JOB NO.: TCS00694/13

AGREEMENT NO. CE 45/2008 (CE)
LIANTANG/ HEUNG YUEN WAI
BOUNDARY CONTROL POINT AND ASSOCIATED WORKS

FINAL REVIEW ENVIRONMENTAL MONITORING AND AUDIT REPORT

PREPARED FOR
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT (CEDD)

Date	Reference No.	Prepared By	Certified By
19 January 2024	TCS00694/13/600/R2859v3		
		Nicola Hon (Environmental Consultant)	Tam Tak Wing (Environmental Team Leader)

Version	Date	Remarks
1	22 December 2023	First Submission
2	12 January 2024	Amended according to IEC's comment
3	19 January 2024	Amended according to IEC's comment

SMEC

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Our ref: 7076192/L30516/AG/TK/rw

23 January 2024

AECOM
12/F, Grand Central Plaza, Tower 2
138 Shatin Rural Committee Road
Shatin, N.T.

By Email & Post

Attention: Mr Eddie LUK

Dear Sir

Agreement No. CE 45/2008 (CE)
Liantang/Heung Yuen Wai Boundary Control Point and Associated Works
Independent Environmental Checker – Investigation
Final EM&A Review Report

With reference to the Final EM&A Review Report (Version 3) certified by the ET Leader and received by us on 22 January 2024, please note that we have no adverse comments on the captioned submission. We herewith verify the captioned submission in accordance with Section 13.5 of the EM&A Manual.

Thank you for your attention and please do not hesitate to contact the undersigned on tel. 3995 8120 or by email to alex.gbaguidi@smec.com; or our Mr Tommy KONG on tel. 3995 8123 or by email to tommy.kong@smec.com.

Yours faithfully

Alex GBAGUIDI
Independent Environmental Checker

cc	CEDD/BCP	-	Mr LU Pei Yu / Mr Yu Wang LAM	by fax: 3547 1659
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EXECUTIVE SUMMARY

ES01 Civil Engineering and Development Department is the Project Proponent and the Permit Holder of Agreement No. CE 45/2008 (CE) Liantang / Heung Yuen Wai Boundary Control Point and Associated Works (LT/HYW)" (The Project). It is a Designated Project to be implemented under Environmental Permit number EP-404/2011/D which granted on 20 January 2017.

ES02 To facilitate the project management and implementation, the Project has been divided to six CEDD contracts to execute, including Contract 2 (CV/2012/08), Contract 3 (CV/2012/09), Contract 4 (NE/2014/02), Contract 5 (CV/2013/03), Contract 6 (CV/2013/08) and Contract 7 (NE/2014/03) and an ArshSD contract (Contract SS C505).

ES03 The construction phase Environmental Monitoring and Aduit (EM&A) of the Project was commenced on 16th August 2013 and terminated on 31st October 2023, following approval from the Environmental Protection Department. The termination proposals related to the Project are summarized below.

Termination Proposal	EPD's letter reference	Suspended monitoring stations & site inspection
Proposal for partial termination of the construction phase EM&A programme for Contracts 2, 4, 7 and SS C505	Approved by EPD via EPD's ref.: ( ) in Ax (3) to EP 2/N7/A/52 Pt.17 dated 9 July 2020	Air quality monitoring stations AM1c & AM8; noise monitoring stations NM1, NM7 and ET's site inspection
Proposal for partial termination of the construction phase EM&A programme for Contract 3	Approved by EPD via EPD's ref.: () in Ax (3) to EP 2/N7/A52 Pt.18 on 4 May 2021	Air quality monitoring stations AM9b; noise monitoring stations NM8, NM9 & NM10; water quality monitoring stations WM4, WM4-CA & WM4-CB and ET's site inspection
Proposal for Termination of Construction Phase EM&A Programme for Remaining Works of Contract 6 (entire Project)	Approved by EPD via EPD's ref.: () in Ax (3) to EP2/N7/A52 Pt.19 on 31 October 2023	All remaining stations and ET's site inspection for remaining areas

ES04 This is the Final Review EM&A Report for Construction Phase summarizing the monitoring results and inspection findings during the construction period of 16th August 2013 to 31st October 2023 (hereinafter 'the construction Period).

ENVIRONMENTAL MONITORING AND AUDIT ACTIVITIES IN THE CONSTRUCTION PHASE

ES05 Environmental monitoring activities under the EM&A programme in the Construction Period are summarized in the following table.

Issues	Environmental Monitoring Parameters / Inspection	Total Sessions
Air Quality	1-hour TSP Monitoring	14313
	24-hour TSP Monitoring	4708
Construction Noise	$L_{Aeq(30min)}$ Daytime monitoring	4430
Water Quality	Dissolved Oxygen	11330
	Turbidity	11941
	Suspended Solids	11938
Site inspection & audit	ET weekly Environmental Site Inspection for all Contracts	1921

BREACH OF ACTION AND LIMIT (A/L) LEVELS

ES06 Throughout the Construction Period, 25 Action Level and 4 Limit Level air quality exceedances were recorded. For construction noise, 11 Action Level and 3 Limit Level exceedances were recorded. For water quality monitoring, 36 Action Level and 950 Limit Level exceedances were

recorded. NOEs were issued to relevant parties upon confirmation of the monitoring result and investigation for the causes of exceedances were carried out by ET subsequently. The statistics analysis of environmental exceedance are summarized in the following table.

Environmental Aspect	Monitoring Parameters	Total analyzed of the sample	Exceedance			
			Action Level	Limit Level	Total	%
Air Quality	1-hour TSP	14313	6	0	6	0.042
	24-hour TSP	4708	19	4	23	0.49
Construction Noise	$L_{eq(30min)}$ Daytime	4430	11	3	14	0.32
Water Quality	DO	11330	0	33	33	0.29
	Turbidity	11941	15	443	458	3.84
	SS	11938	21	474	495	4.17

ENVIRONMENTAL COMPLAINT, NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS

ES07 Throughout the Construction Period, a total of 111 environmental complaints were lodged under the EM&A Programme and investigations had carried out by ET by auditing the mitigation measures implemented by the Contractor. After investigation, 28 out of 111 complaints were considered as project related complaint. The Contractor was strongly advised to implement and enhance the relevant mitigation measures and site check was conducted by ET to check the environmental performance after the situation has been rectified.

ES08 One event of summons was lodged for Contract 2 throughout the Construction Period, and no prosecution was received for the project.

ES09 Throughout the Construction Period, 1921 session of site inspection has been carried out by ET to evaluate site environmental performance. no non-compliance was recorded. Minor deficiencies were in general rectified within the specified deadlines. The environmental performance of the Project was therefore considered satisfactory.

ES10 Precision of the prediction of the EIA on the adverse air quality, noise and water quality impacts as generated from the construction of the Project is acceptable. The monitoring performed during the Construction Period is effective for generating data with the necessary statistical power to categorically identify or confirm the presence or absence of the predicted environmental impacts attributable to the works under the Project.

ES11 The mitigation measures stipulated in Implementation Schedule for Environmental Mitigation Measures included air quality, noise and water quality are effective and shall be strictly implemented and observed throughout the construction period in future of others construction projects.

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1 INTRODUCTION

1.1 *PROJECT BACKGROUND*

1.1.1 Civil Engineering and Development Department is the Project Proponent and the Permit Holder of *Agreement No. CE 45/2008 (CE) Liantang / Heung Yuen Wai Boundary Control Point and Associated Works*, which is a Designated Project to be implemented under Environmental Permit number EP-404/2011/D granted on 20 January 2017.

1.1.2 The Project consists of three main components: Construction of a Boundary Control Point (hereinafter referred as "BCP"); Reuse of treated sewage effluent from a treatment plant; and Construction of a connecting road alignment. Layout plan of the Project is shown in ***Appendix A***.

1.1.3 The proposed BCP is located at the boundary with Shenzhen near the existing Chuk Yuen Village, comprising a main passenger building with passenger and cargo processing facilities and the associated customs, transport and ancillary facilities. The connecting road alignment consists of six main sections:

1) Lin Ma Hang to Frontier Closed Area (FCA) Boundary – this section comprises at-grade and viaducts and includes the improvement works at Lin Ma Hang Road;
2) Ping Yeung to Wo Keng Shan – this section stretches from the Frontier Closed Area Boundary to the tunnel portal at Cheung Shan and comprises at-grade and viaducts including an interchange at Ping Yeung;
3) North Tunnel – this section comprises the tunnel segment at Cheung Shan and includes a ventilation building at the portals on either end of the tunnel;
4) Sha Tau Kok Road – this section stretches from the tunnel portal at Wo Keng Shan to the tunnel portal south of Loi Tung and comprises at-grade and viaducts including an interchange at Sha Tau Kok and an administration building;
5) South Tunnel – this section comprises a tunnel segment that stretches from Loi Tung to Fanling and includes a ventilation building at the portals on either end of the tunnel as well as a ventilation building in the middle of the tunnel near Lau Shui Heung;
6) Fanling – this section comprises the at-grade, viaducts and interchange connection to the existing Fanling Highway.

1.1.4 Action-United Environmental Services & Consulting has been commissioned as an Independent ET to implement the relevant EM&A program in accordance with the approved EM&A Manual, as well as the associated duties. As part of the EM&A program, the baseline monitoring has carried out between **13 June 2013** and **12 July 2013** for all parameters including air quality, noise and water quality before construction work commencement. The Baseline Monitoring Report summarized the key findings and the rationale behind determining a set of Action and Limit Levels (A/L Levels) from the baseline data. Also, the Project baseline monitoring report which verified by the IEC has been submitted to EPD on **16 July 2013** for endorsement. The major construction works of the Project was commenced on **16 August 2013** in accordance with the EP Section 5.3 stipulation.

1.1.5 Following the partial commencement of the Project, the major construction works under the Project were substantially completed. Proposal for partial termination of the construction phase EM&A programme for Contracts 2, 4, 7 and SS C505 was approved by EPD on 9 July 2020 (EPD's ref.: ( ) in Ax (3) to EP 2/N7/A/52 Pt.17). Moreover, termination proposal for Contract 3 was approved by EPD on 4 May 2021 (EPD's ref.: () in Ax (3) to EP 2/N7/A52 Pt.18).

1.1.6 The proposal for termination of construction phase EM&A programme for Contract 6 and entire Project was approved by EPD on 31 October 2023 (EPD letter reference: ( ) in Ax(3) to EP2/N7/A52 Pt.19 dated 31 October 2023.

1.1.7 This is the Final Review EM&A Report for Construction Phase summarizing the monitoring results and inspection findings during the construction period of 16th August 2013 to 31st October 2023 (hereinafter 'the construction Period).

1.2 *REPORT STRUCTURE*

1.2.1 The Final Review Environmental Monitoring and Audit Report is structured into the following sections:-

Section 1 *Introduction*
Section 2 *Project Organization and Construction Progress*
Section 3 *Summary of Impact Monitoring Requirements*
Section 4 *Air Quality Monitoring*
Section 5 *Construction Noise Monitoring*
Section 6 *Water Quality Monitoring*
Section 7 *Ecology Monitoring*
Section 8 *Waste Management*
Section 9 *Site Inspections*
Section 10 *Environmental Complaints and Non-Compliance*
Section 11 *Implementation Status of Mitigation Measures*
Section 12 *Conclusions and Recommendations*

2 PROJECT ORGANIZATION AND CONSTRUCTION PROGRESS

2.1 *CONSTRUCTION CONTRACT PACKAGING*

2.1.1 To facilitate the project management and implementation, the Project would be divided by the following contracts:

- Contract 2 (CV/2012/08)
- Contract 3 (CV/2012/09)
- Contract 4 (NE/2014/02)
- Contract 5 (CV/2013/03)
- Contract 6 (CV/2013/08)
- Contract 7 (NE/2014/03)
- ArchSD Contract No. SS C505

2.1.2 The details of each contracts is summarized below and the delineation of each contracts is shown in ***Appendix A***.

Contract 2 (CV/2012/08)

2.1.3 Contract 2 has awarded in December 2013 and construction work was commenced on 19 May 2014. Major Scope of Work of the Contract 2 is listed below:

- construction of an approximately 5.2km long dual two-lane connecting road (with about 0.4km of at-grade road and 4.8km of tunnel) connecting the Fanling Interchange with the proposed Sha Tau Kok Interchange;
- construction of a ventilation adit tunnel and the mid-ventilation building;
- construction of the north and south portal buildings of the Lung Shan Tunnel and their associated slope works;
- provision and installation of ventilation system, E&M works and building services works for Lung Shan tunnel and Cheung Shan tunnel and their portal buildings;
- construction of Tunnel Administration Building adjacent to Wo Keng Shan Road and the associated E&M and building services works; and
- construction of associated footpath, slopes, retaining structures, drainage, sewerage, waterworks, landscaping works and other ancillary works.

Contract 3 (CV/2012/09)

2.1.4 Contract 3 was awarded in July 2013 and construction work was commenced on 5 November 2013. Major Scope of Work of the Contract 3 is listed below:

- construction of four link roads connecting the existing Fanling Highway and the south portal of the Lung Shan Tunnel;
- realignment of the existing Tai Wo Service Road West and Tai Wo Service Road East;
- widening of the existing Fanling Highway (HyD's entrustment works);
- demolishing existing Kiu Tau vehicular bridge and Kiu Tau footbridge and reconstruction of the existing Kiu Tau Footbridge (HyD's entrustment works); and
- construction of associated footpath, slopes, retaining structures, drainage, sewerage, waterworks, landscaping works and other ancillary works.

Contract 4 (NE/2014/02)

2.1.5 Contract 4 has awarded in mid-April 2016 and construction work was commenced on 2 May 2017. The scope of work of the Contract 4 includes:

- design, supply, delivery, installation, testing and commissioning of a traffic control and surveillance system for the connecting road linking up the Liantang / Heung Yuen Wai Boundary Control Point and the existing Fanling Highway.

Contract 5 (CV/2013/03)

2.1.6 Contract 5 has awarded in April 2013 and construction work was commenced in August 2013. Major Scope of Work of the Contract 5 is listed below:

- site formation of about 23 hectares of land for the development of the BCP;
- construction of an approximately 1.6 km long perimeter road at the BCP including a 175m long depressed road;
- associated diversion/modification works at existing local roads and junctions including Lin Ma Hang Road;
- construction of pedestrian subway linking the BCP to Lin Ma Hang Road;
- provision of resite area with supporting infrastructure for reprovisioning of the affected village houses; and
- construction of associated footpath, slopes, retaining structures, drainage, sewerage, waterworks, landscaping works and other ancillary works.

Contract 6 (CV/2013/08)

2.1.7 Contract 6 has awarded in June 2015 and construction work was commenced on 23 October 2015. Major Scope of Work of the Contract 6 would be included below:

- construction of an approximately 4.6km long dual two-lane connecting road (with about 0.6km of at-grade road, 3.3km of viaduct and 0.7km of tunnel) connecting the BCP with the proposed Sha Tau Kok Road Interchange and the associated ventilation buildings;
- associated diversion/modification works at access roads to the resite of Chuk Yuen Village;
- provision of sewage collection, treatment and disposal facilities for the BCP and the resite of Chuk Yuen Village;
- construction of a pedestrian subway linking the BCP to Lin Ma Hang Road;
- provisioning of the affected facilities including Wo Keng Shan Road garden; and
- construction of associated footpath, slopes, retaining structures, drainage, sewage treatment plant for reuse of treated sewage effluent, waterworks, landscaping works and other ancillary works.

Contract 7 (NE/2014/03)

2.1.8 Contract 7 has awarded in December 2015 and the construction works of Contract 7 was commenced on 15 February 2016. Major Scope of Work of the Contract 7 would be included below:

- construction of the Hong Kong Special Administrative Region (HKSAR) portion of four vehicular bridge
- construction of one pedestrian bridge crossing Shenzhen (SZ) River (cross boundary bridges)

ArchSD Contract No. SS C505

2.1.9 SS C505 has awarded in July 2015 and construction work was commenced on 1 September 2015. Major Scope of Work of the SS C505 would be included below:

- passenger-related facilities including processing kiosks and examination facilities for private cars and coaches, passenger clearance building and halls, the interior fitting works for the pedestrian bridge crossing Shenzhen River, etc.;
- cargo processing facilities including kiosks for clearance of goods vehicles, customs inspection platforms, X-ray building, etc.;
- accommodation for the facilities inside of the Government departments providing services in connection with the BCP;
- transport-related facilities inside the BCP including road networks, public transport interchange, transport drop-off and pick-up areas, vehicle holding areas and associated road

furniture etc;
- a public carpark; and
- other ancillary facilities such as sewerage and drainage, building services provisions and electronic systems, associated environmental mitigation measure and landscape works.

2.2 *PROJECT ORGANIZATION*

2.2.1 The project organization is shown in ***Appendix B***. The responsibilities of respective parties are:

Civil Engineering and Development Department (CEDD)

2.2.2 CEDD is the Project Proponent and the Permit Holder of the EP of the development of the Project and will assume overall responsibility for the project. An Independent Environmental Checker (IEC) shall be employed by CEDD to audit the results of the EM&A works carried out by the ET.

Architectural Services Department (ArchSD)

2.2.3 ArchSD acts as the works agent for Development Bureau (DEVB), for Contract SS C505 Liantang/ Heung Yuen Wai Boundary Control Point (BCP) – BCP Buildings and Associated Facilities.

Environmental Protection Department (EPD)

2.2.4 EPD is the statutory enforcement body for environmental protection matters in Hong Kong.

Ronald Lu & Partners (Hong Kong) Ltd (The Architect)

2.2.5 Ronald Lu & Partners (Hong Kong) Ltd is appointed by ArchSD as an Architect for Contract SS C505 Liantang/ Heung Yuen Wai Boundary Control Point (BCP) – BCP Buildings and Associated Facilities. It responsible for overseeing the construction works of Contract SS C505 and for ensuring that the works are undertaken by the Contractor in accordance with the specification and contract requirements. The duties and responsibilities of the Architect with respect to EM&A are:

- Monitor the Contractors' compliance with contract specifications, including the implementation and operation of the environmental mitigation measures and their effectiveness
- Monitor Contractors' and ET's compliance with the requirements in the Environmental Permit (EP) and EM&A Manual
- Facilitate ET's implementation of the EM&A programme
- Participate in joint site inspection by the ET and IEC
- Oversee the implementation of the agreed Event / Action Plan in the event of any exceedance
- Adhere to the procedures for carrying out complaint investigation
- Liaison with DSD, Engineer/Engineer's Representative, ET, IEC and the Contractor of the "Construction of the DSD's Regulation of Shenzhen River Stage 4 (RSR 4)" Project discussing regarding the cumulative impact issues.

Engineer or Engineers Representative (ER)

2.2.6 The ER is responsible for overseeing the construction works and for ensuring that the works are undertaken by the Contractor in accordance with the specification and contract requirements. The duties and responsibilities of the ER with respect to EM&A are:

- Monitor the Contractors' compliance with contract specifications, including the implementation and operation of the environmental mitigation measures and their effectiveness
- Monitor Contractors's, ET's and IEC's compliance with the requirements in the Environmental Permit (EP) and EM&A Manual

- Facilitate ET's implementation of the EM&A programme
- Participate in joint site inspection by the ET and IEC
- Oversee the implementation of the agreed Event / Action Plan in the event of any exceedance
- Adhere to the procedures for carrying out complaint investigation
- Liaison with DSD, Engineer/Engineer's Representative, ET, IEC and the Contractor of the "Construction of the DSD's Regulation of Shenzhen River Stage 4 (RSR 4)" Project discussing regarding the cumulative impact issues.

The Contractor(s)

2.2.7 There will be one contractor for each individual works contract. Once the contractors are appointed, EPD, ET and IEC will be notified the details of the contractor.

2.2.8 The Contractor for Contracts under CEDD should report to the ER. For ArchSD Contract, the Contractor should report to the Architect or Architect's Representative (AR). The duties and responsibilities of the Contractor are:

- Comply with the relevant contract conditions and specifications on environmental protection
- Employ an Environmental Team (ET) to undertake monitoring, laboratory analysis and reporting of EM &A Facilitate ET's monitoring and site inspection activities
- Participate in the site inspections by the ET and IEC, and undertake any corrective actions
- Provide information / advice to the ET regarding works programme and activities which may contribute to the generation of adverse environmental impacts
- Submit proposals on mitigation measures in case of exceedances of Action and Limit levels in accordance with the Event / Action Plans
- Implement measures to reduce impact where Action and Limit levels are exceeded
- Adhere to the procedures for carrying out complaint investigation

Environmental Team (ET)

2.2.9 Once the ET is appointed, the EPD, CEDD, ER, Architect and IEC will be notified the details of the ET.

2.2.10 The ET shall not be in any way an associated body of the Contractor(s), and shall be employed by the Project Proponent/Contractor to conduct the EM&A programme. The ET should be managed by the ET Leader. The ET Leader shall be a person who has at least 7 years' experience in EM&A and has relevant professional qualifications. Suitably qualified staff should be included in the ET, and resources for the implementation of the EM&A programme should be allocated in time under the Contract(s), to enable fulfillment of the Project's EM&A requirements as specified in the EM&A Manual during construction of the Project. The ET shall report to the Project Proponent and the duties shall include:

- Monitor and audit various environmental parameters as required in this EM&A Manual
- Analyse the environmental monitoring and audit data, review the success of EM&A programme and the adequacy of mitigation measures implemented, confirm the validity of the EIA predictions and identify any adverse environmental impacts arising
- Carry out regular site inspection to investigate and audit the Contractors' site practice, equipment/plant and work methodologies with respect to pollution control and environmental mitigation, and effect proactive action to pre-empt problems
- Monitor compliance with conditions in the EP, environmental protection, pollution prevention and control regulations and contract specifications
- Audit environmental conditions on site
- Report on the environmental monitoring and audit results to EPD, the ER, the Architect, the lEC and Contractor or their delegated representatives
- Recommend suitable mitigation measures to the Contractor in the case of exceedance of Action and Limit levels in accordance with the Event and Action Plans

- Liaise with the IEC on all environmental performance matters and timely submit all relevant EM&A proforma for approval by IEC
- Advise the Contractor(s) on environmental improvement, awareness, enhancement measures etc., on site
- Adhere to the procedures for carrying out complaint investigation
- Liaison with the client departments, Engineer/Engineer's Representative, ET, lEC and the Contractor(s) of the concurrent projects as listed under Section 2.3 below regarding the cumulative impact issues.

Independent Environmental Checker (IEC)

2.2.11 One IEC will be employed for this Project. Once the IEC is appointed, EPD, ER, the Architect and ET will be notified the details of the IEC.

2.2.12 The Independent Environmental Checker (IEC) should not be in any way an associated body of the Contractor or the ET for the Project. The IEC should be employed by the Permit Holder (i.e., CEDD) prior to the commencement of the construction of the Project. The IEC should have at least 10 years' experience in EM&A and have relevant professional qualifications. The appointment of IEC should be subject to the approval of EPD. The IEC should:

- Provide proactive advice to the ER and the Project Proponent on EM&A matters related to the project, independent from the management of construction works, but empowered to audit the environmental performance of construction
- Review and audit all aspects of the EM&A programme implemented by the ET
- Review and verify the monitoring data and all submissions in connection with the EP and EM&A Manual submitted by the ET
- Arrange and conduct regular, at least monthly site inspections of the works during construction phase, and ad hoc inspections if significant environmental problems are identified
- Check compliance with the agreed Event / Action Plan in the event of any exceedance
- Check compliance with the procedures for carrying out complaint investigation
- Check the effectiveness of corrective measures
- Feedback audit results to ET by signing off relevant EM&A proforma
- Check that the mitigation measures are effectively implemented
- Verify the log-book(s) mentioned in Condition 2.2 of the EP, notify the Director by fax, within one working day of receipt of notification from the ET Leader of each and every occurrence, change of circumstances or non-compliance with the EIA Report and/or the EP, which might affect the monitoring or control of adverse environmental impacts from the Project
- Report the works conducted, the findings, recommendation and improvement of the site inspections, after reviewing ET's and Contractor's works, and advices to the ER and Project Proponent on a monthly basis
- Liaison with the client departments, Engineer/Engineer's Representative, the Architect, ET, lEC and the Contractor of the concurrent projects as listed under Section 2.3 below regarding the cumulative impact issues.

2.3 *CONCURRENT PROJECTS*

2.3.1 The concurrent construction works that may be carried out include, but not limited to, the following:

(a) Regulation of Shenzhen River Stage IV;

(b) Widening of Fanling Highway – Tai Hang to Wo Hop Shek Interchange – Contract No. HY/2012/06;

(c) Construction of BCP facilities in Shenzhen.

2.4 *CONSTRUCTION PROGRESS*

2.4.1 Following the partial commencement of the Project, the major construction works under the Project were substantially completed. Proposal for partial termination of the construction phase EM&A programme for Contracts 2, 4, 7 and SS C505 was approved by EPD on 9 July 2020 (EPD's ref.: ( ) in Ax (3) to EP 2/N7/A/52 Pt.17). Moreover, termination proposal for Contract 3 was approved by EPD on 4 May 2021 (EPD's ref.: () in Ax (3) to EP 2/N7/A52 Pt.18).

2.4.2 The proposal for termination of construction phase EM&A programme for Contract 6 and entire Project was approved by EPD on 31 October 2023 (EPD letter reference: ( ) in Ax(3) to EP2/N7/A52 Pt.19 dated 31 October 2023.

2.5 *SUMMARY OF ENVIRONMENTAL SUBMISSIONS*

2.5.1 In according to the EP, the required documents have submitted to EPD which listed in below:

- Project Layout Plans of Contracts 2, 3, 4, 5, 6, 7 and SS C505
- Landscape Plan
- Topsoil Management Plan
- Environmental Monitoring and Audit Programme
- Baseline Monitoring Report (TCS00690/13/600/R0030v3) for the Project
- Waste Management Plan of the Contracts 2, 3, 4, 5, 6, 7 and SS C505
- Contamination Assessment Plan (CAP) and Contamination Assessment Report (CAR) for Po Kat Tsai, Loi Tung and the workshops in Fanling
- Vegetation Survey Report
- Woodland Compensation Plan
- Habitat Creation and Management Plan

2.5.2 During the Construction Period, the Contractor of each contracts have applied and obtained the environmental relevant permits, licenses, and/or notifications on environmental protection for construction. They are presented in the relevant monthly EM&A Reports.

3 SUMMARY OF IMPACT MONITORING REQUIREMENTS

3.1 *GENERAL*

3.1.1 The Environmental Monitoring and Audit requirements are set out in the Approved EM&A manual. Environmental issues such as air quality, construction noise and water quality were identified as the key issues during the construction phase of the Project.

3.1.2 A summary of construction phase EM&A requirements are presented in the sub-sections below.

3.2 *MONITORING PARAMETERS*

3.2.1 The EM&A program of construction phase monitoring shall cover the following environmental issues:

- Air quality;
- Construction noise; and
- Water quality

3.2.2 A summary of the monitoring parameters is presented in ***Table 3-1.***

Table 3-1 Summary of EM&A Requirements

Environmental Issue	Parameters
Air Quality	• 1-hour TSP by Real-Time Portable Dust Meter; and • 24-hour TSP by High Volume Air Sampler.
Noise	• $L_{eq(30min)}$ in normal working days (Monday to Saturday) 07:00-19:00 except public holiday; and • 3 sets of consecutive $L_{eq(5min)}$ on restricted hours i.e. 19:00 to 07:00 next day, and whole day of public holiday or Sunday • Supplementary information for data auditing, statistical results such as L_{10} and L_{90} shall also be obtained for reference.
Water Quality	**In-situ Measurements** • Dissolved Oxygen Concentration (mg/L); • Dissolved Oxygen Saturation (%); • Turbidity (NTU); • pH unit; • Water depth (m); and • Temperature (°C).
	Laboratory Analysis • Suspended Solids (mg/L)

3.3 *MONITORING LOCATIONS*

3.3.1 The designated monitoring locations as recommended in the *EM&A Manual* are shown in ***Appendix C***. As the access to some of the designated monitoring locations was questionable due to safety reason or denied by the landlords, alternative locations therefore have had proposed. The latest alternative monitoring locations has been updated in the revised EM&A Programme (Rev.7) which approved by EPD on 7 April 2017. Besides, in view of Location AM1b was demolished and returned to the landlord on 27 April 2018, alterative location AM1c was proposed by ET and approved by EPD on 26 November 2018. ***Table 3-2, Table 3-3 and Table 3-4*** listed the air quality, construction noise and water quality monitoring locations for the Project and a map showing these monitoring stations is presented in ***Appendix D***.

3.3.2 Following the proposal for partial termination of the construction phase EM&A programme for Contract 2, 4, 7 and SSC505 and Contract 3 was approved by EPD on 9 July 2020 and 4 May 2021 respectively. The corresponding air quality monitoring stations including AM1c, and AM8 were ceased after last monitoring carried out on 7 July 2020 and 10 July 2020 respectively and AM9b was ceased after last monitoring carried out on 4 May 2021. Besides, the

corresponding noise monitoring stations including NM1 and NM7 were ceased after last monitoring carried out on 7 July 2020 and 10 July 2020 respectively and NM8, NM9 and NM10 were ceased after last monitoring carried out on 29 April 2021 according to Partial Termination Proposal for Contract 3 approved by EPD on 4 May 2021. Moreover, WM4, WM4-CA and WM4-CB were ceased after last monitoring carried out on 3 May 2021 according to Partial Termination Proposal for Contract 3 approved by EPD on 4 May 2021.

Table 3-2 Impact Monitoring Stations - Air Quality

Station ID	Description	Works Area	Related to the Work Contract
AM1c (*) ($)	Open area of Tsung Yuen Ha Village No. 63	BCP	SS C505 Contract 7
AM2	Village House near Lin Ma Hang Road	LMH to Frontier Closed Area	Contract 6
AM3	Ta Kwu Ling Fire Service Station of Ta Kwu Ling Village.	LMH to Frontier Closed Area	Contract 6
AM4b^	House no. 10B1 Nga Yiu Ha Village	LMH to Frontier Closed Area	Contract 6
AM5a^	Ping Yeung Village House	Ping Yeung to Wo Keng Shan	Contract 6
AM6	Wo Keng Shan Village House	Ping Yeung to Wo Keng Shan	Contract 6
AM7b@	Loi Tung Village House	Sha Tau Kok Road	Contract 2 Contract 6
AM8 ($)	Po Kat Tsai Village No. 4	Po Kat Tsai	Contract 2
AM9b#	Nam Wa Po Village House No. 80	Fanling	Contract 3

 # Proposal for the change of air quality monitoring location from AM9a to AM9b was submitted to EPD on 4 Nov 2013 after verified by the IEC and it was approved by EPD (EPD's ref.: (15) in EP 2/N7/A/52 Pt.10 dated 8 Nov 2013). Besides, AM9b was ceased after last monitoring carried out on 4 May 2021 according to Partial Termination Proposal approved by EPD on 4 May 2021.
@ Proposal for the change of air quality monitoring location from AM7a to AM7b was submitted to EPD on 4 June 2014 after verified by the IEC. It was approved by EPD (EPD's ref.: (7) in EP 2/N7/A/52 Pt.12 dated 9 Jun 2014).
^ Proposal for change of air quality monitoring locations was enclosed in the updated EM&A Programme which approval by EPD on 29 Mar 2016. Besides, Location AM1b was temporary suspended (24-hour TSP monitoring) since 27 April 2018 as the rented land was demolished and returned to the landlord.
** Revised proposal for alterative location AM1c was submitted to EPD on 31 October 2018 after verified by the IEC and it was approved by EPD (EPD's ref.: ( ) in Ax (1) to EP 2/N7/A/52 Pt.26 dated 26 November 2018).*
$ AM1c and AM8 were ceased after last monitoring carried out on 7 July 2020 and 10 July 2020 respectively according to Partial Termination Proposal approved by EPD on 9 July 2020.

Table 3-3 Impact Monitoring Stations - Construction Noise

Station ID	Description	Works Area	Related to the Work Contract
NM1 ($)	Tsung Yuen Ha Village House No. 63	BCP	SS C505 Contract 7
NM2a#	Village House near Lin Ma Hang Road	Lin Ma Hang to Frontier Closed Area	Contract 6
NM3	Ping Yeung Village House (facade facing northeast)	Ping Yeung to Wo Keng Shan	Contract 6
NM4	Wo Keng Shan Village House	Ping Yeung to Wo Keng Shan	Contract 6
NM5	Village House, Loi Tung	Sha Tau Kok Road	Contract 2, Contract 6

NM6	Tai Tong Wu Village House 2	Sha Tau Kok Road	Contract 2, Contract 6
NM7 ($)	Po Kat Tsai Village	Po Kat Tsai	Contract 2
NM8 ($)	Village House, Tong Hang	Fanling	Contract 2 Contract 3
NM9 ($)	Village House, Kiu Tau Village	Fanling	Contract 3
NM10 ($)	Nam Wa Po Village House No. 80	Fanling	Contract 3

 # Proposal for the change of construction noise monitoring location from NM2 to NM2a was verified by the IEC on 6 May 2016 and was effective on 9 May 2016.
$ NM1 and NM7 were ceased after last monitoring carried out on 7 July 2020 and 10 July 2020 respectively according to Partial Termination Proposal approved by EPD on 9 July 2020. Besides, NM8, NM9 and NM10 were ceased after last monitoring carried out on 29 April 2021 according to Partial Termination Proposal for Contract 3 approved by EPD on 4 May 2021.

Table 3-4 Impact Monitoring Stations - Water Quality

Station ID	Description	Coordinates of Designated / Alternative Location		Nature of the location	Related to the Work Contract
		Easting	Northing		
WM1	Downstream of Kong Yiu Channel	833 679	845 421	Alternative location located at upstream 51m of the designated location	Contract 6
WM1-Control	Upstream of Kong Yiu Channel	834 185	845 917	Designated location	Contract 6
WM2A	Downstream of River Ganges	834 204	844 471	Alternative location located at upstream 81m of the designated location	Contract 6
WM2A(a)*	Downstream of River Ganges	834 191	844 474	Alternative location located at upstream 70m of the designated location	Contract 6
WM2A-Controlx#	Upstream of River Ganges	835 377	844 188	Alternative location located at upstream 160m of the designated location	Contract 6
WM2B	Downstream of River Ganges	835 433	843 397	Designated location	Contract 6
WM2B-Control	Upstream of River Ganges	835 835	843 351	Alternative location located at downstream 31m of the designated location	Contract 6
WM3x#	Downstream of River Indus	836 206	842 270	Alternative location located at downstream 180m of the designated location	Contract 6
WM3-Control	Upstream of River Indus	836 763	842 400	Alternative location located at downstream 26m of the designated location	Contract 6
WM4 ($)	Downstream of Ma Wat Channel	833 850	838 338	Alternative location located at upstream 11m of the designated location	Contract 3
WM4– Control A ($)	Kau Lung Hang Stream	834 028	837 695	Alternative location located at downstream 28m of the designated location	Contract 3
WM4– Control B ($)	Upstream of Ma Wat Channel	833760	837395	Alternative location located at upstream 15m of the designated location	Contract 3

Note: EPD has approved the revised EM&A Programme (Rev.7) which proposed that (1) if the measured water depth of the monitoring station is lower than 150 mm, alternative location based on the criteria were selected to perform water monitoring; and (2) If no suitable alternative location could be found within 15m far from the original location, the sampling at that location will be cancelled since sampling at too far from the designated location could not make a representative sample in accordance

with the updated EM&A Programme (Rev. 07) (Section 4.1.4) (EPD ref.: ( ) in EP2/N7/A/52 Ax(1) Pt.20 dated 7 April 2017)

(*) Proposal for the change of water monitoring location from WM2A to WM2A(a) was verified by the IEC and it was approved by EPD. (EPD's ref. (10) in EP 2/N7/A/52 Pt.19)

(#) Proposal for the change of water quality monitoring location (WM3x and WM2A-Cx was included in the EM&A Programme Rev .05 which approved by EPD on 29 March 2016 (EPD ref.: (3) in EP2/N7/A/52 Ax(1) Pt.19)

($) WM4, WM4-CA and WM4-CB were ceased after last monitoring carried out on 3 May 2021 according to Partial Termination Proposal for Contract 3 approved by EPD on 4 May 2021.

3.4 *MONITORING FREQUENCY AND PERIOD*

The requirements of impact monitoring are stipulated in *Sections 2.1.6, 3.1.5* and *4.1.6* of the approved *EM&A Manual* and presented as follows.

Air Quality Monitoring

3.4.1 Frequency of impact air quality monitoring is as follows:

- 1-hour TSP 3 times every six days during course of works
- 24-hour TSP Once every 6 days during course of works.

Noise Monitoring

3.4.2 One set of $L_{eq(30min)}$ as 6 consecutive $L_{eq(5min)}$ between 0700-1900 hours on normal weekdays and once every week during course of works. If construction work necessary to carry out at other time periods, i.e. restricted time period (19:00 to 07:00 the next morning and whole day on public holidays) (hereinafter referred as "the restricted hours"), additional weekly impact monitoring for $L_{eq(5min)}$ measurement shall be employed during respective restricted hours periods.. Supplementary information for data auditing, statistical results such as L_{10} and L_{90} shall also be obtained for reference.

Water Quality Monitoring

3.4.3 The water quality monitoring frequency shall be 3 days per week during course of works. The interval between two sets of monitoring shall not be less than 36 hours.

3.5 *MONITORING EQUIPMENT*

Air Quality Monitoring

3.5.1 The 24-hour and 1-hour TSP levels shall be measured by following the standard high volume sampling method as set out in the *Title 40 of the Code of Federal Regulations, Chapter 1 (Part 50), Appendix B*. If the ET proposes to use a direct reading dust meter to measure 1-hour TSP levels, it shall submit sufficient information to the IEC to approve.

3.5.2 The filter paper of 24-hour TSP measurement shall be determined by HOKLAS accredited laboratory.

3.5.3 All equipment to be used for air quality monitoring is listed in ***Table 3-5***.

Table 3-5 Air Quality Monitoring Equipment

Equipment	Model
24-Hr TSP	
High Volume Air Sampler	TISCH High Volume Air Sampler, HVS Model TE-5170
Calibration Kit	TISCH Model TE-5025A
1-Hour TSP	
Portable Dust Meter	Sibata LD-3B Laser Dust monitor Particle Mass Profiler & Counter* / SidePak™ Personal Aerosol Monitor AM510

Wind Data Monitoring Equipment

3.5.4 According to the approved EM&A Manual, wind data monitoring equipment shall also be provided and set up for logging wind speed and wind direction near the dust monitoring locations. The equipment installation location shall be proposed by the ET and agreed with the IEC. For installation and operation of wind data monitoring equipment, the following points shall be observed:

1) The wind sensors should be installed 10 m above ground so that they are clear of obstructions or turbulence caused by buildings.
2) The wind data should be captured by a data logger. The data shall be downloaded for analysis at least once a month.
3) The wind data monitoring equipment should be re-calibrated at least once every six months.
4) Wind direction should be divided into 16 sectors of 22.5 degrees each.

3.5.5 ET has liaised with the landlords of the successful granted HVS installation premises. However, the owners rejected to provide premises for wind data monitoring equipment installation.

3.5.6 Under this situation, the ET proposed alternative methods to obtain representative wind data. Meteorological information as extracted from "the Hong Kong Observatory Ta Kwu Ling Station" is alternative method to obtain representative wind data. For Ta Kwu Ling Station, it is located nearby the Project site. Moreover, this station is located at 15m above mean sea level while its anemometer is located at 13m above the existing ground which in compliance with the general setting up requirement. Furthermore, this station also can be to provide the humidity, rainfall, and air pressure and temperature etc. meteorological information. In Hong Kong of a lot development projects, weather information extracted from Hong Kong Observatory is common alternative method if weather station installation not allowed.

Noise Monitoring

3.5.7 Sound level meter in compliance with the International Electrotechnical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications shall be used for carrying out the noise monitoring. The sound level meter shall be checked using an acoustic calibrator. The wind speed shall be checked with a portable wind speed meter capable of measuring the wind speed in m/s.

3.5.8 Noise monitoring equipment to be used for monitoring is listed in ***Table 3-6***.

Table 3-6 Construction Noise Monitoring Equipment

Equipment	Model
Integrating Sound Level Meter	B&K Type 2238 or Rion NL-14 or Rion NL-52 or Rion NL-31
Calibrator	B&K Type 4231 or Rion NC-74 or Rion NC-75
Portable Wind Speed Indicator	Testo Anemometer

3.5.9 Sound level meters listed above comply with the *International Electrotechnical Commission Publications 651: 1979 (Type 1)* and *804: 1985 (Type 1)* specifications, as recommended in TM issued under the NCO. The acoustic calibrator and sound level meter to be used in the impact monitoring will be calibrated yearly.

Water Quality Monitoring

3.5.10 DO and water temperature should be measured in-situ by a DO/temperature meter. The instrument should be portable and weatherproof using a DC power source. It should have a membrane electrode with automatic temperature compensation complete with a cable. The equipment should be capable of measuring:

- a DO level in the range of 0-20 mg/l and 0-200% saturation; and
- a temperature of between 0 and 45 degree Celsius.

3.5.11 A portable pH meter capable of measuring a range between 0.0 and 14.0 should be provided to measure pH under the specified conditions accordingly to the APHA Standard Methods.

3.5.12 The instrument should be portable and weatherproof using a DC power source. It should have a photoelectric sensor capable of measuring turbidity between 0-1000 NTU.

3.5.13 A portable, battery-operated echo sounder or tape measure will be used for the determination of water depth at each designated monitoring station as appropriate.

3.5.14 A water sampler e.g. Kahlsico Water Sampler, which is a transparent PVC cylinder with capacity not less than 2 litres, will be used for water sampling if water depth over than 0.5m. For sampling from very shallow water depths e.g. <0.5 m, water sample collection will be directly from water surface below 100mm use sampling plastic bottle to avoid inclusion of bottom sediment or humus. Moreover, Teflon/stainless steel bailer or self-made sampling buckets maybe used for water sampling. The equipment used for sampling will be depended the sampling location and depth situations.

3.5.15 Water samples for laboratory measurement of SS will be collected in high density polythene bottles, packed in ice (cooled to 4 ºC without being frozen), and delivered to the laboratory in the same day as the samples were collected.

3.5.16 Analysis of suspended solids should be carried out in a HOKLAS or other accredited laboratory. Water samples of about 1L should be collected at the monitoring stations for carrying out the laboratory suspended solids determination. The SS determination work should start within 24 hours after collection of the water samples. The SS analyses should follow the *APHA Standard Methods 2540D* with Limit of Reporting of 2 mg/L.

3.5.17 Water quality monitoring equipment used in the impact monitoring is listed in ***Table 3-7***. Suspended solids (SS) analysis is carried out by a local HOKLAS-accredited laboratory, namely *ALS Technichem (HK) Pty Ltd*.

Table 3-7 Water Quality Monitoring Equipment

Equipment	Model
Water Depth Detector	Eagle Sonar or tape measures
Water Sampler	A 2-litre transparent PVC cylinder with latex cups at both ends or teflon/stainless steel bailer or self-made sampling bucket
Thermometer & DO meter	YSI Professional Plus/ YSI PRO20 Handheld Dissolved Oxygen Instrument/ YSI 550A Multifunctional Meter/ YSI Professional DSS
pH meter	YSI Professional Plus/ AZ8685 pH pen-style meter / YSI 6820/ 650MDS/ YSI Professional DSS
Turbidimeter	Hach 2100Q / YSI Professional DSS
Sample Container	High density polythene bottles (provided by laboratory)
Storage Container	'Willow' 33-liter plastic cool box with Ice pad

3.6 *MONITORING METHODOLOGY*

1-hour TSP Monitoring

3.6.1 The 1-hour TSP monitor was a brand named "Sibata LD-3B Laser Dust monitor Particle Mass Profiler & Counter" / "SidePak™ Personal Aerosol Monitor AM510" which is a portable, battery-operated laser photometer. The 1-hour TSP meter provides a real time 1-hour TSP measurement based on 90º light scattering. The 1-hour TSP monitor consists of the following:

(a.) A pump to draw sample aerosol through the optic chamber where TSP is measured;

(b.) A sheath air system to isolate the aerosol in the chamber to keep the optics clean for

maximum reliability; and

(c.) A built-in data logger compatible with Windows based program to facilitate data collection, analysis and reporting.

3.6.2 The 1-hour TSP meter is used within the valid period as follow manufacturer's Operation and Service Manual.

24-hour TSP Monitoring

3.6.3 The equipment used for 24-hour TSP measurement is Tisch Environmental, Inc. Model TE-5170 TSP high volume air sampling system, which complied with *EPA Code of Federal Regulation, Appendix B to Part 50*. The High Volume Air Sampler (HVS) consists of the following:

(a.) An anodized aluminum shelter;
(b.) A 8"x10" stainless steel filter holder;
(c.) A blower motor assembly;
(d.) A continuous flow/pressure recorder;
(e.) A motor speed-voltage control/elapsed time indicator;
(f.) A 7-day mechanical timer, and
(g.) A power supply of 220v/50 Hz

3.6.4 The HVS is operated and calibrated on a regular basis in accordance with the manufacturer's instruction using Tisch Calibration Kit Model TE-5025A. Calibration would carry out in two month interval.

