) Regulation Code of Practice on the Packaging, Labelling and Storage of Chemical Waste	^ ^ ^ ^
S9.98 – 9.99 of Ref 2	<u>Asbestos wastes</u> • All storage of asbestos waste should be carried out properly in a secure place isolated from other substances so as to prevent any possible release of asbestos fibres into the atmosphere and contamination of other substances. The storage area should bear warning panels to alert people of the presence of asbestos	To ensure the asbestos wastes are handled and disposed of in accordance with the statutory requirements	Contractor	All construction sites	Construction stage	Code of practice on the Handling, Transportation and Disposal of Asbestos Waste	^

EIA REF.	RECOMMENDED MITIGATION MEASURES FOR WORKS CONTRACT 1112	OBJECTIVES OF THE RECOMMENDED MEASURES & MAIN CONCERNS TO ADDRESS	WHO TO IMPLEMENT THE MEASURES?	LOCATION OF THE MEASURES	WHEN TO IMPLEMENT THE MEASURES?	WHAT REQUIREMENTS OR STANDARDS FOR MEASURES TO ACHIEVE?	STATUS
	waste. Collection, transportation and disposal of asbestos waste will follow the trip-ticket system. • Licensed asbestos waste collectors will be appointed to collect the asbestos waste and deliver to the designated landfill for disposal. The Project Proponent should notify to EPD in advance for disposal of asbestos waste. After processing the notification, EPD will issue specific instructions and directions for disposal. The waste producer must strictly follow these directions						N/A

EIA REF.	RECOMMENDED MITIGATION MEASURES FOR WORKS CONTRACT 1112	OBJECTIVES OF THE RECOMMENDED MEASURES & MAIN CONCERNS TO ADDRESS	WHO TO IMPLEMENT THE MEASURES?	LOCATION OF THE MEASURES	WHEN TO IMPLEMENT THE MEASURES?	WHAT REQUIREMENTS OR STANDARDS FOR MEASURES TO ACHIEVE?	STATUS
Land Contamination							
S10.24 – 10.34 of Ref 2	<u>Precautionary measures</u> • Precautionary measures such as visual inspection are recommended to be undertaken during construction activities that disturb soil. The inspection process should involve a visual observation of excavated soils for discolouration and the presence of oils, together with identifying the presence of odours, which may also indicate soil and/or groundwater contamination. • If soil discolouration or the presence of oil/unnatural odour is noted during visual inspection, sampling and testing should also be undertaken to verify the presence of contamination.	To act as a general precautionary measure to screen soils for the presence contamination during construction	Contractor	All construction sites	Construction stage	"Guidance Note for Contaminated Land Assessment and Remediation" "Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management	^ ^
S10.35 of Ref 2	• Potential remediation of contaminated soil • If land contamination is identified, CAR and RAP detailing the proposed remediation works should be prepared. RR should then be prepared and submitted to EPD to demonstrate that the decontamination work is adequate and has been carried out in accordance with the endorsed CAR and RAP. Information such as soil treatment/disposal records (including trip tickets), confirmatory sampling results and photographs should be included in the RR. No construction work should be carried out prior to endorsement of the RR by EPD. • In order to minimise environmental impacts arising from the handling of potentially contaminated materials, the following environmental precautionary measures are recommended to be utilised during the course of any required site remediation: • Excavation profiles must be properly designed and executed with attention to the relevant requirements for environment, health and safety; • Excavation should be carried out during dry season as far as possible to minimise contaminated runoff from contaminated soils; • Supply of suitable clean backfill material is needed after excavation; • If proposed remediation methods employ chemical oxidation methods as the contaminant mass reduction technology, chemicals will be securely and separately stored away from sources of ignition or oxidisable items. Handling will be	To remediate contaminated soil	Contractor	All construction sites	Construction stage	"Guidance Notes for Investigation and Remediation of Contaminated Sites of Petrol Filling Stations, Boatyards and Car Repair /Dismantling Workshop"	N/A N/A N/A N/A N/A N/A

EIA REF.	RECOMMENDED MITIGATION MEASURES FOR WORKS CONTRACT 1112	OBJECTIVES OF THE RECOMMENDED MEASURES & MAIN CONCERNS TO ADDRESS	WHO TO IMPLEMENT THE MEASURES?	LOCATION OF THE MEASURES	WHEN TO IMPLEMENT THE MEASURES?	WHAT REQUIREMENTS OR STANDARDS FOR MEASURES TO ACHIEVE?	STATUS
	undertaken by personnel with appropriate training and Personal Protective Equipment • Vehicles containing any excavated materials should be suitably covered to limit potential dust emissions or contaminated wastewater run-off, and truck bodies and tailgates should be sealed to prevent any discharge during transport or during wet conditions; • Speed control for the trucks carrying coVehicle wheel and body washing facilities at the site's exit points should be established and used; and contaminated materials should be enforced; • Pollution control measures for air emissions e.g. from biopile blower, noise emissions e.g. from blower, and water discharges e.g. runoff control should be implemented and complied with relevant regulations and guidelines.						N/A N/A N/A N/A
S10.36 of Ref 2	The Occupation Safety and Health Ordinance (OSHO) (Chapter 509) and its subsidiary Regulations should be followed by all site personnel working on the site at all times. In addition, the following basic health and safety measures should be implemented as far as possible: Set up a list of safety measures for site workers. Provide written information and training on safety for site workers. Keep a log-book and plan showing the contaminated zones and clean zones. Maintain a hygienic working environment. Avoid dust generation. Provide face and respiratory protection gear to site workers. Provide personal protective clothing (e.g. chemical resistant jackboot, liquid tight gloves) to site workers. Provide first aid training and materials to site workers.	To minimise the potentially adverse effects on health and safety of construction workers during the course of site remediation.	Contractor	All construction sites	Site remediation and prior to construction phase	"Guidance Note for Contaminated Land Assessment and Remediation" "Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management "Occupation Safety and Health Ordinance (Chapter 509)"	N/A
EM&A Project							
S14.2 – 14.4 of Ref. 1; S13.2 – 13.4 of Ref. 3 1.	• An Environmental Team needs to be employed as per this EM&A Manual. • Prepare a systematic EMP to ensure effective implementation of the mitigation measures. • An environmental impact monitoring needs to be implementing by the Environmental Team to ensure all the requirements given in this EM&A Manual are fully complied with.	Perform environmental monitoring & auditing	Contractor	All construction sites	Construction stage	EIAO Guidance Note Ref4/2010 EIAO-TM	^

Remark for Status:

^ Compliance of mitigation measure
+ Non-compliance but rectified by the contractor
N/A Not Applicable
X Non-compliance of mitigation measure
* Recommendation was made during site audit but improved/rectified by the contractor
# Recommendation was made during site audit and improvement/rectification not yet completed by the contractor

Notes:
Ref. 1 – EIA Report for SCL (TAW-HUH)
Ref. 2 – EIA Report for SCL (MKK-HUH)
Ref. 3 – EIA Report for SCL (HHS)

This EMIS contains only those requirements that are relevant to Works Contract 1112 in terms of:

- EM&A required under Works Contract 1112
- Who to implement the measures – the Contractor (Leighton)
- The location of the measures – within and in the vicinity of the Works Contract 1112 Site Boundary
- When to implement the measures – during the design and construction