3.6.5 24-hour TSP is collected by the ET on filters of HVS and quantified by a local HOKLAS accredited laboratory, ALS Technichem (HK) Pty Ltd (ALS), upon receipt of the samples. The ET keep all the sampled 24-hour TSP filters in normal air conditioned room conditions, i.e. 70% RH (Relative Humidity) and 25°C, for six months prior to disposal.

Noise Monitoring

3.6.6 Noise measurements were taken in terms of the A-weighted equivalent sound pressure level (L_{eq}) measured in decibels dB(A). Supplementary statistical results (L_{10} and L_{90}) were also obtained for reference.

3.6.7 During the monitoring, all noise measurements would be performed with the meter set to FAST response and on the A-weighted equivalent continuous sound pressure level (L_{eq}). $Leq_{(30min)}$ in six consecutive $Leq_{(5min)}$ measurements will use as the monitoring parameter for the time period between 0700-1900 hours on weekdays; $Leq_{(5min)}$ measurements would be used as monitoring parameter for other time periods (e.g. during restricted hours), if necessary.

3.6.8 Prior of noise measurement, the accuracy of the sound level meter is checked using an acoustic calibrator generating a known sound pressure level at a known frequency. The checking is performed before and after the noise measurement.

Water Quality

3.6.9 Water quality monitoring is conducted at the designated or alternative locations. The sampling procedures with the in-situ monitoring are presented as below:

Sampling Procedure

3.6.10 A Digital Global Positioning System (GPS) is used to identify the designated monitoring stations prior to water sampling. A portable, battery-operated echo sounder or tape measurement is used for the determination of water depth at each station. At each station, water sample would be collected from 0.1m below water surface or the water surface to prevent the river bed sediment for stirring.

3.6.11 If the water level of a monitoring station is too shallow when sampling, sediment would be disturbed which affecting the accuracy of water quality monitoring. In order to avoid disturbing sediment, depth limits should be set up for the water sampling for the ease of reference. When the measured water depth of the monitoring station (both control and impact stations) is lower than 150mm, water monitoring would not be to perform at that monitoring location. Instead, the monitoring location will be moved to a temporary alternative location monitoring location based on the criteria below:-

(a) the alternative location should be either upstream or downstream of the original location and at the same the river/drain channel
(b) the alternative location should be within 15m far from the original location
(c) if no suitable alternative location could be found within 15m far from the original location, the sampling at that location will be cancelled since sampling at too far from the designated location could not make a representative sample.

3.6.12 The sample container will be rinsed with a portion of the water sample. The water sample then will be transferred to the high-density polythene bottles as provided by the laboratory, labeled with a unique sample number and sealed with a screw cap.

3.6.13 Before sampling, general information such as the date and time of sampling, weather condition as well as the personnel responsible for the monitoring would be recorded on the field data sheet.

3.6.14 A 'Willow' 33-liter plastic cool box packed with ice will be used to preserve the water samples prior to arrival at the laboratory for chemical determination. The water temperature of the cool box is maintained at a temperature as close to 4^0C as possible without being frozen. Samples collected are delivered to the laboratory upon collection.

In-situ Measurement

3.6.15 YSI Professional DSS is used for water in-situ measures, which automates the measurements and data logging of temperature, dissolved oxygen and dissolved oxygen saturation.

3.6.16 YSI Professional DSS is used for in-situ pH measurement. The pH meter is capable of measuring pH in the range of 0 – 14 and readable to 0.1.

3.6.17 YSI Professional DSS is used for in-situ turbidity measurement. The turbidity meter is capable of measuring turbidity in the range of 0 – 1000 NTU.

3.6.18 All in-situ measurement equipment are calibrated by HOKLAS accredited laboratory of three month interval.

Laboratory Analysis

3.6.19 All water samples analyzed Suspended Solids (SS) will be carried out by a local HOKLAS-accredited testing laboratory (ALS Technichem (HK) Pty Ltd HOKLAS registration no. 66). SS determination using *APHA Standard Methods 2540D* as specified in the *EM&A Manual* will start within 48 hours of water sample receipt.

3.7 *EQUIPMENT CALIBRATION*

3.7.1 Calibration of the HVS is performed upon installation and thereafter at bimonthly intervals in accordance with the manufacturer's instruction using the certified standard calibrator (TISCH Model TE-5025A). Moreover, the Calibration Kit would be calibrated annually. The calibration data are properly documented and the records are maintained by ET for future reference.

3.7.2 The 1-hour TSP meter was calibrated by the supplier prior to purchase. Zero response of the equipment would be checked before and after each monitoring event. Annually calibration with

the High Volume Sampler (HVS) in same condition would be undertaken by the Laboratory.

3.7.3 The sound level meter and calibrator are calibrated and certified by a laboratory accredited under HOKLAS or any other international accreditation scheme at yearly basis.

3.7.4 All water quality monitoring equipment would be calibrated by HOKLAS accredited laboratory of three month intervals.

3.7.5 The calibration certificates of all monitoring equipment used for the impact monitoring program in the Reporting Period and the HOKLAS accredited certificate of laboratory are attached in relevant monthly EM&A Reports.

3.8 *DERIVATION OF ACTION/LIMIT (A/L) LEVELS*

3.8.1 The baseline results form the basis for determining the environmental acceptance criteria for the impact monitoring. According to the approved Environmental Monitoring and Audit Manual, the air quality, construction noise and water quality criteria were set up, namely Action and Limit levels are listed in ***Tables 3-8, 3-9*** and ***3-10***.

Table 3-8 Action and Limit Levels for Air Quality Monitoring

Monitoring Station	Action Level (μg /m^3)		Limit Level (μg/m^3)	
	1-hour TSP	24-hour TSP	1-hour TSP	24-hour TSP
AM1c ($)	265	143	500	260
AM2	268	149		
AM3	269	145		
AM4b	267	148		
AM5a	268	143		
AM6	269	148		
AM7b	275	156		
AM8 ($)	269	144		
AM9b ($)	271	151		

$ AM1c and AM8 were ceased after last monitoring carried out on 7 July 2020 and 10 July 2020 respectively according to Partial Termination Proposal approved by EPD on 9 July 2020. Besides, AM9b was ceased after last monitoring carried out on 4 May 2021 according to Partial Termination Proposal approved by EPD on 4 May 2021.

Table 3-9 Action and Limit Levels for Construction Noise

Monitoring Location	Action Level	Limit Level in dB(A)
	Time Period: 0700-1900 hours on normal weekdays	
NM1**($)**, NM2a, NM3, NM4, NM5, NM6, NM7**($)**, NM8**($)**, NM9**($)**, NM10**($)**	When one or more documented complaints are received	75 dB(A)[Note 1 & Note 2]

Note 1: Acceptable Noise Levels for school should be reduced to 70 dB(A) and65 dB(A) during examination period.

Note 2: If works are to be carried out during restricted hours, the conditions stipulated in the construction noise permit issued by the NCA have to be followed.

$ NM1 and NM7 were ceased after last monitoring carried out on 7 July 2020 and 10 July 2020 respectively according to Partial Termination Proposal approved by EPD on 9 July 2020. Besides, NM8, NM9 and NM10 were ceased after last monitoring carried out on 29 April 2021 according to Partial Termination Proposal for Contract 3 approved by EPD on 4 May 2021.

Table 3-10 Action and Limit Levels for Water Quality

Parameter	Performance criteria	Monitoring Location				
		WM1	**WM2A(a)**	**WM2B**	**WM3x**	**WM4($)**

Parameter	Performance criteria	Monitoring Location				
		WM1	WM2A(a)	WM2B	WM3x	WM4($)
DO (mg/L)	Action Level	(*)4.23	(**)4.00	(*)4.74	(**)4.00	(*)4.14
	Limit Level	(#)4.19	(**)4.00	(#)4.60	(**)4.00	(#)4.08
Turbidity (NTU)	Action Level	51.3	24.9	11.4	13.4	35.2
		AND	120% of upstream control station of the same day			
	Limit Level	67.6	33.8	12.3	14.0	38.4
		AND	130% of upstream control station of the same day			
SS (mg/L)	Action Level	54.5	14.6	11.8	12.6	39.4
		AND	120% of upstream control station of the same day			
	Limit Level	64.9	17.3	12.4	12.9	45.5
		AND	130% of upstream control station of the same day			

Remarks:
*(*) The Proposed **Action Level** of Dissolved Oxygen is adopted to be used 5%-ile of baseline data*
*(**) The Proposed **Action & Limit Level** of Dissolved Oxygen is used 4mg/L*
*(#) The Proposed **Limit Level** of Dissolved Oxygen is adopted to be used 1%-ile of baseline data*
($) WM4, WM4-CA and WM4-CB were ceased after last monitoring carried out on 3 May 2021 according to Partial Termination Proposal for Contract 3 approved by EPD on 4 May 2021.

3.8.2 Should non-compliance of the environmental quality criteria occurs, remedial actions will be triggered according to the Event and Action Plan which presented in ***Appendix E.***

3.9 *DATA MANAGEMENT AND DATA QA/QC CONTROL*

3.9.1 All monitoring data will be handled by the ET's in-house data recording and management system. The monitoring data recorded in the equipment will be downloaded directly from the equipment at the end of each monitoring day. The downloaded monitoring data will input into a computerized database maintained by the ET. The laboratory results will be input directly into the computerized database and checked by personnel other than those who input the data.

3.9.2 For monitoring parameters that require laboratory analysis, the local laboratory shall follow the QA/QC requirements as set out under the HOKLAS scheme for the relevant laboratory tests.

4 AIR QUALITY MONITORING

4.1 *GENERAL*

4.1.1 Dust monitoring is considered necessary during the construction phase and regular site inspections are required to ensure that the dust control measures are properly implemented.

4.1.2 Monitoring and audit of the Total Suspended Particulate (TSP) levels should be carried out by the ET to ensure that any deteriorating air quality could be readily detected and timely actions taken to rectify the situation. 1-hour or 24-hour TSP levels should be measured to indicate the impacts of construction dust on air quality.

4.2 *AIR QUALITY MONITORING RESULTS*

4.2.1 During the Construction Period, a total of ***14313*** sessions of 1-hour TSP monitoring and ***4708*** events 24-hour TSP monitoring were carried out at designated monitoring locations. The monitoring results are summarized in ***Tables 4-1 to 4-2*** and the relevant graphical plots are shown in ***Appendix F***. Meteorological data during the Construction Period are shown in ***Appendix G.***

Table 4-1 Summary of 1-hour TSP Monitoring Results

Location ID	ID adopted in EIA	Predicted Cumulative Hourly Average TSP Concentration ($\mu g/m^3$)	1-hour TSP Concentration ($\mu g/m^3$) Average (range)	Monitoring Period	Number of Sessions
AM1a/ AM1b /AM1c	TYH	249	82 (11 – 379)	16 Aug 2013 to 7 Jul 2020	1308
AM2	V1	300	84 (11 – 282)	16 Aug 2013 to 30 Oct 2023	1971
AM3	TKL2	303	83 (13 – 268)	16 Aug 2013 to 30 Oct 2023	1971
AM4a / AM4b	KTW4	485	71 (12 – 184)	26 Oct 2015 to 26 Oct 2023	1545
AM5 / AM5a	PY1	444	71 (7 – 179)	26 Oct 2015 to 26 Oct 2023	1545
AM6	WKS7	201	73 (9 – 239)	26 Oct 2015 to 26 Oct 2023	1545
AM7a / AM7b	TTW3	268	76 (12 – 260)	20 May 2014 to 26 Oct 2023	1815
AM8	PKT2	318	71 (7 – 256)	20 May 2014 to 10 Jul 2020	1176
AM9b	NWP1	409	78 (12 – 366)	4 Nov 2013 to 29 Apr 2021	1437

Table 4-2 Summary of 24-hour TSP Monitoring Results

Location ID	ID adopted in EIA	Predicted Cumulative Daily Average TSP Concentration ($\mu g/m^3$)	24-hour TSP Concentration ($\mu g/m^3$) Average (range)	Monitoring Period	Number of Sessions
AM1a/ AM1b /AM1c	TYH	140	60 (11 – 142)	16 Aug 2013 to 6 Jul 2020	434
AM2	V1	103	86 (11 – 303)	16 Aug 2013 to 27 Oct 2023	653
AM3 (*)	TKL2	162	71 (9 – 519)	16 Aug 2013 to 26 Jan 2023	603
AM4a / AM4b	KTW4	235	55 (12 – 142)	27 Oct 2015 to 27 Oct 2023	515
AM5 / AM5a	PY1	176	54 (6 -242)	27 Oct 2015 to 27 Oct 2023	515
AM6	WKS7	129	74 (10 – 226)	27 Oct 2015 to 27 Oct 2023	515
AM7a / AM7b	TTW3	185	62 (10 – 258)	26 May 2014 to 27 Oct 2023	606
AM8	PKT2	87	48 (10 – 139)	21 May 2014 to 8 Jul 2020	394
AM9b	NWP1	222	56 (10 – 348)	7 Nov 2013 to 29 Apr 2021	473

Remark: (*) Power supply for HVS for 24-hour TSP monitoring at Location AM3 was suspended from 1 Feb 2023 to 30 Oct 2023 due to the renovation work of Ta Kwu Ling Ambulance Depot.

4.2.2 Throughout the Construction Period, 25 Action Level and 4 Limit Level air quality exceedances were recorded. NOEs were issued to relevant parties upon confirmation of the monitoring result. Investigation had been conducted by ET and the investigation result shown in relevant Monthly EM&A Reports. Breaches of air quality A/L levels and statistical analysis of compliance for construction noise monitoring results are summarized in ***Table 4-3***.

Table 4-3 Summaries of Breaches of Air Quality A/L Levels

Monitoring Parameters	Action Level	Limit Level	Status
1-hour TSP	6	0	Investigation for all the exceedances had been conducted according to the Event and Action Plan in the EM&A Manual and presented in the relevant monthly EM&A reports. All the environmental complaint received during construction phase has been resolved.
24-hour TSP	19	4	

4.2.3 According to the EIA, with implementation of the recommended mitigation measures as well as the relevant control requirements as stipulated in the Air Pollution Control (Construction Dust) Regulation, no adverse residual impacts are predicted at all the ASRs during the construction phase.

4.2.4 The weather throughout the Construction Period was typical Hong Kong climate including rainy season (Apr to Oct) and dry season (Nov to Mar next year). The major dust sources in the Construction Period are construction activities by the Project, as well as traffic emission from adjacent roads.

4.2.5 Except for 25 Action Level and 4 Limit Level exceedances which considered as cumulated impact from project and other dust source such as traffic and other construction site nearby, all the 1-hour TSP and 24-hour TSP monitoring results throughout the Contraction Period were below the Action/Limit Levels. Under the construction dust suppression measures as provided by the Contractor, the impact monitoring results were generally fulfilled of the environmental quality criteria of the parameter and comparable to EIA.

4.2.6 The air quality monitoring performed during the Construction Period are effective for generating data with the necessary statistical power to categorically identify or confirm the presence or absence of the predicted environmental impacts attributable to the works under the Project. The construction dust suppression measures as recommended in the Implementation Schedule for Environmental Mitigation Measures (ISEMM) is also proven effective and adequate.

Recommendations

4.2.7 The air quality mitigation measures stipulated in ISEMM should be strictly observed throughout the construction period in future of others construction projects.

5 CONSTRUCTION NOISE MONITORING

5.1 *GENERAL*

5.1.1 The construction noise level were measured in terms of the A-weighted equivalent continuous sound pressure level (Leq) at all designated monitoring locations throughout the Construction Period.

5.2 *NOISE MONITORING RESULTS*

5.2.1 During the Construction Period, ***4430*** sessions of noise monitoring were carried out at designated monitoring locations. Since free-field status were performed at NM2a and NM10, façade correction (+3 dB(A)) has been added for the correction in according to the acoustical principles and EPD guidelines. During the Construction Period, noise monitoring were not carried out under fog, rain, wind with a steady speed exceeding 5m/s or wind with gusts exceeding 10m/s of weather condition.

5.2.2 The noise monitoring results throughout the Construction Period are summarized in ***Tables 5-1*** and the graphical plots of monitoring result are shown in ***Appendix F***.

Table 5-1 Summary of Construction Noise Monitoring Results

Location ID	ID adopted in EIA	Predicted Noise Level dB(A) in EIA (Range)	Leq, 30min (dB((A)) (Range)	Monitoring Period	Number of Sessions
NM1	TYH	64-70	43 – 72	16 Aug 2013 to 7 Jul 2020	390
NM2 / NM2a	V2	51-74	52 – 75	16 Aug 2013 to 30 Oct 2023	565
NM3	PY2	56-75	50 – 70	26 Oct 2015 to 26 Oct 2023	424
NM4	WKS6	57-75	52 – 75	26 Oct 2015 to 26 Oct 2023	424
NM5	LT1	48-71	46 – 72	20 May 2014 to 26 Oct 2023	515
NM6	TTW2	53-74	48 – 68	20 May 2014 to 26 Oct 2023	515
NM7	PKT2	68-73	45 – 83	20 May 2014 to 10 Jul 2020	343
NM8	TH1	43-73	50 – 70	6 Nov 2013 to 29 Apr 2021	418
NM9	KT3	50-75	52 – 61	6 Nov 2013 to 29 Apr 2021	418
NM10	NWP1	50-75	52 – 96	6 Nov 2013 to 29 Apr 2021	418

5.2.3 Throughout the Construction Period, eleven noise complaints were received (which trigger an Action Level), and three Limit Level exceedances were recorded. NOEs were issued to relevant parties upon confirmation of the monitoring result. Investigation had been conducted by ET and the investigation result shown in relevant Monthly EM&A Reports. Breaches of construction noise A/L levels and statistical analysis of compliance for construction noise monitoring results are summarized in ***Table 5-2***.

Table 5-2 Summaries of Breaches of Construction Noise A/L Levels

Monitoring Parameters	Action Level	Limit Level	Status
Leq(30min) Daytime	11	3	Investigation for all the exceedances and noise complaints and had been conducted according to the Event and Action Plan in the EM&A Manual and presented in the relevant monthly EM&A reports. All the environmental complaint received during construction phase has been resolved.

5.2.4 According to the EIA, the noise impact associated with unmitigated construction activities for the proposed BCP and the connecting road would cause exceedance of the daytime construction noise criterion at the nearby NSRs during the normal working hours. Therefore, good site practices and mitigation measures including the use of quiet plants, erection of movable noise barriers and

noise insulating fabric have been proposed to alleviate the noise impact. With the good site practices and mitigation measures in place, no residual impacts are predicted at all the NSRs.

5.2.5 With implementation of construction noise mitigation measures and good site practices provided by the Contractor, the impact noise monitoring results recorded three non-project related Limit Level exceedances of the environmental quality criteria of the parameter throughout the Construction Period, which are generally comparable with the and EIA.

5.2.6 It is considered that the construction noise monitoring performed during the Construction Period are effective for generating data with the necessary statistical power to categorically identify or confirm the presence or absence of the predicted environmental impacts attributable to the works under the Project.

5.2.7 $L_{eq(30min)}$ monitoring results registered consistent compliance of the parameter with environmental quality criteria throughout the Construction Period, indicating that the prediction of EIA prediction on the adverse noise nuisance to be generated from the construction of the Project is in general acceptable and the recommended environmental mitigation measures as stipulated in ISEMM are also adequate.

Recommendations

5.2.8 The construction noise mitigation measures stipulated in ISEMM shall be strictly observed throughout the construction period in future of others construction projects.

6 WATER QUALITY MONITORING

6.1 *GENERAL*

6.1.1 EIA has assessed that adverse water quality impact is not predicted during the construction and operation phase of the Project. Nevertheless, appropriate mitigation measures are recommended to minimize potential water quality impacts.

6.1.2 Water quality monitoring is recommended during the course of construction works near Kong Yiu Channel, River Ganges, River Indus, Ma Wat Channel and streams at Kau Lung Hang to obtain a robust, defensible database of baseline information of water quality before construction, and thereafter, to monitor any variation of water quality from the baseline conditions or exceedances of WQOs during construction and to ensure the recommended mitigation measures are properly implemented.

6.1.3 Regular audit of implementation of the recommended mitigation measures during the construction phase at the works areas should also be undertaken during the construction phase to ensure the recommended mitigation measures are properly implemented.

6.2 *RESULTS OF WATER QUALITY MONITORING*

6.2.1 The key monitoring parameters including Dissolved Oxygen, Turbidity and Suspended Solids are summarized in ***Tables 6-1 to 6-3*** and the relevant graphical plot are shown in ***Appendix F***.

Table 6-1 Summary of Water Quality Monitoring Results of Dissolved Oxygen

Station ID	Description	Dissolved Oxygen (mg/L) Average (range)	Monitoring Period	Number of Sessions
WM1	Downstream of Kong Yiu Channel	7.3 (0.2 – 15.1)	16 Aug 2013 to 30 Oct 2023	1565
WM1-Control	Upstream of Kong Yiu Channel	7.4 (2.1 – 25.7)	16 Aug 2013 to 30 Oct 2023	1407
WM2A /WM2A(a)	Downstream of River Ganges	6.9 (3.2 – 15.5)	23 Oct 2015 to 30 Oct 2023	1232
WM2A-Control	Upstream of River Ganges	7.4 (1.9 – 15.5)	23 Oct 2015 to 30 Oct 2023	1232
WM2B	Downstream of River Ganges	8.3 (5.4 – 13.4)	23 Oct 2015 to 10 Apr 2017	226
WM2B-Control	Upstream of River Ganges	7.5 (4.0 – 12.4)	23 Oct 2015 to 10 Apr 2017	226
WM3x	Downstream of River Indus	7.5 (1.1 – 14.9)	23 Oct 2015 to 30 Oct 2023	1247
WM3-Control	Upstream of River Indus	7.3 (1.1 – 18.5)	23 Oct 2015 to 30 Oct 2023	727
WM4	Downstream of Ma Wat Channel	7.1 (2.2 – 14.6)	6 Nov 2013 to 3 May 2021	1156
WM4– Control A	Kau Lung Hang Stream	7.2 (2.1 – 14.9)	6 Nov 2013 to 3 May 2021	1156
WM4– Control B	Upstream of Ma Wat Channel	6.6 (1.1 – 13.7)	6 Nov 2013 to 3 May 2021	1156

Table 6-2 Summary of Water Quality Monitoring Results of Turbidity

Station ID	Description	Turbidity (NTU) Average (range)	Monitoring Period	Number of Sessions
WM1	Downstream of Kong Yiu Channel	73.1 (1.8 - 1137.5)	16 Aug 2013 to 30 Oct 2023	1596
WM1-	Upstream of Kong	76.4	16 Aug 2013 to 30 Oct	1438

Station ID	Description	Turbidity (NTU) Average (range)	Monitoring Period	Number of Sessions
Control	Yiu Channel	(2.0 – 1270.0)	2023	
WM2A /WM2A(a)	Downstream of River Ganges	49.5 (1.3 – 2146.0)	23 Oct 2015 to 30 Oct 2023	1353
WM2A-Control	Upstream of River Ganges	38.8 (2.7 2370.0)	23 Oct 2015 to 30 Oct 2023	1352
WM2B	Downstream of River Ganges	50.2 (2.3 – 999.0)	23 Oct 2015 to 10 Apr 2023	265
WM2B-Control	Upstream of River Ganges	11.4 (1.6 - 962.5)	23 Oct 2015 to 10 Apr 2023	259
WM3x	Downstream of River Indus	19.2 (0.1 – 999.0)	23 Oct 2015 to 30 Oct 2023	1308
WM3-Control	Upstream of River Indus	28.8 (1.0 – 999.0)	23 Oct 2015 to 30 Oct 2023	788
WM4	Downstream of Ma Wat Channel	24.4 (1.5 – 595.0)	6 Nov 2013 to 3 May 2021	1194
WM4–Control A	Kau Lung Hang Stream	15.9 (0.1 – 999.0)	6 Nov 2013 to 3 May 2021	1194
WM4–Control B	Upstream of Ma Wat Channel	16.3 (1.3 – 449.0)	6 Nov 2013 to 3 May 2021	1194

Table 6-3 Summary of Water Quality Monitoring Results of Suspended Solids

Station ID	Description	Suspended Solids (mg/L) Average (range)	Monitoring Period	Number of Sessions
WM1	Downstream of Kong Yiu Channel	64.1 (2.0 – 64.1)	16 Aug 2013 to 30 Oct 2023	1596
WM1-Control	Upstream of Kong Yiu Channel	84.3 (2.0 – 7920.0)	16 Aug 2013 to 30 Oct 2023	1438
WM2A /WM2A(a)	Downstream of River Ganges	40.5 (2.0 – 2810.0)	23 Oct 2015 to 30 Oct 2023	1352
WM2A-Control	Upstream of River Ganges	39.4 (2.0 – 4825.0)	23 Oct 2015 to 30 Oct 2023	1352
WM2B	Downstream of River Ganges	54.8 (2.0 – 1720.0)	23 Oct 2015 to 10 Apr 2023	266
WM2B-Control	Upstream of River Ganges	8.1 (2.0 – 425.0)	23 Oct 2015 to 10 Apr 2023	259
WM3x	Downstream of River Indus	15.4 (1.0 – 826.0)	23 Oct 2015 to 30 Oct 2023	1308
WM3-Control	Upstream of River Indus	35.5 (1.0 – 4485.0)	23 Oct 2015 to 30 Oct 2023	788
WM4	Downstream of Ma Wat Channel	21.9 (2.0 – 564.5)	6 Nov 2013 to 3 May 2021	1193
WM4–Control A	Kau Lung Hang Stream	11.8 (2.0 – 744.0)	6 Nov 2013 to 3 May 2021	1193
WM4–Control B	Upstream of Ma Wat Channel	16.0 (2.0 – 434.0)	6 Nov 2013 to 3 May 2021	1193

6.2.2 Throughout the Construction Period, a total of 21 Action Level and 950 Limit Level exceedances were recorded. NOEs were issued to relevant parties upon confirmation of the monitoring result. Investigation had been conducted by ET and the investigation result shown in relevant Monthly EM&A Reports. Breaches of water quality A/L levels and statistical analysis of compliance for water quality results are summarized in ***Table 6-4***.

Table 6-4 Summaries of Breaches of Water Quality A/L Levels

Monitoring Parameters	Action Level	Limit Level	Project related exceedance	Status
DO	0	33	0	Investigation for all the exceedances had been conducted according to the Event and Action Plan in the EM&A Manual and presented in the relevant monthly EM&A reports. All the environmental complaint received during construction phase has been resolved.
Turbidity	15	443	37	
SS	21	474	32	

6.2.3 With the implementation of water quality mitigation measures, most the exceedances were concluded as non-project related. For project related exceedances, the Contractor had rectified the deficiencies promptly and the ET had carried out additional monitoring until no subsequent exceedances recorded. In view of the relevant graphical plot, the monitoring results revealed that there are trends of narrow down of monitoring exceedances due to construction activities and the return of ambient environmental conditions in comparison with baseline data.

6.2.4 Precision of the prediction of the EIA on the adverse water quality impacts to be generated from the construction of the Project is acceptable. The water quality monitoring performed during the Construction Period is effective for generating data with the necessary statistical power to categorically identify or confirm the presence or absence of the predicted environmental impacts attributable to the works under the Project. The water quality mitigation measures as recommended in ISEMM are also proven effective and adequate.

7 ECOLOGY MONITORING

7.1 *MONITORING ON WOODLAND COMPENSATION*

7.1.1 According to the approved Woodland Compensation Plan (WCP), ecological monitoring for woodland compensation shall be conducted at bi-monthly interval for the first year and the monitoring frequency would be reduced to quarterly from the second year.

7.1.2 As Stage 2 of the enhancement planting work was undertaken in August 2019 has covered all of the 9 monitoring quadrats. The bi-monthly was conducted in the first year after Stage 2 of enhancement planting and the monitoring frequency would be reduce to quarterly from the second year.

7.1.3 The quarterly ecological monitoring for period of June to August 2021 had carried out on 22 and 23 July 2021 by transects inspection and quadrat monitoring. The quarterly Ecological Monitoring Report was verified by IEC on 7 October 2021 and it has been submitted as a stand-alone copy to supplement the EM&A Report on 7 October 2021.

7.1.4 The monitoring for woodland compensation was completed in August 2021 as the last monitoring according to the approved WCP. The details of findings could refer to the corresponding Quarterly Ecological Monitoring Report. As advised by the AECOM, the Woodland Compensation Area had been handed over to AFCD after their acceptance of Initial Planting and Enhancement Planting Works, which include the last replanting works in September 2021.

7.2 *MONITORING ON WETLAND COMPENSATION*

7.2.1 According to the approved Habitat Creation and Management Plan (HCMP), the proposed Wetland Compensation Area (WCA) near the Ping Yeung Interchange adjacent to the section of Ping Yuen River was adopted. Ecological monitoring at implementation and establishment periods of WCA will be conducted to cover the ecological attributes. Implementation of the wetland will commence within the construction phase after completion of the construction works at Ping Yeung Section. Monitoring on the WCA will be conducted in implementation and establishment stages.

7.2.2 Monitoring of WCA at establishment stage has been conducted for one year duration according to the approved HCMP. The establishment stage of wetland was commenced on 1st October 2020 and report (September 2021) was the last monitoring report for the Wetland Compensation Area. The monitoring results of ecology and water quality are generally in order, and no follow up measures under the EM&A is required. After establishment stage, AFCD would be responsible of maintenance and the monitoring works. As advised by the AECOM, the handover issue with AFCD is under processing.

7.2.3 The revision of HCMP Rev 4.0 prepared by AECOM and has been certified by ETL and verified by IEC on 9 December 2021 and re-submitted to EPD on 16 December 2021 and EPD had no comment on HCMP Rev 4.0 on 1 March 2022.

8 WASTE MANAGEMENT

8.1 *GENERAL WASTE MANAGEMENT*

8.1.1 Waste management was carried out by an on-site Environmental Officer or an Environmental Supervisor from time to time.

8.2 *RECORDS OF WASTE QUANTITIES*

8.2.1 All types of waste arising from the construction work are classified into the following:

- Construction & Demolition (C&D) Material;
- Chemical Waste;
- General Refuse; and
- Excavated Soil.

8.2.2 The quantities of waste for disposal in the Construction Period by mean of Waste Flow Table are presented in ***Appendix J***. The Contractor was reminded that, whenever possible, materials were reused on-site as far as practicable. Summary of total waste generated from construction phase of the Project is shown in ***Table 8-1*** and ***Table 8-2***.

Table 8-1 Summary of Inert Waste Generated

Contract	Total Quantity Generated ('000m3)	Broken Concrete ('000m3)	Reused in the Contract ('000m3)	Reused in other Projects ('000m3)	Disposed as Public Fill ('000m3)	Imported C&D Material ('000m3)
SSC505	219.822	12.416	56.813	0.000	150.593	219.822
C2	2,931.749	2.704	39.028	1,556.249	1,335.734	2,931.749
C3	159.361	18.712	26.850	0	119.115	159.361
C4	0	0	0	0	0	0
C5	2.000	2.000	0	0	0	2.000
C6	1,218.400	0	166.627	288.010	747.740	1,218.400
C7	23.684	2.953	0	2.003	21.681	0
Total	4,555.017	38.785	289.318	1,846.262	2,374.863	863.794

Table 8-2 Summary of Non-Inert Waste Generated

Contract	Metals ('000 kg)	Paper/ cardboard packaging ('000 kg)	Plastics ('000 kg)	Chemical Waste ('000 kg)	General Refuse ('000m3)
SSC505	14,418.002	26.053	23.423	5.000	61.010
C2	2454.981	15.161	85.453	224.938	19.751
C3	0.777 (#)	0.001 (#)	0.073 (#)	4.173 (*)	7.122
C4	0.250	0.049	0	0	0.060
C5	37.580	1.559	0	8.376	7.505
C6	0	16.441	0.227	34.045	27.253
C7	188.100	4.062	0.040	0.000	3.793
Total	17,099.690	63.326	109.216	276.532	126.494

Remark: (#) Unit in '000m^3; (*) Unit in m^3

8.3 *EFFECTIVENESS OF SOLID AND LIQUID WASTE MANAGEMENT*

8.3.1 Waste management was the contractor's responsibility to ensure that all wastes produced during the construction phase are handled, stored and disposed of in accordance with good waste management practices and EPD's regulations and requirements. The Waste Management Plan was developed by the Contractor to include the recommended mitigation measures in the construction phase.

8.3.2 During construction phase, regular site inspection as part of the EM&A procedures were carried out to determine if wastes are being managed in accordance with approved procedures and the

Waste Management Plan. Different aspects of waste management including waste generation, storage, recycling, treatment, transport and disposal had included in the programme. Waste Flow Table implemented by the Project has properly recorded the total qualities of wastes generated and disposal arrangement, they were general in line with the EIA Report.

8.3.3 With the implementation of the recommended mitigation measures for the handling, transportation and disposal of the identified waste arising, residual impacts are not observed for construction phases. It is deemed that the solid and liquid waste management is effective and under control.

9 SITE INSPECTION

9.1 *REQUIREMENTS*

9.1.1 According to the approved EM&A Manual, the environmental site inspection shall be formulation by ET Leader. Weekly environmental site inspections should carry out to confirm the environmental performance.

9.2 *FINDINGS / DEFICIENCIES DURING THE REPORTING MONTH*

9.2.1 Throughout the Construction Period, weekly joint site inspection has been carried out by ER, Contractors, IEC and ET to evaluate site environmental performance. The summary of site inspection are shown in ***Table 9-1***.

Table 9-1 Summary of Site Inspection

Contract	Number of Sessions	Inspection Period
Contract 2	317	23 May 2014 to 10 July 2020
Contract 3	377	6 Nov 2013 to 5 May 2021
Contract 4	178	11 May 2017 to 10 July 2020
Contract 5	159	22 Aug 2013 to 30 Aug 2016
Contract 6	418	25 Sep 2015 to 31 Oct 2023
Contract 7	231	5 Jan 2016 to 10 July 2020
Contract SS C505	241	19 Aug 2015 to 10 July 2020

9.2.2 In the Construction Period, no non-compliance was recorded. Minor deficiencies were in general rectified within the specified deadlines. The environmental performance of the Project was therefore considered satisfactory.

10 ENVIRONMENTAL COMPLAINT AND NON-COMPLIANCE

10.1 *ENVIRONMENTAL COMPLAINT, SUMMONS AND PROSECUTIONS*

10.1.1 Throughout the Construction Period, a total of 111 environmental complaints were lodged under the EM&A Programme. Investigations of the complaints had carried out by ET by auditing the mitigation measures implemented by the Contractor. After investigation, 28 out of 111 complaints were considered as project related complaint. The Contractor was strongly advised to implement and enhance the relevant mitigation measures and site check was conducted by ET to check the environmental performance after the situation has been rectified.

10.1.2 One event of summons was lodged for Contract 2 throughout the Construction Period, and no prosecution was received for the project. The statistical summary of environmental complaint is presented in ***Tables 10-1, 10-2*** and ***10-3***. The complaint log for the Project is shown in ***Appendix K***.

Table 10-1 Statistical Summary of Environmental Complaints

Contract No	Contract Period	Environmental Statistics	
		Cumulative Complaint	Project related complaint
Contract 2	19 May 2014 – 31 July 2020	38	11
Contract 3	6 Nov 2013 – 5 May 2021	10	1
Contract 4	11 May 2017 – 31 July 2020	0	0
Contract 5	16 Aug 2013 – 31 July 2016	4	0
Contract 6	16 Aug 2013 – 31 October 2023	47	14
Contract 7	15 Feb 2016 – 31 July 2020	4	1
SS C505	19 Aug 2015 – 31 July 2020	8	1

Table 10-2 Statistical Summary of Environmental Summons

Contract No	Contract Period	Environmental Summons Statistics	
		Cumulative Summons	Summons Nature
Contract 2	19 May 2014 – 31 July 2020	1	contravening the Water Pollution Control (General) Regulations
Contract 3	6 Nov 2013 – 5 May 2021	0	NA
Contract 4	11 May 2017 – 31 July 2020	0	NA
Contract 5	16 Aug 2013 – 31 July 2016	0	NA
Contract 6	16 Aug 2013 – 31 October 2023	0	NA
Contract 7	15 Feb 2016 – 31 July 2020	0	NA
SS C505	19 Aug 2015 – 31 July 2020	0	NA

Table 10-3 Statistical Summary of Environmental Prosecutions

Contract No	Contract Period	Environmental Prosecutions Statistics	
		Cumulative	Prosecutions Nature
Contract 2	19 May 2014 – 31 July 2020	0	NA
Contract 3	6 Nov 2013 – 5 May 2021	0	NA
Contract 4	11 May 2017 – 31 July 2020	0	NA
Contract 5	16 Aug 2013 – 31 July 2016	0	NA
Contract 6	16 Aug 2013 – 31 October 2023	0	NA
Contract 7	15 Feb 2016 – 31 July 2020	0	0
SS C505	19 Aug 2015 – 31 July 2020	0	0

11 IMPLEMENTATION STATUS OF MITIGATION MEASURES

11.1 *GENERAL REQUIREMENTS*

11.1.1 The environmental mitigation measures that recommended in the Implementation Schedule for Environmental Mitigation Measures (ISEMM) in the approved EM&A Manual covered the issues of dust, noise, water and waste and they are summarized presented in ***Appendix H.***

Implementation of Mitigation Measures during Construction Phase

11.1.2 The Project has been implementing the required environmental mitigation measures according to the approved EM&A Manual as subject to the site condition. Environmental mitigation measures have been generally implemented by the Project according to the ISEMM, where applicable.

Implementation of Mitigation Measures during Operation Phase

11.1.3 The Heung Yuen Wai (HYW) Highway and connecting roads under the Project was opened on 26 May 2019. Since partial commencement of operation is the same as the commencement of operation for the entire project from EIAO perspective. All relevant requirements as stipulated in the EP and the approved EIA report (including the EM&A Manual) for the commencement of operation of the Project shall be strictly complied with.

11.1.4 In general, the recommended mitigation measures for operation stage of HYW Highway and connecting roads under the Project have been implemented. The implementation status of mitigation measures for operation phase in the Reporting Period are summarized in ***Appendix I***.

11.1.5 For more details about the implementation status of mitigation measures for operation phase with photo illustration, an Environmental Monitoring and Audit report on the implementation of the mitigation measures for operation stage of the Project will be disposed to EPD not later than three months after the commencement of operation of the Project under EP-404/2011/D condition 5.5. The abovementioned report was submitted to EPD on 23 August 2019.

11.1.6 Upon BCP partially opened on 26 August 2020, an operation phase EM&A report covering the operation of the BCP (Version 3) was subsequently submitted to EPD in accordance with the EP-404/2011/D condition 5.5. EPD on 10 February 2021 wrote to the EP Holder that they considered the Operation Phase EM&A Report was generally in order and met the EP Condition 5.5.

11.1.7 Pursuant to EM&A Manual Section 10.2, the implementation of landscape mitigation measures during establishment period shall be audited by a qualified landscape architect. Site inspection for establishment period was commenced in August 2019 and competed in July 2020 respectively. The relevant checklists were included in the corresponding EM&A Reports. Besides, further to the Landscape Plan (Rev.4) approved by EPD via letter dated 7 June 2021, minor changes on site layout was required, AECOM then submitted the Landscape Plan Rev.5 to EPD on 31 May 2022 and has been approved by EPD on 16 September 2022.

12 CONCLUSIONS AND RECOMMENDATIONS

12.1 *CONCLUSIONS*

12.1.1 This is the Final Review EM&A Report for Construction Phase summarizing the monitoring results and inspection findings during the construction period of 16th August 2013 to 31st October 2023 (hereinafter 'the construction Period).

Air Quality Monitoring

12.1.2 Throughout the Construction Period, 1-hour TSP and 24-hour TAP monitoring were carried out according to the EM&A requirement. Except for 25 Action Level and 4 Limit Level exceedances which considered as cumulated impact from project and other dust source such as traffic and other construction site nearby, all the 1-hour TSP and 24-hour TSP monitoring results throughout the Contraction Period were below the Action/Limit Levels. Under the construction dust suppression measures as provided by the Contractor, the impact monitoring results were generally fulfilled of the environmental quality criteria of the parameter and comparable to EIA.

Construction Noise Monitoring

12.1.3 Throughout the Construction Period, construction noise monitoring were carried out according to the EM&A requirement. Eleven noise complaints were received (which trigger an Action Level), and three Limit Level exceedances were recorded. With implementation of construction noise mitigation measures and good site practices provided by the Contractor, the impact noise monitoring results recorded three non-project related Limit Level exceedances of the environmental quality criteria of the parameter throughout the Construction Period, which are generally comparable with the and EIA

Water Quality Monitoring

12.1.4 Throughout the Construction Period, water quality monitoring were carried out according to the EM&A requirement. There were 971 exceedances, namely 21 Action Level and 950 Limit Level recorded in this Construction Period. With the implementation of water quality mitigation measures, most the exceedances were concluded as non-project related. For project related exceedances, the Contractor had rectified the deficiencies promptly and the ET had carried out additional monitoring until no subsequent exceedances recorded. the monitoring results revealed that there are trends of narrow down of monitoring exceedances due to construction activities and the return of ambient environmental conditions in comparison with baseline data.

Site Inspection

12.1.5 Throughout the Construction Period, 1921 session of site inspection has been carried out by ET to evaluate site environmental performance. no non-compliance was recorded. Minor deficiencies were in general rectified within the specified deadlines. The environmental performance of the Project was therefore considered satisfactory.

Environmental Complaint, Summons and Prosecution

12.1.6 Throughout the Construction Period, a total of 111 environmental complaints were lodged under the EM&A Programme and investigations had carried out by ET by auditing the mitigation measures implemented by the Contractor. After investigation, 28 out of 111 complaints were considered as project related complaint. The Contractor was strongly advised to implement and enhance the relevant mitigation measures and site check was conducted by ET to check the environmental performance after the situation has been rectified.

12.1.7 One event of summons was lodged for Contract 2 throughout the Construction Period, and no prosecution was received for the project.

12.1.8 In conclusion, monitoring results of air quality, construction noise and water quality in general

indicated satisfactory environmental performance of the Project. The environmental mitigation measures as recommended in the ISEMM are also proven effective and adequate.

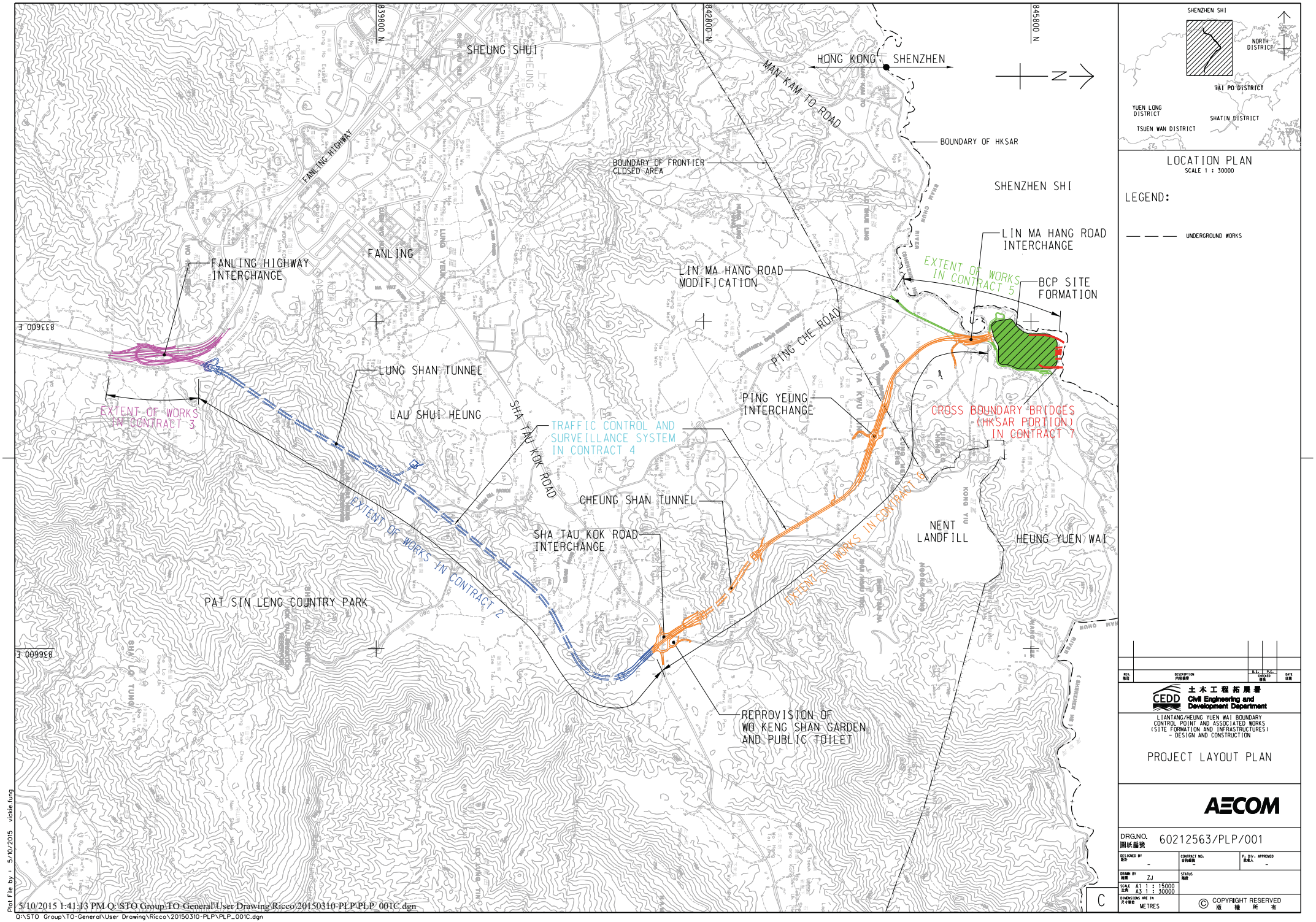
12.2 *RECOMMENDATIONS*

12.2.1 Precision of the prediction of the EIA on the adverse air quality, noise and water quality impacts as generated from the construction of the Project is acceptable. The monitoring performed during the Construction Period is effective for generating data with the necessary statistical power to categorically identify or confirm the presence or absence of the predicted environmental impacts attributable to the works under the Project.