Appendix E EVENT AND ACTION PLAN

Event and Action Plan for Landscape and Visual Impact Monitoring

EVENT	ET	IEC	ER	CONTRACTOR
Action level				
Non-conformity on one occasion	1. Inform the contractor, the IEC and the ER 2. Discuss remedial actions with the IEC, the ER and the Contractor 3. Monitor remedial actions until rectification has been completed	1. Check inspection report 2. Check the contractor's working method 3. Discuss with the ET, ER and the contractor on possible remedial measures 4. Advise the ER on effectiveness of proposed remedial measures.	1. Confirm receipt of notification of non-conformity in writing 2. Review and agree on the remedial measures proposed by the contractor 3. Supervise implementation of remedial measures	1. Identify source and investigate the non-conformity 2. Implement remedial measures 3. Amend working methods agreed with the ER as appropriate 4. Rectify damage and undertake any necessary replacement
Repeated Non-conformity	1. Identify source 2. Inform the contractor, the IEC and the ER 3. Increase inspection frequency 4. Discuss remedial actions with the IEC, the ER and the contractor 5. Monitor remedial actions until rectification has been completed 6. If non-conformity stops, cease additional monitoring	1. Check inspection report 2. Check the contractor's working method 3. Discuss with the ET and the Contractor on possible remedial measures 4. Advise the ER on effectiveness of proposed remedial measures	1. Notify the contractor 2. In consultation with the ET and IEC, agree with the contractor on the remedial measures to be implemented 3. Supervise implementation of remedial measures.	1. Identify source and investigate the non-conformity 2. Implement remedial measures 3. Amend working methods agreed with the ER as appropriate 4. Rectify damage and undertake any necessary replacement. Stop relevant portion of works as determined by the ER until the non-conformity is abated.

Event and Action Plan for Air Quality

EVENT	ET	IEC	ER	CONTRACTOR
Action level				
1. Exceedance for one sample	1. Inform the IEC, Contractor and ER 2. Discuss with the Contractor, IEC and ER on the remedial measures required 3. Repeat measurement to confirm findings 4. Increase monitoring frequency	1. Check monitoring data submitted by the ET 2. Check Contractor's working method 3. Review and advise the ET and ER on the effectiveness of the proposed remedial measures	1. Confirm receipt of notification of exceedance in writing	1. Identify source(s), investigate the causes of exceedance and propose remedial measures; 2. Implement remedial measures; 3. Amend working methods agreed with the ER as appropriate
2.Exceedance for two or more consecutive samples	1. Inform the IEC, Contractor and ER 2. Discuss with the ER, IEC and Contractor on the remedial measures required 3. Repeat measurements to confirm findings 4. Increase monitoring frequency to daily 5. If exceedance continues, arrange meeting with the IEC, ER and Contractor 6. If exceedance stops, cease additional monitoring	1. Check monitoring data submitted by the ET 2. Check Contractor's working method 3. Review and advise the ET and ER on the effectiveness of the proposed remedial measures	1. Confirm receipt of notification of exceedance in writing 2. Review and agree on the remedial measures proposed by the Contractor 3. Supervise Implementation of remedial measures	1. Identify source and investigate the causes of exceedance 2. Submit proposals for remedial measures to the ER with a copy to ET and IEC within three working days of notification 3. Implement the agreed proposals 4. Amend proposal as appropriate

EVENT	ET	IEC	ER	CONTRACTOR
Limit Level				
1.Exceedance for one sample	1. Inform the IEC, EPD, Contractor and ER 2. Repeat measurement to confirm findings 3. Increase monitoring frequency to daily 4. Discuss with the ER, IEC and contractor on the remedial measures and assess the effectiveness.	1. Check monitoring data submitted by the ET 2. Check the Contractor's working method 3. Discuss with the ET, ER and Contractor on possible remedial measures 4. Review and advise the ER and ET on the effectiveness of Contractor's remedial measures.	1. Confirm receipt of notification of exceedance in writing 2. Notify the Contractor, IEC and ET 3. Review and agree on the remedial measures proposed by the Contractor 4. Supervise implementation of remedial measures.	1. Identify source(s) and investigate the causes of exceedance 2. Take immediate action to avoid further exceedance 3. Submit proposals for remedial measures to ER with a copy to ET and IEC within three working days of notification 4. Implement agreed proposals 5. Amend proposal if appropriate.
2.Exceedance for two or more consecutive samples	1. Notify IEC, Contractor & EPD 2. Repeat measurement to confirm findings 3. Increase monitoring frequency to daily 4. Carry out analysis of the Contractor's working procedures with the ER to determine possible mitigation to be implemented 5. Arrange meeting with the IEC, Contractor and ER to discuss the remedial measures to be taken 6. Review the effectiveness of the Contractor's remedial measures and keep IEC, EPD and ER informed of the results 7. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by the ET 2. Check the Contractor's working method 3. Discuss with ET, ER, and Contractor on the potential remedial measures 4. Review and advise the ER and ET on the effectiveness of Contractor's remedial measures.	1. Confirm receipt of notification of exceedance in writing 2. Notify the Contractor, IEC and ET 3. In consultation with the ET and IEC, agree with the Contractor on the remedial measures to be implemented 4. Supervise the implementation of remedial measures 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	1. Identify source(s) and investigate the causes of exceedance 2. Take immediate action to avoid further exceedance 3. Submit proposals for remedial measures to the ER with a copy to the IEC and ET within three working days of notification 4. Implement the agreed proposals 5. Revise and resubmit proposals if problem still not under control 6. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Event and Action Plan for Construction Noise

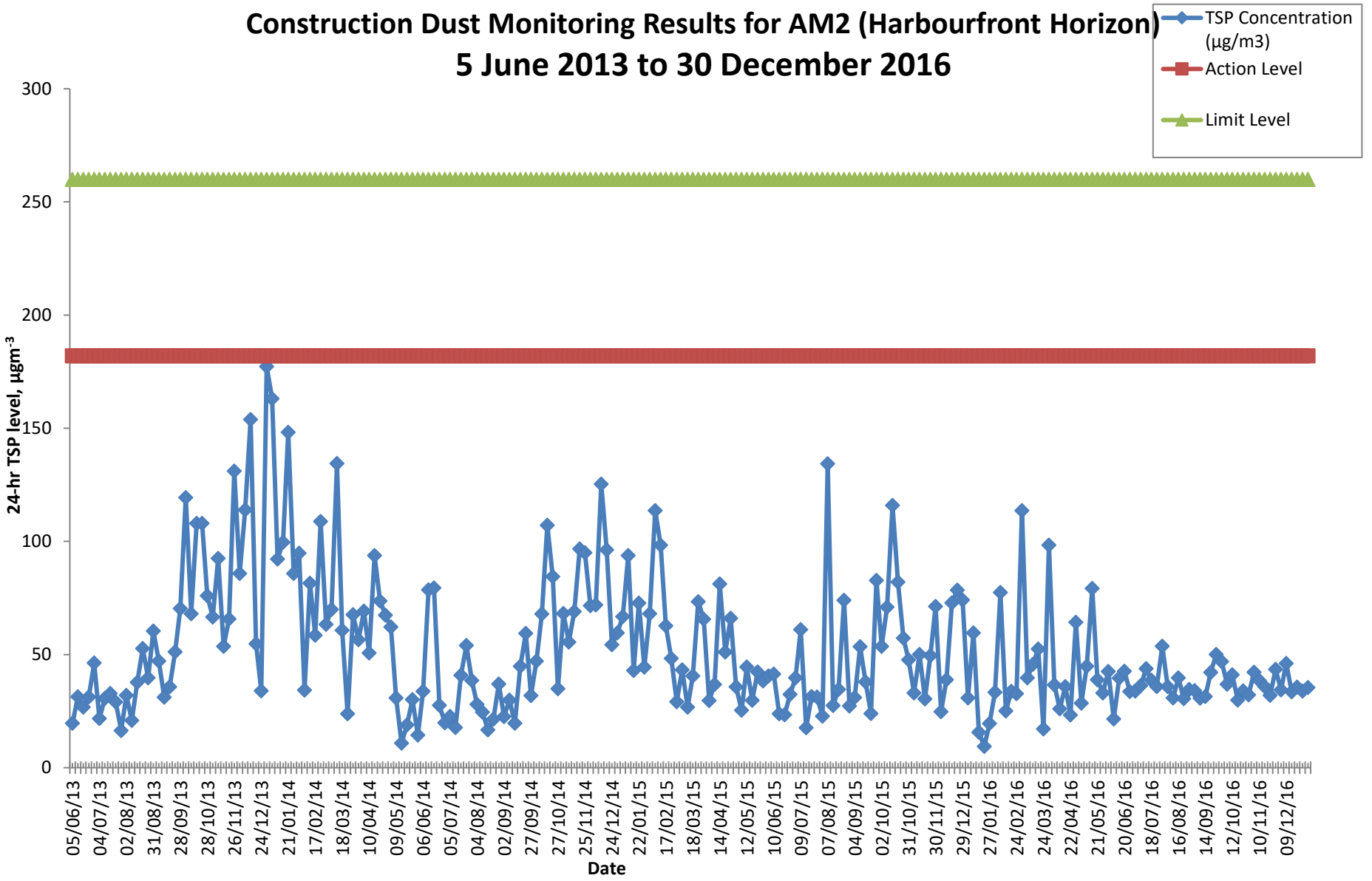
EVENT	ET	IEC	ER	CONTRACTOR
Action Level	1. Notify the IEC, Contractor and ER 2. Discuss with the ER, IEC and contractor on the remedial measures and assess the effectiveness. 3. Increase monitoring frequency to check mitigation effectiveness.	1. Review the investigation results submitted by Contractor. 2. Review and advise the ER and ET on the effectiveness of Contractor's remedial measures.	1. Confirm receipt of notification of complaint in writing 2. Notify the Contractor, IEC and ET 3. Review and agree on the remedial measures proposed by the Contractor 4. Supervise implementation of remedial measures.	1. Investigate the complaint and propose remedial measure. 2. Report the results of investigation to the IEC, ET and ER. 3. Submit noise mitigation proposals to ER with a copy to ET and IEC within three working days of notification 4. Implement noise mitigation proposal.
Limit Level	1. Notify IEC, Contractor & EPD 2. Repeat measurement to confirm findings 3. Increase monitoring frequency to daily 4. Carry out analysis of the Contractor's working procedures with the ER to determine possible mitigation to be implemented 5. Arrange meeting with the IEC, Contractor and ER to discuss the remedial measures to be taken 6. Inform IEC, ER and EPD the causes and actions taken for the exceedances. 7. Assess effectiveness of the Contractor's remedial measures and keep IEC, ER and EPD informed of the results.	1. Check monitoring data submitted by the ET 2. Check the Contractor's working method 3. Discuss with ET, ER, and Contractor on the potential remedial measures 4. Review and advise the ER and ET on the effectiveness of Contractor's remedial measures.	1. Confirm receipt of notification of exceedance in writing 2. Notify the Contractor, IEC and ET 3. In consultation with the ET and IEC, agree with the Contractor on the remedial measures to be implemented 4. Supervise the implementation of remedial measures 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	1. Identify source(s) and investigate the causes of exceedance 2. Take immediate action to avoid further exceedance 3. Submit proposals for remedial measures to the ER with a copy to the IEC and ET within three working days of notification 4. Implement the agreed proposals 5. Revise and resubmit proposals if problem still not under control 6. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Note:

ET – Environmental Team, IEC – Independent Environmental Checker, ER – Engineer's Representative

Appendix F SUMMARY OF AIR MONITORING DATA & GRAPHICAL PRESENTATION

SUMMARY OF AIR MONITORING DATA				
ID	Average (µg/m^3)	Range (µg/m^3)	Action Level (µg/m^3)	Limit Level (µg/m^3)
AM2	49.1	9.4 – 177.2	182	260


Construction Dust Monitoring Results for AM2 (Harbourfront Horizon)
5 June 2013 to 30 December 2016
TSP Concentration (µg/m3)
Action Level
Limit Level
24-hr TSP level, µgm-3
300
250
200
150
100
50
0
05/06/13
04/07/13
02/08/13
31/08/13
28/09/13
28/10/13
26/11/13
24/12/13
21/01/14
17/02/14
18/03/14
10/04/14
09/05/14
06/06/14
05/07/14
04/08/14
02/09/14
27/09/14
27/10/14
25/11/14
24/12/14
22/01/15
17/02/15
18/03/15
14/04/15
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10/06/15
09/07/15
07/08/15
04/09/15
02/10/15
31/10/15
30/11/15
29/12/15
27/01/16
24/02/16
24/03/16
22/04/16
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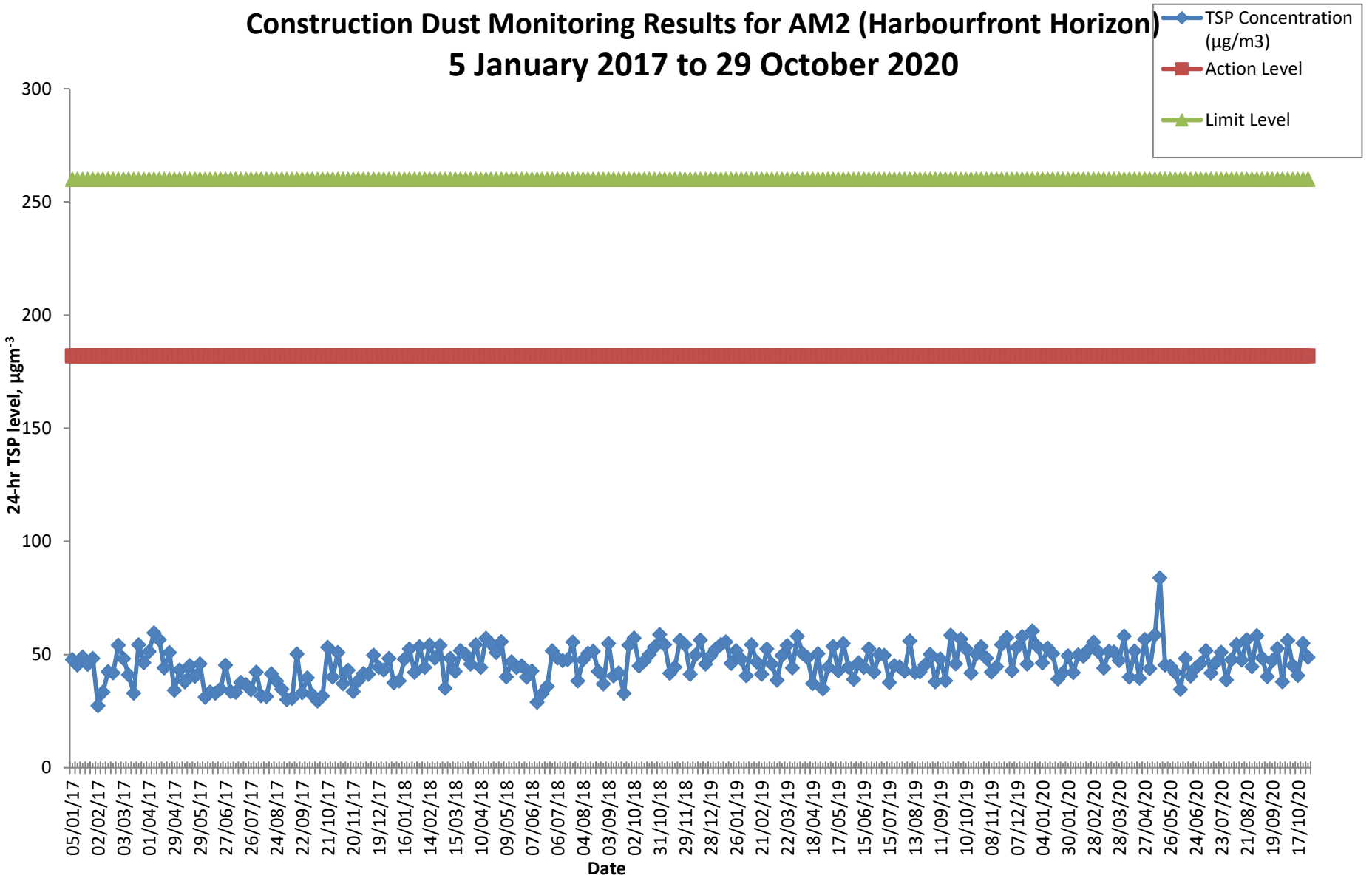
10/11/16
09/12/16
Date