12.2.2 The mitigation measures stipulated in ISEMM included air quality, noise and water quality are effective and shall be strictly implemented and observed throughout the construction period in future of others construction projects.

Appendix A

Layout plan of the Project



LOCATION PLAN
SCALE 1 : 30000

LEGEND:

— — — UNDERGROUND WORKS

REV. 修訂	DESCRIPTION 內容摘要	D.E. 設計	P.I.C. CHECKED 審核	DATE 日期

CEDD 土木工程拓展署 Civil Engineering and Development Department

LIANTANG/HEUNG YUEN WAI BOUNDARY CONTROL POINT AND ASSOCIATED WORKS (SITE FORMATION AND INFRASTRUCTURES) - DESIGN AND CONSTRUCTION

PROJECT LAYOUT PLAN

AECOM

DRG.NO. 圖紙編號 60212563/PLP/001

DESIGNED BY 設計	CONTRACT NO. 合約編號	P. DIV. APPROVED 批准人
–	–	–
DRAWN BY 繪圖	STATUS 狀態	
ZJ		
SCALE 比例 A1 1 : 15000 A3 1 : 30000		
DIMENSIONS ARE IN 尺寸單位 METRES	© COPYRIGHT RESERVED 版權所有	

C

Plot File by : 5/10/2015 vickie.fung

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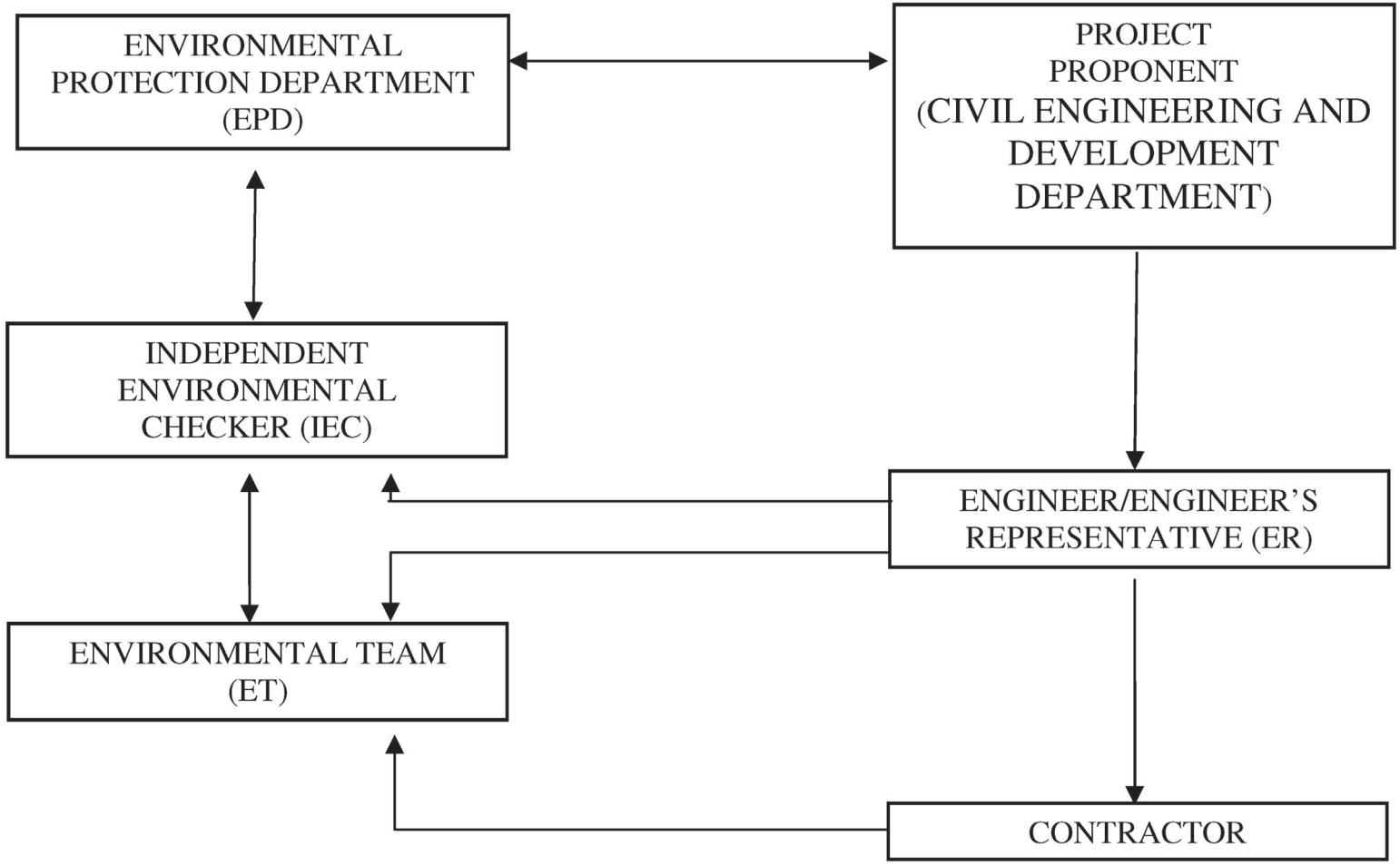
Appendix B

Organization Chart



Legend

Line of Communication

Client

CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

Project

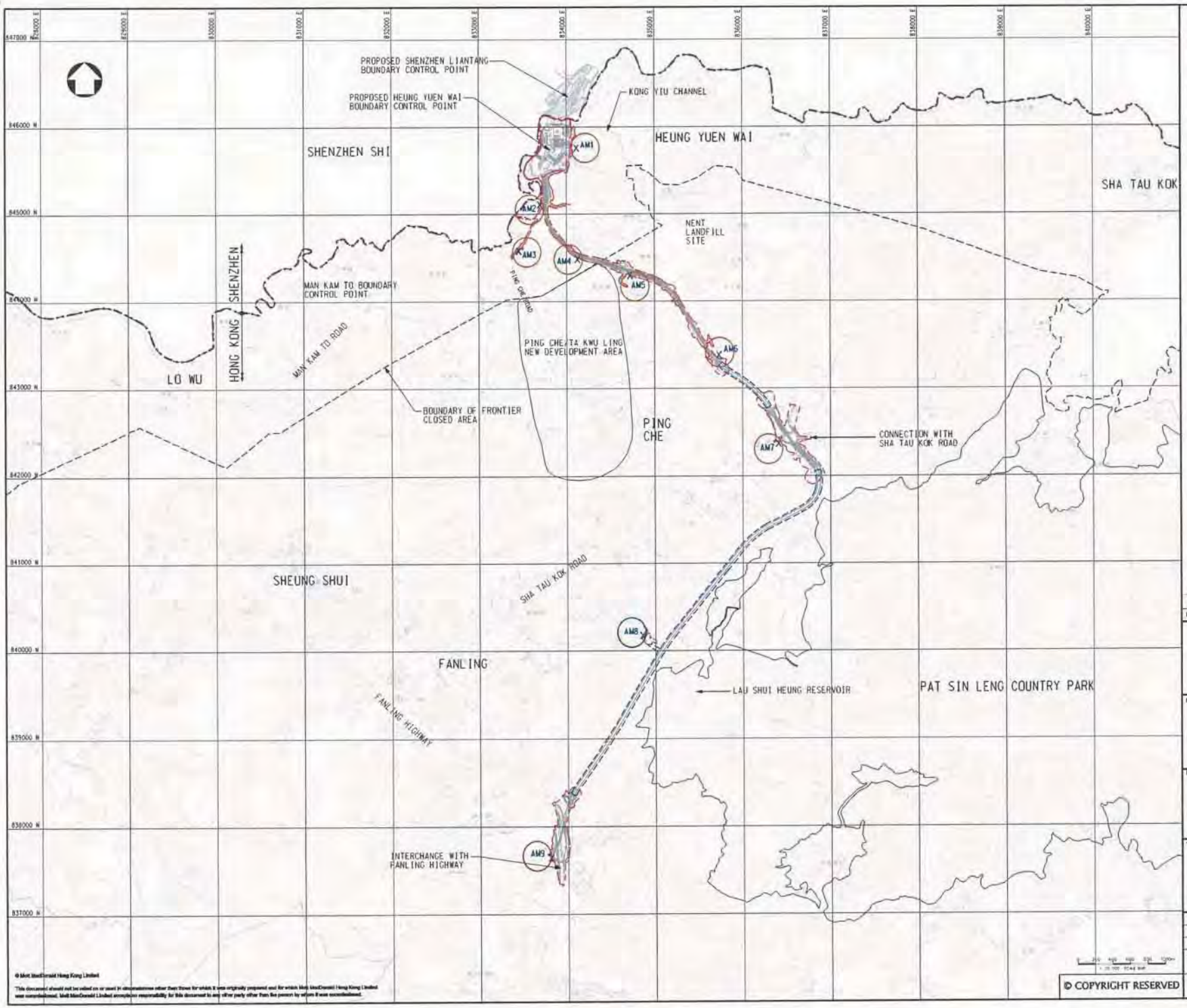
AGREEMENT NO. CE45/2008(CE)
LIANTANG/HEUNG YUEN WAI BOUNDARY CONTROL POINT AND ASSOCIATED WORKS

Title

Project Organisation Chart

Appendix C

Designated Monitoring Locations as Recommended in the Approved EM&A Manual



Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	AUG 10	MENG	FIRST ISSUE	DC	HT

Mott MacDonald

Client: CEDD — CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

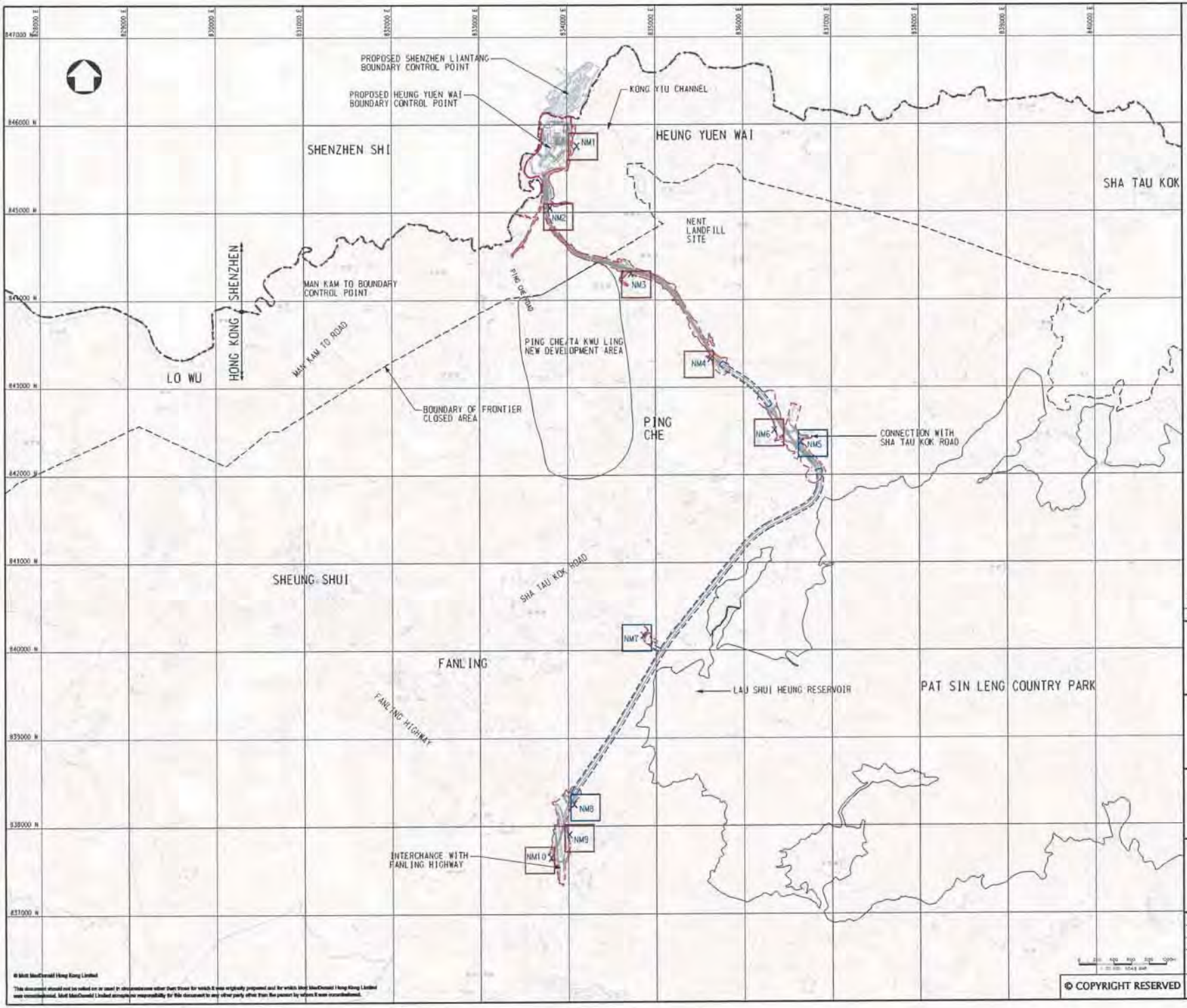
Project: AGREEMENT NO. CE45/2008(CE) LIANTANG/HEUNG YUEN WAI BOUNDARY CONTROL POINT AND ASSOCIATED WORKS

Title: PROPOSED LOCATION OF CONSTRUCTION AIR QUALITY MONITORING STATIONS

Designed	DC		Eng.Chk.	EC	
Drawn	MENG		Coordination	EC	
Eng.Chk.	DC		Approved	HT	

Scale at A1: 1:20000 | Project: 255228 | Status: PRE

Drawing No: FIGURE 2.1 | Rev: P1



Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	AUG 10	WING	FIRST ISSUE	DC	HT

Mott MacDonald

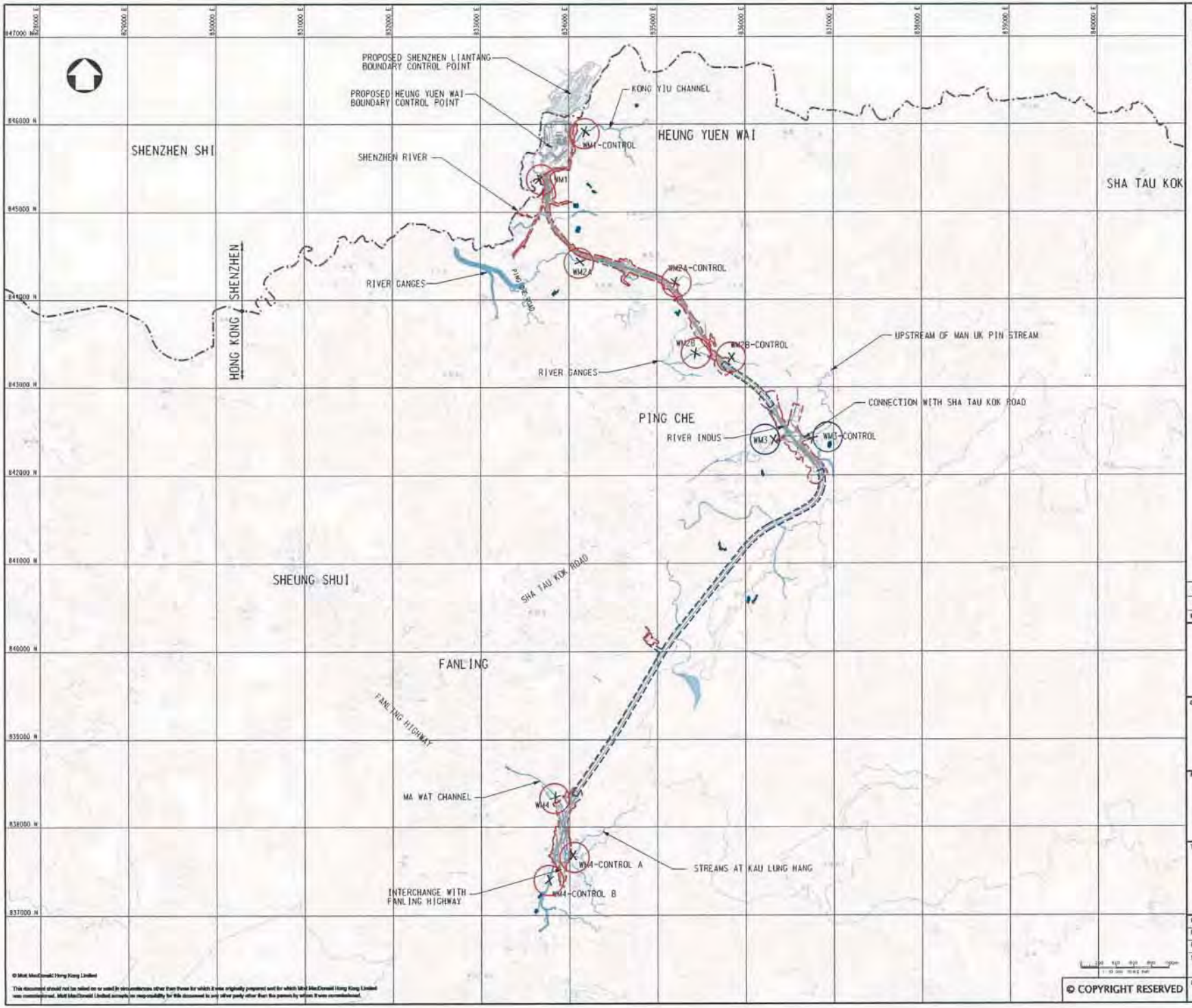
Client: CEDD — CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

Project: AGREEMENT NO. CE45/2008(CE) LIANTANG/HEUNG YUEN WAI BOUNDARY CONTROL POINT AND ASSOCIATED WORKS

Title: PROPOSED LOCATION OF CONSTRUCTION NOISE MONITORING STATIONS

Designed	DC		Eng.Chk.	EC	
Drawn	WING		Coordinator	EC	
Dwg.Chk.	DC		Approved	HT	

Scale at A1: 1:20000 | Project: 255228 | Status: PRE | Drawing No: FIGURE 3.1 | Rev: P1



LEGEND:

- BOUNDARY OF HKSAR
- LAND REQUIREMENT LIMIT (ABOVE GROUND)
- LAND REQUIREMENT LIMIT (TUNNEL)
- X PROPOSED WATER QUALITY MONITORING STATION

MONITORING STATION	CO-ORDINATES	
	EASTING(m)	NORTHING(m)
WM1	833668.635	845371.097
WM1-CONTROL	834185.480	845916.662
WM2A	834132.193	844432.910
WM2A-CONTROL	835205.329	844200.151
WM2B	835434.744	843394.606
WM2B-CONTROL	835845.878	843343.625
WM3	836323.622	842404.977
WM3-CONTROL	836763.419	842425.507
WM4	833840.783	838344.842
WM4-CONTROL A	834038.937	837688.995
WM4-CONTROL B	833769.123	837406.936

Rev	Date	Drawn	Description	Ch'k'd	App'd
P2	NOV 10	WING	GENERAL REVISION	HC	HT
P1	OCT 10	WING	FIRST ISSUE	HC	HT

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Client: CEDD — CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

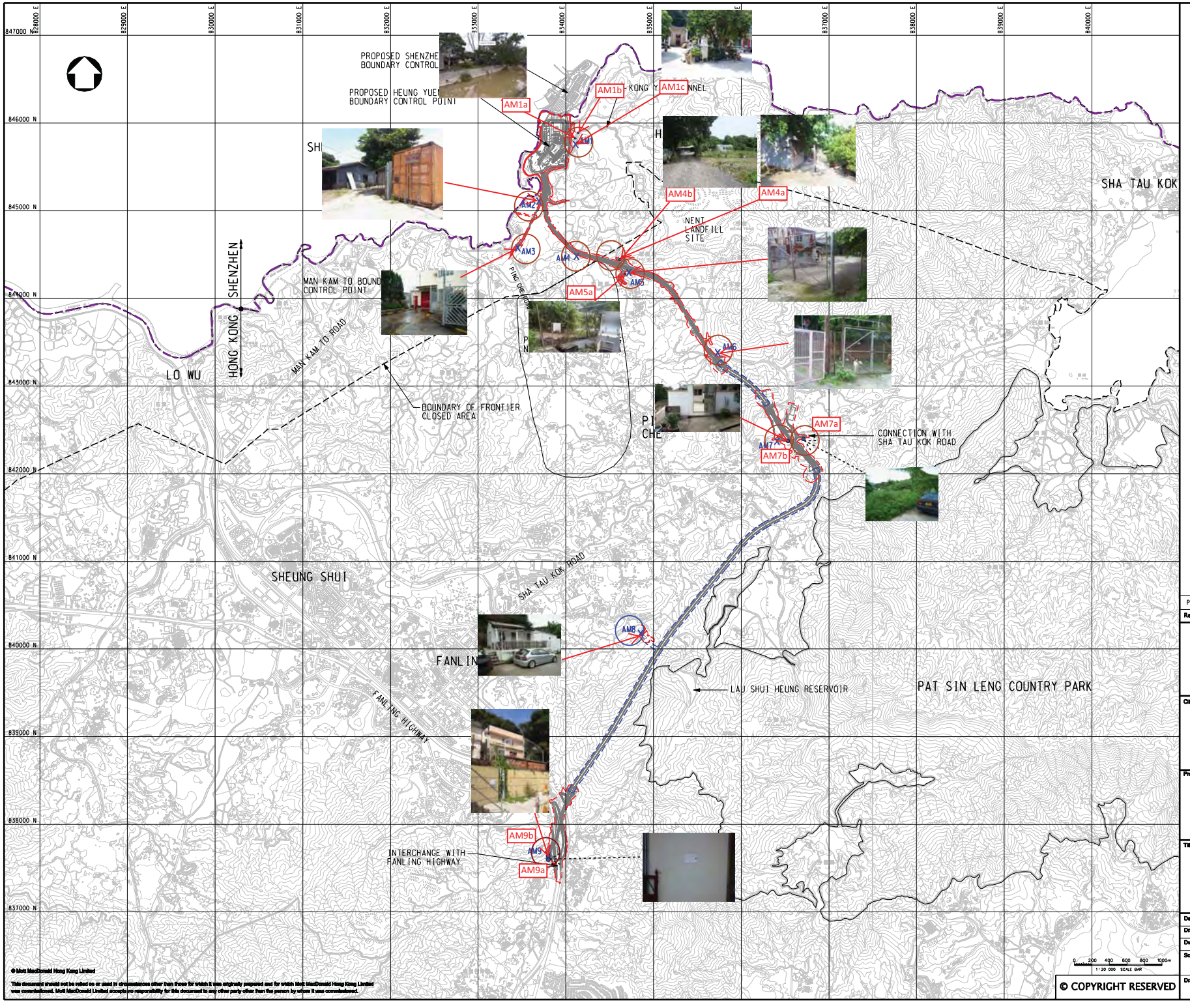
Project: AGREEMENT NO. CE45/2008(CE) LIANTANG/HEUNG YUEN WAI BOUNDARY CONTROL POINT AND ASSOCIATED WORKS

Title: LOCATIONS OF PROPOSED WATER QUALITY MONITORING STATIONS

Designed	HC		Dwg.Chk.	EC	
Drawn	WING		Coordination	EC	
Dwg.Chk.	HC		Approved	HT	
Scale at A1	1:20000	Project	255228	Status	PRE
Drawing No	FIGURE 4.1			Rev	P2

Appendix D

Monitoring Locations for Impact Monitoring



LEGEND:

- BOUNDARY OF HKSAR
- WORKS AREA (ABOVE GROUND)
- WORKS AREA (TUNNEL)
- X Air Monitoring Stations in the EM&A Manual
- Proposed Air Monitoring Stations

Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	AUG 10	MING	FIRST ISSUE	DC	HT

Mott MacDonald
20/F Two Landmark East
100 How Ming Street
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Client

CEDD
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

Project

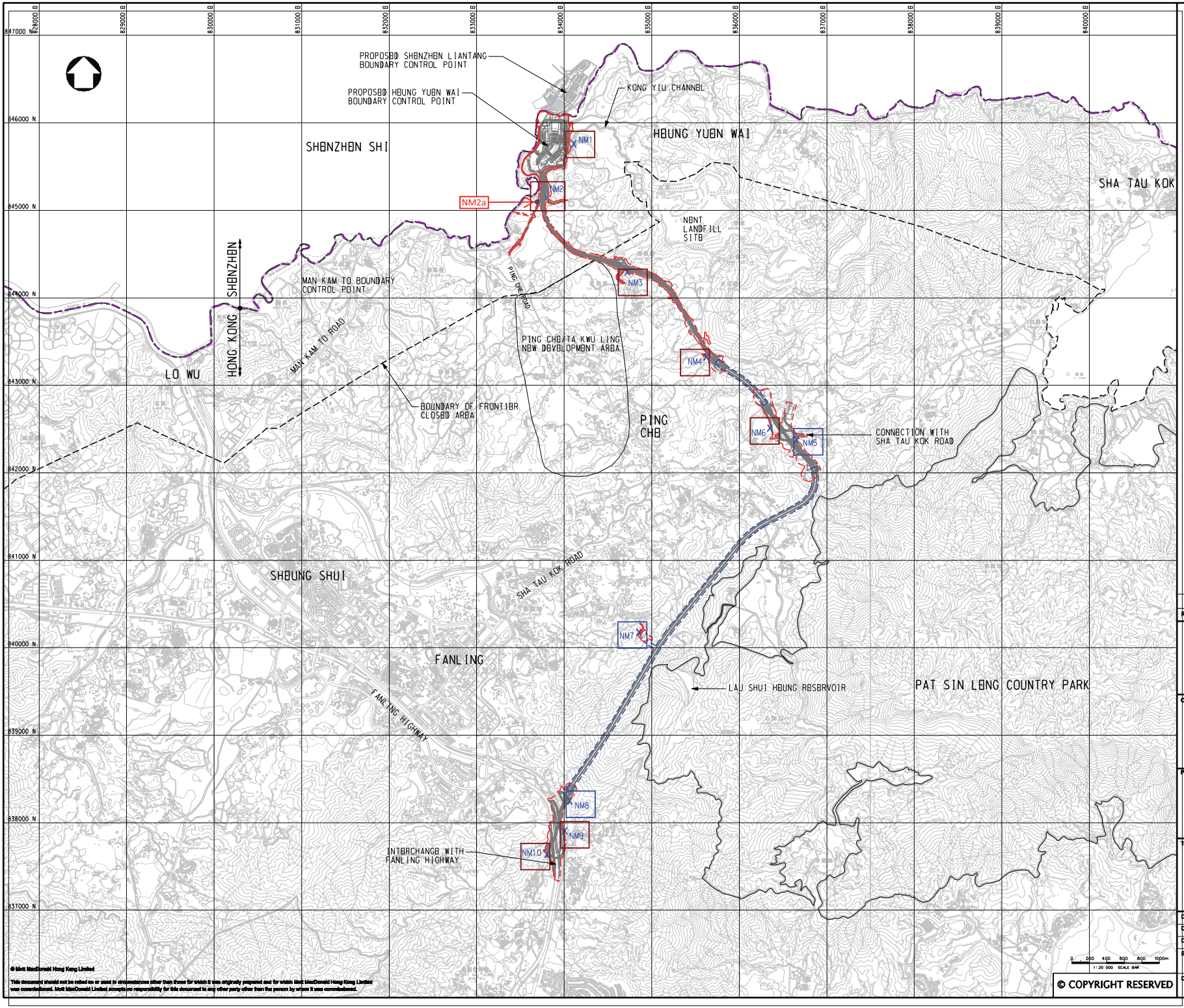
AGREEMENT NO. CE45/2008(CE)
LIANTANG/HEUNG YUEN WAI BOUNDARY CONTROL POINT AND ASSOCIATED WORKS

Title

PROPOSED LOCATION OF CONSTRUCTION AIR QUALITY MONITORING STATIONS

Designed	DC		Eng.Chk.	EC	
Drawn	MING		Coordination	EC	
Dwg.Chk.	DC		Approved	HT	
Scale at A1	1:20000	Project	255228	Status	PRE
		CAD file	j:\255228\report\env\em&a\00B3\FIG 2-1.dgn		
Drawing No	FIGURE 2.1			Rev	P1

0 200 400 600 800 1000m
1:20 000 SCALE BAR



LEGEND:

- BOUNDARY OF HKSAR
- WORKS AREA (ABOVE GROUND)
- WORKS AREA (TUNNEL)
- X CONSTRUCTION NOISE MONITORING STATIONS
- Proposed Noise Monitoring Stations

Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	AUG 10	MING	FIRST ISSUE	DC	HT

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20/F Two Landmark East
100 How Ming Street
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CEDD
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

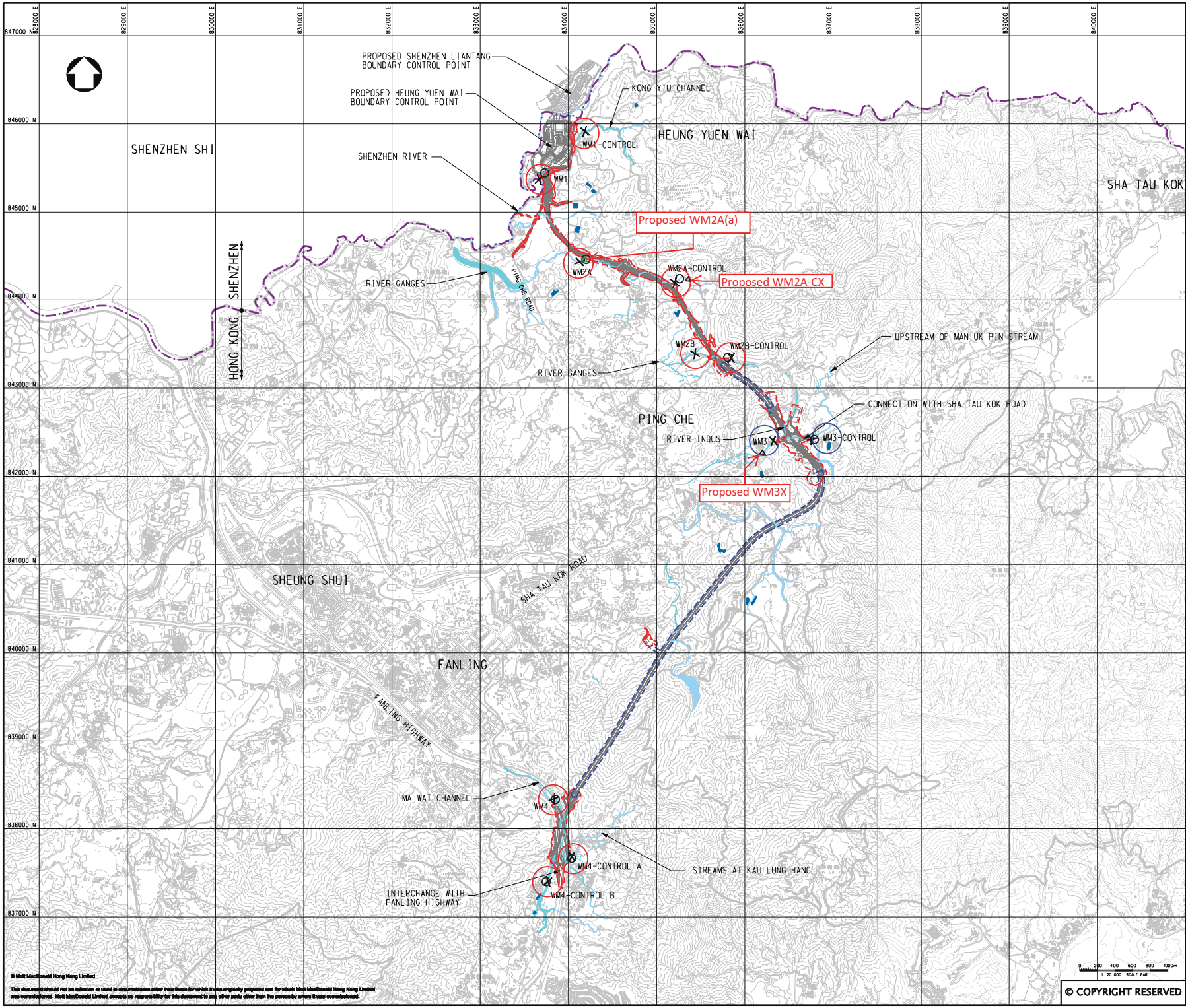
Project

AGREEMENT NO. CE45/2008(CE)
LIANTANG/HUNG YUEN WAI BOUNDARY CONTROL POINT AND ASSOCIATED WORKS

Title

PROPOSED LOCATION OF CONSTRUCTION NOISE MONITORING STATIONS

Designed	DC		Eng.Chk.	BC	
Drawn	MING		Coordination	BC	
Dwg.Chk.	DC		Approved	HT	
Scale at A1	1:20000	Project	255228	Status	PRE
		CAD file	j:\255228\report\env\em&o\00B3\FIG 3-1.dgn		
Drawing No	FIGURE 3.1			Rev	P1



LEGEND:

- BOUNDARY OF HKSAR
- LAND REQUIREMENT LIMIT (ABOVE GROUND)
- LAND REQUIREMENT LIMIT (TUNNEL)
- X Water Quality Monitoring Location Recommended in EM&A Manual
- O Alternative Water Quality Monitoring Location for EM&A Programme
- △ New Proposed Water Quality Monitoring Location in November 2015
- △ New Proposed Water Quality Monitoring Location in May 2016

Station ID	Location recommended in EM&A Manual Coordinates Easting	Northing	Location found during site visit Coordinates Easting	Northing
WM1	833668.655	845371.897	833679	845421
WM1 Control	834187.480	845916.662	834185	845917
WM2A	834132.193	844432.910	834204	844471
WM2A-Control	835205.329	844200.151	835270	844243
WM2B	835414.744	843304.606	835435	843397
WM2B-Control	835845.878	843343.625	835835	843351
WM3	836323.622	842404.377	836324	842407
WM3-Control	836763.419	842425.507	836763	842400
WM4	833840.783	838344.842	833850	838338
WM4-Control A	834038.937	837668.985	834028	837695
WM4-Control B	833769.123	837406.936	833760	837395

New Proposed Water Quality Monitoring Location in November 2015		
Location ID	Easting	Northing
WM2A-C (Original)	0835270	0844243
WM2A-Cx (Proposed)	0835377	0844188
WM3(Original)	0836324	0842407
WM3x(Proposed)	0836206	0842270

New Proposed Wate Quality Monitoring Location in May 2016		
Location ID	Easting	Northing
WM2A (Original)	834204	844471
WM2A(a) (Proposed	834191	844474

Rev	Date	Drawn	Description	Ch'k'd	App'd
P2	NOV 10	MING	GENERAL REVISION	HC	HT
P1	OCT 10	MING	FIRST ISSUE	HC	HT

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Client

CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

Project

AGREEMENT NO. CE45/2008(CE)
LIANTANG/HEUNG YUEN WAI BOUNDARY CONTROL POINT AND ASSOCIATED WORKS

Title

LOCATIONS OF PROPOSED WATER QUALITY MONITORING STATIONS

Designed	HC		Eng.Chk.	EC	
Drawn	MING		Coordination	EC	
Dwg.Chk.	HC		Approved	HT	
Scale at A1	1:20000	Project	255228		Status PRE
		CAD file	a:\255228\REPORT\ENV\EM&A\DWS\FIG 4-1.dgn		
Drawing No	Appendix C				Rev P2

Appendix E

Event and Action Plan

Event and Action Plan for Air Quality

Event	ET	IEC	ER	Action Contractor
Action Level				
1. Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC and ER; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method.	1. Notify Contractor.	1. Rectify any unacceptable practice; 2. Amend working methods if appropriate.
2. Exceedance for two or more consecutive samples	1. Identify source; 2. Inform IEC and ER; 3. Advise the ER on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC and Contractor on remedial actions required; 7. If exceedance continues, arrange meeting with IEC and ER; 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ET on the effectiveness of the proposed remedial measures; 5. Monitor the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented.	1. Submit proposals for remedial to ER within 3 working days of notification; 2. Implement the agreed proposals; 3. Amend proposal if appropriate.
Limit Level				
1. Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform ER, Contractor and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ER on the effectiveness of the proposed remedial measures; 5. Monitor theimplementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Amend proposal if appropriate.
2. Exceedance for two or more consecutive samples	1. Notify IEC, ER, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 4. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 5. Monitor the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Ensure remedial measures properly implemented; 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. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. 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	Action Contractor
Action Level	1. Notify ER, IEC and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, ER and Contractor; 4. Discuss with the IEC and Contractor on remedial measures required; 5. Increase monitoring frequency to check mitigation effectiveness.	1. Review the investigation results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; 3. Advise the ER on the effectiveness of the proposed remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures.	1. Submit noise mitigation proposals to IEC and ER; 2. Implement noise mitigation proposals.
Limit Level	1. Inform IEC, ER, Contractor and EPD; 2. Repeat measurements to confirm findings; 3. Increase monitoring frequency; 4. Identify source and investigate the cause of exceedance; 5. Carry out analysis of Contractor's working procedures; 6. Discuss with the IEC, Contractor and ER on remedial measures required; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures; 5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the exceedance until the exceedance is abated.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC and ER within 3 working days of notification; 3. Implement the agreed proposals; 4. Submit further proposal if problem still not under control; 5. Stop the relevant portion of works as instructed by the ER until the exceedance is abated.

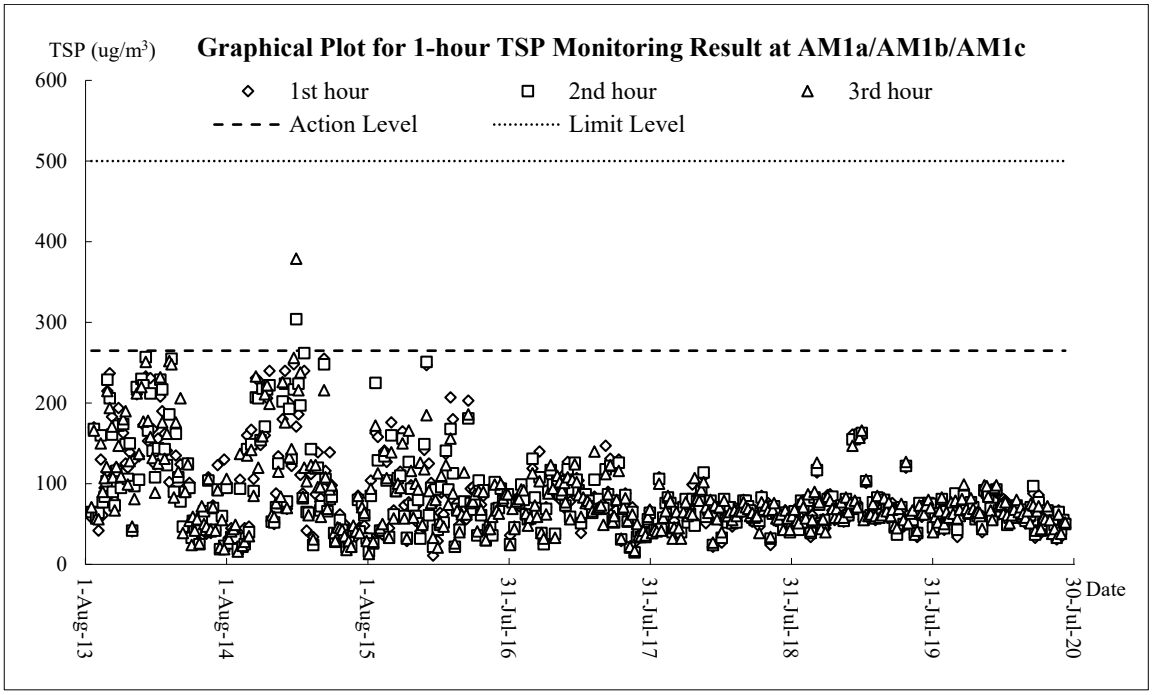
Event and Action Plan for Water Quality

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Action level being exceeded by one sampling day	1. Repeat in-situ measurement to confirm findings; 2. Identify reasons for non-compliance and sources of impact; 3. Inform IEC and Contractor; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC and Contractor; 6. Repeat measurement on next day of exceedance.	1. Discuss with ET and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly; 3. Assess the effectiveness of the implemented mitigation measures	1. Discuss with IEC on the proposed mitigation measures; 2. Make agreement on the mitigation measures to be implemented; 3. Assess the effectiveness of the implemented mitigation measures	1. Inform the ER and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with ET and IEC and propose mitigation measures to IEC and ER; 6. Implement the agreed mitigation measures.
Action Level being exceeded by more than two consecutive sampling days	1. Repeat in-situ measurement to confirm findings; 2. Identify reasons for non-compliance and sources of impact; 3. Inform IEC and Contractor; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC and Contractor; 6. Ensure mitigation measures are implemented; 7. Prepare to increase the monitoring frequency to daily; 8. Repeat measurement on next day of exceedance.	1. Discuss with ET and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly; 3. Assess the effectiveness of the implemented mitigation measures	1. Discuss with IEC on the proposed mitigation measures; 2. Make agreement on the mitigation measures to be implemented; 3. Assess the effectiveness of the implemented mitigation measures	1. Inform the ER and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with ET and IEC and propose mitigation measures to IEC and ER within 3 working days; 6. Implement the agreed mitigation measures.
Limit Level being exceeded by one sampling day	1. Repeat in-situ measurement to confirm findings; 2. Identify reasons for non-compliance and sources of impact; 3. Inform IEC, Contractor and EPD; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, ER and Contractor; 6. Ensure mitigation measures are implemented; 7. Increase the monitoring frequency to daily until no exceedance of Limit Level.	1. Discuss with ET and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly; 3. Assess the effectiveness of the implemented mitigation measures	1. Discuss with IEC, ET and Contractor on the proposed mitigation measures; 2. Request Contractor to critically review the working methods; 3. Make agreement on the mitigation measures to be implemented; 4. Assess the effectiveness of the implemented mitigation measures	1. Inform the ER and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with ET, IEC and ER and propose mitigation measures to IEC and ER within 3 working days; 6. Implement the agreed mitigation measures.
Limit level being exceeded by more than one consecutive sampling days	1. Repeat in-situ measurement to confirm findings; 2. Identify reasons for non-compliance and sources of impact; 3. Inform IEC, Contractor and EPD; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, ER and Contractor; 6. Ensure mitigation measures are implemented; 7. Increase the monitoring frequency to daily until no exceedance of Limit Level for two consecutive days.	1. Discuss with ET and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly; 3. Assess the effectiveness of the implemented mitigation measures.	1. Discuss with IEC, ET and Contractor on the proposed mitigation measures; 2. Request Contractor to critically review the working methods; 3. Make agreement on the mitigation measures to be implemented; 4. Assess the effectiveness of the implemented mitigation measures; 5. Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the construction activities until no exceedance of Limit Level.	1. Inform the ER and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with ET, IEC and ER and propose mitigation measures to IEC and ER within 3 working days; 6. Implement the agreed mitigation measures; 7. As directed by the ER, to slow down or to stop all or part of the construction activities.

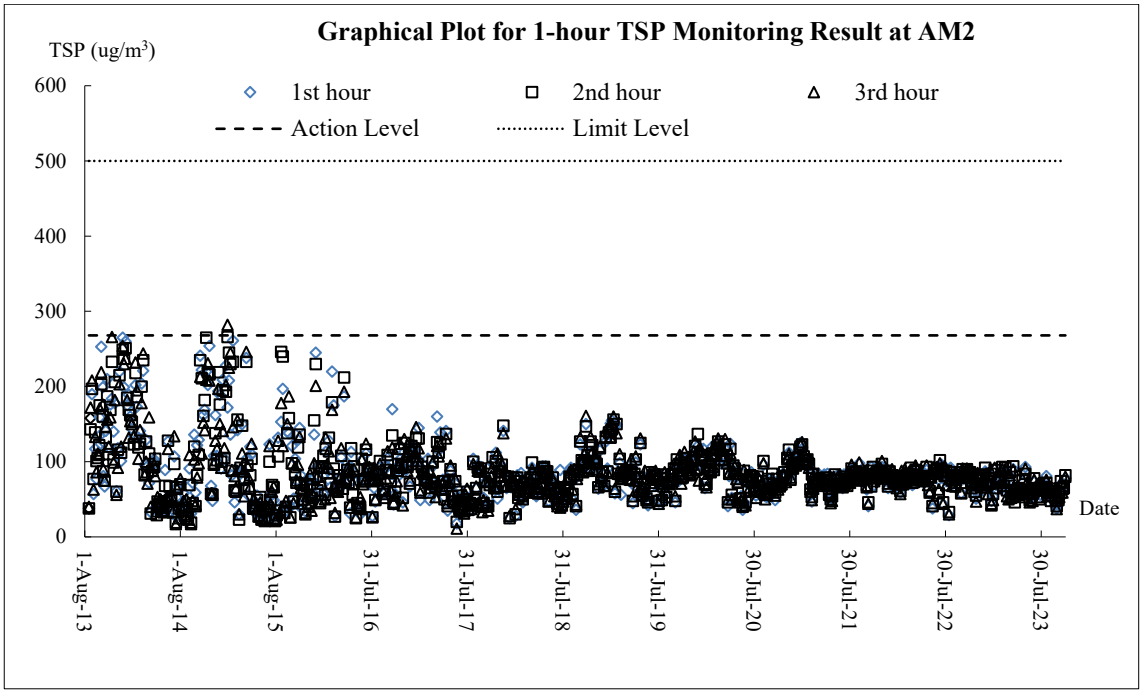
Appendix F

Graphical Plots for Monitoring Result

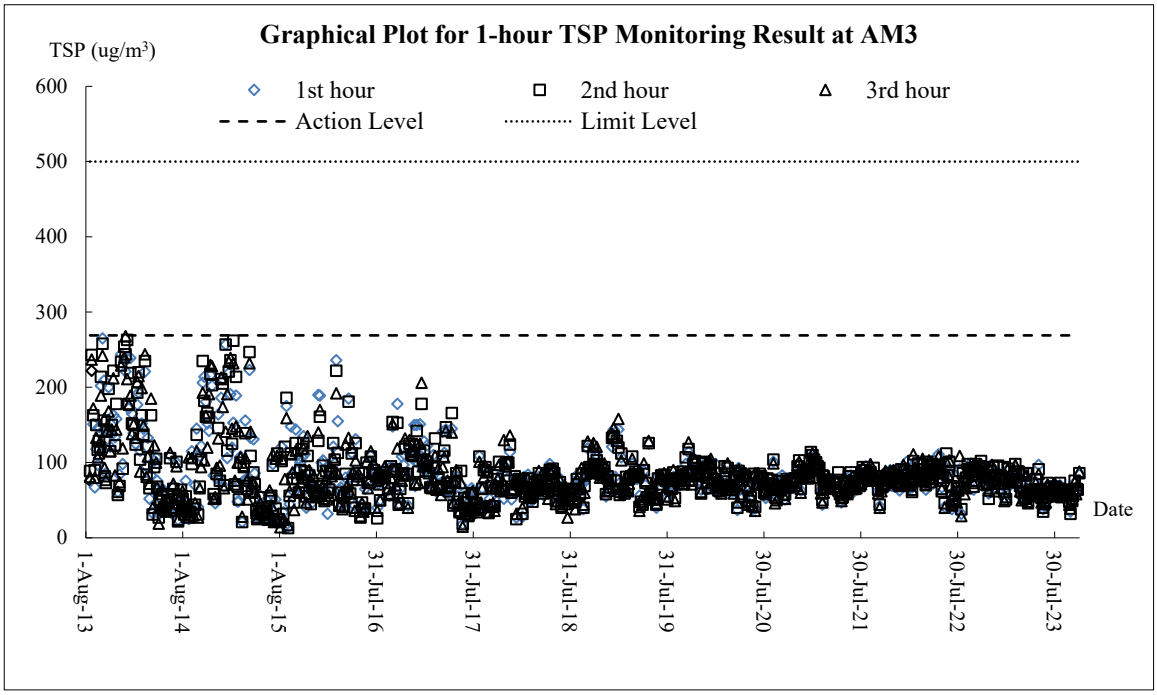
Air Quality – 1-hour TSP



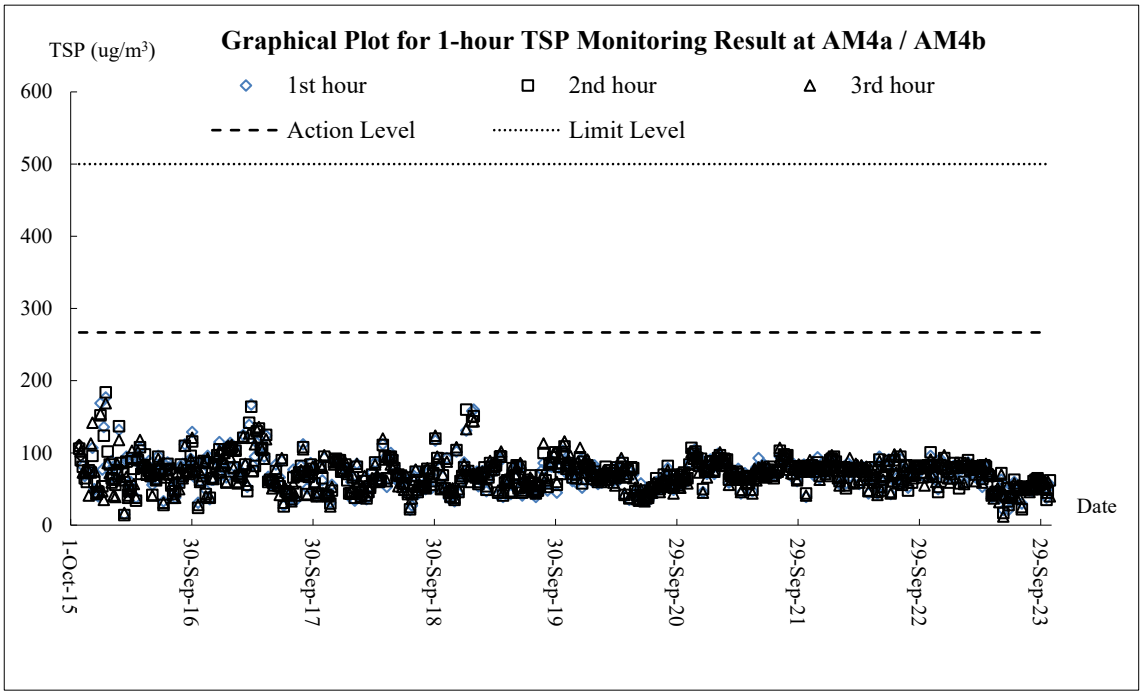
NOTE: Monitoring Period: 16 Aug 2013 to 7 Jul 2020



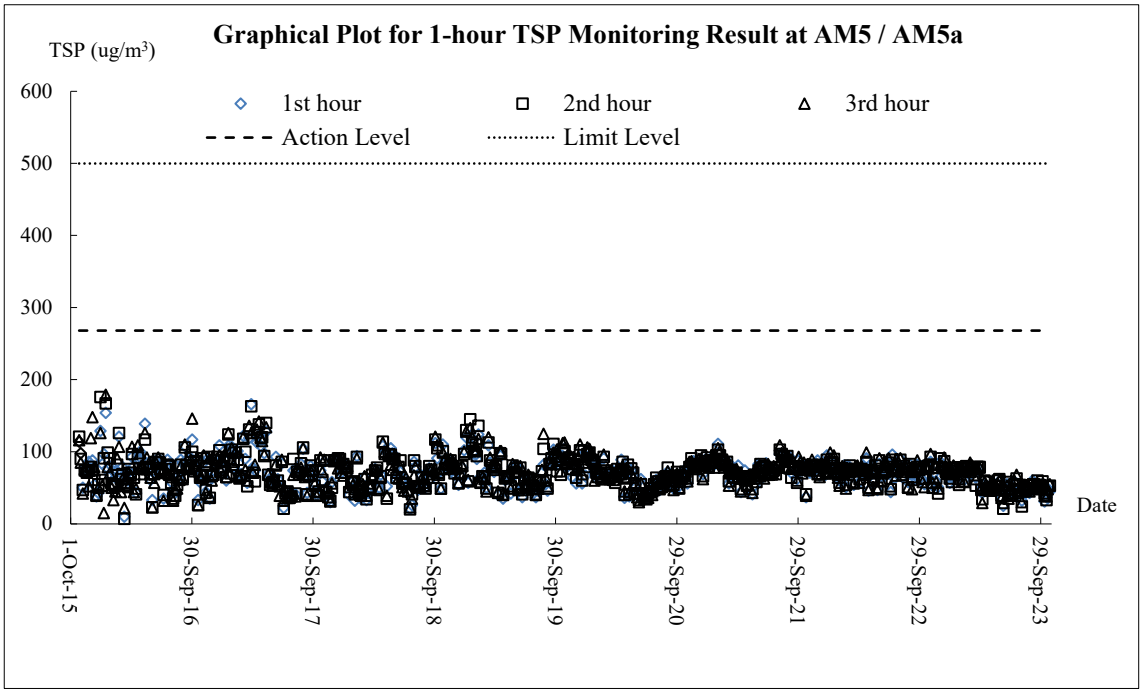
NOTE: Monitoring Period: 16 Aug 2013 to 30 Oct 2023



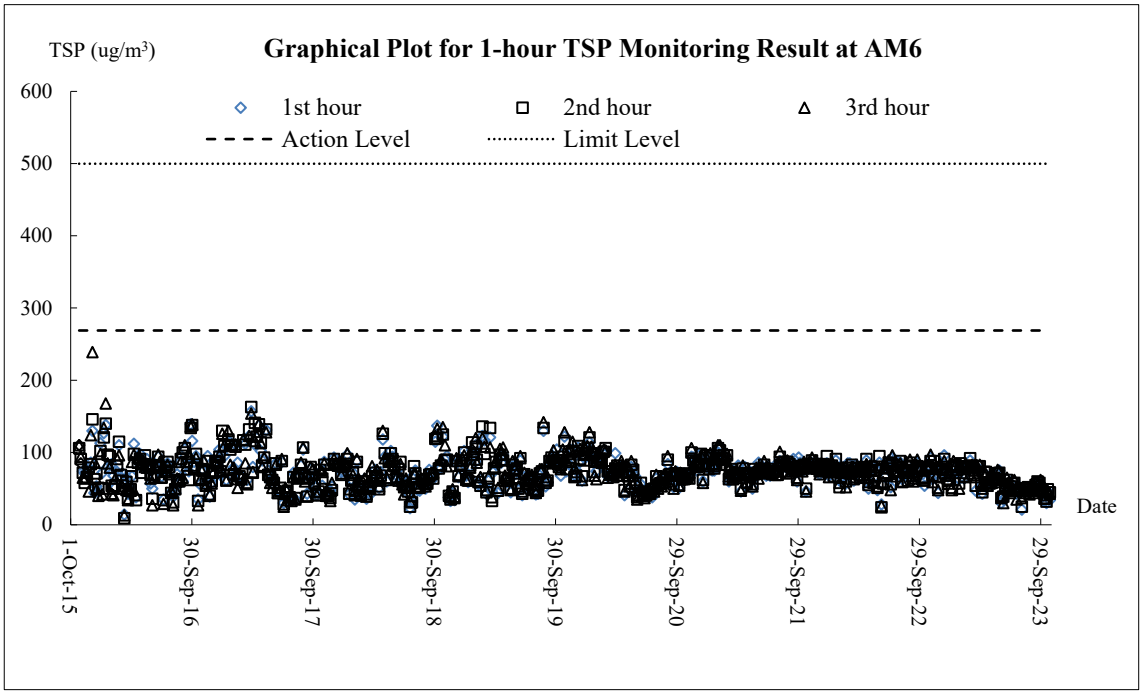
NOTE: Monitoring Period: 16 Aug 2013 to 30 Oct 2023



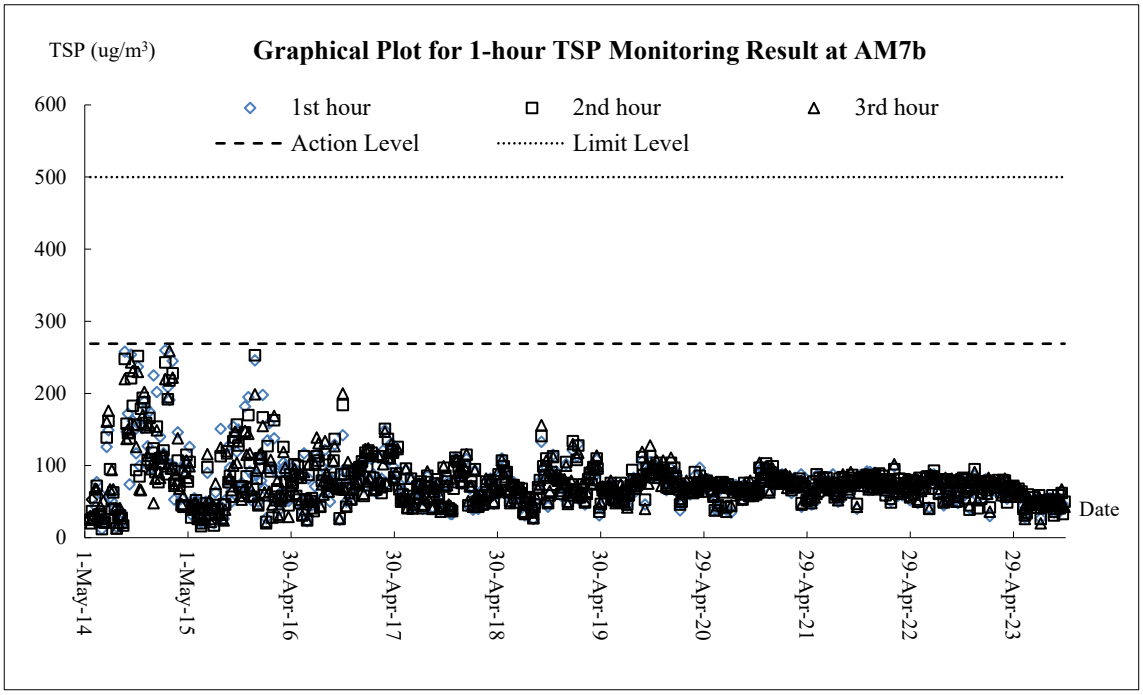
NOTE: Monitoring Period: 26 Oct 2015 to 26 Oct 2023



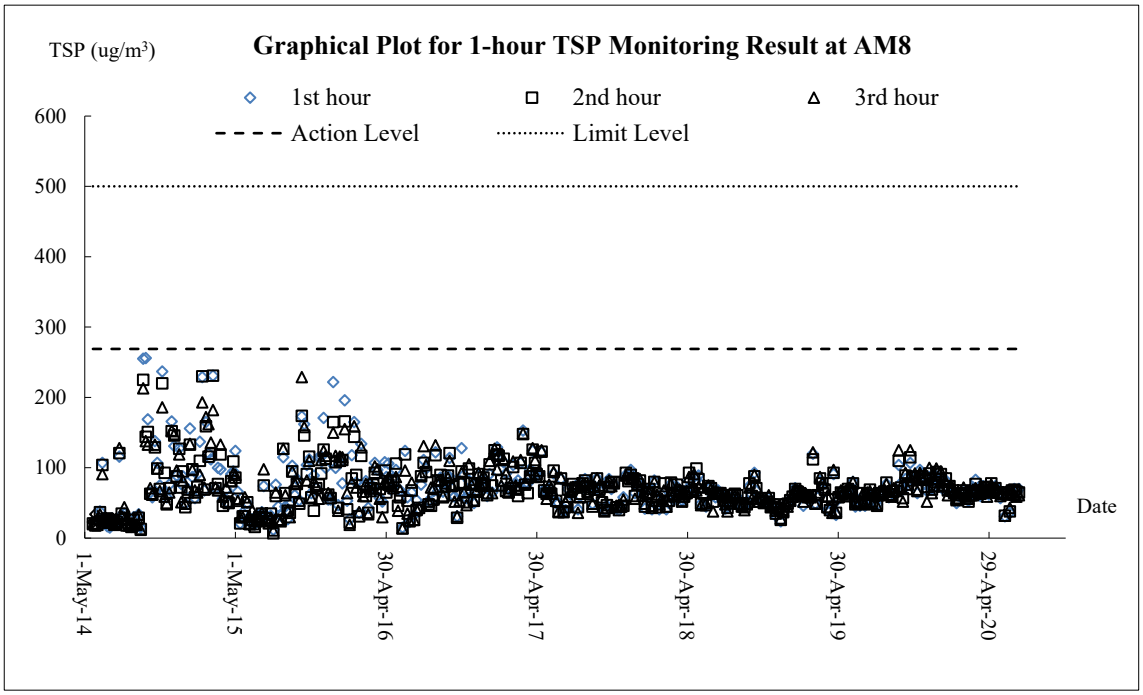
NOTE: Monitoring Period: 26 Oct 2015 to 26 Oct 2023



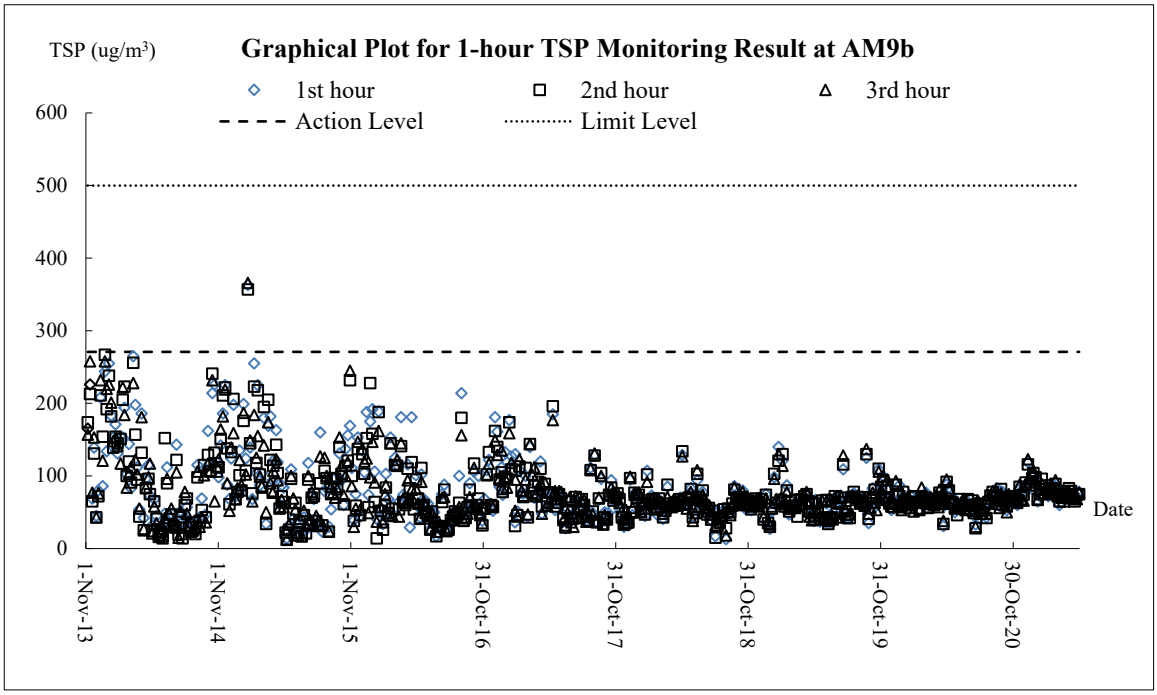
NOTE: Monitoring Period: 26 Oct 2015 to 26 Oct 2023



NOTE: Monitoring Period: 20 May 2014 to 26 Oct 2023

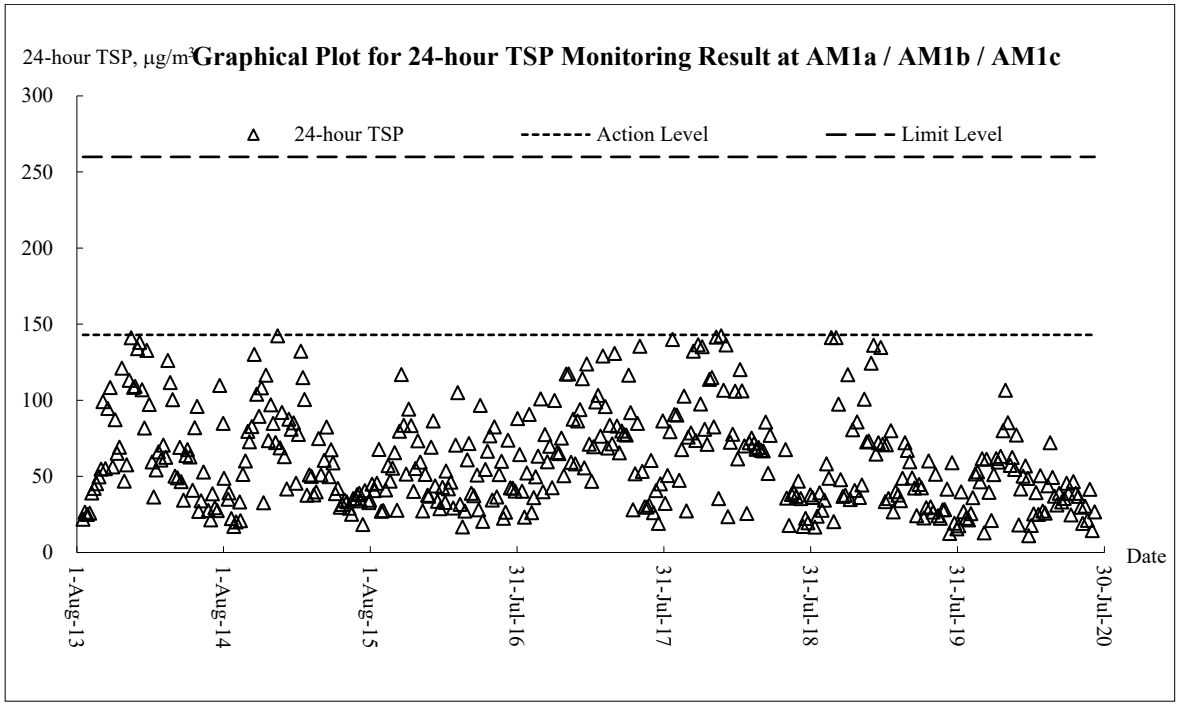


NOTE: Monitoring Period: 20 May 2014 to 10 Jul 2020

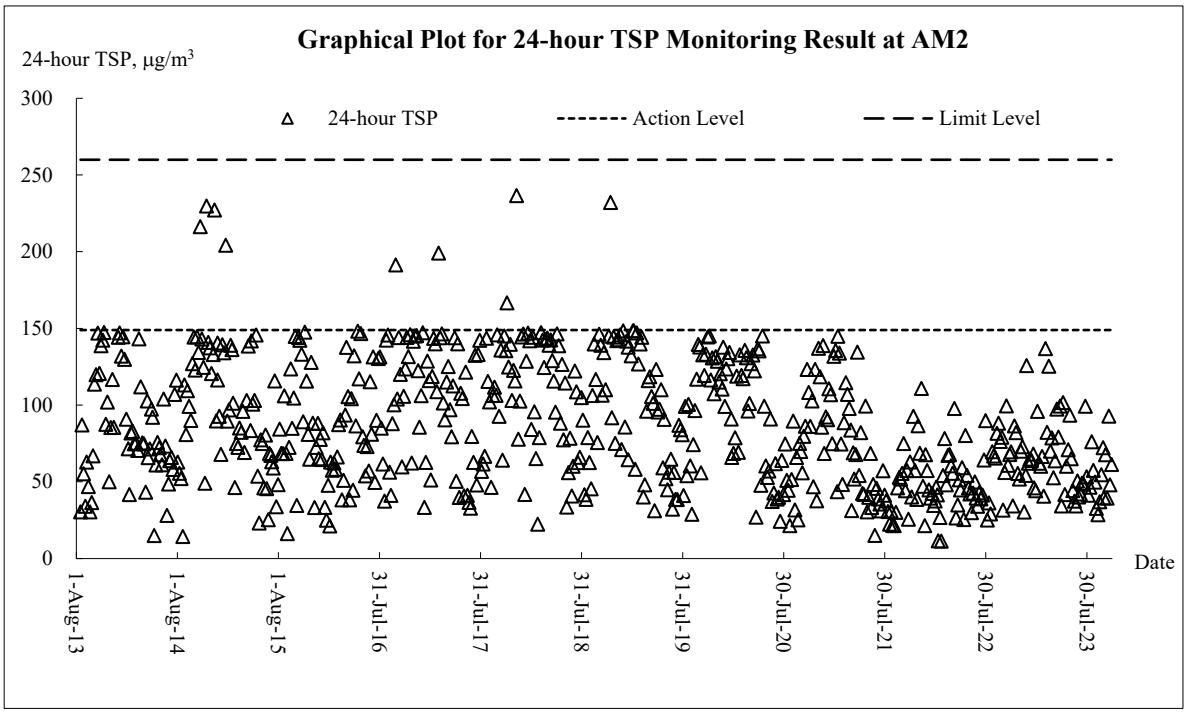


NOTE: Monitoring Period: 4 Nov 2013 to 29 Apr 2021

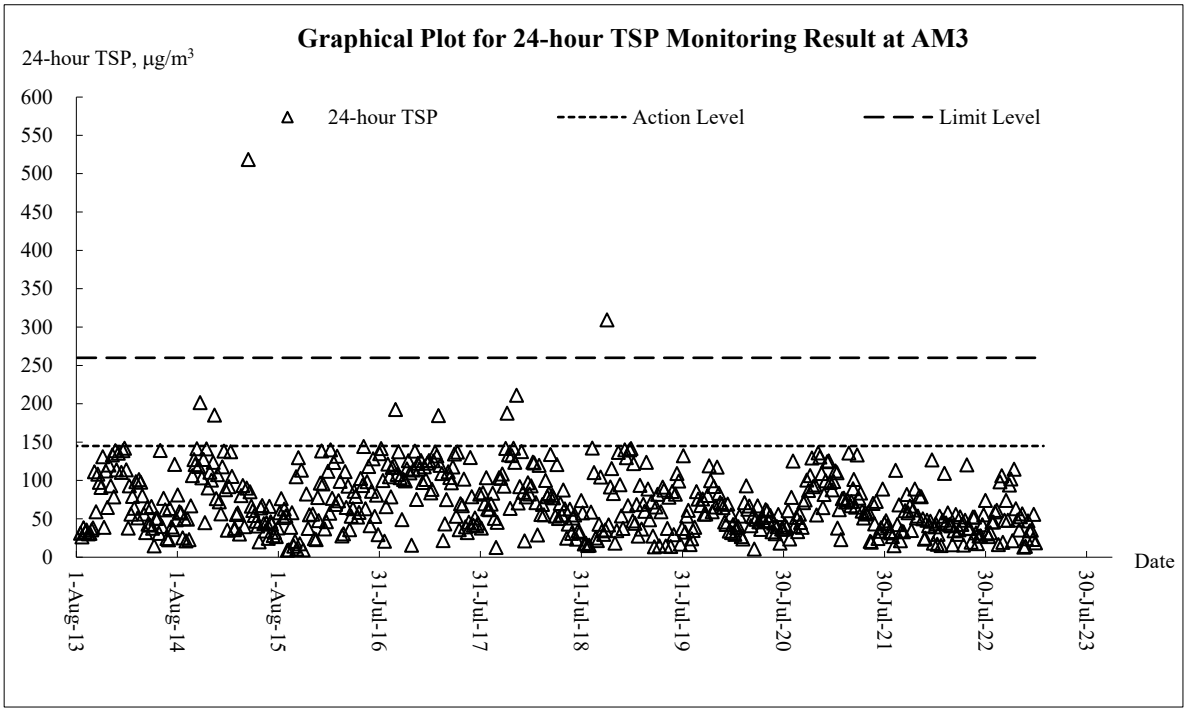
Air Quality – 24-hour TSP



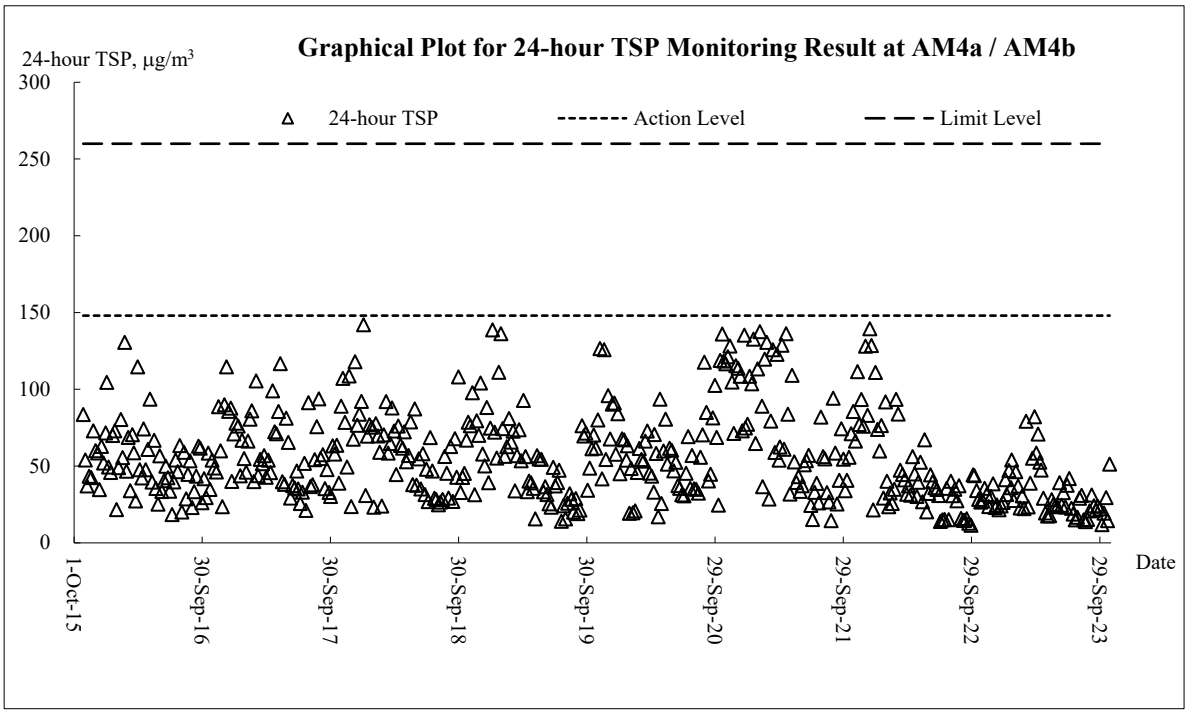
NOTE: Monitoring Period: 16 Aug 2013 to 6 Jul 2020



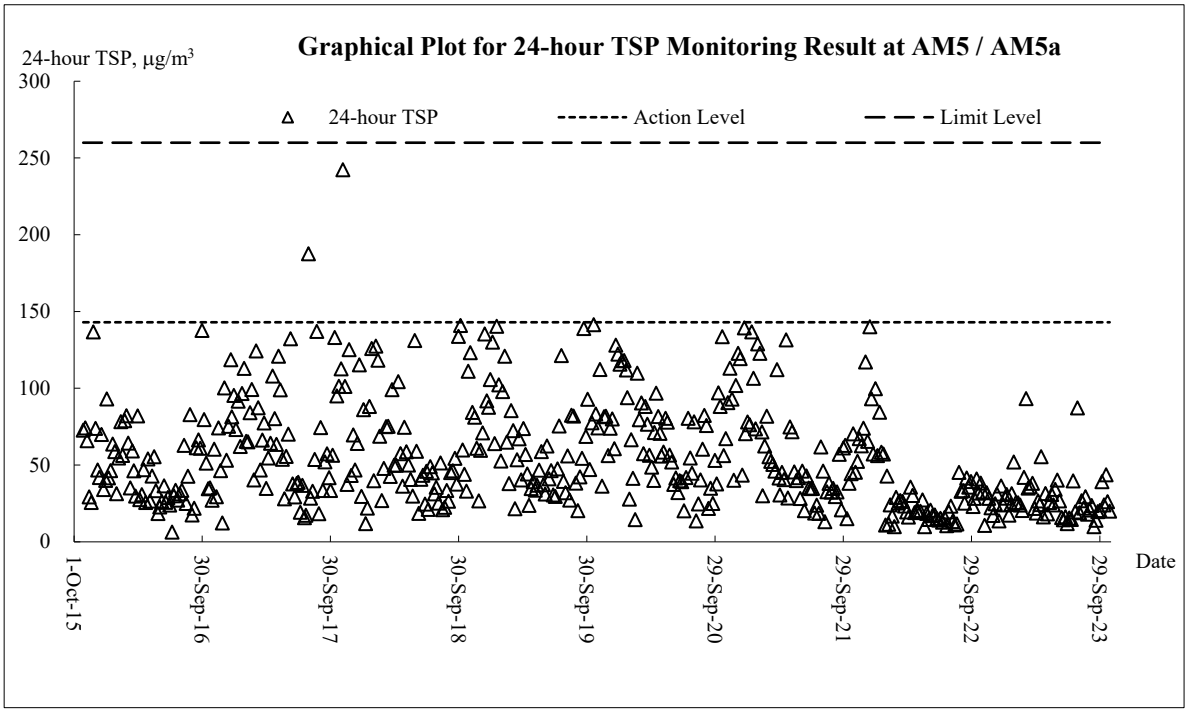
NOTE: Monitoring Period: 16 Aug 2013 to 27 Oct 2023



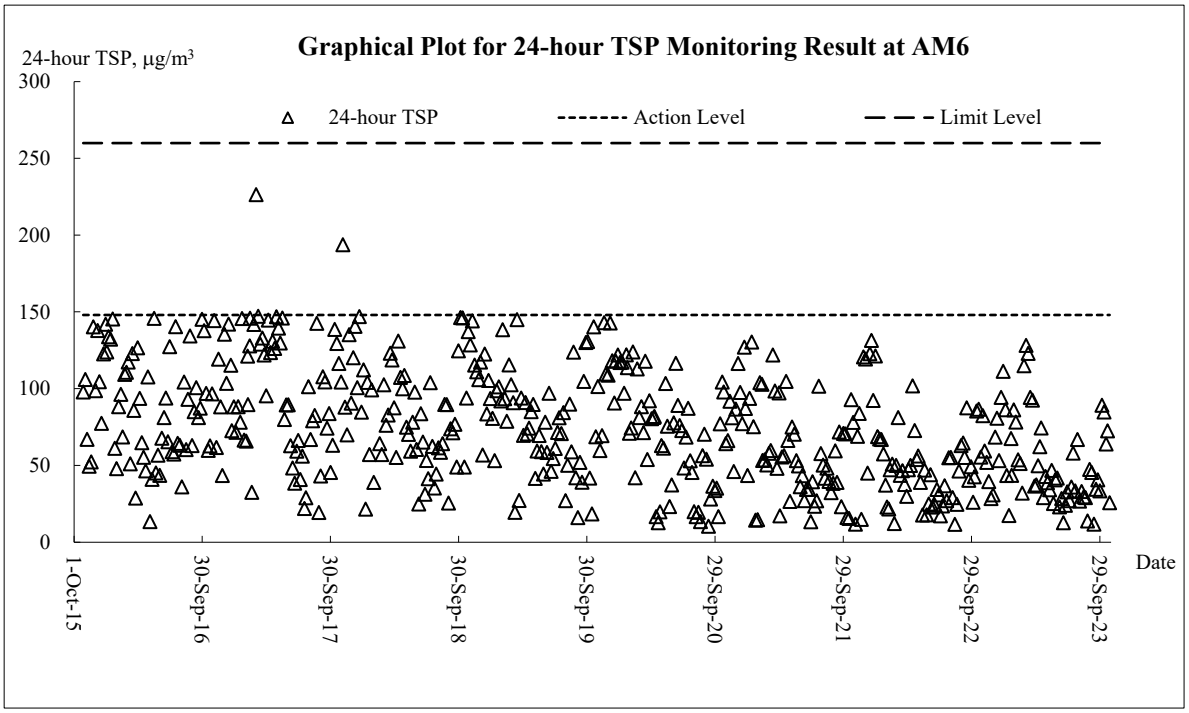
NOTE: Monitoring Period: 16 Aug 2013 to 26 Jan 2023



NOTE: Monitoring Period: 27 Oct 2015 to 27 Oct 2023



NOTE: Monitoring Period: 27 Oct 2015 to 27 Oct 2023



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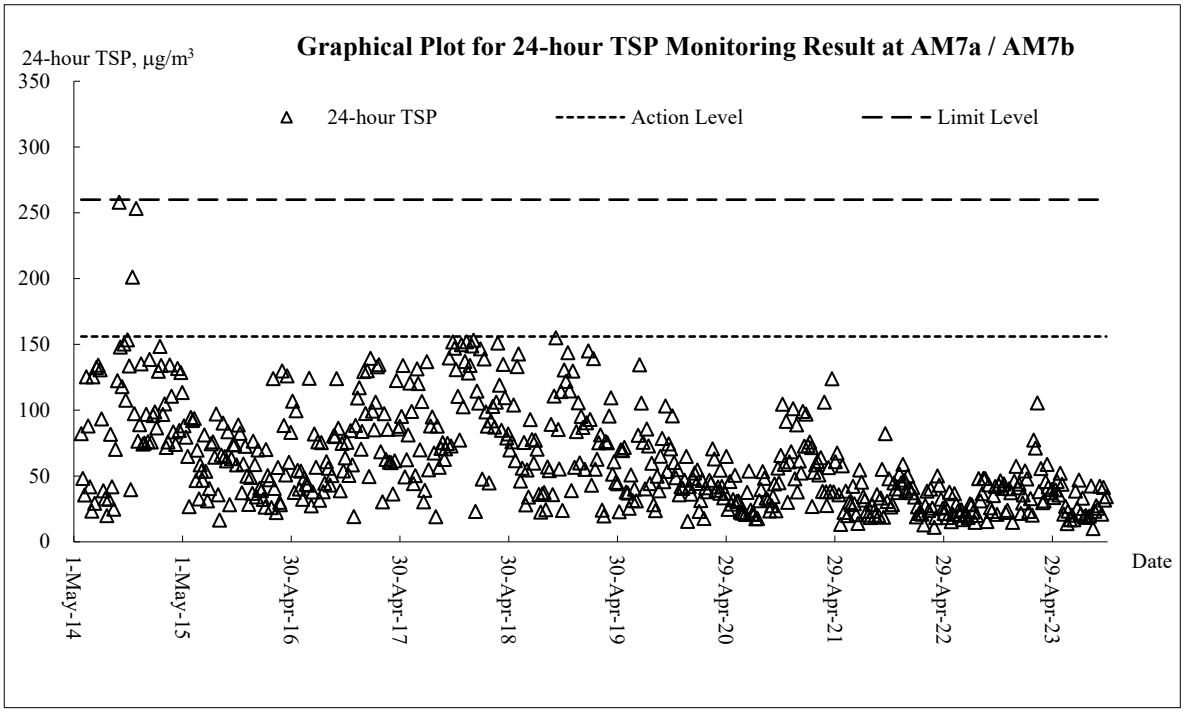
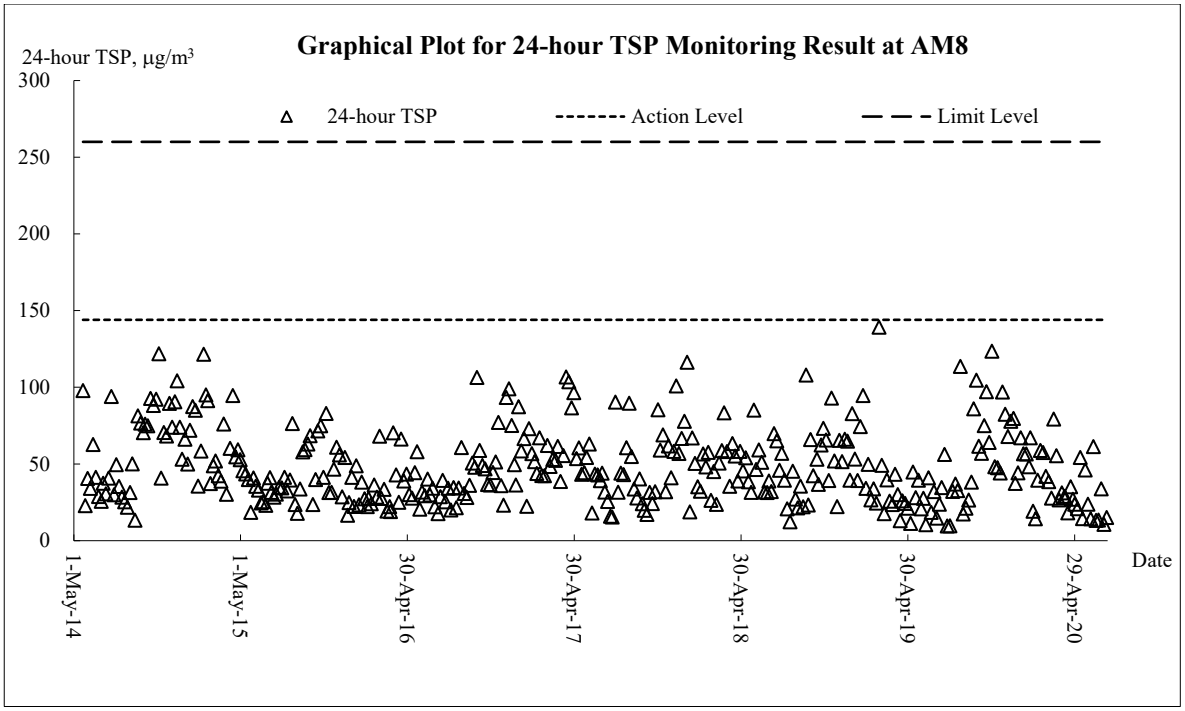