Construction Dust Monitoring Results for AM2 (Harbourfront Horizon)
5 January 2017 to 29 October 2020
TSP Concentration (µg/m3)
Action Level
Limit Level
24-hr TSP level, µgm-3
300
250
200
150
100
50
0
05/01/17
02/02/17
03/03/17
01/04/17
29/04/17
29/05/17
27/06/17
26/07/17
24/08/17
22/09/17
21/10/17
20/11/17
19/12/17
16/01/18
14/02/18
15/03/18
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13/08/19
11/09/19
10/10/19
08/11/19
07/12/19
04/01/20
30/01/20
28/02/20
28/03/20
27/04/20
26/05/20
24/06/20
23/07/20
21/08/20
19/09/20
17/10/20
Date

Appendix G WASTE FLOW TABLE (3 JUNE 2013 TO 31 OCT 2020)

Month	WASTE FLOW TABLE															
	Actual Quantities of Inert C&D Materials Generated Monthly									Actual Quantities of non-inert C&D Wastes Generated Monthly						
	Generated				Disposed					Recycled				Disposed		
	Imported from SCL1111	Imported from SCL1121	Total Quantity Generated	Hard Rock and Broken Concrete	Reused in the Contract	Reused in Other Projects	Disposed as Public Fills at HH Barging Point	Disposed as Public Fills at TKO137	Disposed as Public Fills at TM38	Metals	Paper/ Cardboard Packaging	Asphalt	Plastics	Chemical Waste		General Refuse
Unit	(in '000m^3)									(in '000Kg)				(in '000Kg)	(in '000L)	(in '000Kg)
Jun-13	0	-	0	0	0	0	0	0	0	137.3	0	0	0	0	-	6.55
Jul-13	0	-	0.36	0	0	0	0	0	0.36	365.34	0	0	0	0	-	16.87
Aug-13	0	-	1.68	0	0	0	0.05	0	1.63	69.98	0.25	0	0	0	-	12.67
Sep-13	0	-	3.39	0	0	0	0.20	0	3.19	131.18	0.22	0	0.46	0	-	16.25
Oct-13	0	-	4.04	0	0	0	0.78	0	3.26	179.97	0.63	8.28	2.04	0	-	39.87
Nov-13	0	-	6.09	0	0	0	2.09	0.18	3.82	125.70	0.45	160.35	0	0	-	28.69
Dec-13	0	-	5.69	0	0	0	1.74	0.01	3.94	72.15	0.39	4.13	0	0	-	18.04
Jan-14	0	-	4.58	0	0	0	0	0.27	4.31	117.57	0.26	147.67	0.26	0	-	30.09
Feb-14	0	-	3.80	0	0	0.14 [Note1]	0	0.19	3.46	28.32	0.29	414.67	0	0	-	15.73
Mar-14	0	-	10.10	0	0	6.18[Note2]	0	0.29	3.63	96.26	0.25	0	0	0	-	47.76
Apr-14	0	-	6.67	0	0	4.82[Note3]	0	0.0053	1.85	75.43	0.23	1,322.39	0	0.2	-	78.63
May-14	0.52	-	5.77	0	0.43	2.00[Note4]	0	0.12	3.65	48.86	0.28	501.45	0	0	-	66.03
Jun-14	0.47	-	4.56	0	0	1.73[Note5]	0	0.29	2.54	42.95	0.25	0	0	0.4	-	45.97
Jul-14	0.34	-	8.61	0	0	2.89[Note6]	0	0.87	4.84	70.99	0	0	0	0	-	40.50
Aug-14	0.20	-	8.57	0	0	3.56[Note7]	0	0.44	4.57	227.86	0	0	0	0	-	76.93
Sep-14	0.23	-	11.11	0	0	5.82[Note8]	0	0.23	5.06	220.85	0.29	0	0	0	-	43.01
Oct-14	0.54	-	12.79	0	0	6.04[Note9]	0	0.06	6.69	174.82	0.71	329.16	0	0	-	97.92
Nov-14	0.93	-	10.63	0	0	3.78[Note10]	0	0.15	6.70	163.72	0.56	376.40	0	0	-	81.91
Dec-14	3.72	-	8.59	0	0	2.97[Note11]	0	0	5.62	385.80	0.53	166.98	0	5.4	-	130.83
Jan-15	3.72	-	19.29	0	0	10.03 [Note12]	0	0	9.26	543.40	0.80	179.01	0	0	1.60	318.66
Feb-15	3.03	-	13.96	0	0	8.41 [Note13]	0	0	5.54	263.10	0.46	168.82	0	0	0	180.27
Mar-15	5.68	-	22.28	0	0	12.45[Note14]	0	0	9.82	346.70	0.61	11.45	0	0	0	429.13
Apr-15	4.71	-	18.51	0	0	11.25[Note15]	0	0.23	7.26	275.99	0.32	0	0	0	0	376.98