NOTE: Monitoring Period: 26 May 2014 to 27 Oct 2023



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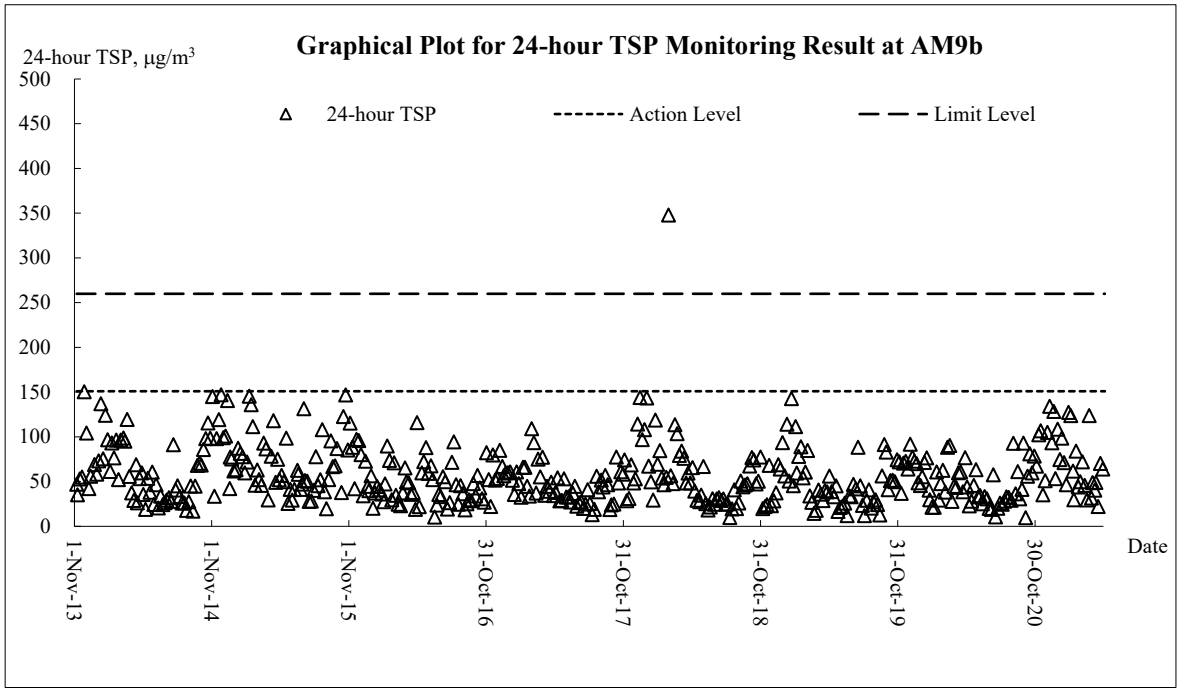
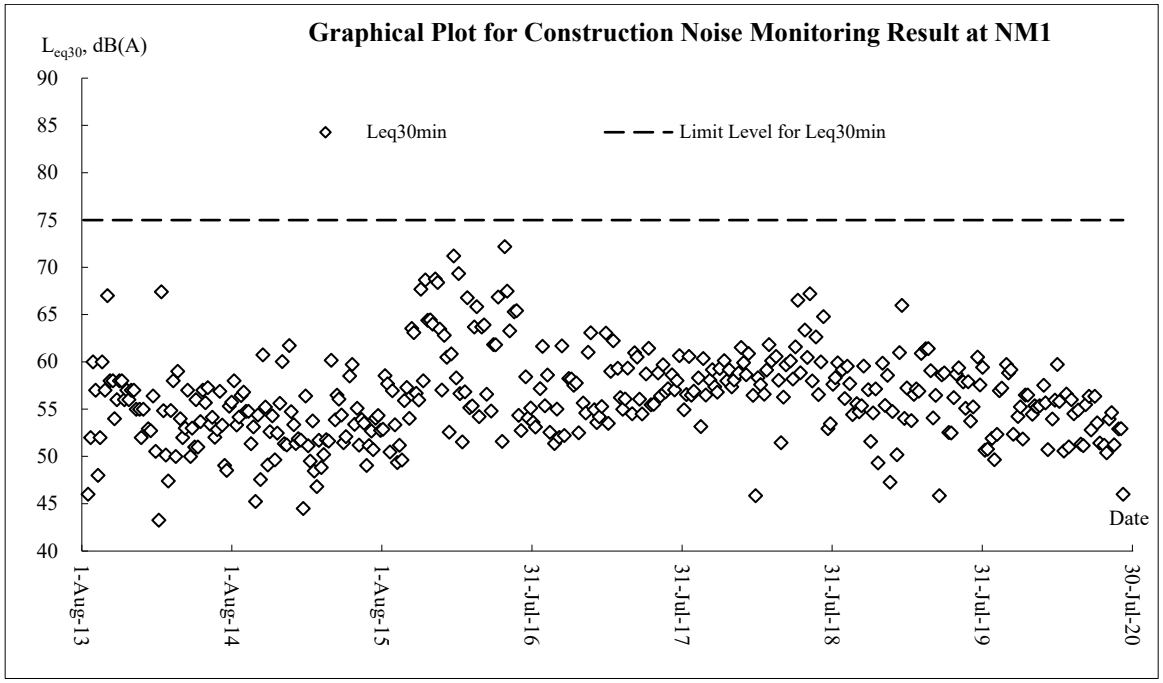


NOTE: Monitoring Period: 7 Nov 2013 to 29 Apr 2021

Noise



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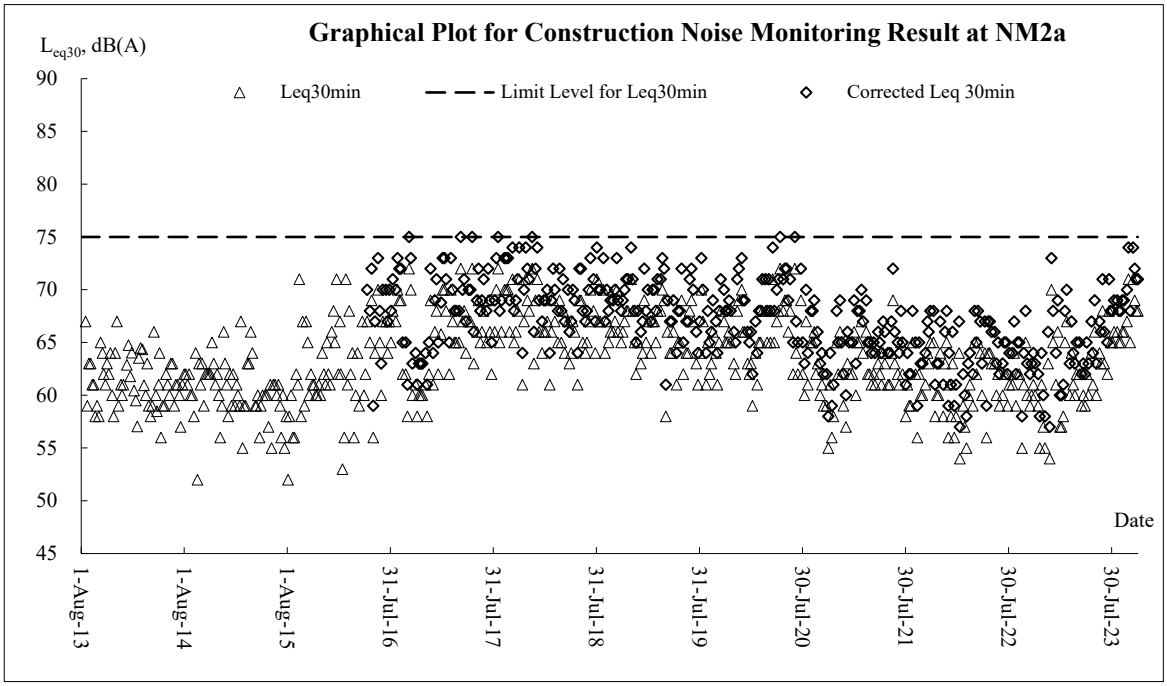

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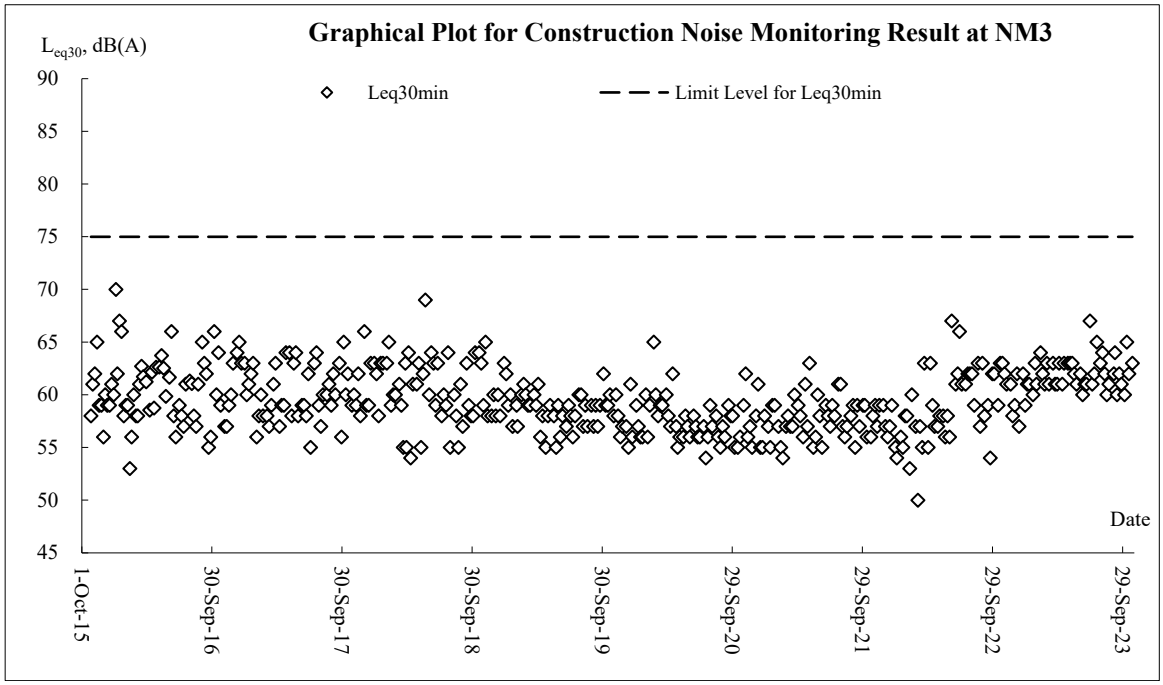

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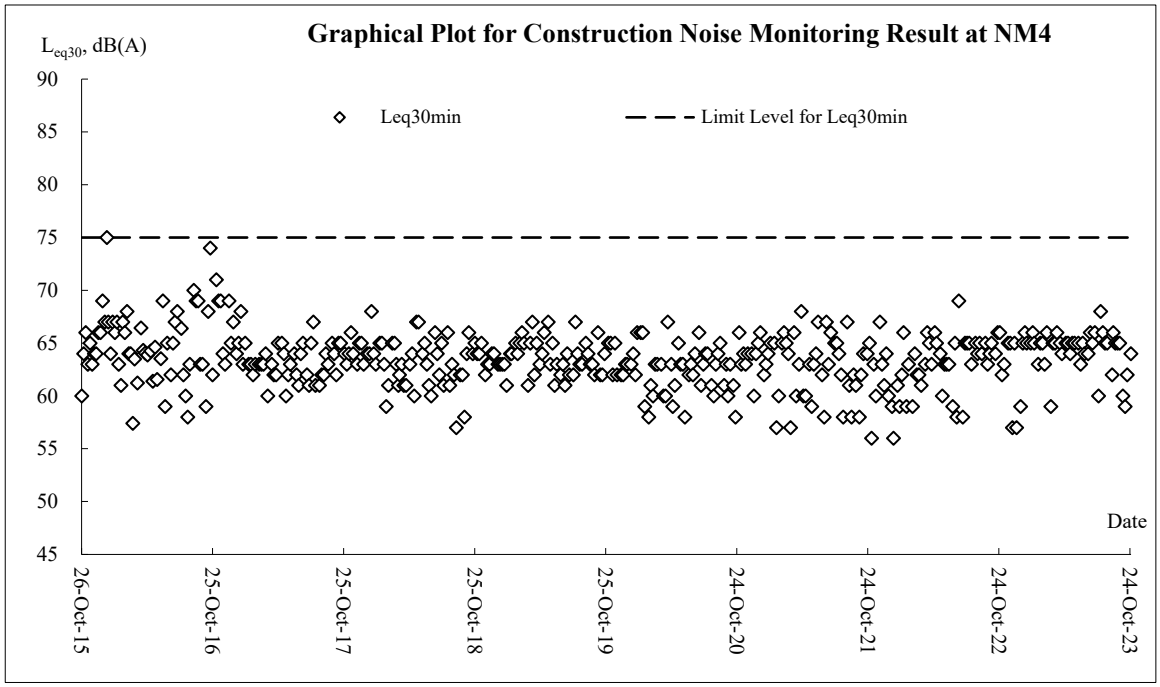

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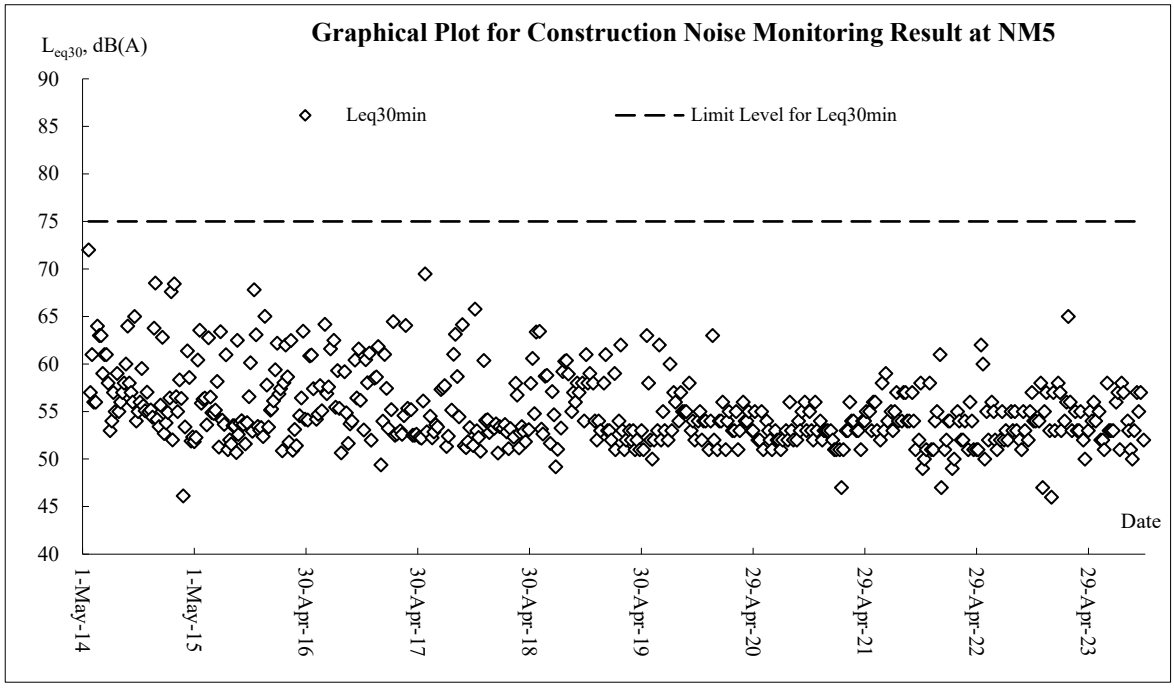

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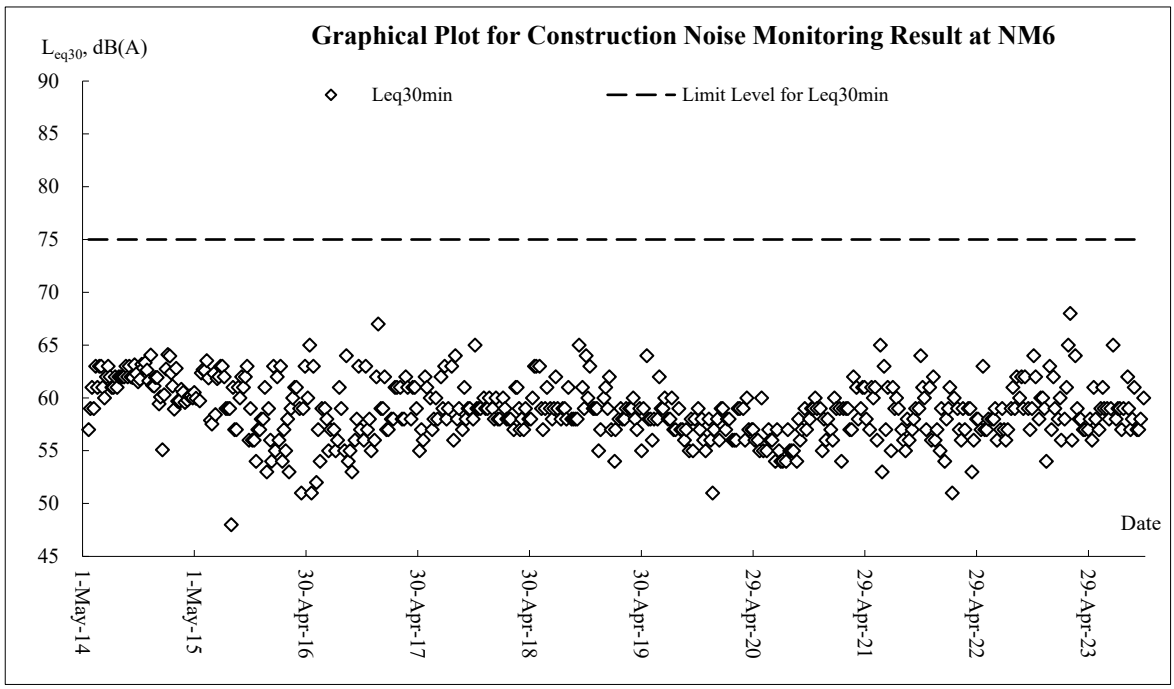

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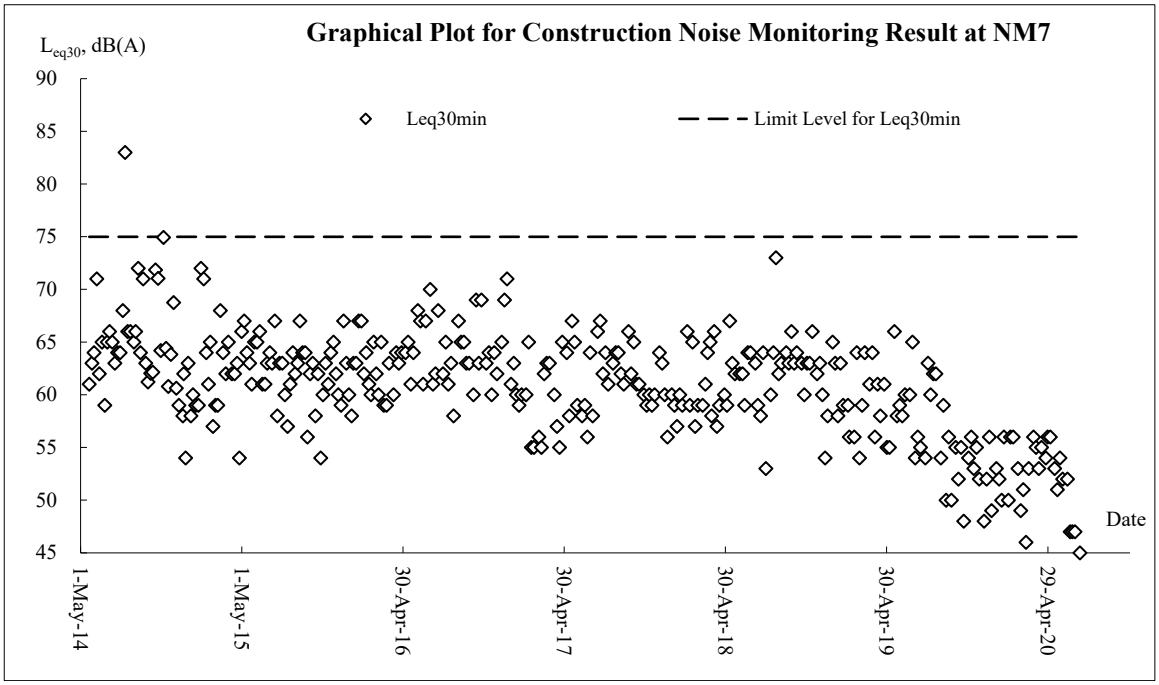

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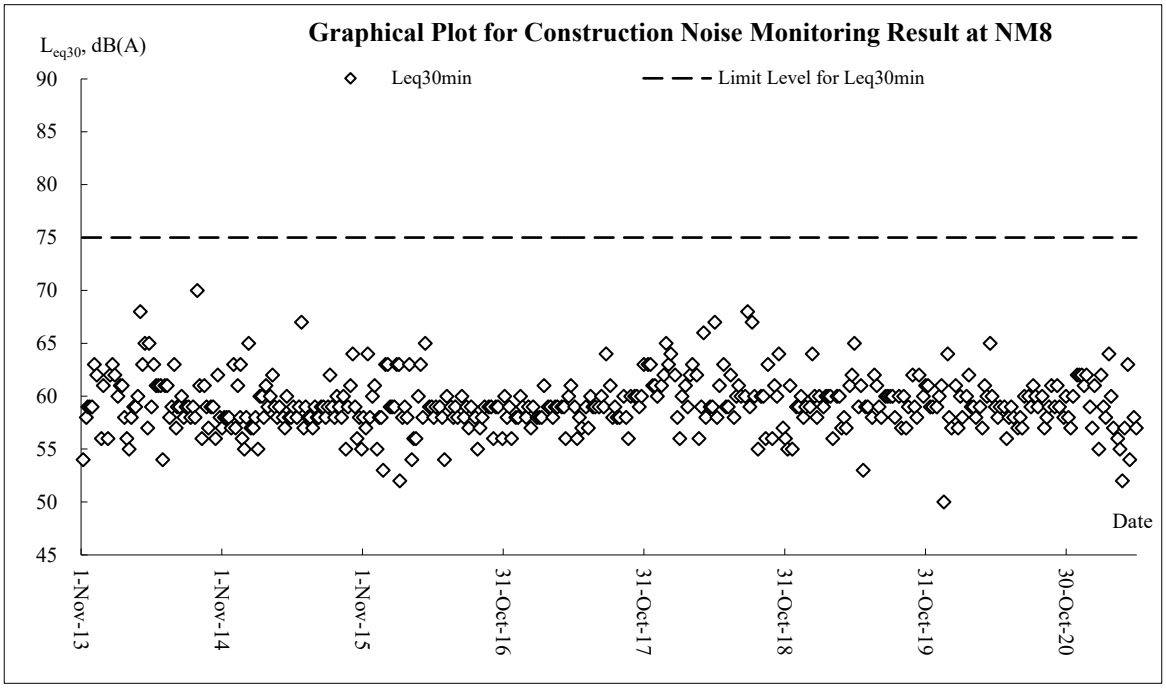

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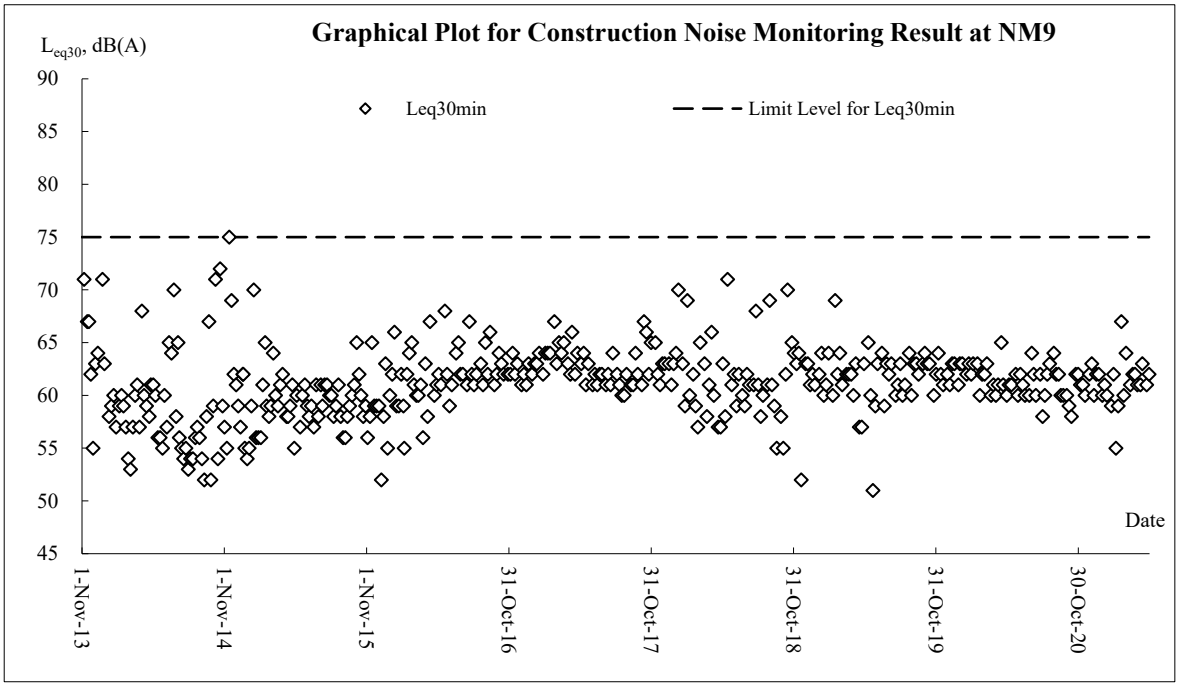

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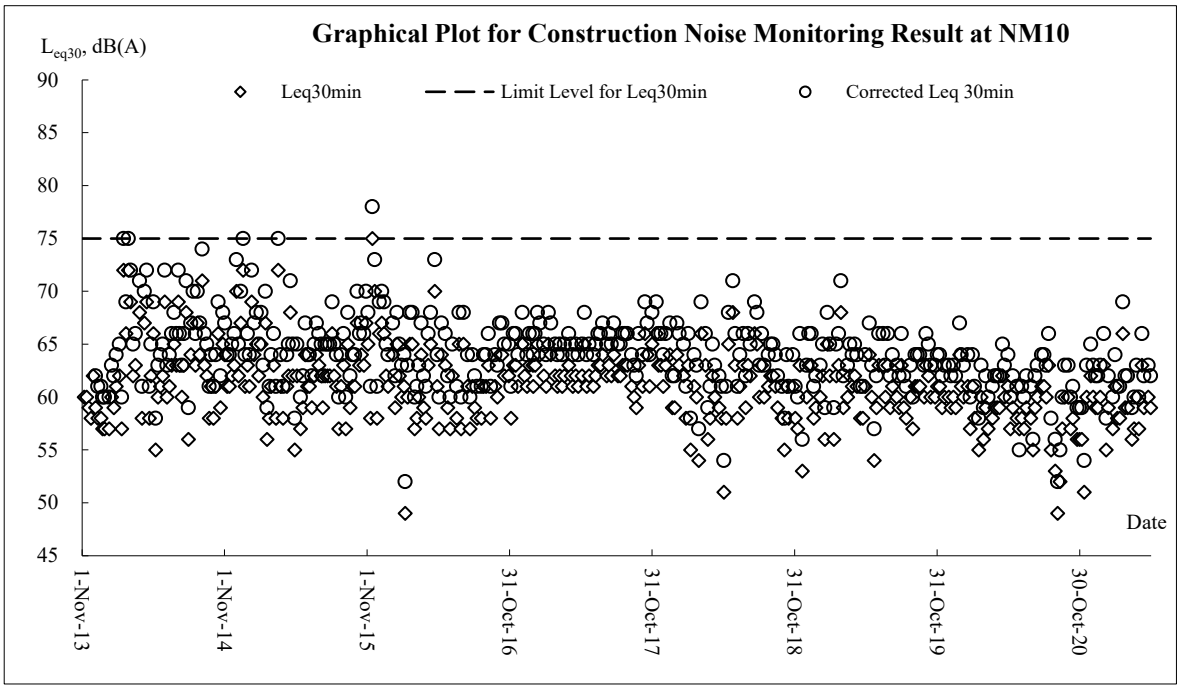
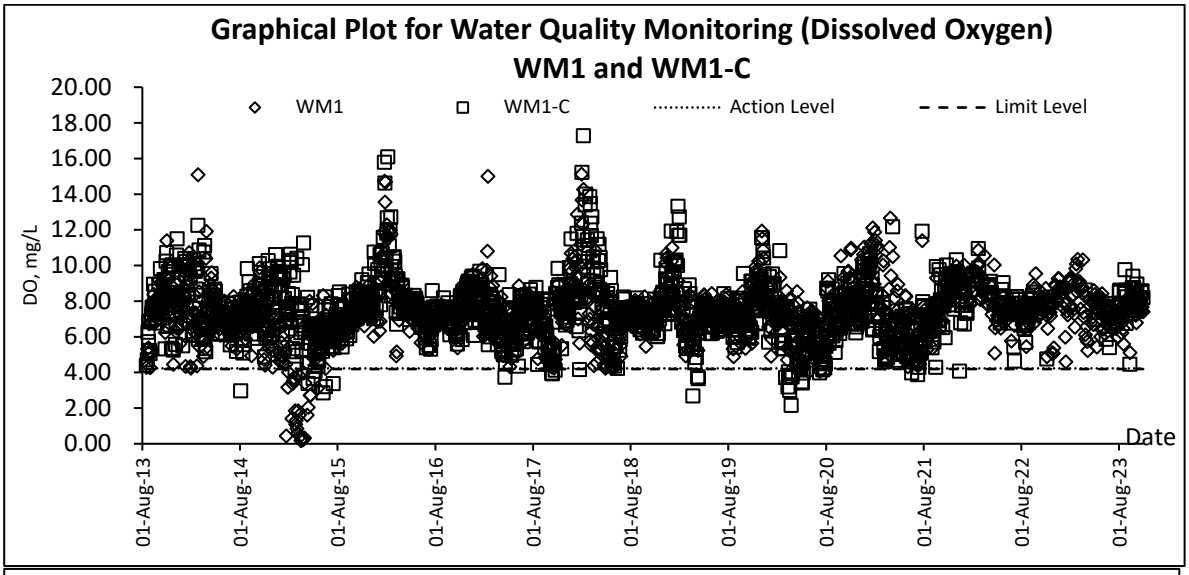
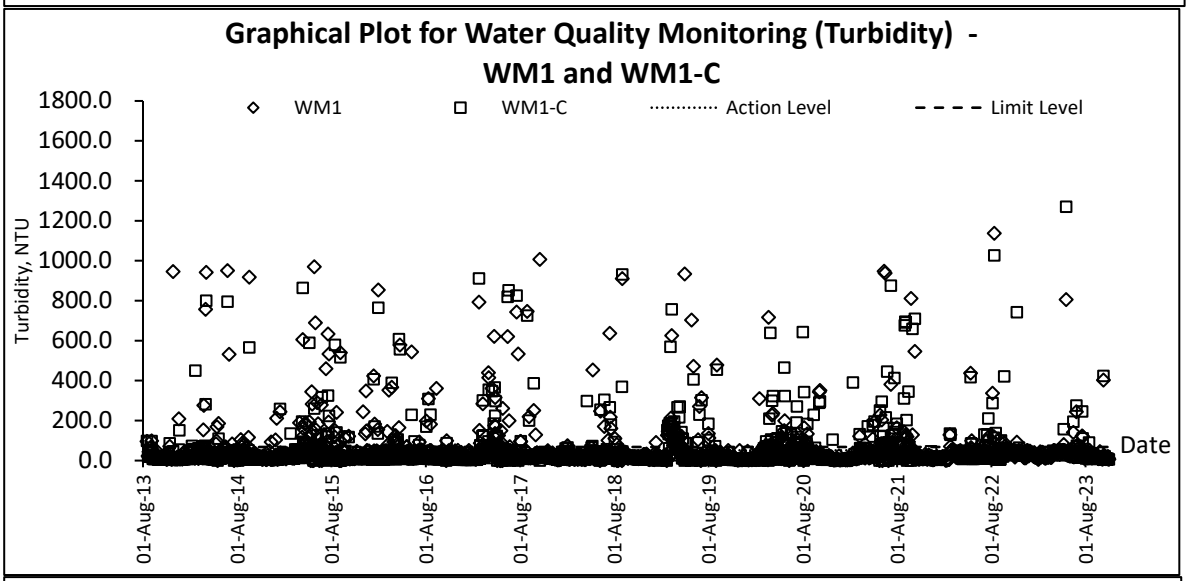
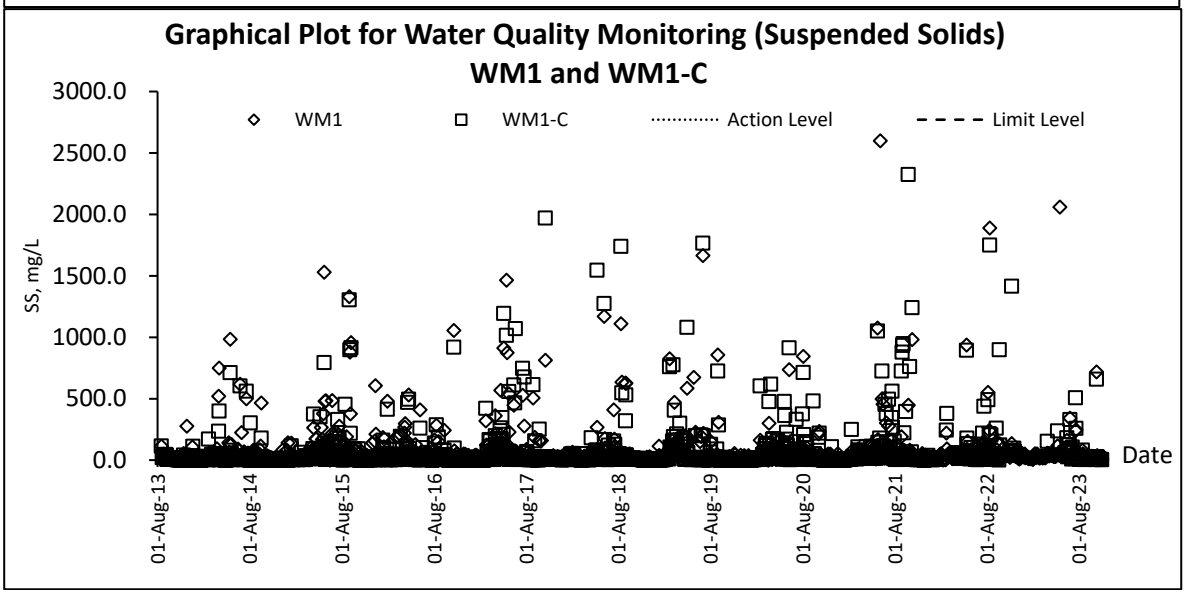


NOTE: Monitoring Period: 6 Nov 2013 to 29 Apr 2021

Water Quality







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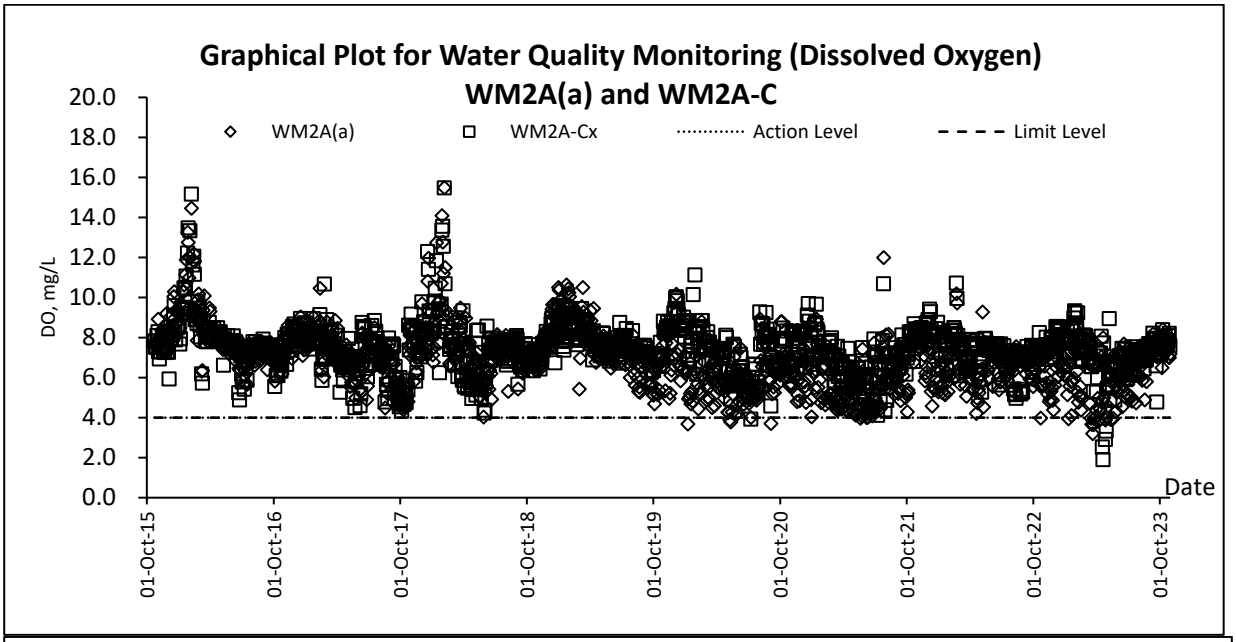

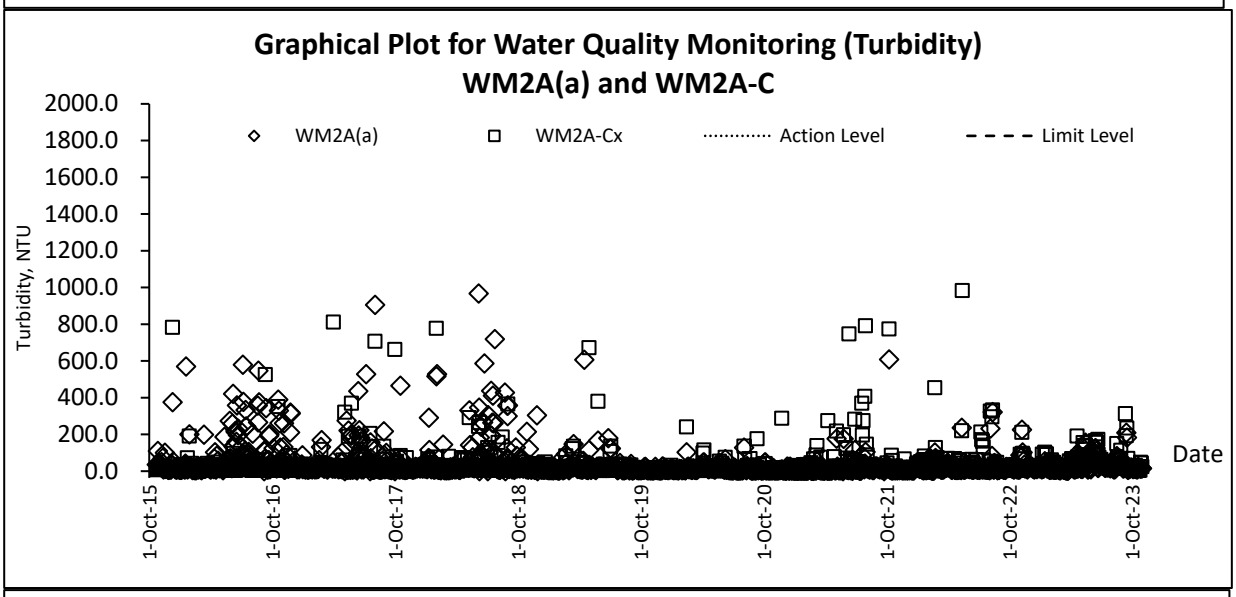

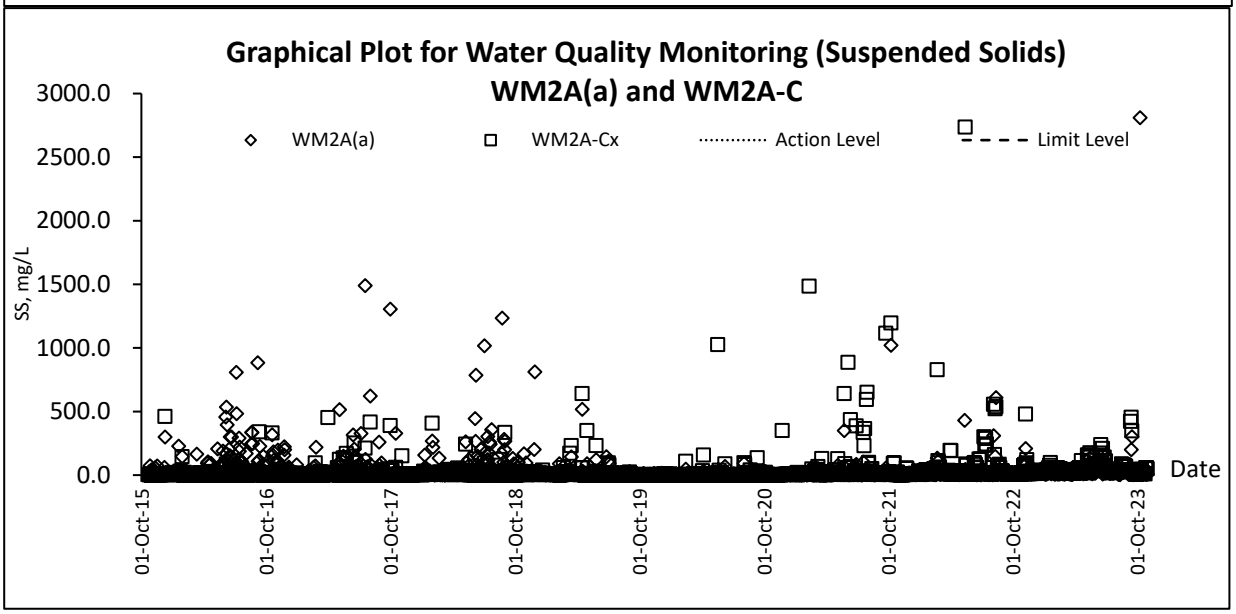

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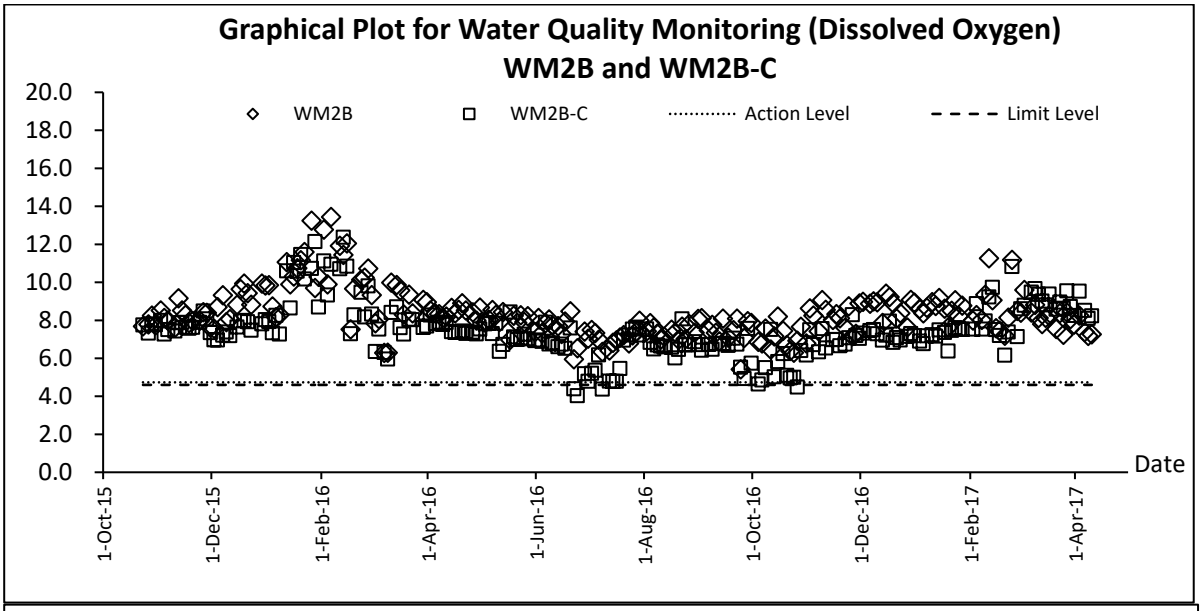

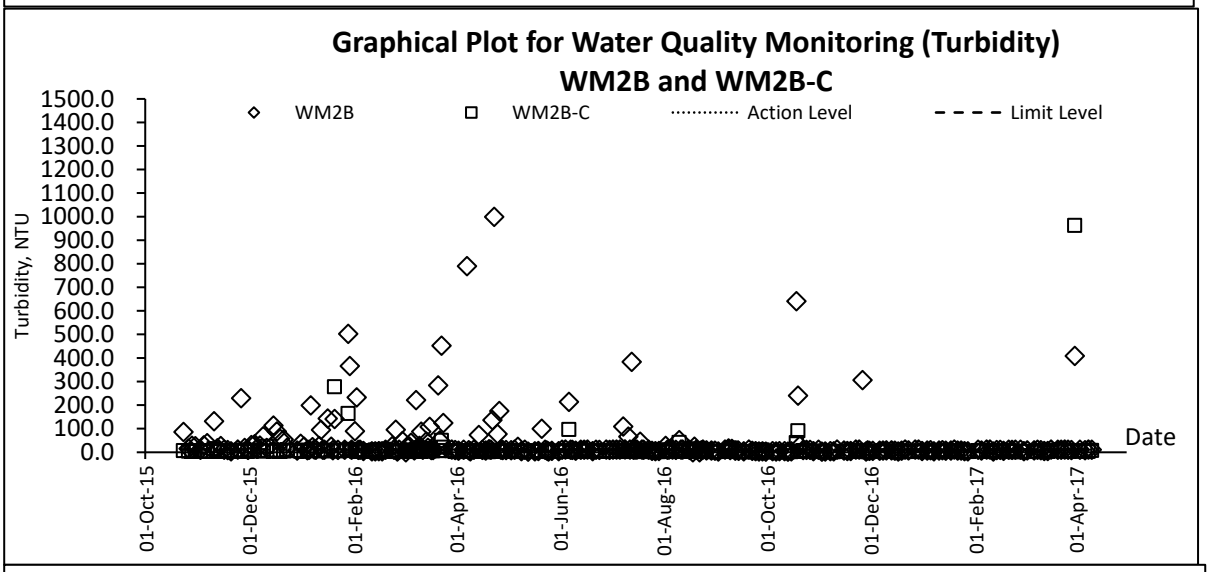

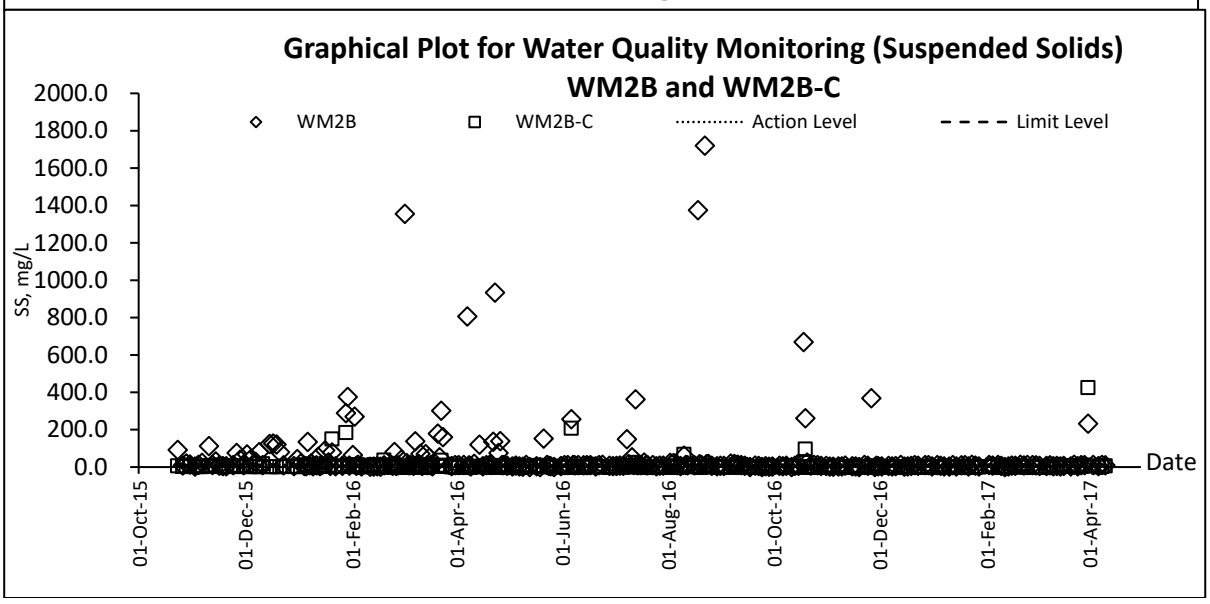

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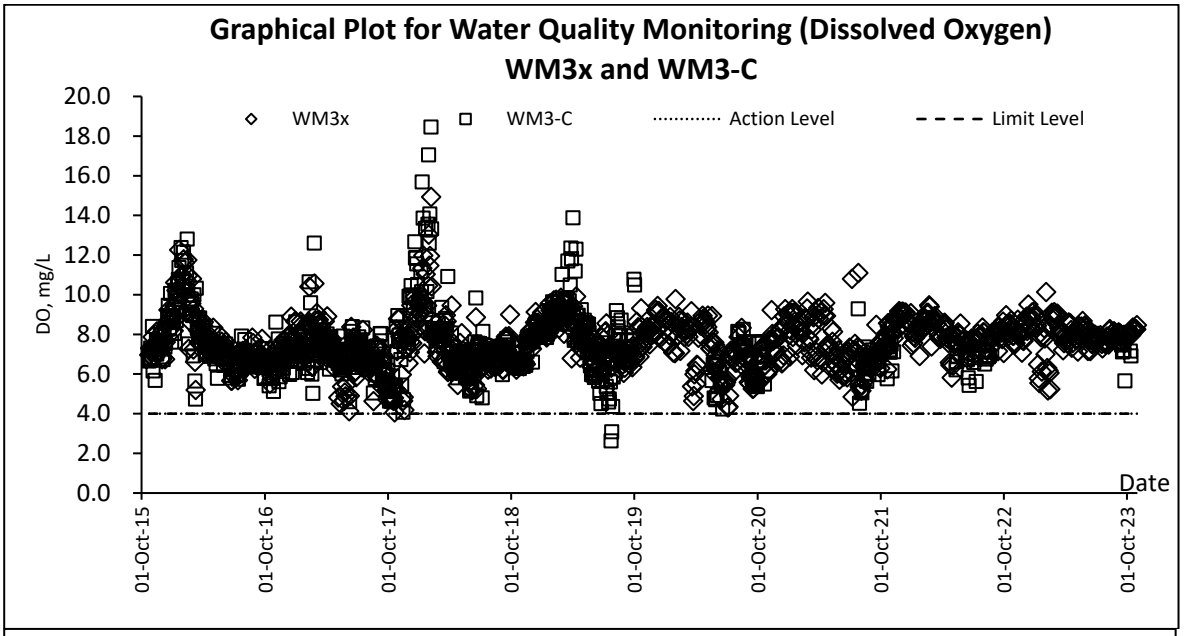

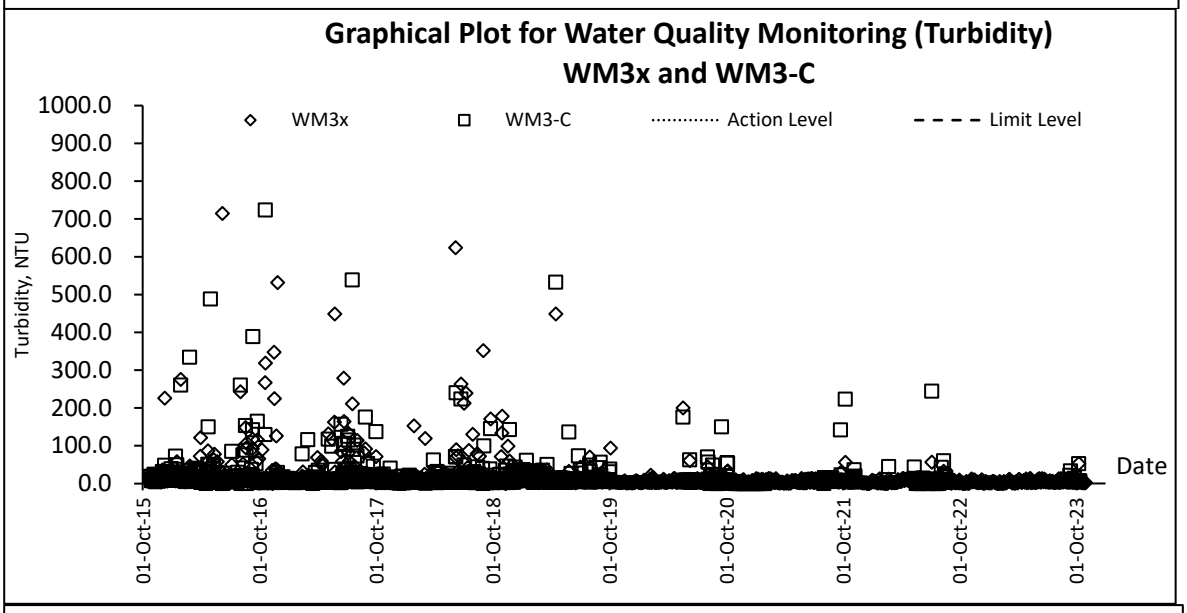

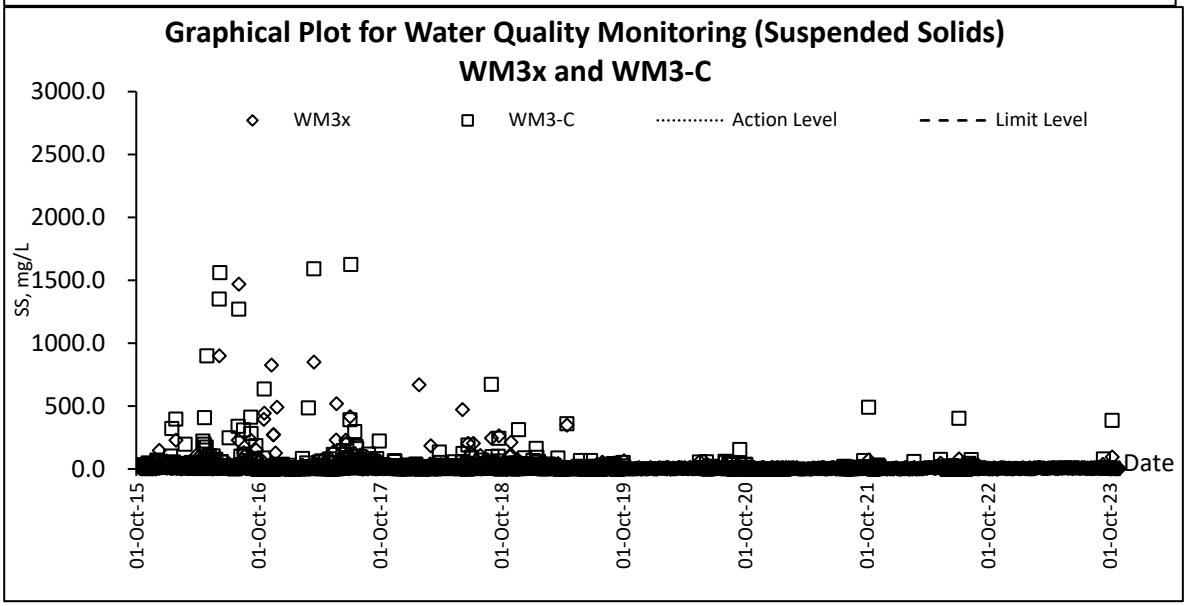

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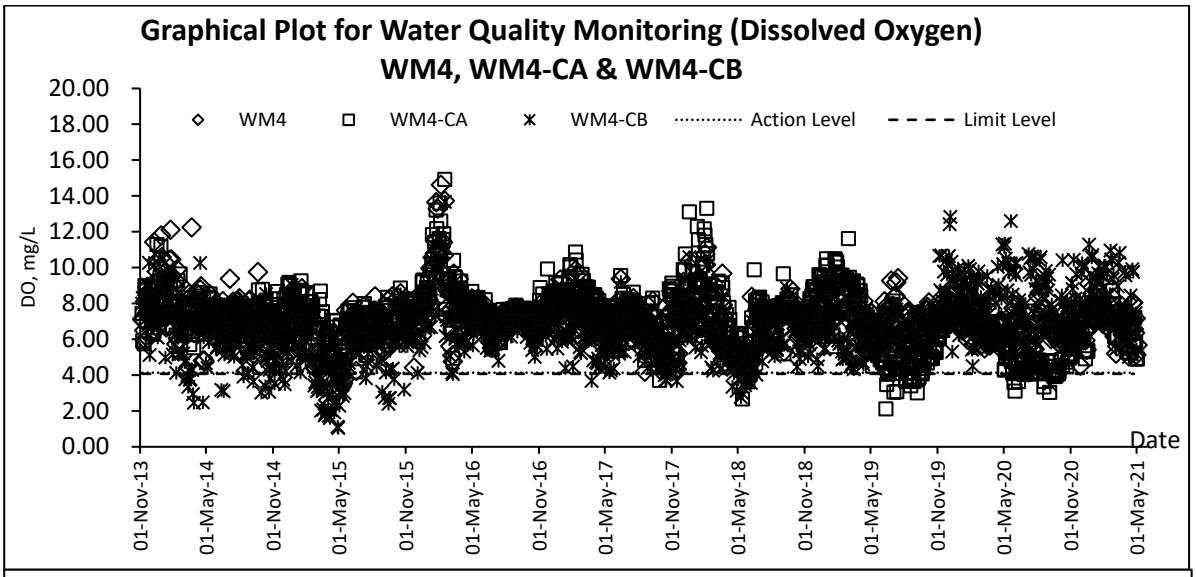

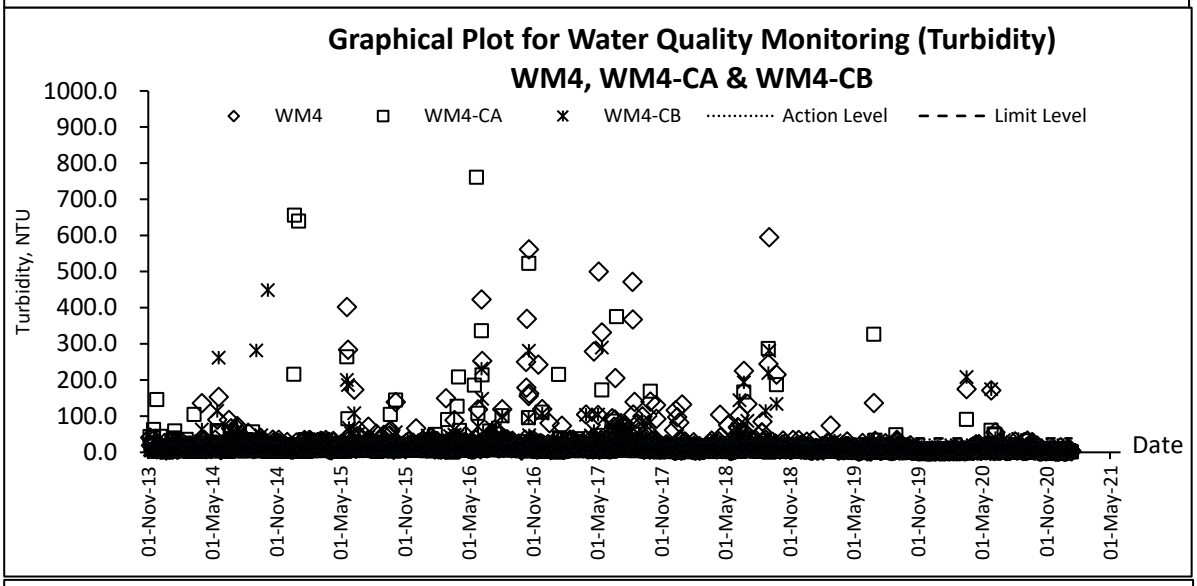

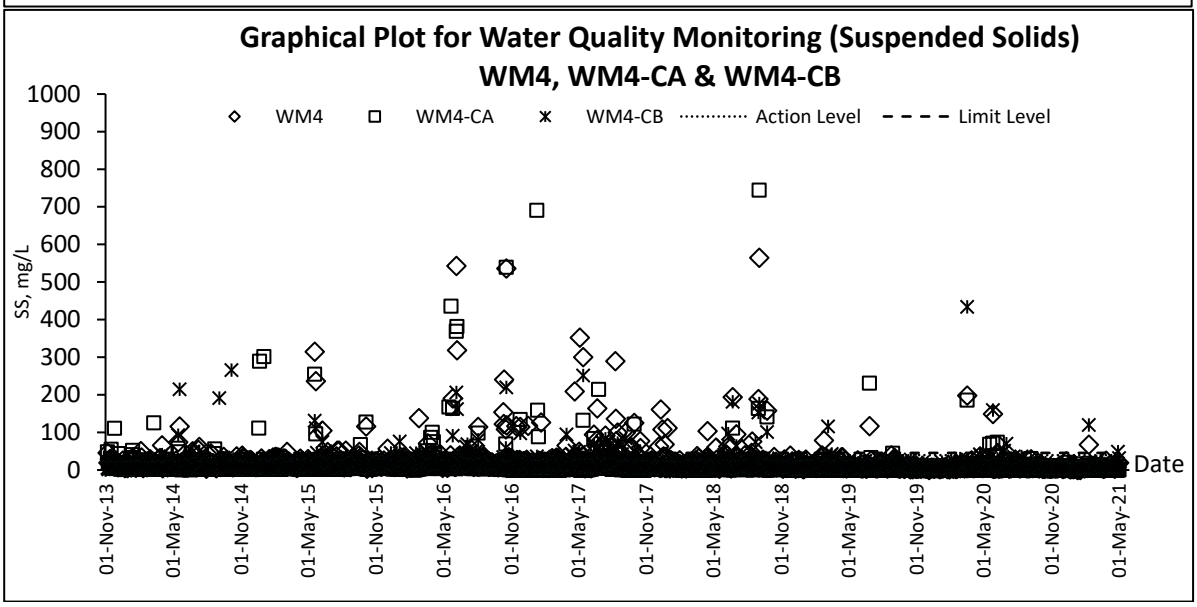

Monitoring Period: 6 Nov 2013 to 3 May 2021

Appendix G

Meteorological Data

Extract of Annual Data – Ta Kwu Ling Station

Year	Air Temperature			Mean Relative Humidity (%)	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
	Mean Daily Max (deg. C)	Mean (deg. C)	Mean Daily Min (deg. C)				
2013	26.8	22.5	19.1	78	2505.5	100	7.6
2014	27.0	22.7	19.4	77	1749.0	100	6.6
2015	27.7	23.4	20.1	78	1553.5	100	6.4
2016	26.9	22.9	19.8	80	2624.5	090#	6.1#
2017	27.4	23.2	20.0	78	2201.0	080	6.7
2018	27.5	23.1	19.8	77	2329.5	080	6.8
2019	28.2	23.8	20.5	79	1900.0	100	6.8
2020	28.0	23.7	20.5	78	1612.5	100	7.0
2021	28.5	23.6	19.9	77	2131.0	100	6.6
2022	27.5	23.0	19.6	78	2074.5	100	6.9
2023	27.9	23.5	20.2	79	2459.5	110	6.8

data incomplete

Appendix H

Implementation Schedule for Environmental Mitigation Measures

Environmental Mitigation Implementation Schedule

EIA Ref.	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Implementation status and remark
Air Quality Impact (Construction)								
3.6.1.1	2.1	**General Dust Control Measures** The following dust suppression measures should be implemented: ▪ Frequent water spraying for active construction areas (4 times per day for active areas in Po Kak Tsai and 8 times per day for all other active areas), including areas with heavy construction and slope cutting activities ▪ 80% of stockpile areas should be covered by impervious sheets ▪ Speed of trucks within the site should be controlled to about 10 km/hr ▪ All haul roads within the site should be paved to avoid dust emission due to vehicular movement	To minimize adverse dust emission generated from various construction activities of the works sites	Contractor	Construction Works Sites	During Construction	EIA Recommendation and Air Pollution Control (Construction Dust) Regulation	Implemented.
3.6.1.2	2.1	**Best Practice for Dust Control** The relevant best practices for dust control as stipulated in the Air Pollution Control (Construction Dust) Regulation should be adopted to further reduce the construction dust impacts of the Project. These best practices include: Good site management. ▪ The Contractor should maintain high standard of housekeeping to prevent emission of fugitive dust. ▪ Loading, unloading, handling and storage of raw materials, wastes or by-products should be carried out in a manner so as to minimize the release of visible dust emission. ▪ Any piles of materials accumulated on or around the work areas should be cleaned up regularly. ▪ Cleaning, repair and maintenance of all plant facilities within the work areas should be carried out in a manner minimizing generation of fugitive dust emissions. ▪ The material should be handled properly to prevent fugitive dust emission before cleaning. *Disturbed Parts of the Roads* ▪ Each and every main temporary access should be paved	To minimize adverse dust emission generated from various construction activities of the works sites	Contractor	Construction Works Sites	During Construction	EIA Recommendation and Air Pollution Control (Construction Dust) Regulation	Implemented.

EIA Ref.	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Implementation status and remark
		with oncrete, bituminous hardcore materials or metal plates and kept clear of dusty materials; or ▪ Unpaved parts of the road should be sprayed with water or a dust suppression chemical so as to keep the entire road surface wet. *Exposed Earth* ▪ Exposed earth should be properly treated by compaction, hydroseeding, vegetation planting or seating with latex, vinyl, bitumen within six months after the last construction activity on the site or part of the site where the exposed earth lies. *Loading, Unloading or Transfer of Dusty Materials* ▪ All dusty materials should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet. *Debris Handling* ▪ Any debris should be covered entirely by impervious sheeting or stored in a debris collection area sheltered on the top and the three sides. ▪ Before debris is dumped into a chute, water should be sprayed so that it remains wet when it is dumped. *Transport of Dusty Materials* ▪ Vehicle used for transporting dusty materials/spoils should be covered with tarpaulin or similar material. The cover should extend over the edges of the sides and tailboards. *Wheel washing* ▪ Vehicle wheel washing facilities should be provided at each construction site exit. Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels. *Use of vehicles* ▪ Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels. ▪ Where a vehicle leaving the construction site is carrying a load of dusty materials, the load should be covered entirely by clean						

EIA Ref.	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Implementation status and remark
		impervious sheeting to ensure that the dusty materials do not leak from the vehicle. *Site hoarding* ▪ Where a site boundary adjoins a road, street, service lane or other area accessible to the public, hoarding of not less than 2.4m high from ground level should be provided along the entire length of that portion of the site boundary except for a site entrance or exit. *Blasting* ▪ The areas within 30m from the blasting area should be wetted with water prior to blasting						
Air Quality Impact (Operation)								
3.5.2.2	2.2	The following odour containment and control measures will be provided for the proposed sewage treatment work at the BCP site: ▪ The treatment work will be totally enclosed. Negative pressure ventilation will be provided within the enclosure to avoid any fugitive odorous emission from the treatment work. ▪ Further odour containment will be achieved by covering or confining the sewage channels, sewage tanks, and equipment with potential odour emission. ▪ Proper mixing will be provided at the equalization and sludge holding tanks to prevent sewage septicity. ▪ Chemical or biological deodorisation facilities with a minimum odour removal efficiency of 90% will be provided to treat potential odorous emissions from the treatment plant including sewage channels / tanks, filter press and screening facilities so as to minimize any potential odour impact to the nearby ASRs.	To minimize potential odour impact from operation of the proposed sewage treatment work at BC.	DSD	BCP	Operation Phase	EIA recommendation	Implemented.
Noise Impact (Construction)								
4.4.1.4	3.1	**Adoption of Quieter PME** Use of the recommended quieter PME such as those given in the BS5228: Part 1:2009 and presented in **Table 4.14**, which can be found in Hong Kong.	To minimize the construction air-borne noise impact	Contractor	Construction Work Sites	During Construction	EIA recommendation, EIAO and Noise Control Ordinance (NCO)	Implemented.

EIA Ref.	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Implementation status and remark
4.4.1.4	3.1	**Use of Movable Noise Barrier** The use of movable barrier for certain PME can further alleviate the construction noise impacts. In general, a 5 dB(A) reduction for movable PME and 10 dB(A) for stationary PME can be achieved depending on the actual design of the movable noise barrier. The Contractor shall be responsible for design of the movable noise barrier with due consideration given to the size of the PME and the requirement for intercepting the line of sight between the NSRs and PME. Barrier material with surface mass in excess of 7 kg/m2 is recommended to achieve the predicted screening effect.	To minimize the construction air-borne noise impact	Contractors	Construction Work Sites	During Construction	EIA recommendation, EIAO and NCO	
4.4.1.4	3.1	**Use of Noise Enclosure/ Acoustic Shed** The use of noise enclosure or acoustic shed is to cover stationary PME such as air compressor and concrete pump. With the adoption of the noise enclosure, the PME could be completely screened, and noise reduction of 15 dB(A) can be achieved according to the GW-TM.	To minimize the construction air-borne noise impact	Contractors	Construction Work Sites	During Construction	EIA recommendation, EIAO and NCO	Implemented.
4.4.1.4	3.1	**Use of Noise Insulating Fabric** Noise insulating fabric can be adopted for certain PME (e.g. drill rig, pilling auger etc). The insulating fabric should be lapped such that there are no openings or gaps on the joints. Technical data from manufacturers state that by using the Fabric, a noise reduction of over 10 dB(A) can be achieved on noise level.	To minimize the construction airborne noise impact	Contractors	Construction Work Sites	During Construction	EIA recommendation, EIAO and NCO	Implemented.

EIA Ref.	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Implementation status and remark
4.4.1.4	3.1	**Good Site Practice** The good site practices listed below should be followed during each phase of construction: • Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme; • Silencers or mufflers on construction equipment should be utilized and should be properly maintained during the construction programme; • Mobile plant, if any, should be sited as far from NSRs as possible; • Machines and plant (such as trucks) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum; • Plant known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the nearby NSRs; and • Material stockpiles and other structures should be effectively utilized, wherever practicable, in screening noise from on-site construction activities.	To minimize the construction air-borne noise impact	Contractors	Construction Work Sites	During Construction	EIA recommendation, EIAO and NCO	Implemented.
Noise Impact (Operation)								
		Road Traffic Noise						
Table 4.42 and Figure 4.20.1 to 4.20.4	3.2	Erection of noise barrier/ enclosure along the viaduct section.	To minimize the road traffic noise along the connecting road of BCP	Contractor	Loi Tung and Fanling Highway Interchange	Before Operation	EIAO and NCO	Implemented.
		Fixed Plant Noise						

EIA Ref.	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Implementation status and remark
Table 4.46	3.2	• Specification of the maximum allowable sound power levels of the proposed fixed plants during daytime and night-time.	To minimize the fixed plant noise impact	Managing Authority of the buildings / Contractor	BCP, Administration Building and all ventilation buildings	Before Operation.	EIA recommendation, EIAO and NCO	Implemented.
4.5.2.4	3.2	The following noise reduction measures shall be considered as far as practicable during operation: • Choose quieter plant such as those which have been effectively silenced; • Include noise levels specification when ordering new plant (including chillier and E/M equipment). • Locate fixed plant/louver away from any NSRs as far as practicable; • Locate fixed plant in walled plant rooms or in specially designed enclosures; • Locate noisy machines in a basement or a completely separate building; • Install direct noise mitigation measures including silencers, acoustic louvers and acoustic enclosure where necessary; and • Develop and implement a regularly scheduled plant maintenance programme so that equipment is properly operated and serviced in order to maintain a controlled level of noise.	To minimize the fixed plant noise impact	Managing Authority of the buildings / Contractor	BCP, Administration Building and all ventilation buildings	Before Operation.	EIAO and NCO	Implemented.
Water Quality Impact (Construction)								
5.6.1.1	4.1	**Construction site runoff and drainage** The site practices outlined in ProPECC Note PN 1/94 should be followed as far as practicable in order to minimise surface runoff and the chance of erosion. The following measures are recommended to protect water quality and when properly implemented should be sufficient to adequately control site discharges so as to avoid water quality impacts: • At the start of site establishment, perimeter cut-off drains to direct off-site water around the site should be constructed with internal	To control site runoff and drainage; prevent high sediment loading from reaching the nearby watercourses	Contractor	Construction Works Sites	Construction Phase	Practice Note for Professional Persons on Construction Site Drainage (ProPECC Note PN 1/94)	Implemented. Implemented.

EIA Ref.	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Implementation status and remark
		drainage works and erosion and sedimentation control facilities implemented. Channels (both temporary and permanent drainage pipes and culverts), earth bunds or sand bag barriers should be provided on site to direct stormwater to silt removal facilities. The design of the temporary on-site drainage system should be undertaken by the Contractor prior to the commencement of construction. • The dikes or embankments for flood protection should be implemented around the boundaries of earthwork areas. Temporary ditches should be provided to facilitate the runoff discharge into stormwater drainage system through a sediment/silt trap. The sediment/silt traps should be incorporated in the permanent drainage channels to enhance deposition rates, if practical. • Sand/silt removal facilities such as sand/silt traps and sediment basins should be provided to remove sand/silt particles from runoff to meet the requirements of the TM standards under the WPCO. The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC Note PN 1/94. Sizes may vary depending upon the flow rate. The detailed design of the sand/silt traps should be undertaken by the Contractor prior to the commencement of construction. • All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly during rainstorms. Deposited silt and grit should be regularly removed, at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times • Measures should be taken to minimize the ingress of site drainage into excavations. If excavation of trenches in wet periods is necessary, they should be dug and backfilled in short sections wherever practicable. Water pumped out from foundation excavations should be discharged into storm drains via silt removal facilities. • If surface excavation works cannot be avoided during the wet season						

EIA Ref.	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Implementation status and remark
		(April to September), temporarily exposed slope/soil surfaces should be covered by tarpaulin or other means, as far as practicable, and temporary access roads should be protected by crushed stone or gravel, as excavation proceeds. Interception channels should be provided (e.g. along the crest/edge of the excavation) to prevent storm runoff from washing across exposed soil surfaces. Arrangements should always be in place to ensure that adequate surface protection measures can be safely carried out well before the arrival of a rainstorm. Other measures that need to be implemented before, during and after rainstorms are summarized in ProPECC Note PN 1/94. • The overall slope of the site should be kept to a minimum to reduce the erosive potential of surface water flows. • All vehicles and plant should 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 facility should be provided at construction site exit where practicable. Wash-water should have sand and silt settled out and removed regularly 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 should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains. • Open stockpiles of construction materials or construction wastes on-site should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system. • Manholes (including newly constructed ones) should be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and stormwater runoff being directed into foul sewers. • Precautions should be taken at any time of the year when rainstorms are likely. Actions should be taken when a rainstorm is imminent or forecasted and actions to be taken during or after rainstorms are						

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		summarized in Appendix A2 of ProPECC Note PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events, especially for areas located near steep slopes. • Bentonite slurries used in piling or slurry walling should be reconditioned and reused wherever practicable. Temporary enclosed storage locations should 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 Note PN 1/94 should be adhered to in the handling and disposal of bentonite slurries.						
5.6.1.1	4.1	**Good site practices for works within water gathering grounds** The following conditions should be complied, if there is any works to be carried out within the water gathering grounds: • Adequate measures should be implemented to ensure no pollution or siltation occurs to the catchwaters and catchments. • No earth, building materials, oil or fuel, soil, toxic materials or any materials that may possibly cause contamination to water gathering grounds are allowed to be stockpiled on site. • All surplus spoil should be removed from water gathering grounds as soon as possible. • Temporary drains with silt traps should be constructed at the site boundary before the commencement of any earthworks. • Regular cleaning of silt traps should be carried out to ensure proper operation at all time. • All excavated or filled surfaces which have the risk of erosion should always be protected form erosion.	To minimize water quality impacts to the water gathering grounds	Contractor	Construction Works Sites within the water gathering	Construction Phase	ProPECC Note PN 1/94	Implemented.

EIA Ref.	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Implementation status and remark
		• Facilities for washing the wheels of vehicles before leaving the site should be provide • Any construction plant which causes pollution to catchwaters or catchments due to the leakage of oil or fuel should be removed off site immediately. • No maintenance activities which may generate chemical wastes should be undertaken in the water gathering grounds. Vehicle maintenance should be confined to designated paved areas only and any spillages should be cleared up immediately using absorbents and waste oils should be collected in designated tanks prior to disposal off site. All storm water run-off from these areas should be discharged via oil/petrol separators and sand/silt removal traps. • Any soil contaminated with fuel leaked from plant should be removed off site and the voids arising from removal of contaminated soil should be replaced by suitable material approved by the Director of Water Supplies. • Provision of temporary toilet facilities and use of chemicals or insecticide of any kind are subject to the approval of the Director of Water Supplies. • Drainage plans should be submitted for approval by the Director of Water Supplies.						

EIA Ref.	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Implementation status and remark
		• An unimpeded access through the waterworks access road should always be maintained. • Earthworks near catchwaters or streamcourses should only be carried out in dry season between October and March, • Advance notice must be given before the commencement of works on site quoting WSD's approval letter reference.						
5.6.1.2	4.1	**Good site practices of general construction activities** Construction solid waste, debris and refuse generated on-site should be collected, handled and disposed of properly to avoid entering any nearby stormwater drain. Stockpiles of cement and other construction materials should be kept covered when not being used. Oils and fuels should only be stored in designated areas which have pollution prevention facilities. To prevent spillage of fuels and solvents to any nearby stormwater drain, all fuel tanks and storage areas should be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank. The bund should be drained of rainwater after a rain event.	To minimize water quality impacts	Contractor	All construction site	Construction phase	EIA recommendation	Implemented.
5.6.1.3	4.1	**Sewage effluent from construction workforce** Temporary sanitary facilities, such as portable chemical toilets, should be employed on-site where necessary to handle sewage from the workforce. A licensed contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance.	To minimize water quality impacts	Contractor	All construction works sites with on-site sanitary facilities	Construction phase	EIA Recommendation and Water Pollution Control Ordinance (WPCO)	Implemented.
5.6.1.4	4.1	**Hydrogeological Impact** Grout injection works would be conducted before blasting, for sealing a limited area around the tunnel with a grout of a suitable strength for controlling the potential groundwater inflows. The pre-injection grouting method would be supplemented by post-injection grouting where necessary to further enhance the groundwater inflow control. On-site	To minimize water quality impacts	Contractor	Construction works sites of the drill and blast tunnel	Construction phase	EIA Recommendation and WPCO	Implemented.

EIA Ref.	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Implementation status and remark
		treatment for the groundwater ingress pumped out would be required to remove any contamination by grouting materials before discharge off-site.						
Water Quality Impact (Operation)								
		No mitigation measure is required.						
Sewage and Sewerage Treatment Impact (Construction)								
6.7	5	The sewage generated by the on-site workforce should be collected in chemical toilets and disposed of off-site by a licensed waste collector.	To minimize water quality impacts	Contractor	All construction works sites with on-site sanitary facilities	Construction phase	EIA recommendation and WPCO	Implemented.
Sewage and Sewerage Treatment Impact (Operation)								
6.6.3	5	Sewage generated by the BCP and Chuk Yuen Village Resite will be collected and treated by the proposed on-site sewage treatment facility using Membrane Bioreactor treatment with a portion of the treated wastewater reused for irrigation and flushing within the BCP.	To minimize water quality impacts	DSD	BCP	Operation phase	EIA recommendation and WPCO	Implemented.
6.5.3	5	Sewage generated from the Administration Building will be discharged to the existing local sewerage system.	To minimize water quality impacts	DSD	Administration Building	Operation phase	EIA recommendation and WPCO	Implemented.
Waste Management Implication (Construction)								
7.6.1.1	6	**Good Site Practices** Adverse impacts related to waste management such as potential hazard, air, odour, noise, wastewater discharge and public transport as mentioned in section 3.4.7.2 (ii)(c) of the Study Brief are not expected to arise, provided that good site practices are strictly followed. Recommendations for good site practices during the construction activities include: • Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site • Training of site personnel in proper waste management and chemical	To minimize adverse environmental impact	Contractor	Construction works sites (general)	Construction phase	EIA recommendation; Waste Disposal Ordinance; Waste Disposal (Chemical Wastes) (General) Regulation; and ETWB TC(W) No. 19/2005, Environmental Management on Construction Site	Implemented.

EIA Ref.	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Implementation status and remark
		handling procedures • Provision of sufficient waste disposal points and regular collection of waste • Dust suppression measures as required under the Air Pollution Control (Construction Dust) Regulation should be followed as far as practicable. Appropriate measures to minimise windblown litter and dust/odour during transportation of waste by covering trucks or in enclosed containers • General refuse shall be removed away immediately for disposal. As such odour is not anticipated to be an issue to distant sensitive receivers • Provision of wheel washing facilities before the trucks leaving the works area so as to minimise dust introduction from public road • Covers and water spraying system should be provided for the stockpiled C&D material to prevent dust impact or being washed away • Designate different locations for storage of C&D material to enhance reuse • Well planned programme for transportation of C&D material to lessen the off-site traffic impact. Well planned delivery programme for offsite disposal and imported filling material such that adverse noise impact from transporting of C&D material is not anticipated • Site practices outlined in ProPECC PN 1/94 Construction Site Drainage should be adopted as far as practicable, such as cleaning and maintenance of drainage systems regularly • Provision of cover for the stockpile material, sand bag or earth bund as barrier to prevent material from washing away and entering the drains						
7.6.1.2	6	**Waste Reduction Measures** Good management and control can prevent the generation of a significant amount of waste. Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction include: • Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials	To reduce the quantity of wastes	Contractor	Construction works sites (General)	Construction phase	EIA recommendation and Waste Disposal Ordinance	Implemented.

EIA Ref.	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Implementation status and remark
		and their proper disposal • Encourage collection of aluminium cans by providing separate labelled bins to enable this waste to be segregated from other general refuse generated by the work force • Proper storage and site practices to minimise the potential for damage or contamination of construction materials • Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste • In addition to the above measures, specific mitigation measures are recommended below for the identified waste arising to minimise environmental impacts during handling, transportation and disposal of these wastes.						
7.6.1.3	6	**C&D Materials** In order to minimise impacts resulting from collection and transportation of C&D material for off-site disposal, the excavated materials should be reused on-site as backfilling material as far as practicable. The surplus rock and other inert C&D material would be disposed of at the Government's Public Fill Reception Facilities (PFRFs) at Tuen Mun Area 38 for beneficial use by other projects in the HKSAR as the last resort. C&D waste generated from general site clearance and tree felling works would require disposal to the designated landfill site. Other mitigation requirements are listed below: • A Waste Management Plan should be prepared and implemented in accordance with ETWB TC(W) No. 19/2005 Environmental Management on Construction Site; and • In order to monitor the disposal of C&D material and solid wastes at public filling facilities and landfills, and to control fly-tipping, a trip-ticket system (e.g. ETWB TCW No. 31/2004) should be included.	To minimize impacts resulting from C&D material	Contractor	Construction works sites (General)	Construction phase	EIA recommendation; Waste Disposal Ordinance; and ETWB TCW No. 31/2004	Implemented.

EIA Ref.	EM&A Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Implementation status and remark
7.6.1.4	6	**General refuse** General refuse should be stored in enclosed bins or compaction units separated from other C&D material. A reputable waste collector is to be employed by the Contractor to remove general refuse from the site separately. Preferably an enclosed and covered area should be provided to reduce the occurrence of 'wind blown' litter.	To minimize impacts resulting from collection and transportation of general refuse for off-site disposal	Contractor	Construction works sites (General)	Construction phase	Waste Disposal Ordinance and Public Health and Municipal Services Ordinance - Public Cleansing and Prevention of Nuisances Regulation	Implemented.
7.6.1.5	6	**Chemical waste** If chemical wastes are produced at the construction site, the Contractor will be required to register with the EPD as a chemical waste producer and to follow the guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical	To minimize impacts resulting from collection and transportation of chemical waste for off-site disposal	Contractor	Construction works sites (General)	Construction phase	Waste Disposal (Chemical Waste) (General) Regulation and Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes	Implemented.

Appendix I

Implementation Status of Mitigation Measures for Operation Phase

EP/ EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status	Remarks
Air Quality Impact (Operation)							
EP C3.11/ EIA Section 3.5.2.2	The sewage treatment plant installed for the Project shall be installed at the location shown in Figure 3 of the EP The plant shall be designed with the following odour containment and control measures : 1. Negative Pressure Ventilation (a) The treatment plant shall be totally enclosed with negative pressure ventilation to avoid odorous emission from the treatment works. The tanks will be connected to deodorisation facilities designed for a minimum removal of 90% directly to eliminate odour problem. 2. Total Containment of Sewage Channels (a) air-tight cover shall be installed to sewage channels, sewage tanks, and equipment with potential odour emission and the trapped gases shall be collected by air handling equipment for containing and directing odorous gases to deodorisation facilities.	To minimize potential odour impact from operation of the proposed sewage treatment work at BCP	DSD	Sewage Treatment Plant (STP) at BCP	Operation Phase	Fully implemented Fully implemented Fully implemented	STP was implemented at BCP and it was handover to DSD on 29 July 2019 for operation. The STP was enclosed with negative pressure ventilation and the tanks are connected to deodorisation facilities. The underground sewage tank, sewage channel and potential odour emission with air tight cover and were connected to deodorisation facilities. -

EP/ EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status	Remarks
	(b) Gravity sewer, equalization and sludge holding tanks shall be designed with suitable sewer distance and retention time to prevent sewage septicity. 3. Proper mixing will be provided at the equalization and sludge holding tanks to prevent sewage septicity. 4. <u>Deodorisation</u> (a) Deodorisation facilities at the sewage treatment plant shall be designed with a minimum odour removal efficiency of 90%.					Fully implemented Fully implemented	- The deodorisation facilities was monitored by control room to ensure odour removal efficiency of 90%.
EP C3.12	The air intake point of Boundary Control Point Building shall be located at least 150m from the sewage treatment plant.	To minimize potential odour impact from operation of the proposed sewage treatment work at BCP	DSD	STP at BCP	During detailed design/ before operation Phase	Fully implemented	
<u>Noise Impact (Operation)</u>							
	<u>Road Traffic Noise</u>						
EP C3.5 / EIA Table 4.42 and Figure	Erection of noise barrier/ enclosure along the viaduct section. - To mitigate the traffic noise impact arising from the operation of the	To minimize the road traffic noise along the connecting road of BCP	Contractor	Loi Tung and Fanling Highway Interchange	Before Operation	Fully implemented	Noise barriers were installed in accordance with the Noise Mitigation Plan.

EP/ EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status	Remarks
4.20.1 to 4.20.4	Project, the noise mitigation measures shall be implemented in accordance with Fig 4, 5, 6 and 7 attached to the EP, or otherwise approved by the Director subject to the submission of a Noise Mitigation Plan by the Permit Holder to cater for the final layout and design of the Project.						
	Fixed Plant Noise						
EIA Table 4.46	Specification of the maximum allowable sound power levels of the proposed fixed plants during daytime and night-time.	To minimize the fixed plant noise impact	Managing Authority of the buildings / Contractor	BCP, Administration Building and all ventilation buildings	Before Operation	Fully implemented	-
EIA Section 4.6.2	Commissioning test should be conducted for all major fixed noise sources to ensure compliance of the operational for all major fixed noise sources before operation.	To minimize the fixed plant noise impact	Managing Authority of the buildings / Contractor	BCP, Administration Building and all ventilation buildings	Before Operation	Fully implemented	-
EIA Section 4.5.2.4	The following noise reduction measures shall be considered as far as practicable during operation: • Choose quieter plant such as those which have been effectively silenced; • Include noise levels specification when ordering new plant (including chillier and E/M	To minimize the fixed plant noise impact	Managing Authority of the buildings / Contractor	BCP, Administration Building and all ventilation buildings	Before Operation	Fully implemented	-

EP/ EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status	Remarks
	equipment); • Locate fixed plant/louver away from any NSRs as far as practicable; • Locate fixed plant in walled plant rooms or in specially designed enclosures; • Locate noisy machines in a basement or a completely separate building; • Install direct noise mitigation measures including silencers, acoustic louvers and acoustic enclosure where necessary; and • Develop and implement a regularly scheduled plant maintenance programme so that equipment is properly operated and serviced in order to maintain a controlled level of noise.						
Sewage and Sewerage Treatment Impact (Operation)							
EIA Section 5.6.2.1	The implementation of proper channel/pipeline/cross road pipes to maintain the overland flow path, and that drainage channel would be provided to convey the storm drain and	To minimize water quality impacts	DSD	For connecting road	Operation phase	Fully implemented	The permanent drainage works have been implemented in accordance with the recommendations in the

EP/ EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status	Remarks
	discharge at downstream of River Indus.						Drainage Impact Assessment (DIA) for the project
EIA Section 6.6.3	Sewage generated by the BCP and Chuk Yuen Village Resite will be collected and treated by the proposed on-site sewage treatment facility using Membrane Bioreactor treatment with a portion of the treated wastewater reused for irrigation and flushing within the BCP.	To minimize water quality impacts	DSD	BCP	Operation phase	Fully implemented	-
EIA Section 6.5.3	Sewage generated from the Administration Building will be discharged to the existing local sewerage system.	To minimize water quality impacts	DSD	Administration Building	Operation phase	Fully implemented	-
Waste Management (Operation)							
7.6.2.1	**General refuse** General refuse should be collected on daily basis and delivered to the refuse collection point accordingly. A reputable waste collector should be employed to remove general refuse regularly to avoid odour nuisance or pest and vermin problem. Recycling containers are recommended to be provided to encourage recycling of aluminium cans and waste paper.	To minimize impacts resulting from collection and transportation of general refuse for off-site disposal	Managing Authority of the BCP	BCP and its Associated facilities	Operation phase	Fully implemented	

EP/ EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status	Remarks
7.6.2.2	**Chemical waste** • Register with the EPD as a chemical waste producer should be made and guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes should be followed. • Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. Licensed collector should be deployed to transport and dispose of the chemical wastes, to the licensed Chemical Waste Treatment Centre, or licensed facilities, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.	To minimize impacts resulting from collection and transportation of general refuse for off-site disposal	Managing Authority of the BCP	BCP and its Associated facilities	Operation phase	Fully implemented	
Ecological Impact							
EIA	**Mitigation to Noise Disturbance to**	To minimize the	Contractors	BCP,	Before Operation	Fully	-

EP/ EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status	Remarks
Section 9.8	**Wildlife** The following noise reduction measures shall be considered as far as practicable during operation: • Choose quieter plant such as those which have been effectively silenced; • Include noise levels specification when ordering new plant (including chillier and E/M equipment); • Locate fixed plant in walled plant rooms or in specially designed enclosures; • Locate noisy machines in a basement or a completely separate building; • Install direct noise mitigation measures including silencers, acoustic louvers and acoustic enclosure where necessary; and • Develop and implement a regularly scheduled plant maintenance; • programme so that equipment is properly operated and serviced in order to maintain a controlled level of noise.	impact to wildlife		Administration Building and all ventilation buildings		implemented	
EIA Section	**Mitigation to Anthropogenic Disturbance**	To screen the Proposed structures	Contractors	In proximity to administration	Operation phase	Fully implemented	Refer to OM4 below

EP/ EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status	Remarks
9.8	• Buffer planting shall be provided for screening the proposed structures and associated facilities.	and associated facilities.		Building and all ventilation buildings and associated facilities.			
EIA Section 9.8	**Mitigation to Habitat Fragmentation** • Landscape fragmentation should be kept to a minimum and key wildlife routes preserved as far as possible (i.e. OM1 of EM&A Manual Chapter 10). • Provision of landscape plantings (i.e. OM3-7 of EM&A Manual Chapter 10)	To minimize the obstruction on wildlife movement	Contractors	All viaduct sections	Operation phase	Fully implemented	Refer to OM1 below. Refer to OM3 to 7 below.
EP C3.7	To reduce collisions from birds, the design of noise barriers shall avoid/minimize the use of transparent / reflective materials or adopt bird-friendly design on such surfaces.	To avoid bird mortality due to collision with noise barrier	Contractors	Locations with erection of noise barrier	During detailed design and construction phases	Fully implemented	Steel works of noise barrier was painted in different tone of mat finished green and avoid use of transparent / reflective materials.
EP C4.1	The ecological mitigation measures stated in the Woodland Compensation Plan and Habitat Creation and Management Plan are properly implemented, maintained and monitored during the entire period of the life of the Project.	To mitigate the loss woodland and Wetland	Contractors	woodland compensation area and wetland compensation area	Operation phase	Fully implemented	Refer Table 1-2
Landscape, Visual and Glare Impact							
EP C3.8 &	**(OM1) Detailed Design Considerations**	To reduce architectural footprint	Detailed designer/	BCP, Administration	During Detailed Design &	Fully implemented	The detail landscape design of the project is

EP/ EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status	Remarks
EIA 11.6.3 & Table 11.16 (OM1)	Detailed design of development components should aim to reduce landscape footprint and visibility of structures. The area allowed for any development components should be reduced to a practical minimum.	on the land and minimize visibility of structures.	Consultants	Building and all ventilation buildings	Construction/ Operation Phase		divided into 3 packages as described in the Landscape Plan.
EP C3.8 & EIA 11.6.3 & Table 11.16 (OM2)	**(OM2) Aesthetically Pleasing Design** The form, textures, finishes and colours of the proposed development components should be compatible with the existing surroundings. Light earthy tone colours such as shades of green, shades of grey, shades of brown and off-white may be utilised where technically feasible to reduce the visibility of the development components, including all roadwork, buildings and noise barriers etc. To further improve visual amenity, natural building materials such as stone and timber, should be preferably adopted for architectural features, where technically feasible.	To reduce visibility of structures and increase their compatibility with the surrounding	Detailed designer/ Consultants	Noise Barriers	During Detailed Design & Construction/ Operation Phase	Fully implemented	The steel works of noise barrier are painted in different tone of mat finished green to blend in with the surrounding.
EP C3.8 & EIA 11.6.3 & Table 11.16 (OM3)	**(OM3) Compensatory Planting** All compensatory planting of trees is to be carried out in accordance with ETWB TCW No. 03/2006.	To compensate for loss of trees and some shrubs due to the Project.	Contractors	Woodland compensation area, in proximity to administration Building and all ventilation	During Construction/ Operation Phase	Fully implemented	The programme of woodland compensation has been commenced in early 2016 according to the Woodland. Compensation Plan.