	WASTE FLOW TABLE															
May-15	4.62	-	20.64	0	0	11.53[Note16]	0	0	9.10	353.88	0.67	0	0	0	0	266.43
Jun-15	5.04	-	13.49	0	0	6.29 [Note17]	0	0	7.20	317.14	0.43	0	0	0.20	1.00	258.01
Jul-15	6.21	0.09	21.64	0	0	16.15[Note18]	0	0	5.50	706.38	0.69	0	0	0	0	270.73
Aug-15	0.40	0	26.43	0	0	19.29[Note19]	0	0	7.14	45.53	0.57	0	0	0	0	261.04
Sep-15	-	-	20.91	0	0	13.16[Note20]	0	0	7.75	317.36	0.58	0	0	0.45	0	240.74
Oct-15	-	-	26.22	0	0	14.19[Note21]	0	0	12.03	251.95	0.48	0	0	0	0	422.80
Nov-15	-	-	18.66	0	0	7.03[Note22]	0	0	11.64	446.80	0.53	0	0	0	0	283.46
Dec-15	-	-	17.02	0	0	9.81[Note23]	0	0	7.21	198.11	0.50	0	0	0	0	355.24
Jan-16	-	-	24.58	0	0	13.22[Note24]	0	0	11.37	273.64	0.62	0	0	0	0	347.67
Feb-16	-	-	9.34	0	0	4.31[Note25]	0	0	5.04	269.58	0.46	0	0	0	0	251.30
Mar-16	-	-	9.75	0	0	3.48[Note26]	0	0	6.27	750.85	0	0	0	0	0	288.35
Apr-16	-	-	12.83	0	0	5.68[Note27]	0	0	7.15	549.43	0.65	0	0	0.09	1.30	282.05
May-16	-	-	7.22	0	0	2.08[Note28]	0	0	5.14	356.66	0.55	0	0	0	0	318.75
Jun-16	-	-	2.83	0	0	2.38[Note29]	0	0	0.45	228.10	0.40	0	0	0	4.21	410.03
Jul-16	-	-	8.67	0	0	8.50[Note30]	0	0.01	0.16	172.90	0.16	0	0	0	0	418.44
Aug-16	-	-	2.08	0	0	1.95[Note31]	0	0	0.12	334.40	0.30	0	0	0	0	542.00
Sep-16	-	-	1.44	0	0	1.44[Note32]	0	0	0	47.10	0.37	0	0	0	0	542.44
Oct-16	-	-	3.00	0	0	3.00[Note33]	0	0	0	99.79	0.44	0	0	0	0	633.27
Nov-16	-	-	1.29	0	0	1.29[Note34]	0	0	0	29.71	0.45	0	0	0	0	866.16
Dec-16	-	-	1.10	0	0	1.10[Note35]	0	0	0	45.80	0.48	0	0	0	0	978.39
Jan-17	-	-	2.19	0	0	2.19[Note36]	0	0	0	26.10	0.25	0	0	0	0	730.48
Feb-17	-	-	1.04	0	0	1.04[Note37]	0	0	0	0	0.45	0	0	0	0	564.62
Mar-17	-	-	0.89	0	0	0.89[Note38]	0	0	0	0	0.49	0	0.31	0	0	688.72
Apr-17	-	-	0.83	0	0	0.83[Note39]	0	0	0	0	0.36	0	0	0	0	567.73
May-17	-	-	1.23	0	0	1.23[Note40]	0	0	0	0	0.16	0	0	0	0	597.93
Jun-17	-	-	0.70	0	0	0.70[Note41]	0	0	0	0	0.17	0	0	0	0	440.50
Jul-17	-	-	0.98	0	0	0.98[Note42]	0	0	0	0	0.31	0	0	0	0	371.00
Aug-17	-	-	0.63	0	0	0.63[Note43]	0	0	0	0	0.17	0	0	0	0	393.48
Sep -17	-	-	0.21	0	0	0.21[Note44]	0	0	0	0	0.23	0	0.11	0	0	362.47

	WASTE FLOW TABLE															
Oct-17	-	-	0.25	0	0	0.25[Note45]	0	0	0	0	0.10	0	0	0	0	377.69
Nov-17	-	-	0.66	0	0	0.66[Note46]	0	0	0	11.77	0.35	0	0	0	0	788.65
Dec-17	-	-	0.91	0	0	0.91[Note47]	0	0	0	0	0	0	0	0	0	446.48
Jan-18	-	-	0.83	0	0	0.83[Note48]	0	0	0	0	0	0	0	0	0	571.95
Feb-18	-	-	0.35	0	0	0.35[Note49]	0	0	0	0	0	0	0	0	0	395.37
Mar-18	-	-	0.66	0	0	0	0	0	0.66	0	0	0	0	0	0	760.13
Apr-18	-	-	0.55	0	0	0	0	0	0.55	0	0.04	0	0	0	0	461.49
May-18	-	-	0.40	0	0	0	0	0	0.40	14.37	0	0	0	0	0	245.30
Jun-18	-	-	0.48	0	0	0.00	0	0.00	0.48	0	0	0	0	0	0	164.33
Jul-18	-	-	0.33	0	0	0.00	0	0.07	0.27	45.84	0	0	0	0	0	148.53
Aug-18	-	-	0.14	0	0	0.00	0	0.00	0.14	53.62	0	0	0	0	0	133.46
Sep-18	-	-	0.16	0	0	0.00	0	0.00	0.16	0	0	0	0	0	0	112.56
Oct-18	-	-	0.35	0	0	0.00	0	0.00	0.35	5.21	0	0	0	0	0	129.09
Nov-18	-	-	0.23	0	0	0.00	0	0.00	0.23	0	0	0	0	0	0	96.35
Dec-18	-	-	0.17	0	0	0	0	0	0.17	0	0	0	0	0	0	71.21
Jan-19	-	-	0.24	0	0	0.00	0	0.00	0.24	0	0	0	0	0	0	67.72
Feb-19	-	-	0.08	0	0	0.00	0	0.00	0.08	0	0	0	0	0	0	42.90
Mar-19	-	-	0.042	0	0	0.00	0	0.00	0.042	0	0	0	0	0	0	51.08
Apr-19	-	-	0.075	0	0	0.00	0	0.00	0.075	0	0	0	0	0	0	44.30
May-19	-	-	0.00	0	0	0.00	0	0.00	0.00	0	0	0	0	0	0	60.98
Jun-19	-	-	0.070	0	0	0.00	0	0.00	0.070	0	0	0	0	0	0	85.82
Jul-19	-	-	0.032	0	0	0.00	0	0.00	0.032	0	0	0	0	0	0	82.09
Aug-19	-	-	0.080	0	0	0.00	0	0.00	0.080	0	0	0	0	0	0	72.45
Sep-19	-	-	0.023	0	0	0.00	0	0.00	0.023	0	0	0	0	0	0	39.94
Oct-19	-	-	0.142	0	0	0.00	0	0.00	0.142	0	0	0	0	0	0	78.30
Nov-19	-	-	0.277	0	0	0.00	0	0.005	0.277	0	0	0	0	0	0	63.16
Dec-19	-	-	0.012	0	0	0.00	0	0.00	0.012	0	0	0	0	0	0	96.39

	WASTE FLOW TABLE															
Jan-20	-	-	0.027	0	0	0.00	0	0.00	0.027	0	0	0	0	0	0	86.59
Feb-20	-	-	0.173	0	0	0.00	0	0.00	0.173	0	0	0	0	0	0	126.66
Mar-20	-	-	0.184	0	0	0.00	0	0.00	0.184	0	0	0	0	0	0	213.40
Apr-20	-	-	0.080	0	0	0.00	0	0.00	0.080	0	0	0	0	0	0	98.66
May-20	-	-	0.008	0	0	0.00	0	0.00	0.008	0	0	0	0	0	0	91.51
Jun-20	-	-	0.000	0	0	0.00	0	0.00	0.000	3.69	0	0	0	0	0	150.23
Jul-20	-	-	0.000	0	0	0.00	0	0.00	0.000	0	0	0	0	0	0	112.70
Aug-20	-	-	0.000	0	0	0.00	0	0.00	0.000	0	0	0	0	0	0	106.99
Sep-20	-	-	0.004	0	0	0.00	0	0.00	0.004	0	0	0	0	0	0	127.40
Oct-20	-	-	0.000	0	0	0.00	0	0.00	0.000	0	0	0	0	0	0	132.98
TOTAL	**40.35**	**0.09**	**457.93**	**0.00**	**0.42**	**239.63**	**4.86**	**3.43**	**210.25**	**9793.74**	**21.34**	**3790.76**	**3.18**	**6.74**	**8.11**	**22099.00**

Note:

1. 137 m^3 of the Inert C&D materials were reused in South Island Line (SIL) Project Contract 904.
2. 267 m^3 of the Inert C&D materials were reused in SIL Project Contract 904; 3,998 m^3 of the Inert C&D materials were reused in Wan Chai Development Phase II – Central – Wan Chai Bypass at Wan Chai West Project Contract HK/2012/08; and 1,912 m^3 of the Inert C&D materials were reused in Tuen Mun – Chek Lap Kok Link (TM-CLKL) and Tuen Mun Western Bypass (TMWB) Project Contract HY/2012/08.
3. 1,728 m^3 of the Inert C&D materials were reused in Wan Chai Development Phase II – Central – Wan Chai Bypass at Wan Chai West Project Contract HK/2012/08; and 3,088 m^3 of the Inert C&D materials were reused in TM-CLKL and TMWB Project Contract HY/2012/08.
4. 184 m^3 of the Inert C&D materials were reused in South Island Line (SIL) Project Contract 904; and 1814 m^3 of the Inert C&D materials were reused in TM-CLKL and TMWB Project Contract HY/2012/08.
5. 1,021 m^3 of the Inert C&D materials were reused in Wan Chai Development Phase II – Central – Wan Chai Bypass at Wan Chai West Project Contract HK/2012/08; and 707 m3 of the Inert C&D materials were reused in TM-CLKL and TMWB Project Contract HY/2012/08.
6. 2,894 m^3 of the Inert C&D materials were reused in TM-CLKL and TMWB Project Contract HY/2012/08.
7. 575.5m^3 of the Inert C&D materials were reused in Wan Chai Development Phase II – Central – Wan Chai Bypass at Wan Chai West Project Contract HK/2012/08; and 2907.6 m^3 of the Inert C&D materials were reused in TM-CLKL and TMWB Project Contract HY/2012/08; and 76.0 m^3 of the Inert C&D materials were reused in Wan Chai Development Phase II – Central – Wan Chai Bypass at Wan Chai West Project Contract HK/2009/08.
8. 4,905.4 m^3 of the Inert C&D materials were reused in TM-CLKL and 912.3 m^3 of the Inert C&D materials were reused in SIL Project Contract 904.
9. 5,522.9 m^3 of the Inert C&D materials were reused in TM-CLKL and 515.9 m^3 of the Inert C&D materials were reused in SIL Project Contract 904.
10. 3,774.6 m^3 of the Inert C&D materials were reused in TM-CLKL.
11. 2,968.9 m^3 of the Inert C&D materials were reused in TM-CLKL (HY/2012/08).
12. 9,988.1 m^3 of the Inert C&D materials were reused in WENT (SITA) and 46.34 m^3 of the Inert C&D materials were reused in SIL Project Contract 904.
13. 8,212.8 m^3 of the Inert C&D materials were reused in WENT (SITA) and 200.9 m^3 of the Inert C&D materials were reused in SIL Project Contract 904.

14. 11,757 m^3 of the Inert C&D materials were reused in WENT (SITA), 23.41 m^3 of the Inert C&D materials were reused in SIL Project Contract 904 and 672.78 m^3 of the Inert C&D materials were reused in XRL822.
15. 10,633 m^3 of the Inert C&D materials were reused in WENT (SITA) and 0.61176 m^3 of the Inert C&D materials were reused in XRL822.
16. 11,533 m^3 of the Inert C&D materials were reused in WENT (SITA).
17. 6,290 m^3 of the Inert C&D materials were reused in WENT (SITA).
18. 16,145 m^3 of the Inert C&D materials were reused in WENT (SITA).
19. 878 m^3 of the Inert C&D materials were reused in WENT (SITA) and 18,415 m^3 of the Inert C&D materials were reused in SCL1121.
20. 13,163 m^3 of the Inert C&D materials were reused in SCL1121.
21. 14,189 m^3 of the Inert C&D materials were reused in SCL1121.
22. 7,030 m^3 of the Inert C&D materials were reused in SCL1121.
23. 9,811 m^3 of the Inert C&D materials were reused in SCL1121.
24. 13,218 m^3 of the Inert C&D materials were reused in SCL1121.
25. 4,306 m^3 of the Inert C&D materials were reused in SCL1121.
26. 3,478 m^3 of the Inert C&D materials were reused in SCL1121.
27. 5,680 m^3 of the Inert C&D materials were reused in SCL1121.
28. 2,080 m^3 of the Inert C&D materials were reused in SCL1121.
29. 2,380 m^3 of the Inert C&D materials were reused in SCL1121.
30. 8,500 m^3 of the Inert C&D materials were reused in SCL1121.
31. 1,950 m^3 of the Inert C&D materials were reused in SCL1121.
32. 1,440 m^3 of the Inert C&D materials were reused in SCL1121.
33. 3,004 m^3 of the Inert C&D materials were reused in SCL1121.
34. 1,290 m^3 of the Inert C&D materials were reused in SCL1121.
35. 1,100 m^3 of the Inert C&D materials were reused in SCL1121.
36. 2,190 m^3 of the Inert C&D materials were reused in SCL1121.
37. 1,040 m^3 of the Inert C&D materials were reused in SCL1121.
38. 890 m^3 of the Inert C&D materials were reused in SCL1121.
39. 830 m^3 of the Inert C&D materials were reused in SCL1121.
40. 1,230 m^3 of the Inert C&D materials were reused in SCL1121.
41. 700 m^3 of the Inert C&D materials were reused in SCL1121.
42. 980 m^3 of the Inert C&D materials were reused in SCL1121.
43. 630 m^3 of the Inert C&D materials were reused in SCL1121.
44. 210 m^3 of the Inert C&D materials were reused in SCL1121.
45. 250 m^3 of the Inert C&D materials were reused in SCL1121.
46. 660 m^3 of the Inert C&D materials were reused in SCL1121.
47. 910 m^3 of the Inert C&D materials were reused in SCL1121.
48. 830 m^3 of the Inert C&D materials were reused in SCL1121.
49. 350 m^3 of the Inert C&D materials were reused in SCL1121.

Month	MARINE SEDIMENT FLOW TABLE					
	Actual Quantities of Marine Dumping Monthly					
	Type 1			Type 2		
	Generated from SCL1111 [Note1]	Generated from SCL1112 [Note3]	Disposed	Generated from SCL1111 [Note2]	Generated from SCL1112 [Note4]	Disposed
Unit	(in '000m^3)			(in '000m^3)		
Jan-15	0	0	0	2.22	0.06	2.28
Feb-15	1.29	0	0.82	0	0	0
Mar-15	2.43	0	2.48	0	0	0
Apr-15	3.97	0.14	5.27	0	0	0
May-15	8.26	0.09	8.35	0	0	0
Jun-15	9.71	0.12	9.83	0	0	0
Jul-15	5.29	0	5.18	0	0	0
Aug-15	0	0	0	0	0	0
Sep-15	-	0	0	-	1.94	1.94
Oct-15	-	0.53	0.53	-	0	0
Nov-15	-	5.67	5.67	0	2.32	2.32
Dec-15	-	14.44	-	-	1.02	-
Jan-16	-	16.59	-	-	0.02	-
Feb-16	-	1.25	-	-	4.04	-
Mar-16	-	3.85	-	-	2.30	-
Apr-16	-	0	-	-	0.36	-
May-16	-	0	-	-	4.06	-
Jun-16	-	0	-	-	6.45	-
Jul-16	-	0	-	-	0	-
Aug-16	-	0	-	-	0	-
Sep-16	-	0	-	-	0	-
Oct-16	-	0	-	-	0	-
Nov-16	-	0	-	-	0	-
Dec-16	-	0	-	-	0	-
Jan-17	-	0	-	-	0	-