EP/ EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status	Remarks
				buildings and associated facilities and Viaduct Structure			Other compensatory planting shall refer to OM4 and OM10.
EP C3.8 & EIA 11.6.3 & Table 11.16 (OM4)	**(OM4) Buffer Tree Planting** Tree planting shall be provided to screen the proposed structures and associated facilities. In addition, the compensatory shrub and ground cover planting detailed in OM4 will provide screening and improve compatibility with the surrounding environment.	To screen the proposed structures and associated facilities including roads.	Contractors	In proximity to administration Building and all ventilation buildings and associated facilities.	During Construction/ Operation Phase	Fully implemented	New planting has been provided for Buffet Tree Planting.
EP C3.8 & EIA 11.6.3 & Table 11.16 (OM5)	**(OM5) Aesthetic Improvement Planting - Viaduct Structure** Planters will be provided for trailer planting to soften the hard, straight edges of the viaduct. Where space allows for planters, climbers are proposed to cover vertical, hard surfaces of the piers.	To soften the hard edges on the viaduct and maximize greening opportunity.	Contractors	Viaduct Structure.	During Construction/ Operation Phase	Fully implemented	Shrub plantings are provided on the viaduct planters.
EP C3.8 & EIA 11.6.3 & Table 11.16 (OM6)	**(OM6) Aesthetic Improvement Planting – under Viaduct** Shade tolerant plant will be planted, where light is insufficient, to improve value of areas under viaducts.	To soften the hard edges on the viaduct and maximize greening opportunity.	Contractors	Viaduct Structure.	During Construction/ Operation Phase	Fully implemented	Amenity palm and shrub are planted under the viaduct structures connecting the existing Fanling Highway.
EP C3.8 &	**(OM7) Landscaped Slope** Where existing hillside slopes are	To prevent soil erosion and reduce	Contractors	Newly formed slope	During Construction/ Operation Phase	Fully implemented	Varies format of landscape treatment are

EP/ EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status	Remarks
EIA 11.6.3 & Table 11.16 (OM7)	anticipated to be modified (eg cut slope at the portals of the tunnel sections and embankments along the alignment) the final slope surface will be landscaped by hydroseeding, tree or shrub planting where slope gradient allows.	visible impact of man-made slopes.					applied on all newly formed slope features, to suit the site conditions including slope gradient and soil depth.
EP C3.8 & EIA 11.6.3 & Table 11.16 (OM8)	**(OM8) Green Roof** Green roofing should be established on proposed buildings to reduce exposure to untreated concrete surfaces and mitigate visual impact to VSRs at high levels.	To reduce exposure to untreated concrete surfaces, reduce visual impact to VSRs at high levels and maximize greening opportunity.	Contractors	BCP, Administration Building and all ventilation buildings	During Construction/ Operation Phase	Fully implemented	Suitable shrubs and ground covers are planted in building roofs of new buildings.
EP C3.8 & EIA 11.6.3 & Table 11.16 (OM9)	**(OM9) Vertical Greening** Vertical planting should be established to soften the hard, vertical surfaces of the proposed development components. These components will include walls of administration and ventilation buildings, retaining walls and road abutments.	To reduce visible impact of proposed new structures and facilities and maximize greening opportunity.	Contractors	BCP, Administration Building and all ventilation buildings	During Construction/ Operation Phase	Fully implemented	Planters are provided by the building edges in building roofs of new development structures.
EP C3.8 & EIA 11.6.3 & Table 11.16 (OM10)	**(OM10) Roadside Amenity Planting** Roadside amenity planting should be provided, to enhance the landscape and visual quality of the existing and proposed transport routes and car parks.	To soften edges of the proposed engineer structures and associated facilities and enhance the landscape and visual quality of the existing and proposed road.	Contractors	Roadside of the project	During Construction/ Operation Phase	Fully implemented	New plantings are provided for Roadside Amenity Planting
EP C3.8	**(OM11) Reinstatement**	Particularly aimed at	Contractors	Existing	During Construction/	Fully	Reinstatement works

EP/ EIA Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measures	When to implement the measures?	Implementation Status	Remarks
& EIA 11.6.3 & Table 11.16 (OM11)	Certain areas unavoidably disturbed by the Project will be reprovisioned.	temporarily disturbed areas, to reduce long term impact on landscape.		engineering channel Ma Wat River.	Operation Phase	implemented	are provided to the disturbed existing engineering channel Ma Wat River.
EP C3.8, EP C3.9 & EIA 11.6.3 & Table 11.16 (OM12)	**(OM12) Light Control** Street and night time lighting glare will be controlled to minimize glare impact to adjacent VSRs during the operation stage.	To minimize glare impact to adjacent VSRs.	Contractors	Lit areas around BCP, Administration Building and all ventilation buildings and along roads.	During Operation Phase	Fully implemented	Light controls are provided at new buildings.
EP C3.8 & EIA 11.6.3 & Table 11.16 (OM13)	**(OM13) Reprovisioned LCSD Garden** The Open Space of Wo Keng Shan public garden falls within the Project Site and will be reprovisioned to reprovide the amenities of the garden on a one to one basis.	To compensate for loss of Open Space due to the Project.	Contractors	Near existing Wo Keng Shan public garden	During Construction/ Operation Phase	Fully implemented	1256.4m^2 of site area at the north of Sha Tau Kok Interchange will be converted to a re-provision LCSD Wo Keng Shan Garden is implemented.

Appendix J

Waste Flow Table

Architectural Services Department	**Form No. D/OI.03/09.002**

Contract No. / Works Order No.: - SSC505

Monthly Summary Waste Flow Table for 2015 [year] [to be submitted not later than the 15th day of each month following reporting month]

(All quantities shall be rounded off to 3 decimal places.)

Month	Actual Quantities of Inert Construction Waste Generated Monthly				
	(a)=(b)+(c)+(d)+(e) Total Quantity Generated	(b) Broken Concrete (see Note 4)	(c) Reused in the Contract	(d) Reused in other Projects	(e) Disposed of as Public Fill
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)
Jan	-	-	-	-	-
Feb	-	-	-	-	-
Mar	-	-	-	-	-
Apr	-	-	-	-	-
May	-	-	-	-	-
Jun	-	-	-	-	-
Sub-total	-	-	-	-	-
Jul	0	0	0	0	0
Aug	0	0	0	0	0
Sep	0.094	0	0.094	0	0
Oct	0.382	0	0.382	0	0
Nov	0.271	0	0.128	0	0.143
Dec	0.663	0	0	0	0.663
Total	1.410	0	0.604	0	0.806

Month	Actual Quantities of Non-inert Construction Waste Generated Monthly												
	Timber		Metals		Paper/ cardboard packaging		Plastics (see Note 3)		Chemical Waste		Other Recyclable Materials _____ (pls. specify)		General Refuse disposed of at Landfill
	(in '000kg)		(in '000kg)		(in '000kg)		(in '000kg)		(in '000kg)		(in '000kg)		(in '000m^3)
	generated	recycled	generated	recycled	generated	recycled	generated	recycled	generated	recycled	generated	recycled	generated
Jan	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	-	-	-	-	-	-	-	-	-	-	-	-	-
Apr	-	-	-	-	-	-	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-	-	-	-	-	-	-
Jun	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub-total	-	-	-	-	-	-	-	-	-	-	-	-	-
Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sep	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.020
Oct	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.046
Nov	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.60	0.00	0.00	0.00	0.052
Dec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.111
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.60	0.00	0.00	0.00	0.229

Architectural Services Department	**Form No. D/OI.03/09.002**

Contract No. / Works Order No.: - SSC505

Monthly Summary Waste Flow Table for 2016 [year] [to be submitted not later than the 15th day of each month following reporting month]

(All quantities shall be rounded off to 3 decimal places.)

Month	Actual Quantities of Inert Construction Waste Generated Monthly				
	(a)=(b)+(c)+(d)+(e) Total Quantity Generated	(b) Broken Concrete (see Note 4)	(c) Reused in the Contract	(d) Reused in other Projects	(e) Disposed of as Public Fill
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)
Jan	0.800	0	0	0	0.800
Feb	0.858	0	0	0	0.858
Mar	0.793	0	0	0	0.793
Apr	0.111	0	0	0	0.111
May	1.087	0	1.074	0	0.013
Jun	8.645	0	8.541	0	0.104
Sub-total	12.293	0	9.615	0	2.678
Jul	2.942	0	2.884	0	0.059
Aug	4.247	0	4.182	0	0.065
Sep	2.963	0	2.911	0	0.052
Oct	8.665	0	7.501	0	1.164
Nov	4.841	0	4.048	0	0.793
Dec	6.713	0	6.440	0	0.273
Total	42.663	0	37.580	0	5.083

Month	Actual Quantities of Non-inert Construction Waste Generated Monthly												
	Timber		Metals		Paper/ cardboard packaging		Plastics (see Note 3)		Chemical Waste		Other Recyclable Materials (see Page 3)		General Refuse disposed of at Landfill
	(in '000kg)		(in '000kg)		(in '000kg)		(in '000kg)		(in '000kg)		(in '000kg)		(in '000m^3)
	generated	recycled	generated	recycled	generated	recycled	generated	recycled	generated	recycled	generated	recycled	generated
Jan	0.000	0.000	4.73	4.73	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.072
Feb	0.000	0.000	0.0004	0.0004	0.0186	0.0186	0.000	0.000	0.000	0.000	0.021	0.021	0.065
Mar	0	0	52.752	52.752	0.044	0.044	0	0	0	0	0.05	0.05	0.059
Apr	0	0	1465.5906	1465.5906	0.09	0.09	0	0	0	0	0.084	0.084	0.091
May	0	0	1587.5818	1587.5818	0	0	0.004	0.004	0	0	0.153	0.153	0.156
Jun	0	0	725.0582	725.0582	0.33	0.33	0.0045	0.0045	0	0	0.067	0.067	0.117
Sub-total	0	0	3818.7330	3818.7330	0.4826	0.4826	0.0085	0.0085	0	0	0.375	0.375	0.559
Jul	0	0	265.690	265.690	0.430	0.430	0.020	0.020	0.000	0.000	0.194	0.194	0.189
Aug	0	0	298.260	298.260	0.360	0.360	0.025	0.025	0.000	0.000	0.069	0.069	0.228
Sep	0	0	572.15	572.15	0.370	0.370	0.048	0.048	0.000	0.000	0.088	0.088	0.241
Oct	0	0	287.87	287.87	0.36	0.36	0.098	0.098	0.000	0.000	0.112	0.112	0.189
Nov	0	0	268.18	268.18	0.54	0.54	0.087	0.087	0.000	0.000	0.0765	0.0765	0.423
Dec	0	0	298.052	298.052	0	0	0.053	0.053	0.000	0.000	0.0095	0.0095	0.390
Total	0	0	5808.935	5808.935	2.543	2.543	0.339	0.339	0.000	0.000	0.923	0.923	2.217

Architectural Services Department	Form No. D/OI.03/09.002

Contract No. / Works Order No.: - SSC505

Monthly Summary Waste Flow Table for 2017 [year] [to be submitted not later than the 15th day of each month following reporting month]

(All quantities shall be rounded off to 3 decimal places.)

Month	Actual Quantities of Inert Construction Waste Generated Monthly				
	(a)=(b)+(c)+(d)+(e) Total Quantity Generated	(b) Broken Concrete (see Note 4)	(c) Reused in the Contract	(d) Reused in other Projects	(e) Disposed of as Public Fill
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)
Jan	3.160	0.000	2.003	0.000	1.157
Feb	1.374	0.000	0.249	0.000	1.125
Mar	0.548	0.000	0.054	0.000	0.494
Apr	4.136	0.013	1.139	0.000	2.984
May	4.201	0.000	1.191	0.000	3.010
Jun	9.813	0.000	1.317	0.000	8.496
Sub-total	23.230	0.013	5.953	0.000	17.264
Jul	9.101	0.000	1.223	0.000	7.878
Aug	6.341	0.000	2.532	0.000	3.809
Sep	5.142	0.000	4.992	0.000	0.150
Oct	2.610	0.000	0.250	0.000	2.360
Nov	3.248	0.020	0.160	0.000	3.068
Dec	7.509	0.285	0.321	0.000	6.903
Total	57.180	0.317	15.431	0.000	41.431

Month	Actual Quantities of Non-inert Construction Waste Generated Monthly												
	Timber		Metals		Paper/ cardboard packaging		Plastics (see Note 3)		Chemical Waste		Other Recyclable Materials (see Page 3)		General Refuse disposed of at Landfill
	(in '000kg)		(in '000kg)		(in '000kg)		(in '000kg)		(in '000kg)		(in '000kg)		(in '000m^3)
	generated	recycled	generated	recycled	generated	recycled	generated	recycled	generated	recycled	generated	recycled	generated
Jan	0.000	0.000	458.150	458.150	0.560	0.560	0.058	0.058	0.000	0.000	0.024	0.024	0.481
Feb	0.000	0.000	177.180	177.180	0.370	0.370	0.036	0.036	0.000	0.000	0.008	0.008	0.280
Mar	0.000	0.000	97.370	97.370	3.380	3.380	1.573	1.573	0.000	0.000	0.036	0.036	0.423
Apr	0.000	0.000	148.110	148.110	0.300	0.300	1.223	1.223	0.000	0.000	29.795	29.795	0.358
May	0.000	0.000	405.500	405.500	0.44	0.440	0.040	0.040	0.000	0.000	0.006	0.006	0.644
Jun	0.000	0.000	338.580	338.580	0.710	0.710	0.036	0.036	0.000	0.000	0.002	0.002	0.878
Sub-total	0.000	0.000	1624.890	1624.890	5.760	5.760	2.966	2.966	0.000	0.000	29.871	29.871	3.064
Jul	0.000	0.000	296.540	296.540	0.650	0.650	1.040	1.040	0.000	0.000	0.002	0.002	1.651
Aug	0.000	0.000	239.720	239.720	0.700	0.700	0.000	0.000	0.000	0.000	0.000	0.000	1.554
Sep	0.000	0.000	68.060	68.060	0.570	0.570	1.037	1.037	0.000	0.000	0.001	0.001	1.606
Oct	0.000	0.000	53.130	53.130	0.000	0.000	3.000	3.000	0.000	0.000	0.000	0.000	1.651
Nov	0.000	0.000	446.270	446.270	1.810	1.810	0.069	0.069	0.000	0.000	0.005	0.005	1.931
Dec	0.000	0.000	193.810	193.810	0.300	0.300	0.000	0.000	0.000	0.000	0.000	0.000	1.781
Total	0.000	0.000	2922.420	2922.420	9.790	9.790	8.112	8.112	0.000	0.000	29.879	29.879	13.238

Architectural Services Department	Form No. D/OI.03/09.002

Contract No. / Works Order No.: - SSC505

Monthly Summary Waste Flow Table for 2018 [year] [to be submitted not later than the 15th day of each month following reporting month]

(All quantities shall be rounded off to 3 decimal places.)

Month	Actual Quantities of Inert Construction Waste Generated Monthly				
	(a)=(b)+(c)+(d)+(e) Total Quantity Generated	(b) Broken Concrete (see Note 4)	(c) Reused in the Contract	(d) Reused in other Projects	(e) Disposed of as Public Fill
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)
Jan	5.298	0.646	0.160	0.000	4.492
Feb	7.243	0.572	0.320	0.000	6.351
Mar	11.241	0.831	0.225	0.000	10.186
Apr	3.717	1.458	0.257	0.000	2.002
May	5.346	0.788	0.300	0.000	4.258
Jun	6.828	0.661	0.376	0.000	5.792
Sub-total	39.672	4.956	1.638	0.000	33.079
Jul	11.637	0.051	0.282	0.000	11.304
Aug	16.440	0.142	0.263	0.000	16.036
Sep	7.849	0.116	0.161	0.000	7.573
Oct	3.619	1.148	0.196	0.000	2.275
Nov	4.702	0.908	0.186	0.000	3.608
Dec	4.016	1.267	0.110	0.000	2.639
Total	87.934	8.587	2.836	0.000	76.512

Month	Actual Quantities of Non-inert Construction Waste Generated Monthly												
	Timber		Metals		Paper/ cardboard packaging		Plastics (see Note 3)		Chemical Waste		Other Recyclable Materials (see Page 3)		General Refuse disposed of at Landfill
	(in '000kg)		(in '000kg)		(in '000kg)		(in '000kg)		(in '000kg)		(in '000kg)		(in '000m^3)
	generated	recycled	generated	recycled	generated	recycled	generated	recycled	generated	recycled	generated	recycled	generated
Jan	0.000	0.000	375.870	375.870	0.220	0.220	0.032	0.032	0.000	0.000	0.000	0.000	1.918
Feb	0.000	0.000	720.120	720.120	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.223
Mar	0.000	0.000	220.860	220.860	0.830	0.830	0.005	0.005	0.000	0.000	0.005	0.005	2.711
Apr	0.000	0.000	202.130	202.130	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.470
May	0.000	0.000	294.330	294.330	0.000	0.000	0.042	0.042	0.000	0.000	0.000	0.000	2.490
Jun	0.000	0.000	242.170	242.170	0.990	0.990	0.000	0.000	1.200	0.000	0.000	0.000	2.997
Sub-total	0.000	0.000	2,055.480	2,055.480	2.040	2.040	0.079	0.079	1.200	0.000	0.005	0.005	14.809
Jul	0.000	0.000	218.990	218.990	0.280	0.280	0.000	0.000	0.000	0.000	0.000	0.000	3.146
Aug	0.000	0.000	466.220	466.220	0.230	0.230	0.000	0.000	1.200	0.000	0.000	0.000	3.114
Sep	0.000	0.000	172.850	172.850	0.620	0.620	0.033	0.033	0.000	0.000	0.000	0.000	2.704
Oct	0.000	0.000	351.580	351.580	0.460	0.460	0.490	0.490	0.000	0.000	0.000	0.000	2.035
Nov	0.000	0.000	240.200	240.200	0.340	0.340	0.300	0.300	0.000	0.000	0.000	0.000	1.372
Dec	0.000	0.000	272.030	272.030	0.210	0.210	0.000	0.000	0.000	0.000	0.000	0.000	1.235
Total	0.000	0.000	3,777.350	3,777.350	4.180	4.180	0.902	0.902	2.400	0.000	0.005	0.005	28.415

Architectural Services Department	Form No. D/OI.03/09.002

Contract No. / Works Order No.: - SSC505

Monthly Summary Waste Flow Table for 2019 [year] [to be submitted not later than the 15th day of each month following reporting month]

(All quantities shall be rounded off to 3 decimal places.)

Month	Actual Quantities of Inert Construction Waste Generated Monthly				
	(a)=(b)+(c)+(d)+(e) Total Quantity Generated	(b) Broken Concrete (see Note 4)	(c) Reused in the Contract	(d) Reused in other Projects	(e) Disposed of as Public Fill
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)
Jan	4.815	1.963	0.160	0.000	2.691
Feb	4.609	0.598	0.150	0.000	3.861
Mar	4.233	0.300	0.026	0.000	3.907
Apr	2.852	0.141	0.013	0.000	2.698
May	3.936	0.120	0.013	0.000	3.803
Jun	1.605	0.065	0.000	0.000	1.541
Sub-total	22.049	3.188	0.362	0.000	18.499
Jul	2.752	0.243	0.000	0.000	2.509
Aug	2.059	0.044	0.000	0.000	2.015
Sep	0.915	0.037	0.000	0.000	0.878
Oct	0.826	0.000	0.000	0.000	0.826
Nov	1.560	0.000	0.000	0.000	1.560
Dec	0.351	0.000	0.000	0.000	0.351
Total	30.511	3.512	0.362	0.000	26.637

Month	Actual Quantities of Non-inert Construction Waste Generated Monthly												
	Timber		Metals		Paper/ cardboard packaging		Plastics (see Note 3)		Chemical Waste		Other Recyclable Materials (see Page 3)		General Refuse disposed of at Landfill
	(in '000kg)		(in '000kg)		(in '000kg)		(in '000kg)		(in '000kg)		(in '000kg)		(in '000m^3)
	generated	recycled	generated	recycled	generated	recycled	generated	recycled	generated	recycled	generated	recycled	generated
Jan	0.000	0.000	238.550	238.550	0.290	0.290	0.950	0.950	0.000	0.000	0.000	0.000	1.417
Feb	1.510	1.510	0.000	0.000	0.410	0.410	2.660	2.660	0.000	0.000	0.000	0.000	1.157
Mar	1.900	1.900	337.420	337.420	0.360	0.360	1.330	1.330	0.000	0.000	0.000	0.000	1.586
Apr	0.560	0.560	116.170	116.170	0.610	0.610	3.330	3.330	0.000	0.000	0.000	0.000	1.190
May	0.000	0.000	77.277	77.277	0.540	0.540	0.400	0.400	0.000	0.000	0.000	0.000	1.086
Jun	0.000	0.000	234.170	234.170	0.570	0.570	1.580	1.580	0.000	0.000	0.000	0.000	1.664
Sub-total	3.970	3.970	1,003.587	1,003.587	2.780	2.780	10.250	10.250	0.000	0.000	0.000	0.000	8.100
Jul	0.000	0.000	345.290	345.290	0.400	0.400	1.370	1.370	0.000	0.000	0.000	0.000	1.528
Aug	0.000	0.000	106.920	106.920	2.610	2.610	0.950	0.950	0.000	0.000	0.000	0.000	0.982
Sep	0.000	0.000	106.210	106.210	3.540	3.540	0.410	0.410	0.000	0.000	0.000	0.000	0.962
Oct	0.000	0.000	67.590	67.590	0.210	0.210	1.090	1.090	0.000	0.000	0.000	0.000	1.222
Nov	0.000	0.000	133.900	133.900	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.905
Dec	0.000	0.000	145.800	145.800	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.741
Total	3.970	3.970	1,909.297	1,909.297	9.540	9.540	14.070	14.070	0.000	0.000	0.000	0.000	15.440

Architectural Services Department	Form No. D/OI.03/09.002

Contract No. / Works Order No.: - **SS C505** **Final Submission** No

Monthly Summary Waste Flow Table for 2020 [year] [to be submitted not later than the 15th day of each month following reporting month]

(All quantities shall be rounded off to 3 decimal places.)

Month	Actual Quantities of Inert Construction Waste Generated Monthly				
	(a)=(b)+(c)+(d)+(e) Total Quantity Generated	(b) Broken Concrete (see Note 4)	(c) Reused in the Contract	(d) Reused in other Projects	(e) Disposed of as Public Fill
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)
Jan	0.072	0.000	0.000	0.000	0.072
Feb	0.000	0.000	0.000	0.000	0.000
Mar	0.026	0.000	0.000	0.000	0.026
Apr	0.000	0.000	0.000	0.000	0.000
May	0.026	0.000	0.000	0.000	0.026
Jun	0.000	0.000	0.000	0.000	0.000
Sub-total	0.124	0.000	0.000	0.000	0.124
Jul	0.000	0.000	0.000	0.000	0.000
Aug	0.000				
Sep	0.000				
Oct	0.000				
Nov	0.000				
Dec	0.000				
Total	0.124	0.000	0.000	0.000	0.124

Architectural Services Department	**Form No. D/OI.03/09.002**

Month	Actual Quantities of Non-inert Construction Waste Generated Monthly												
	Timber		Metals		Paper/ cardboard packaging		Plastics (see Note 3)		Chemical Waste		Other Recyclable Materials _____ (pls. specify)		General Refuse disposed of at Landfill
	(in '000kg)		(in '000kg)		(in '000kg)		(in '000kg)		(in '000kg)		(in '000kg)		(in '000m^3)
	generated	recycled	generated	recycled	generated	recycled	generated	recycled	generated	recycled	generated	recycled	generated
Jan	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.475
Feb	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.299
Mar	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.234
Apr	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.091
May	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.124
Jun	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.189
Sub-total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.412
Jul	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.059
Aug													
Sep													
Oct													
Nov													
Dec													
Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.471

Notes:
(1) The performance targets are given in the Particular Specification on Environmental Management Plan.
(2) The waste flow table shall also include construction waste that are specified in the Contract to be imported for use at the site.
(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.
(4) Broken concrete for recycling into aggregates.
(5) If necessary, use the conversion factor: 1 full load of dumping truck being equivalent to 6.5 m^3 by volume.

Name of Department : CEDD **Contract No./ Work Order No. :** CV/2012/08

Appendix I - Monthly Summary Waste Flow Table for 2014

(All quantities shall be rounded off to 3 decimal places)

Month	Actual Quantities of Inert C&D Materials Generated / Imported (in '000 m3)						Actual Quantities of Other C&D Materials / Wastes Generated				
	Total Quantities Generated [a+b+c+d]	Broken Concrete (including rock for recycling into aggregates) (a)	Reused in the Contract (b)	Reused in Other Projects (c)	Disposed as Public Fill (d)	Imported C&D Material	Metal (in '000kg)	Paper/ Cardboard Packaging (in '000kg)	Plastic (bottles/containers, plastic sheets/ foams from package material) (in '000kg)	Chemical Waste (in '000kg)	Others (e.g. General Refuse etc.) (in '000m3)
January	0.0045	0.0000	0.0045	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1773
February	0.9869	0.0000	0.9869	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1102
March	0.1366	0.0000	0.1366	0.0000	0.0000	0.2282	0.0000	0.0000	0.0000	3.2400	0.1825
April	0.2063	0.0000	0.1217	0.0269	0.0577	0.5536	0.0000	0.0000	0.0000	4.2800	0.2069
May	14.5769	0.0000	0.0643	14.4032	0.1094	2.0126	0.0000	0.0000	0.0000	0.0000	0.0887
June	26.0821	0.0000	0.0348	22.1289	3.9183	0.6915	0.0000	0.0000	0.0000	0.0000	1.1851
Half-year total	41.9932	0.0000	1.3487	36.5590	4.0855	3.4859	0.0000	0.0000	0.0000	7.5200	1.9508
July	49.4606	0.0000	0.0069	37.1170	12.3368	0.4385	0.0000	0.0000	0.0000	0.0000	0.0558
August	56.4391	0.0000	0.7325	51.3053	4.4013	0.8477	0.0000	0.0000	0.0000	0.0000	0.0774
September	56.614	0.0000	1.3762	44.492	10.7458	0.5819	0.0000	0.0000	0.0000	0.0000	0.0301
October	81.5270	0.0000	0.1239	67.7092	13.6939	0.2305	0.0000	0.0000	0.0000	0.0000	0.0761
November	80.7892	0.0000	0.0000	80.0586	0.7306	0.0000	0.0000	0.1190	0.0000	1.8900	0.0367
December	53.8164	0.0000	0.0000	53.5003	0.3161	0.0000	3.2100	0.3200	0.0070	1.4700	0.0340
Yearly Total	420.6397	0.0000	3.5882	370.7416	46.3099	5.5846	3.2100	0.4390	0.0070	10.8800	2.2609

Remark:

1) Density of C&D material to be 2.2 metric ton/m3
2) Density of General Refuse to be 1.6 metric ton/m3

Name of Department : CEDD **Contract No./ Work Order No. :** CV/2012/08

Appendix I - Monthly Summary Waste Flow Table for 2015

(All quantities shall be rounded off to 3 decimal places)

Month	Actual Quantities of Inert C&D Materials Generated / Imported (in '000 m3)						Actual Quantities of Other C&D Materials / Wastes Generated				
	Total Quantities Generated [a+b+c+d]	Broken Concrete (including rock for recycling into aggregates) (a)	Reused in the Contract (b)	Reused in Other Projects (c)	Disposed as Public Fill (d)	Imported C&D Material	Metal (in '000kg)	Paper/ Cardboard Packaging (in '000kg)	Plastic (bottles/containers, plastic sheets/ foams from package material) (in '000kg)	Chemical Waste (in '000kg)	Others (e.g. General Refuse etc.) (in '000m3)
January	66.2666	0.0000	0.0670	65.6529	0.5467	0.1150	0.0000	0.2500	0.0000	0.0000	0.0617
February	57.9980	0.0000	0.0000	57.3858	0.6121	0.3505	3.3200	0.3900	0.0000	0.5280	0.0908
March	66.0198	0.0000	0.3614	65.3359	0.3225	0.0729	0.0000	0.2920	0.0000	0.7040	0.1293
April	49.2562	0.0000	0.2770	48.7725	0.2066	0.1928	0.0000	0.2300	0.0000	0.0000	0.2423
May	41.7957	0.0000	8.7663	32.6095	0.4199	0.8683	0.0000	0.1300	0.0000	2.6400	0.0511
June	32.4389	0.0000	5.2132	26.7733	0.4524	0.9260	0.0000	0.5400	0.0000	0.5280	0.1703
Half-year total	313.7751	0.0000	14.6850	296.5299	2.5602	2.5255	3.3200	1.8320	0.0000	4.4000	0.7454
July	28.0854	0.0000	0.5171	26.7761	0.7922	1.0930	0.0000	0.6600	0.0000	0.8800	0.0496
August	47.6646	0.0000	0.4526	46.9470	0.2650	0.3577	0.0000	0.4500	0.6000	1.9360	0.1021
September	39.4931	0.0000	0.1339	38.4616	0.8975	0.3062	0.0000	0.0000	0.0000	1.0560	0.0611
October	45.0442	0.0000	1.6666	43.0977	0.2800	0.0680	5.2000	0.5800	0.9000	2.9920	0.0716
November	46.3947	0.0000	2.5152	42.1530	1.7265	0.0444	0.0000	0.0000	0.0000	3.6960	0.0953
December	50.4888	0.0000	0.8455	49.2509	0.3925	0.1544	5.6100	0.4000	0.0000	0.8800	0.0446
Yearly Total	570.9459	0.0000	20.8159	543.2162	6.9138	4.5492	14.1300	3.9220	1.5000	15.8400	1.1696

(All quantities shall be rounded off to 3 decimal places)

Year	Actual Quantities of Inert C&D Materials Generated / Imported (in '000 m3)						Actual Quantities of Other C&D Materials / Wastes Generated				
	Total Quantities Generated [a+b+c+d]	Broken Concrete (including rock for recycling into aggregates) (a)	Reused in the Contract (b)	Reused in Other Projects (c)	Disposed as Public Fill (d)	Imported C&D Material	Metal (in '000kg)	Paper/ Cardboard Packaging (in '000kg)	Plastic (bottles/containers, plastic sheets/ foams from package material) (in '000kg)	Chemical Waste (in '000kg)	Others (e.g. General Refuse etc.) (in '000m3)
2013	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2014	425.4406	0.0000	2.7362	376.3945	46.3099	5.6245	3.2100	0.4390	0.0070	10.8800	2.2609
2015	570.9459	0.0000	20.8159	543.2162	6.9138	4.5492	14.1300	3.9220	1.5000	15.8400	1.1696
2016											
2017											
2018											
Total	996.3865	0.0000	23.5521	919.6108	53.2237	10.1737	17.3400	4.3610	1.5070	26.7200	3.4305

Remark:

1) Density of C&D material to be 2.2 metric ton/m3
2) Density of General Refuse to be 1.6 metric ton/m3
3) Density of Spent Oil to be 0.88 metric ton/m3

Name of Department : CEDD **Contract No./ Work Order No. :** CV/2012/08

Appendix I - Monthly Summary Waste Flow Table for 2016

(All quantities shall be rounded off to 3 decimal places)

Month	Actual Quantities of Inert C&D Materials Generated / Imported (in '000 m3)						Actual Quantities of Other C&D Materials / Wastes Generated				
	Total Quantities Generated [a+b+c+d]	Broken Concrete (including rock for recycling into aggregates) (a)	Reused in the Contract (b)	Reused in Other Projects (c)	Disposed as Public Fill (d)	Imported C&D Material	Metal (in '000kg)	Paper/ Cardboard Packaging (in '000kg)	Plastic (bottles/containers, plastic sheets/ foams from package material) (in '000kg)	Chemical Waste (in '000kg)	Others (e.g. General Refuse etc.) (in '000m3)
January	72.2029	0.0000	0.6482	31.8061	39.7486	0.9345	26.2000	0.0000	0.7600	1.2320	0.1247
February	55.6715	0.0000	1.0145	38.3484	16.3085	1.3108	8.3800	0.9800	0.4000	1.4080	0.1089
March	34.1757	0.0000	0.3241	29.3514	4.5003	1.0325	44.1700	0.0000	1.0700	11.9680	0.0732
April	86.9048	0.0000	0.7045	32.8811	53.3191	1.3786	31.8220	0.4000	1.0900	1.6456	0.1306
May	77.5386	0.0000	0.1268	38.9050	38.5068	6.3690	44.8000	0.3500	1.1400	2.7280	0.1246
June	62.4192	0.0000	0.5848	45.2952	16.5392	2.4119	35.7300	0.3700	1.8200	1.7600	0.0916
Half-year total	388.9127	0.0000	3.4030	216.5873	168.9224	13.4373	191.1020	2.1000	6.2800	20.7416	0.6536
July	65.3701	0.0000	0.4227	25.0255	39.9219	2.4087	11.3820	0.3500	1.5510	2.9920	0.1794
August	88.4708	0.0000	0.1283	27.0545	61.2879	2.0077	23.0010	0.1650	2.0110	5.2800	0.1482
September	97.0232	0.0000	1.5359	50.8682	44.6191	1.8653	4.6810	0.1650	1.9410	3.8720	0.2018
October	92.8467	0.0000	0.8666	39.8733	52.1068	2.2050	0.8420	0.3000	2.1840	0.0000	0.1852
November	100.2462	0.0000	0.4509	45.5418	54.2534	0.6084	65.1720	0.4500	2.5623	2.4640	0.3216
December	75.9804	0.0000	0.9293	26.2843	48.7668	2.5000	21.7910	0.3200	2.5000	3.3000	0.2052
Yearly Total	908.8500	0.0000	7.7367	431.2349	469.8784	25.0324	317.9710	3.8500	19.0293	38.6496	1.8950

(All quantities shall be rounded off to 3 decimal places)

Year	Actual Quantities of Inert C&D Materials Generated / Imported (in '000 m3)						Actual Quantities of Other C&D Materials / Wastes Generated				
	Total Quantities Generated [a+b+c+d]	Broken Concrete (including rock for recycling into aggregates) (a)	Reused in the Contract (b)	Reused in Other Projects (c)	Disposed as Public Fill (d)	Imported C&D Material	Metal (in '000kg)	Paper/ Cardboard Packaging (in '000kg)	Plastic (bottles/containers, plastic sheets/ foams from package material) (in '000kg)	Chemical Waste (in '000kg)	Others (e.g. General Refuse etc.) (in '000m3)
2013	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2014	425.4406	0.0000	2.7362	376.3945	46.3099	5.6245	3.2100	0.4390	0.0070	10.8800	2.2609
2015	570.9459	0.0000	20.8159	543.2162	6.9138	4.5492	14.1300	3.9220	11.9700	16.1920	1.1696
2016	908.8500	0.0000	7.7367	431.2349	469.8784	25.0324	317.9710	3.8500	19.0293	38.6496	1.8950
2017											
2018											
Total	1905.2365	0.0000	31.2888	1350.8456	523.1021	35.2060	335.3110	8.2110	31.0063	65.7216	5.3255

Remark:

1) Density of C&D material to be 2.2 metric ton/m3
2) Density of General Refuse to be 1.6 metric ton/m3
3) Density of Spent Oil to be 0.88 metric ton/m3

APPENDIX G: MONTHLY SUMMARY WASTE FLOW TABLE

FOR: 2017

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill*	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse#
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 ton)	(in '000 kg)	(in '000 g)	(in '000 kg)	(in '000m^3)
Jan	72.9008	0.0000	2.0045	31.5900	39.3063	9.1064	0.1440	0.3600	1.9179	1.7600	0.3210
Feb	85.5921	0.0000	1.4413	29.9165	54.2343	8.4347	0.0769	0.3000	2.1663	4.3480	0.3365
Mar	36.8512	0.0000	0.5903	33.0669	3.1940	7.7980	0.3892	0.4000	1.3527	4.0720	0.4167
Apr	41.5647	0.0000	1.2335	33.1649	7.1663	7.9084	0.4200	0.3200	2.0268	13.0254	0.3862
May	38.2029	0.0000	0.4115	33.2084	4.5830	8.3119	0.4765	0.3700	2.7135	3.5440	0.3907
June	38.6829	0.0000	0.9191	13.5900	24.1738	8.0061	0.0917	0.3300	2.0648	4.8760	0.3265
Sub-total	313.7946	0.0000	6.6002	174.5367	132.6577	49.5655	1.5983	2.0800	12.2420	31.6254	2.1776
July	85.5801	0.0000	1.2343	2.8380	81.5079	8.2250	0.0802	0.3200	2.0394	1.5080	0.5330
Aug	73.2350	0.0000	0.3805	0.8032	72.0514	8.4800	0.0311	0.3500	2.4100	2.8400	0.5071
Sep	69.9895	0.0000	0.0705	1.4936	68.4254	7.1930	0.0423	0.3400	2.1170	1.1560	0.5672
Oct	77.6273	0.0000	0.0000	0.0000	77.6273	0.2297	0.0280	0.3200	2.2253	8.9592	0.6288
Nov	75.2140	0.0000	0.0000	0.1339	75.0801	0.2448	0.0113	0.3400	2.1800	1.3320	0.7348
Dec	72.9824	0.0000	0.0000	0.1278	72.8546	0.2571	0.0284	0.3250	3.2380	1.1560	0.8125
Sub-total	454.6283	0.0000	1.6853	5.2686	365.4592	24.3725	0.1929	1.6100	10.9717	15.7952	2.9709
Total	768.4229	0.0000	8.2855	179.8053	498.1169	73.9380	1.7912	3.6900	23.2137	47.4206	5.1485

Notes:

(1) The performance targets are given in PS 1.100(14)(a)

(2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.

(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.

(4) The Contractor shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the Works, together with a breakdown of the nature where the amount of C&D materials.

(5) Assumption: 1m^3 of inert material weight 2.2 tonne 1m3 of non-inert material weight 1.6 tonne 1m3 of chemical waste weight 0.88 tonne

Forecast of Total Quantities of C&D Materials to be Generated from the Project											
Forecast Made at the End of the Project	Total Quantity Generated	Hard Rock & Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemicals Waste	Others, e.g. general refuse
Month-Year	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000m3)
Dec-14	425.4406	0.0000	2.7362	376.3945	46.3099	5.6245	3.2100	0.4390	0.0070	10.8800	2.2609
Dec-15	570.9459	0.0000	20.8159	543.2162	6.9138	4.5492	14.1300	3.9220	11.9700	16.1920	1.1696
Dec-16	905.8375	0.0000	7.7367	427.7834	470.3174	24.8350	259.2290	3.8500	18.7262	34.2936	1.9720
Dec-17	686.2076	0.0000	8.2855	179.8053	498.1169	73.9380	1.7912	3.6900	23.2137	47.4206	5.1485
Dec-18											
Total:	2,588.43	0.00	39.57	1,527.20	1,021.66	108.95	278.36	11.90	53.92	108.79	10.55

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Contract No. CV/2012/08
Liantang / Heung Yuen Wai Boundary Control Point
Site Formation and Infrastructure Works – Contract 2

MONTHLY SUMMARY WASTE FLOW TABLE

FOR: 2018

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill*	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse#
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000m^3)
Jan	86.6400	0.0000	0.0000	5.2900	81.3500	1.6570	45.0000	0.3100	2.8000	4.5760	0.6575
Feb	33.2700	0.0000	0.0000	3.6700	29.6000	1.3470	32.0000	0.2500	2.4000	1.9500	0.2850
Mar	39.7600	0.0000	0.0000	3.4600	36.3000	1.3380	36.0000	0.3050	2.7000	9.8560	0.6290
Apr	55.5979	0.0000	0.0000	3.3680	52.2299	1.2470	33.7800	0.3240	2.5000	0.0000	0.5748
May	12.9815	0.0000	0.0000	4.6780	8.3035	1.1470	30.1400	0.3040	2.6000	44.9600	0.7056
June	9.0720	0.0000	0.0000	3.1910	5.8810	1.2200	31.7800	0.2870	2.3000	0.1760	0.7534
Sub-total	237.3214	0.0000	0.0000	23.6570	213.6644	7.9560	208.7000	1.7800	15.3000	61.5180	3.6053
July	6.0440	0.0000	0.0000	0.5840	5.4600	1.4570	30.7500	0.2750	2.1000	1.5840	0.8810
Aug	5.4100	0.0000	0.0000	0.7600	4.6500	1.3520	31.5900	0.2570	2.2000	3.0800	0.8400
Sep	8.2680	0.0000	0.0000	3.0430	5.2250	1.2300	30.7800	0.2200	1.8000	1.2300	0.4440
Oct	3.2564	0.0000	0.0000	1.1273	2.1291	1.2600	0.0000	0.1700	1.0125	9.5200	0.5969
Nov	1.9760	0.0000	0.0000	0.1760	1.8000	1.1000	0.0000	0.1780	1.8200	0.0000	0.5690
Dec	5.1965	0.0000	0.0000	2.0925	3.1040	1.3200	0.0000	0.0000	0.0000	28.4500	0.3269
Sub-total	30.1509	0.0000	0.0000	7.7828	22.3681	7.7190	93.1200	1.1000	8.9325	43.8640	3.6578
Total	267.4723	0.0000	0.0000	31.4398	236.0325	15.6750	301.8200	2.8800	24.2325	105.3820	7.2631

Notes:

(1) The performance targets are given in PS 1.100(14)(a)

(2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.

(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.

(4) The Contractor shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the Works, together with a breakdown of the nature where the amount of C&D materials.