	MARINE SEDIMENT FLOW TABLE					
Feb-17	-	0	-	-	0	-
Mar-17	-	0	-	-	0	-
Apr-17	-	0	-	-	0	-
May-17	-	0	-	-	0	-
Jun-17	-	0	-	-	0	-
Jul-17	-	0	-	-	0	-
Aug-17	-	0	-	-	0	-
Sep-17	-	0	-	-	0	-
Oct-17	-	0	-	-	0	-
Nov-17	-	0	-	-	0	-
Dec-17	-	0	-	-	0	-
Jan-18	-	0	-	-	0	-
Feb-18	-	0	-	-	0	-
Mar-18	-	0	-	-	0	-
Apr-18	-	0	-	-	0	-
May-18	-	0	-	-	0	-
Jun-18	-	0	-	-	0	-
Jul-18	-	0	-	-	0	-
Aug-18	-	0	-	-	0	-
Sep-18	-	0	-	-	0	-
Oct-18	-	0	-	-	0	-
Nov-18	-	0	-	-	0	-
Dec-18	-	0	-	-	0	-
Jan-19	-	0	-	-	0	-
Feb-19	-	0	-	-	0	-
Mar-19	-	0	-	-	0	-
Apr-19	-	0	-	-	0	-
May-19	-	0	-	-	0	-
Jun-19	-	0	-	-	0	-

	MARINE SEDIMENT FLOW TABLE					
Jul-19	-	0	-	-	0	-
Aug-19	-	0	-	-	0	-
Sep-19	-	0	-	-	0	-
Oct-19	-	0	-	-	0	-
Nov-19	-	0	-	-	0	-
Dec-19	-	0	-	-	0	-
Jan-20	-	0	-	-	0	-
Feb-20	-	0	-	-	0	-
Mar-20	-	0	-	-	0	-
Apr-20	-	0	-	-	0	-
May-20	-	0	-	-	0	-
Jun-20	-	0	-	-	0	-
Jul-20	-	0	-	-	0	-
Aug-20	-	0	-	-	0	-
Sep-20	-	0	-	-	0	-
Oct-20	-	0	-	-	0	-
TOTAL	**31.69**	**42.67**	**38.11**	**2.22**	**22.57**	**6.54**

Note:

1. Type 1 Marine Sediment generated from SCL1111 was delivered to the Barging Point at SCL1121 for disposal.
2. Type 2 Marine Sediment generated from SCL1111 was delivered to the Barging Point at SCL1121 for disposal.
3. Type 1 Marine Sediment generated from SCL1112 was delivered to the Barging Point at SCL1121 for disposal.
4. Type 2 Marine Sediment generated from SCL1112 was delivered to the Barging Point at SCL1121 for disposal.

Appendix H CUMULATIVE STATISTICS ON COMPLAINTS, NOTIFICATIONS OF SUMMONS AND SUCCESSFUL PROSECUTIONS

Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions

	DATE RECEIVED	REFERENCE NO.	SUBJECT	LOCATION OF CONCERN	STATUS
Environmental Complaints	22 & 24 December 2019	Public comment received by EPD, EPD's Ref. No. K01/RE/36723-2019	General construction noise except renovation (within Restricted Hours)	Hung Hom MTR Station	• Environmental performance at the site and implementation status of proposed noise mitigation measures were immediately reviewed by the Contractor on 24 December 2019 • On 22 December 2019, scaffolding dismantling was carried out inside the Concourse. On 24 December 2019, installation of ceiling panels and floor tiles were carried out involving the use of scissor lifts. • All works on both days were carried out with the concourse entrance closed as a mitigation measure and was covered by a valid CNP. • Investigation report will be submitted to EPD before 9 January 2020.
	7 January 2019	Public comment received by EPD, EPD's Ref. No. K01/RE/00000599-19	General construction noise except renovation (within Restricted Hours)	Hung Hom MTR Station	• Environmental performance at the site and implementation status of proposed noise mitigation measures were immediately reviewed by the Contractor on 8 January 2019. • No external works outside Hung Hom Concourse were carried out during the time of the complaint. • On 8 January 2019, signage erection involving one scissor lift, hand-drill and hand-held breaker was carried out inside the Concourse. All works were carried out with the concourse entrance closed and was covered by a valid CNP. • The noise from such equipment and machinery does not appear to match the noise in the sound recording provided by the complainant. No source of the noise in the sound recording could be identified from construction works carried out at Hung Hom Station. • Investigation report submitted to EPD on 17 January 2019.
Environmental Complaints	19 January 2018	Public comment received by EPD, EPD's Ref. No. K01/RE/00002030	General construction noise except renovation (within Restricted Hours)	Hung Hom MTR Station	• Environmental performance at the site and implementation status of proposed noise mitigation measures were immediately reviewed by the Contractor on 19 January 2018.

	DATE RECEIVED	REFERENCE NO.	SUBJECT	LOCATION OF CONCERN	STATUS
		-18 & K01/RE/00002056 -18			• Ceiling panel works involving elevated working platforms (scissor lifts or cherry pickers) inside the concourse was carried out on 19 and 20 January 2018. All works were carried out behind the door leaves with the concourse entrance closed. • On 19 January 2018, there was also works carried out outside the concourse which required the use of a scissor lift for hoarding removal at North Concourse and paint removal at East Concourse. • The scissor lift platform mobilization sound, i.e. “beeping” sound, has already been muted to minimise sound since the working area was already fenced off with a lookout man provided. However, the level sensor of the scissor lift would be activated as a safety warning signal whenever the platform is at a high position with balance at risk. • All works carried out by SCL Contract 1112 on 19 and 20 January 2018 were covered by valid CNPs. • Investigation report submitted to EPD on 26 January 2018.

	DATE RECEIVED	REFERENCE NO.	SUBJECT	LOCATION OF CONCERN	STATUS
Environmental Complaints	7 December 2017	Public comment received by EPD, EPD's Ref. No. K01/RE/ 00039690-17	Dust Nuisance	Hong Kong Coliseum, 9 Cheong Wan Road, Hung Hom	• The Contractor immediately reviewed environmental performance at the site and implementation status of dust mitigation measures upon receipt of Notice of Complaint from EPD. • The Contractor confirmed that remediation work of concrete wall on top of the vent shaft was on-going at SAT (near the podium of the Hong Kong Coliseum). • Tarpaulin sheet as a construction dust barrier was implemented as dust mitigation measures during the course of the remediation work, and additional mitigation measure in the form of water spraying for dust suppression in the works area was immediately provided by the Contractor after site review. • Given the fact that remediation works surrounding the podium are completed and mitigation measures in place are considered sufficient and effective, the construction works for Contract 1112 is unlikely to cause any dust nuisance. • Investigation report submitted to EPD on 15 December 2017.
Environmental Complaints	10 April 2017	Public comment received by EPD, EPD's Ref. No. K01/RE/00010598 -17	General construction noise except renovation (within Restricted Hours)	The Metropolis, No. 7-10 Metropolis Drive, Tsim Sha Tsui	• ET conducted inspection to examine the environmental performance of the site on 13 April 2017. • The Contractor confirmed bulkhead wall demolition work using coring machine at SAT was carried out on 7 & 8 April 2017 during 1 am – 5 am behind the door leaves and no machinery that would generate beeping sound was involved. • On the two nights from 6 to 8 April 2017, installation of smoke barrier was conducted under podium which required the use of a cherry picker. During cherry picker platform mobilization, safety warning signal, i.e. "beeping" sound, would be emitted. Since the cherry picker was located under the podium with no direct line of sight from the Metropolis Residence, safety warning signal should not

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					be audible from above the podium or at the Metropolis Residence. • There was works involving the use of scissor lifts inside the concourse during April 2017 from 1 am – 5 am. However, such works were carried out with the main door closed. • On 6 & 7 April 2017, there were loading and unloading works using a crane lorry at the north side outside the Concourse from 1 am – 5 am. Backwards movement of the crane lorry would also emit a "beeping" sound as the safety warning signal to alert nearby worker of the movement of the vehicle. • All works carried out by SCL Contract 1112 in early April 2017 are covered by valid CNPs. • Investigation report submitted to EPD on 2 May 2017.
Environmental Complaints	13 March 2017	Public comment received by EPD, EPD's Ref. No. EP3/K01/RE/0000 7049-17	General construction noise except renovation (within Restricted Hours)	Hong Kong Coliseum at No. 9 Cheong Wan Road, Tsim Sha Tsui	• ET conducted inspection to examine the environmental performance of the site on 16 March 2017. • The Contractor confirmed no construction works was carried out at the uncovered site area to the south of the Hong Kong Coliseum podium on 12 March 2017. • It is confirmed that general housekeeping works were carried out under the Hong Kong Coliseum podium to prepare site hand over. No noisy operation with PME or hammering works was carried out that could lead to generation of noise nuisance. • A valid Construction Noise Permit (CNP No. GW-RE0124-17) valid from 28 February 2017 to 27 August 2017 was granted for construction works, including the housekeeping works, carried out under the podium during all restricted hours. • Given the fact that only housekeeping works were carried out under the podium of the Hong Kong Coliseum on 12 March 2017, noise nuisance reported by the complainant shall not be generated from the site managed under SCL Contract 1112.

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					• Investigation report submitted to EPD on 21 March 2017.
Environmental Complaints	8 April 2016	Public comment received by EPD, EPD's Ref. No. K01/RE/00008018 -16	Air nuisance, other than dark smoke, from construction machine	Hung Hom Station, Tsim Sha Tsui	• ET conducted inspection to examine the environmental performance of the site on 14 April 2016. • Both the site and machineries were in normal operation during the site inspection. No air nuisance or smell of diesel exhaust was noticed at the concourse by any of the attending personnel. • No diesel powered equipment was found at the concourse, as all of the powered mechanical equipment was powered by electricity. • It is confirmed that the fresh air intake location of the air conditioning system serving the concourse level is located above the podium at the southern façade of the concourse, away from the construction work under the podium. • It is also confirmed that the sealed system is totally separated from the construction site under the podium. No air from the construction area under the podium will be drawn into the air conditioning system for distribution within the station. • The source of strong diesel exhaust smell at the concourse, as mentioned by the complainant, could not be identified. • Investigation report submitted to EPD on 26 April 2016.
Environmental Complaints	11 April 2016	Public comment received by EPD, EPD's Ref. No. K01/RE/00008149 -16	Complaint of other air nuisance at Hung Hom Station, Tsim Sha Tsui	Hung Hom Station, Tsim Sha Tsui	• Complaint confirmed to be irrelevant to the construction works of the Project, no follow up required.
Environmental Complaints	24 March 2016	Public comment received by EPD, EPD's Ref. No. K01/RE/00006851 -16	"General construction noise except renovation (within Restricted Hours) from Hung Hom Station, Tsim Sha Tsui"	Hung Hom Station, Tsim Sha Tsui	• The Contractor confirmed that only mobilization, i.e. transportation of the equipment itself, of the scissor lift platforms were carried out during night time. During scissor lift platforms mobilization, safety warning signal (the "beeping" noise) would be emitted. The audible warning signal device cannot be switched off so as to alert nearby workers of the movement of the equipment.

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					Silencing the device could induce safety concern and not advisable. • At night time of 22 and 23 March 2015, a forklift was deployed for the transportation of concrete blocks to be used as the footings for hoarding construction outside the concourse area (Photo 2). Backward movement of the forklift would also generate safety warning signal. • There is another valid CNP (CNP No. GW-RE0176-16) for construction works to be carried out inside the concourse during night time. However, this is not applicable to the works of concern, located outside the concourse area. Whereas CNP No. GW-RE0207-16, effective from 10 March 2016 to 28 April 2016, allows mobilization of scissor lift platforms and use of forklift for transportation of construction material outside the MTR Hung Hom Station. • Investigation report submitted to EPD on 20 April 2016.
Environmental Complaints	28 September 2015	Public comment received by EPD, K01/RE/00024658 -15	Complaint of general construction noise except renovation (within Restricted Hours) from construction site at Hung Hom	Harbour Plaza Metropolis, Tsim Sha Tsui	• A valid construction noise permit (CNP) (CNP no. GW-RN0969-15) was granted for such works from 25 September 2015 to 24 March 2016. • Noise mitigation measures were implemented at the site. • Due to the limited construction works being carried out during the evening period and most of the active construction works being carried out under the podium which had no direct line of sight from the nearest sensitive receiver, Harbour Plaza Metropolis, construction noise nuisance from Shatin to Central Link (SCL) Contract 1112 should not be anticipated. • Investigation report submitted to EPD on 3 November 2015.

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Environmental Complaints	10 March 2015	Public comment received by EPD, K01/RE/00005632 -15	Complaint of malodour from Hung Hom Station (near Exit B1)	Hung Hom Station, Tsim Sha Tsui	• ET conducted inspection to examine the environmental performance of the site on 12 Mar 2015 • No odour was noticed by all attending parties. It was observed that excavation, predrilling, welding, box culvert construction and installation of TAM grout pipeworks were carried out at the NAT works area, located to the west and east of the footbridge • The source of malodour could not be identified • A barrier was erected on the eastern side of footbridge, with the barrier already in place on the western side of the footbridge since November 2014, so now both sides of the footbridge contain barriers to shield off any dust or odour from the site • No noticeable malodour was observed and the air quality control was found to be satisfactory according to conversation between EPD and the Contractor • Investigation Report submitted to EPD on 26 Mar 2015
Notification of Summons	3 Oct 2016	Summon received by Mr. MAK Wong-Chuen, Case No.: KTS16747/2016	On 1 April 2016, Mr. MAK Wong-Chuen operated a hand-held electric breaker at around 0053hr outside the Concourse, in violation of Section 6 (1) (a) and 6 (5) of the Noise Control Ordinance (Cap. 400). Mr. Mak Wong-Chuen was employed by Palgo Company Limited, which is a sub-contractor for SCL Contract 1112's main contractor, Leighton Contractors (Asia) Limited.	Entrance C2 of Hung Hom Station	• The hearing took place on 3 Nov 2016 at Kwun Tong Magistrates' Courts. Remarks: The summon was only sent to the individual. Neither Palgo Company Limited nor Leighton Contractors (Asia) Limited received the summons.

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Successful Prosecution	3 Nov 2016	Summon received by Mr. MAK Wong-Chuen, Case No.: KTS16747/2016	On 1 April 2016, Mr. MAK Wong-Chuen operated a hand-held electric breaker at around 0053hr outside the Concourse, in violation of Section 6 (1) (a) and 6 (5) of the Noise Control Ordinance (Cap. 400). Mr. Mak Wong-Chuen was employed by Palgo Company Limited, which is a sub-contractor for SCL Contract 1112's main contractor, Leighton Contractors (Asia) Limited.	Entrance C2 of Hung Hom Station	• The hearing took place on 3 Nov 2016 at Kwun Tong Magistrates' Courts. • The worker pleaded guilty and paid a HKD 15,000 fine. • After the incident, Leighton has reviewed their internal procedures/ working methods to identify the cause of non-compliance and potential improvements. • Upon review, Leighton's current system is found to be adequate to ensure proper implementation of their construction work undertaken at night and they will continue to implement the environmental management systems with the objective of ensuring environmental compliance.

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