(5) Assumption: 1m^3 of inert material weight 2.2 tonne 1m3 of non-inert material weight 1.6 tonne 1m3 of chemical waste weight 0.88 tonne

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Contract No. CV/2012/08
Liantang / Heung Yuen Wai Boundary Control Point
Site Formation and Infrastructure Works – Contract 2

MONTHLY SUMMARY WASTE FLOW TABLE FOR: 2019

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill*	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse#
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000m^3)
Jan	8.1000	0.0000	0.0000	1.5360	6.5640	0.0000	0.0000	0.0000	0.0000	9.4000	0.3000
Feb	1.5710	0.0000	0.0000	0.2000	1.3710	0.0000	0.0000	0.0000	0.0000	0.0000	0.1060
Mar	0.9600	0.0000	0.0000	0.0000	0.9600	0.0000	0.0000	0.0000	0.0000	0.0000	0.0620
Apr	1.4100	0.0000	0.0000	0.0000	1.4100	0.0000	0.0000	0.0000	0.0000	0.0000	0.1247
May	0.9960	0.0000	0.0000	0.0000	0.9960	0.0000	0.0000	0.0000	0.0000	0.0000	0.1390
June	0.3100	0.0000	0.0000	0.0000	0.3100	0.0000	0.0000	0.0000	0.0000	0.0000	0.0535
Sub-total	13.3470	0.0000	0.0000	1.7360	11.6110	0.0000	0.0000	0.0000	0.0000	9.4000	0.7852
July	2.2700	0.0000	0.0000	0.0000	2.2700	0.0000	0.0000	0.0000	0.0000	0.0000	0.0343
Aug	1.2380	0.0000	0.0000	0.0000	1.2380	0.0000	0.0000	0.0000	0.0000	0.0000	0.0313
Sep	0.2230	0.0000	0.0000	0.0000	0.2230	0.0000	0.0000	0.0000	0.0000	0.0000	0.0270
Oct	0.3044	0.0000	0.0000	0.0000	0.3044	0.0000	0.0000	0.0000	0.0000	0.0000	0.0188
Nov	0.0029	0.0000	0.0000	0.0000	0.0029	0.0000	0.0000	0.0000	0.0000	0.0000	0.0217
Dec	0.0160	0.0000	0.0000	0.0000	0.0160	0.0000	0.0000	0.0000	0.0000	0.0000	0.0233
Sub-total	4.0543	0.0000	0.0000	0.0000	4.0543	0.0000	0.0000	0.0000	0.0000	0.0000	0.1564
Total	17.4013	0.0000	0.0000	1.7360	15.6653	0.0000	0.0000	0.0000	0.0000	9.4000	0.9416

Notes:

(1) The performance targets are given in PS 1.100(14)(a)
(2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.
(4) The Contractor shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the Works, together with a breakdown of the nature where the amount of C&D materials.
(5) Assumption: 1m^3 of inert material weight 2.2 tonne 1m3 of non-inert material weight 1.6 tonne 1m3 of chemical waste weight 0.88 tonne

香港寶嘉 Dragages HongKong
A member of the Bouygues Construction group

Contract No. CV/2012/08
Liantang / Heung Yuen Wai Boundary Crossing Control Point
Site Formation and Infrastructure Works – Contract 2

Forecast of Total Quantities of C&D Materials to be Generated from the Project

Forecast Made at the End of the Project	Total Quantity Generated	Hard Rock & Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemicals Waste	Others, e.g. general refuse
Month-Year	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000m3)
Dec-13	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	220.6270	0.0000	0.0000	0.0000	0.0000
Dec-14	425.4406	0.0000	2.7362	376.3945	46.3099	5.6245	3.2100	0.4390	0.0070	10.8800	2.2609
Dec-15	570.9459	0.0000	20.8159	543.2162	6.9138	4.5492	37.6310	3.9220	11.9700	16.1920	1.1696
Dec-16	905.0989	0.0000	7.4372	427.7834	469.8783	24.8350	430.5200	3.8500	18.7262	34.2936	1.9720
Dec-17	741.9482	0.0000	8.0385	175.6792	558.2305	78.3865	1681.8000	4.0700	30.5175	48.7906	5.9610
Dec-18	267.4723	0.0000	0.0000	31.4398	236.0325	15.6750	301.8200	2.8800	24.2325	105.3820	7.2631
Jan-19	17.4013	0.0000	0.0000	1.7360	15.6653	0.0000	0.0000	0.0000	0.0000	9.4000	0.9416
Total	2,928.3072	0.0000	39.0278	1,556.2492	1,333.0303	129.0702	2,675.6080	15.1610	85.4532	224.9382	19.5682

Monthly Waste Flow Table

Name of Department : CEDD **Contract No. : CV/2012/08** **Year: 2020**

Month	Actual Quantities of Inert C&D Materials Generated / Imported (in '000 m3)						Actual Quantities of Other C&D Materials / Wastes Generated				
	Total Quantities Generated	C&D Material (Rock, Soil, Slurry, Broken concrete)	Reused in the Contract	Reused in Other Projects	Disposed as Public Fill	Imported C&D Material	Metal	Paper/ Cardboard Packaging	Plastic (Recycled)	Chemical Waste	General Refuse (in '000 m3)
	[b+c+d]	(a)	(b)	(c)	(d)		(in '000kg)	(in '000kg)	(in kg)	(in '000kg)	(in '000m3)
January	0.0177	0.0177	0.0000	0.0000	0.0177	0.0000	0.0000	0.0000	0.0000	0.0000	0.0415
February	0.0845	0.0845	0.0000	0.0000	0.0845	0.0000	0.0000	0.0000	0.0000	0.0000	0.0498
March	2.5938	2.5938	0.0000	0.0000	2.5938	0.0000	0.0000	0.0000	0.0000	0.0000	0.0634
April	0.0076	0.0076	0.0000	0.0000	0.0076	0.0000	0.0000	0.0000	0.0000	0.0000	0.0183
May	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
June	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0026
Half-year total	2.7036	2.7036	0.0000	0.0000	2.7036	0.0000	0.0000	0.0000	0.0000	0.0000	0.1756
July	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0074
August	0.0000										
September	0.0000										
October	0.0000										
November	0.0000										
December	0.0000										
Yearly Total	2.7036	2.7036	0.0000	0.0000	2.7036	0.0000	0.0000	0.0000	0.0000	0.0000	0.1830

Assumption:

1) Density of C&D material = 2.2 metric ton/m3
2) Density of General Refuse = 1.6 metric ton/m3
3) Density of Spent Oil = 0.88 metric ton/m3

Name of Department: CEDD

Contract No.: CV/2012/09

Monthly Summary Waste Flow Table for December 2013 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated (in '000m^3)	Hard Rock and Large Broken Concrete (in '000m^3)	Reused in the Contract (in '000m^3)	Reused in other Projects (in '000m^3)	Disposed as Public Fill (in '000m^3)	Imported Fill (in '000m^3)	Metals (in '000m^3)	Paper/ cardboard packaging (in '000m^3)	Plastics (see Note 3) (in '000m^3)	Chemical Waste (in '000m^3)	Others, e.g. general refuse (in '000m^3)
Jan											
Feb											
Mar											
Apr											
May											
Jun											
Sub-total											
Jul											
Aug	0	0	0	0	0	0	0	0	0	0	0
Sep	0	0	0	0	0	0	0	0	0	0	0.004
Oct	0	0	0	0	0	0	0	0	0	0	0.003
Nov	1.351	0	0.473	0	0.878	0	0	0	0	0	0.055
Dec	0.177	0.007	0.030	0	0.140	0.600	0	0	0	0	0.055
Total	1.528	0.007	0.503	0	1.018	0.600	0	0	0	0	0.117

Note:

1. Assume the density of soil fill is 2 ton/m^3.
2. Assume the density of rock and broken concrete is 2.5 ton/m^3.
3. Assume each truck of C&D wastes is 5m^3.
4. The inert C&D materials except slurry and bentonite are disposed at Tuen Mun 38.
5. The slurry and bentonite are disposed at Tseung Kwun O 137.
6. The non-inert C&D wastes are disposed at NENT.

Name of Department: CEDD

Contract No.: CV/2012/09

Monthly Summary Waste Flow Table for 2014 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)
Jan	0.409	0.084	0	0	0.409	0.200	0	0	0.010	0	0.110
Feb	1.853	0.356	0.380	0	1.473	0	0.002	0	0	0.019	0.040
Mar	3.954	0.506	1.092	0	2.862	0	0	0	0	0	0.265
Apr	1.600	0.054	0.672	0	0.928	0.200	0	0	0	0.020	0.135
May	2.740	0.450	0.192	0	2.548	0.500	0	0	0	0.020	0.195
Jun	2.215	0.258	0.675	0	1.540	1.075	0	0	0	0.001	0.180
Sub-total	12.771	1.708	3.011	0.000	9.760	1.975	0.002	0.000	0.010	0.060	0.925
Jul	3.596	0.233	0.502	0	3.094	0.747	0	0	0.005	0	0.165
Aug	5.504	0.649	0.732	0	4.772	1.200	0	0	0.005	0.009	0.220
Sep	2.604	0.176	1.176	0	1.428	0.750	0	0	0.005	0	0.085
Oct	6.404	0.090	2.160	0	4.244	1.501	0	0	0.005	0	0.085
Nov	4.295	0	0.645	0	3.650	0	0	0	0.010	0.001	0.110
Dec	3.835	0.435	1.590	0	2.245	0	0	0	0	0	0.085
Total	39.009	3.291	9.816	0.000	29.193	6.173	0.002	0.000	0.040	0.070	1.675

Note:

1. Assume the density of soil fill is 2 ton/m^3.
2. Assume the density of rock and broken concrete is 2.5 ton/m^3.
3. Assume each truck of C&D wastes is 5m^3.
4. The inert C&D materials except slurry and bentonite are disposed at Tuen Mun 38.
5. The slurry and bentonite are disposed at Tseung Kwun O 137.
6. The non-inert C&D wastes are disposed at NENT.
7. Assume the density of metal is 7,850 kg/m^3.

Name of Department: CEDD

Contract No.: CV/2012/09

Monthly Summary Waste Flow Table for 2015 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in m^3)	(in '000m^3)
Jan	3.864	0.105	0.648	0.000	3.216	0.118	0.000	0.000	0.000	0.040	0.080
Feb	2.429	0.049	1.518	0.000	0.911	0.100	0.000	0.000	0.003	0.900	0.070
Mar	3.713	0.029	0.270	0.000	3.443	0.100	0.000	0.000	0.006	0.000	0.080
Apr	3.597	0.115	2.308	0.000	1.289	0.090	0.003	0.000	0.000	0.000	0.065
May	1.357	0.197	0.108	0.000	1.249	0.100	0.000	0.000	0.012	0.000	0.065
Jun	2.515	0.053	0.840	0.000	1.675	0.125	0.000	0.000	0.030	0.800	0.060
Sub-total	17.475	0.547	5.692	0.000	11.783	0.633	0.003	0.000	0.051	1.740	0.420
Jul	1.177	0.030	0.351	0.000	0.826	1.564	0.000	0.000	0.000	0.000	0.065
Aug	1.966	0.164	0.294	0.000	1.672	0.956	0.002	0.000	0.001	0.000	0.130
Sep	2.092	0.027	0.264	0.000	1.828	1.141	0.000	0.000	0.001	0.000	0.115
Oct	2.462	0.381	1.500	0.000	0.962	0.226	0.000	0.000	0.001	0.000	0.125
Nov	2.990	0.709	1.200	0.000	1.790	0.066	0.001	0.000	0.000	0.000	0.130
Dec	3.158	0.174	1.600	0.000	1.558	0.259	0.000	0.000	0.001	0.600	0.145
Total	31.320	2.033	10.901	0.000	20.419	4.846	0.006	0.000	0.055	2.340	1.130

Note:

1. Assume the density of soil fill is 2 ton/m^3.
2. Assume the density of rock and broken concrete is 2.5 ton/m^3.
3. Assume each truck of C&D wastes is 5m^3.
4. The inert C&D materials except slurry and bentonite are disposed at Tuen Mun 38.
5. The slurry and bentonite are disposed at Tseung Kwun O 137.
6. The non-inert C&D wastes are disposed at NENT.
7. Assume the density of metal is 7,850 kg/m^3.

Name of Department: CEDD

Contract No.: CV/2012/09

Monthly Summary Waste Flow Table for 2016 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in m^3)	(in '000m^3)
Jan	2.683	0.253	0.030	0.000	2.400	0.799	0.001	0.000	0.000	0.000	0.115
Feb	1.877	0.651	0.020	0.000	1.205	1.141	0.000	0.000	0.000	0.000	0.110
Mar	1.501	0.417	0.000	0.000	1.084	0.831	0.000	0.000	0.001	0.000	0.090
Apr	0.472	0.046	0.018	0.000	0.408	0.647	0.000	0.000	0.000	0.000	0.135
May	0.488	0.013	0.000	0.000	0.475	2.479	0.000	0.000	0.000	0.000	0.105
Jun	0.523	0.103	0.000	0.000	0.420	0.716	0.000	0.000	0.001	0.000	0.135
Sub-total	7.544	1.483	0.068	0.000	5.993	6.613	0.001	0.000	0.002	0.000	0.690
Jul	0.565	0.019	0.000	0.000	0.546	1.407	0.000	0.001	0.004	1.000	0.085
Aug	0.582	0.088	0.000	0.000	0.494	0.715	0.000	0.000	0.001	0.000	0.105
Sep	1.797	0.604	0.258	0.000	0.935	0.038	0.001	0.000	0.002	0.000	0.090
Oct	1.115	0.485	0.177	0.000	0.453	0.395	0.000	0.000	0.002	0.800	0.120
Nov	0.747	0.140	0.201	0.000	0.407	0.714	0.001	0.000	0.001	0.000	0.125
Dec	0.675	0.130	0.120	0.000	0.425	0.353	0.001	0.000	0.000	0.000	0.120
Total	13.025	2.948	0.824	0.000	9.252	10.235	0.004	0.001	0.012	1.800	1.335

Note:

1. Assume the density of soil fill is 2 ton/m^3.
2. Assume the density of rock and broken concrete is 2.5 ton/m^3.
3. Assume each truck of C&D wastes is 5m^3.
4. The inert C&D materials except slurry and bentonite are disposed at Tuen Mun 38.
5. The slurry and bentonite are disposed at Tseung Kwun O 137.
6. The non-inert C&D wastes are disposed at NENT.
7. Assume the density of metal is 7,850 kg/m^3.
8. Assume the density of plastic is 941 kg/m^3.

Name of Department: CEDD

Contract No.: CV/2012/09

Monthly Summary Waste Flow Table for 2017 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in m^3)	(in '000m^3)
Jan	1.150	0.204	0.150	0.000	0.796	1.150	0.000	0.000	0.001	0.000	0.170
Feb	1.160	0.308	0.192	0.000	0.660	0.926	0.000	0.000	0.001	0.000	0.140
Mar	2.287	0.565	0.060	0.000	1.662	1.055	0.000	0.000	0.000	0.000	0.115
Apr	1.004	0.064	0.036	0.000	0.903	0.463	0.000	0.000	0.004	0.000	0.075
May	0.497	0.005	0.120	0.000	0.372	0.050	0.767	0.000	0.000	0.000	0.105
Jun	1.249	0.150	0.150	0.000	0.948	0.008	0.000	0.000	0.000	0.000	0.135
Sub-total	7.347	1.297	0.708	0.000	5.342	3.651	0.767	0.000	0.006	0.000	0.740
Jul	1.917	0.180	0.120	0.000	1.617	0.542	0.000	0.000	0.000	0.000	0.065
Aug	1.297	0.118	0.120	0.000	1.059	0.099	0.000	0.000	0.000	0.000	0.130
Sep	2.448	0.437	0.090	0.000	1.921	0.291	0.000	0.000	0.000	0.000	0.115
Oct	2.156	0.544	0.240	0.000	1.372	0.939	0.000	0.000	0.000	0.000	0.090
Nov	3.051	1.000	0.210	0.000	1.841	0.368	0.000	0.000	0.000	0.000	0.150
Dec	2.400	0.223	0.180	0.000	1.997	0.377	0.000	0.000	0.000	0.033	0.125
Total	20.616	3.799	1.668	0.000	15.149	6.267	0.767	0.000	0.006	0.033	1.415

Note:

1. Assume the density of soil fill is 2 ton/m^3.
2. Assume the density of rock and broken concrete is 2.5 ton/m^3.
3. Assume each truck of C&D wastes is 5m^3.
4. The inert C&D materials except slurry and bentonite are disposed at Tuen Mun 38.
5. The slurry and bentonite are disposed at Tseung Kwun O 137.
6. The non-inert C&D wastes are disposed at NENT.
7. Assume the density of metal is 7,850 kg/m^3.
8. Assume the density of plastic is 941 kg/m^3.
9. Assume the density of paper is 800 kg/m^3.

Name of Department: CEDD

Contract No.: CV/2012/09

Monthly Summary Waste Flow Table for 2018 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated (in '000m^3)	Hard Rock and Large Broken Concrete (in '000m^3)	Reused in the Contract (in '000m^3)	Reused in other Projects (in '000m^3)	Disposed as Public Fill (in '000m^3)	Imported Fill (in '000m^3)	Metals (in '000m^3)	Paper/ cardboard packaging (in '000m^3)	Plastics (in '000m^3)	Chemical Waste (in m^3)	Others, e.g. general refuse (in '000m^3)
Jan	3.089	0.304	0.060	0.000	2.725	0.923	0.000	0.000	0.000	0.000	0.150
Feb	2.697	0.256	0.150	0.000	2.292	1.144	0.000	0.000	0.000	0.000	0.095
Mar	1.524	0.141	0.120	0.000	1.263	0.211	0.000	0.000	0.000	0.000	0.085
Apr	2.880	0.786	0.360	0.000	1.734	0.788	0.000	0.000	0.000	0.000	0.125
May	1.164	0.290	0.101	0.000	0.773	0.185	0.000	0.000	0.000	0.000	0.150
Jun	0.862	0.082	0.515	0.000	0.265	0.000	0.000	0.000	0.000	0.000	0.110
Sub-total	12.216	1.859	1.306	0.000	9.051	3.251	0.000	0.000	0.000	0.000	0.715
Jul	1.520	0.261	0.476	0.000	0.783	0.039	0.000	0.000	0.000	0.000	0.135
Aug	2.372	0.478	0.613	0.000	1.281	0.193	0.000	0.000	0.000	0.000	0.095
Sep	1.709	0.361	0.381	0.000	0.967	0.272	0.000	0.000	0.000	0.000	0.150
Oct	1.198	0.316	0.000	0.000	0.882	0.000	0.000	0.000	0.000	0.000	0.115
Nov	1.938	0.361	0.296	0.000	1.281	0.000	0.000	0.000	0.000	0.000	0.160
Dec	1.406	0.302	0.060	0.000	1.044	0.000	0.000	0.000	0.000	0.000	0.085
Total	22.359	3.938	3.132	0.000	15.289	3.755	0.000	0.000	0.000	0.000	1.455

Note:

1. Assume the density of soil fill is 2 ton/m^3.
2. Assume the density of rock and broken concrete is 2.5 ton/m^3.
3. Assume each truck of C&D wastes is 5m^3.
4. The inert C&D materials except slurry and bentonite are disposed at Tuen Mun 38.
5. The slurry and bentonite are disposed at Tseung Kwun O 137.
6. The non-inert C&D wastes are disposed at NENT.
7. Assume the density of metal is 7,850 kg/m^3.
8. Assume the density of plastic is 941 kg/m^3.
9. Assume the density of paper is 800 kg/m^3.

Name of Department: CEDD

Contract No.: CV/2012/09

Monthly Summary Waste Flow Table for 2019 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in m^3)	(in '000m^3)
Jan	2.937	0.927	0.000	0.000	2.010	0.997	0.000	0.000	0.000	0.000	0.145
Feb	4.659	0.841	0.000	0.000	3.818	0.030	0.000	0.000	0.000	0.000	0.075
Mar	5.146	0.376	0.000	0.000	4.770	0.000	0.000	0.000	0.000	0.000	0.075
Apr	0.787	0.138	0.006	0.000	0.644	0.000	0.000	0.000	0.000	0.000	0.145
May	4.291	0.414	0.000	0.000	3.877	0.000	0.000	0.000	0.000	0.000	0.180
Jun	1.345	0.000	0.000	0.000	1.345	0.301	0.000	0.000	0.000	0.000	0.115
Sub-total	19.166	2.696	0.006	0.000	16.464	1.328	0.000	0.000	0.000	0.000	0.735
Jul	1.105	0.000	0.000	0.000	1.105	0.048	0.000	0.000	0.000	0.000	0.090
Aug	1.395	0.000	0.000	0.000	1.395	0.000	0.000	0.000	0.000	0.000	0.205
Sep	3.496	0.000	0.000	0.000	3.496	0.000	0.000	0.000	0.000	0.000	0.200
Oct	2.063	0.000	0.000	0.000	2.063	0.000	0.000	0.000	0.000	0.000	0.105
Nov	2.462	0.000	0.000	0.000	2.462	0.254	0.000	0.000	0.000	0.000	0.055
Dec	0.484	0.000	0.000	0.000	0.484	0.000	0.000	0.000	0.000	0.000	0.055
Total	30.171	2.696	0.006	0.000	27.469	1.630	0.000	0.000	0.000	0.000	1.445

Note:

1. Assume the density of soil fill is 2 ton/m^3.
2. Assume the density of rock and broken concrete is 2.5 ton/m^3.
3. Assume each truck of C&D wastes is 5m^3.
4. The inert C&D materials except slurry and bentonite are disposed at Tuen Mun 38.
5. The slurry and bentonite are disposed at Tseung Kwun O 137.
6. The non-inert C&D wastes are disposed at NENT.
7. Assume the density of metal is 7,850 kg/m^3.
8. Assume the density of plastic is 941 kg/m^3.
9. Assume the density of paper is 800 kg/m^3.

Name of Department: CEDD

Contract No.: CV/2012/09

Monthly Summary Waste Flow Table for 2020 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in m^3)	(in '000m^3)
Jan	0.280	0.000	0.000	0.000	0.280	0.000	0.000	0.000	0.000	0.000	0.015
Feb	0.069	0.000	0.000	0.000	0.069	0.000	0.000	0.000	0.000	0.000	0.020
Mar	0.089	0.000	0.000	0.000	0.089	0.000	0.000	0.000	0.000	0.000	0.025
Apr	0.298	0.000	0.000	0.000	0.298	0.000	0.000	0.000	0.000	0.000	0.010
May	0.167	0.000	0.000	0.000	0.167	0.000	0.000	0.000	0.000	0.000	0.015
Jun	0.004	0.000	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.010
Sub-total	0.907	0.000	0.000	0.000	0.907	0.000	0.000	0.000	0.000	0.000	0.095
Jul	0.164	0.000	0.000	0.000	0.164	0.000	0.000	0.000	0.000	0.000	0.010
Aug	0.103	0.000	0.000	0.000	0.103	0.000	0.000	0.000	0.000	0.000	0.010
Sep	0.149	0.000	0.000	0.000	0.149	0.000	0.000	0.000	0.000	0.000	0.010
Oct	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nov	0.004	0.000	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000
Dec	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005
Total	1.327	0.000	0.000	0.000	1.327	0.000	0.000	0.000	0.000	0.000	0.130

Note:

1. Assume the density of soil fill is 2 ton/m^3.
2. Assume the density of rock and broken concrete is 2.5 ton/m^3.
3. Assume each truck of C&D wastes is 5m^3.
4. The inert C&D materials except slurry and bentonite are disposed at Tuen Mun 38.
5. The slurry and bentonite are disposed at Tseung Kwun O 137.
6. The non-inert C&D wastes are disposed at NENT.
7. Assume the density of metal is 7,850 kg/m^3.
8. Assume the density of plastic is 941 kg/m^3.
9. Assume the density of paper is 800 kg/m^3.

Name of Department: CEDD

Contract No.: CV/2012/09

Monthly Summary Waste Flow Table for 2021 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in m^3)	(in '000m^3)
Jan	0.006	0.000	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.010
Feb	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mar	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Apr	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
May	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jun											
Sub-total	0.006	0.000	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.010
Jul											
Aug											
Sep											
Oct											
Nov											
Dec											
Total	0.006	0.000	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.010

Note:

1. Assume the density of soil fill is 2 ton/m^3.
2. Assume the density of rock and broken concrete is 2.5 ton/m^3.
3. Assume each truck of C&D wastes is 5m^3.
4. The inert C&D materials except slurry and bentonite are disposed at Tuen Mun 38.
5. The slurry and bentonite are disposed at Tseung Kwun O 137.
6. The non-inert C&D wastes are disposed at NENT.
7. Assume the density of metal is 7,850 kg/m^3.
8. Assume the density of plastic is 941 kg/m^3.
9. Assume the density of paper is 800 kg/m^3.

Appendix A

Name of Department: CEDD

Contract No.: NE/2014/02

Monthly Summary Waste Flow Table for 2017

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
2016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jan-17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Feb-17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mar-17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Apr-17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
May-17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jun-17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jul-17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Aug-17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sep-17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Oct-17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nov-17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dec-17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Forecast of Total Quantities of C&D Materials to be Generated from the Contract*										
Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
0.500	0.000	0.000	0.000	0.500	0.000	0.500	0.200	0.000	0.000	0.200

Notes :

(1) The performance targets are given in PS Clause 1.84(14).

(2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Sites.

(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging materials.

(4) Estimate 6m3 capacity per dump truck

Appendix A

Name of Department: CEDD

Contract No.: NE/2014/02

Monthly Summary Waste Flow Table for 2018

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
2016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
一月-18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
二月-18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
三月-18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
四月-18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
五月-18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
六月-18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
七月-18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
八月-18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
九月-18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
十月-18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012
十一月-18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.018
十二月-18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.030

Forecast of Total Quantities of C&D Materials to be Generated from the Contract*										
Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
0.500	0.000	0.000	0.000	0.500	0.000	0.500	0.200	0.000	0.000	0.200

Notes :

(1) The performance targets are given in PS Clause 1.84(14).

(2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Sites.

(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging materials.

(4) Estimate 6m3 capacity per dump truck

Appendix A

Name of Department: CEDD

Contract No.: NE/2014/02

Monthly Summary Waste Flow Table for 2016- 2019

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
2016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2018	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.049	0.000	0.000	0.030
Jan-19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Feb-19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mar-19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.035	0.000	0.000
Apr-19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
May-19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jun-19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jul-19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Aug-19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sep-19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Oct-19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nov-19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dec-19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.049	0.035	0.000	0.030

Forecast of Total Quantities of C&D Materials to be Generated from the Contract*										
Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
0.500	0.000	0.000	0.000	0.500	0.000	0.500	0.200	0.000	0.000	0.200

Notes :

(1) The performance targets are given in PS Clause 1.84(14).

(2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Sites.

(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging materials.

(4) Estimate 6m3 capacity per dump truck

Appendix A

Name of Department: CEDD

Contract No.: NE/2014/02

Monthly Summary Waste Flow Table for 2016- 2020

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
2016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2018	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.049	0.000	0.000	0.030
2019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.030
Jan-20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Feb-20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mar-20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Apr-20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
May-20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jun-20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jul-20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Aug-20											
Sep-20											
Oct-20											
Nov-20											
Dec-20											
Total	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.049	0.000	0.000	0.060

Forecast of Total Quantities of C&D Materials to be Generated from the Contract*										
Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
0.500	0.000	0.000	0.000	0.500	0.000	0.500	0.200	0.000	0.000	0.200

Notes :

(1) The performance targets are given in PS Clause 1.84(14).

(2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Sites.

(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging materials.

(4) Estimate 6m3 capacity per dump truck

Name of Department: CEDD

Monthly Summary Waste Flow Table for 2013

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
JAN	--	--	--	--	--	--	--	--	--	--	--
FEB	--	--	--	--	--	--	--	--	--	--	--
MAR	--	--	--	--	--	--	--	--	--	--	--
APRIL	0	0	0	0	0	0	0	0	0	0	0
MAY	0	0	0	0	0	0	0	0	0	0	0
JUN	0	0	0	0	0	0	0	0	0	0	0
Sub Total	0	0	0	0	0	0	0	0	0	0	0
JUL	0	0	0	0	0	0	0	0	0	0	0.005
AUG	0	0	0	0	0	0.771	0	0	0	0	0
SEP	0	0	0	0	0	0.415	1.38	0	0	0	0.085
OCT	0	0	0	0	0	24.770	7.02	0	0	0	1.060
NOV	0	0	0	0	0	18.325	1.89	0	0	0	0.890
DEC	**0**	**0**	**0**	**0**	**0**	**4.76**	**11.53**	**0**	**0**	**0**	**0.2**
Total	0	0	0	0	0	49.041	21.82	0	0	0	2.24

Notes:

(1) The performance targets are given in PS clause 6(14) above.

(2) The waste flow table shall also include C&D materials that are specified in the Contractor to be imported for use at the Site.

(3) Plastic refer to plastic bottles/containers, plastic sheets/foam from packaging material.

(4) The Contractor shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the Works, together with a breakdown of the nature

- Hard Rocks and Large Broken Concrete = Cannot be defined at this stage
- Imported Fill = Estimated by the Contractor
- Metal = Estimated by the Contractor
- Paper/cardboard packaging = Estimated by the Contractor
- Plastics = Estimated by the Contractor
- Chemical Waste = Estimated by the Contractor (Spent lubricating oil, assume density 0.9kg/L)
- Other, e.g. general refuse = Estimated by the Contractor

Name of Department: CEDD

Monthly Summary Waste Flow Table for 2014

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
JAN	0	0	0	0	0	16.571	0	0	0	0	0.85
FEB	0	0	0	0	0	18.672	0	0	0	0	0.005
MAR	0	0	0	0	0	2.968	0	0	0	6	0.01
APRIL	0	0	0	0	0	1.664	0.87	0.051	0	0	0.245
MAY	0	0	0	0	0	19.288	0	0	0	0	0.23
JUN	0	0	0	0	0	33.381	0	0.14	0	0	0
Sub Total	0	0	0	0	0	92.544	0.87	0.191	0	6	1.34
JUL	0	0	0	0	0	33.677	2.01	0.241	0	0	0.11
AUG	0	0	0	0	0	55.082	0	0	0	0	0.03
SEP	0	0	0	0	0	61.674	0	0	0	0	0.015
OCT	0	0	0	0	0	65.327	0	0.274	0	0	0.490
NOV	0	0	0	0	0	75.919	0	**0.051**	0	0	0.755
DEC	**2**	**2**	**0**	**0**	**0**	**11.274**	**7.74**	**0.247**	**0**	**2.376**	**0.555**
Total	2	2	0	0	0	395.50	10.62	1.004	0	8.376	3.295

Notes:

Name of Department: CEDD

Monthly Summary Waste Flow Table for 2015

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
JAN	0	0	0	0	0	33.3285	4.16	0.24	0	0	0.42
FEB	0	0	0	0	0	11.82	0.99	0	0	0	0.18
MAR	0	0	0	0	0	8.592	0	0	0	0	0.375
APRIL	0	0	0	0	0	12.81	0	0	0	0	0.04
MAY	0	0	0	0	0	**16.609**	**0**	**0.154**	**0**	**0**	**0**
JUN	0	0	0	0	0	13.676	0	0	0	0	0.015
Sub Total	0	0	0	0	0	96.8355	5.15	0.394	0	0	1.03
JUL	0	0	0	0	0	10.285	0	0	0	0	0.02
AUG	0	0	0	0	0	9.129	0	0	0	0	0.43
SEP	0	0	0	0	0	2.457	0	0	0	0	0.005
OCT	0	0	0	0	0	16.218	0	0.099	0	0	0.145
NOV	0	0	0	0	0	5.823	0	**0**	0	0	0.030
DEC	**0**	**0**	**0**	**0**	**0**	**0.283**	**0**	**0**	**0**	**0**	**0.07**
Total	0	0	0	0	0	141.03	5.15	0.493	0	0	1.73

Notes:

Name of Department: CEDD

Monthly Summary Waste Flow Table for 2016

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
JAN	0	0	0	0	0	0.235	0	0	0	0	0.06
FEB	0	0	0	0	0	0.141	0	0	0	0	0.045
MAR	0	0	0	0	0	0.1785	0	0	0	0	0.055
APRIL	0	0	0	0	0	0	0	0	0	0	0.03
MAY	0	0	0	0	0	0	0	0	0	0	0.015
JUN	0	0	0	0	0	0	0	0.062	0	0	0.01
Sub Total	0	0	0	0	0	0.5545	0	0.062	0	0	0.215
JUL	0	0	0	0	0	0	0	0	0	0	0.005
AUG	0	0	0	0	0	0	0	0	0	0	0.02
SEP											
OCT											
NOV											
DEC											
Total	0	0	0	0	0	0.55	0	0.062	0	0	0.24

Notes:

Monthly Summary Waste Flow Table for 2015 (year)

Name of Person completing the record: KM LUI (EO)

Project : Liangtang / Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works – Contract 6 Contract No.: CV/2013/08

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 m^3)
Jan											
Feb											
Mar											
Apr											
May											
Jun	0	0	0	0	0	0	0	0	0	0	0
Sub-total	0	0	0	0	0	0	0	0	0	0	0
Jul	0	0	0	0	0	0	0	0	0	0	0
Aug	27.831	0	5.11	0.516	22.205	0	0	0	0	0	1.783
Sep	35.826	0	1.517	1.629	32.680	0	0	0	0	0	0.434
Oct	37.112	0	0.113	5.356	31.643	0	0	0.045	0	14.08	0.185
Nov	16.853	0	0.717	2.456	13.680	4.720	0	0.102	0	18.20	0.594
Dec	51.601	0	11.077	6.827	33.697	2.529	0	0.147	0	0	0.08
Total	169.223	0	18.534	16.784	133.905	7.249	0	0.294	0	32.28	3.076

Notes: (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.

(2) Plastics refer to plastic bottles/containers, plastic sheets/ foam from packaging materials.

(3) Broken concrete for recycling into aggregates.

Monthly Summary Waste Flow Table for 2016 (year)

Name of Person completing the record: K.M. Lui (EO)

Project : Liangtang / Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works – Contract 6 Contract No.: CV/2013/08

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 m^3)
Jan	58.943	0	3.811	12.131	43.001	31.248	0	0	0	0	0.695
Feb	74.418	0	8.785	39.85	25.783	6.552	0	0.097	0	0	0.339
Mar	43.764	0	6.438	12.034	25.292	3.288	0	0.206	0.007	0	0.042
Apr	33.767	0	1.933	5.759	26.075	0	0	0.221	0	0	0.070
May	51.115	0	3.229	17.469	30.417	0.928	0	0.211	0	0	0.079
Jun	61.126	0	6.921	23.286	30.919	3.693	0	0.166	0	0	0.043
Sub-total	323.133	0	31.117	110.529	181.487	45.709	0	0.901	0.007	0	1.268
Jul	73.407	0	0.951	32.858	39.598	0.827	0	0.271	0	0	0.094
Aug	45.652	0	6.653	5.933	33.066	0	0	0.323	0	0	0.110
Sep	31.086	0	2.089	11.529	17.468	0.048	0	0.231	0	0	0.049
Oct	36.479	0	5.359	9.743	21.377	0.01	0	0.273	0	1.475	0.075
Nov	35.682	0	8.541	4.298	22.843	0.03	0	0.252	0	0	0.115
Dec	27.056	0	9.811	5.810	11.435	0.066	0	0	0	0	0.065
Total	741.718	0	83.055	197.484	461.179	53.939	0	2.545	0.007	33.755	4.852

Notes: (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.

(2) Plastics refer to plastic bottles/containers, plastic sheets/ foam from packaging materials.

(3) Broken concrete for recycling into aggregates.

Monthly Summary Waste Flow Table for _2017___ (year)

Name of Person completing the record: K.M. Lui (EO)

Project : Liangtang / Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works – Contract 6 Contract No.: CV/2013/08

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 m^3)
Jan	40.128	0	19.297	6.067	14.764	0	0	0.171	0	0	0.065
Feb	48.065	0	16.328	7.123	24.614	0	0	0.294	0	0	0.107
Mar	49.230	0	5.661	15.029	28.540	0	0	0.494	0	0	0.217
Apr	52.348	0	10.824	31.732	9.792	0	0	0.331	0	0.290	0.162
May	47.339	0	24.850	12.383	10.106	0	0	0	0	0	0.228
Jun	1.108	0	0	0	1.108	0	0	0.285	0	0	0.258
Sub-total	238.218	0	76.960	72.334	88.92418	0	0	1.575	0	0.29	1.037
Jul	0.934	0	0	0	0.934	0	0	0.360	0	0	0.288
Aug	1.656	0	0.432	0	1.224	0	0	0.291	0	0	0.510
Sep	4.210	0	1.386	0	2.824	0	0	0.339	0	0	0.513
Oct	0.970	0	0.520	0	0.450	0	0	0.221	0	0	0.515
Nov	4.523	0	0	0	4.523	0	0	0.820	0	0	0.418
Dec	4.721	0	0.238	0.017	4.466	0	0	0	0	0	0.618
Total	998.394	0	163.227	270.643	564.52455	53.939	0	6.379	0.007	34.045	8.751

Notes: (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.

(2) Plastics refer to plastic bottles/containers, plastic sheets/ foam from packaging materials.

(3) Broken concrete for recycling into aggregates.

Monthly Summary Waste Flow Table for 2018 (year)

Name of Person completing the record: K.M. Lui (EO)

Project : Liangtang / Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works – Contract 6 Contract No.: CV/2013/08

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 m^3)
Jan	4.152	0	0.629	1.947	1.576	0	0	0.240	0	0	0.892
Feb	2.740	0	0.867	0.544	1.329	0	0	0.402	0	0	0.578
Mar	3.269	0	1.581	0.969	0.719	0	0	0.380	0	0	0.725
Apr	2.901	0	0.255	1.955	0.691	0	0	0.360	0	0	0.921
May	3.194	0	0.068	1.964	1.162	0	0	0.384	0	0	1.340
Jun	2.206	0	0	0.9775	1.228	0	0	0.270	0	0	0.714
Sub-total	18.462	0.000	3.400	8.357	6.705	0.000	0.000	2.036	0.000	0.000	5.170
Jul	1.512	0	0	0.816	0.696	0	0	1.608	0	0	0.846
Aug	2.562	0	0	1.989	0.573	0.886	0	0.360	0	0	0.866
Sep	0.997	0	0	0.552	0.445	3.070	0	0.225	0	0	0.633
Oct	1.896	0	0	1.386	0.510	13.192	0	0.188	0	0	0.855
Nov	0.310	0	0	0	0.310	15.028	0	0.345	0	0	0.929
Dec	12.477	0	0	0.010	12.467	9.197	0	0	0	0	0.800
Total	1036.609	0.000	166.627	283.753	586.231	95.312	0.000	11.141	0.007	34.045	18.850

Notes: (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.

(2) Plastics refer to plastic bottles/containers, plastic sheets/ foam from packaging materials.

(3) Broken concrete for recycling into aggregates.

Monthly Summary Waste Flow Table for 2019 (year)

Name of Person completing the record: K.M. Lui (EO)

Project : Liangtang / Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works – Contract 6 Contract No.: CV/2013/08

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 m^3)
Jan	25.725	0	0	0.385	16.126	9.214	0	0.233	0	0	0.521
Feb	17.959	0	0	0.280	11.168	6.511	0	0	0	0	0.278
Mar	11.076	0	0	0.842	10.234	0	0	0.339	0	0	0.580
Apr	7.285	0	0	0.689	6.596	0	0	0.463	0	0	0.389
May	4.090	0	0	0.009	4.081	0	0	0	0	0	0.468
Jun	1.176	0	0	0.315	0.861	0	0	0.270	0	0	0.307
Sub-total	67.311	0.000	0.000	2.520	49.066	15.725	0.000	1.305	0.000	0.000	2.543
Jul	7.846	0	0	1.165	6.681	0	0	0.252	0	0	0.220
Aug	10.670	0	0	0	10.670	0	0	0.256	0	0	0.183
Sep	4.592	0	0	0	4.592	0	0	0.191	0	0	0.160
Oct	3.738	0	0	0	3.738	0	0	0.264	0	0	0.381
Nov	10.129	0	0	0	10.129	0	0	0.409	0	0	0.471
Dec	14.606	0	0	0.572	14.034	0	0	0	0	0	0.285
Total	1155.501	0.000	166.627	288.010	685.141	111.037	0.000	13.818	0.007	34.045	23.093

Notes: (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.

(2) Plastics refer to plastic bottles/containers, plastic sheets/ foam from packaging materials.

(3) Broken concrete for recycling into aggregates.

Monthly Summary Waste Flow Table for 2020 (year)

Name of Person completing the record: K.M. Lui (EO)

Project : Liangtang / Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works – Contract 6 Contract No.: CV/2013/08

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 m^3)
Jan	10.280	0	0	0	10.280	0	0	0	0.22	0	0.377
Feb	21.439	0	0	0	21.439	0	0	0	0	0	0.522
Mar	7.623	0	0	0	7.623	0	0	0	0	0	0.417
Apr	1.567	0	0	0	1.567	0	0	0.310	0	0	0.419
May	3.590	0	0	0	3.590	0	0	0	0	0	0.477
Jun	1.390	0	0	0	1.390	0	0	0	0	0	0.218
Sub-total	45.889	0.000	0.000	0.000	45.889	0.000	0.000	0.310	0.220	0.000	2.430
Jul	1.336	0	0	0	1.336	0	0	0.325	0	0	0.360
Aug	2.876	0	0	0	2.876	0	0	0	0	0	0.217
Sep	1.045	0	0	0	1.045	0	0	0.282	0	0	0.240
Oct	0.321	0	0	0	0.321	0	0	0	0	0	0.187
Nov	0.379	0	0	0	0.379	0	0	0	0	0	0.085
Dec	1.322	0	0	0	1.322	0	0	0	0	0	0.077
Total	53.168	0.000	0.000	0.000	53.168	0.000	0.000	0.917	0.220	0.000	3.596

Notes: (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.

(2) Plastics refer to plastic bottles/containers, plastic sheets/ foam from packaging materials.

(3) Broken concrete for recycling into aggregates.

Monthly Summary Waste Flow Table for _2021__ (year)

Name of Person completing the record: K.M. Lui (EO)

Project : Liangtang / Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works – Contract 6 Contract No.: CV/2013/08

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 m^3)
Jan	0.023	0	0	0	0.023	0	0	0	0	0	0.059
Feb	0.058	0	0	0	0.058	0	0	0.401	0	0	0.029
Mar	0.018	0	0	0	0.018	0	0	0.311	0	0	0.009
Apr	0.000	0	0	0	0	0	0	0	0	0	0.006
May	0.021	0	0	0	0.021	0	0	0	0	0	0.010
Jun	0.042	0	0	0	0.042	0	0	0.394	0	0	0.014
Sub-total	0.162	0.000	0.000	0.000	0.162	0.000	0.000	1.106	0.000	0.000	0.127
Jul	0.087	0	0	0	0.087	0	0	0	0	0	0.004
Aug	0.039	0	0	0	0.039	0	0	0	0	0	0.007
Sep	0.299	0	0	0	0.299	0	0	0.34	0	0	0.006
Oct	0.371	0	0	0	0.371	0	0	0	0	0	0.006
Nov	0.724	0	0	0	0.724	0	0	0	0	0	0.016
Dec	0.016	0	0	0	0.016	0	0	0.26	0	0	0.008
Total	1.698	0.000	0.000	0.000	1.698	0.000	0.000	1.706	0.000	0.000	0.174

Notes: (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.

(2) Plastics refer to plastic bottles/containers, plastic sheets/ foam from packaging materials.

(3) Broken concrete for recycling into aggregates.

Monthly Summary Waste Flow Table for 2022 (year)

Name of Person completing the record: K.M. Lui (EO)

Project : Liangtang / Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works – Contract 6 Contract No.: CV/2013/08

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 m^3)
Jan	0.006	0	0	0	0.006	0	0	0	0	0	0.004
Feb	0.392	0	0	0	0.392	0	0	0	0	0	0.001
Mar	0.293	0	0	0	0.293	0	0	0	0	0	0.001
Apr	0.000	0	0	0	0	0	0	0	0	0	0.006
May	0.000	0	0	0	0	0	0	0	0	0	0.001
Jun	0.045	0	0	0	0.045	0	0	0	0	0	0.000
Sub-total	0.736	0.000	0.000	0.000	0.736	0.000	0.000	0.000	0.000	0.000	0.013
Jul	0.000	0	0	0	0	0	0	0	0	0	0.007
Aug	0.215	0	0	0	0.215	0	0	0	0	0	0.177
Sep	1.085	0	0	0	1.085	0	0	0	0	0	0.162
Oct	2.721	0	0	0	2.721	0	0	0	0	0	0.019
Nov	1.835	0	0	0	1.835	0	0	0	0	0	0.001
Dec	1.001	0	0	0	1.001	0	0	0	0	0	0
Total	7.593	0.000	0.000	0.000	7.593	0.000	0.000	0.000	0.000	0.000	0.379

Notes: (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.

(2) Plastics refer to plastic bottles/containers, plastic sheets/ foam from packaging materials.

(3) Broken concrete for recycling into aggregates.

Monthly Summary Waste Flow Table for 2023 (year)

Name of Person completing the record: K.M. Lui (EO)

Project : Liangtang / Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works – Contract 6 Contract No.: CV/2013/08

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 m^3)
Jan	0.016	0	0	0	0.016	0	0	0	0	0	0.002
Feb	0.124	0	0	0	0.124	0	0	0	0	0	0
Mar	0	0	0	0	0	0	0	0	0	0	0
Apr	0	0	0	0	0	0	0	0	0	0	0.009
May	0	0	0	0	0	0	0	0	0	0	0
Jun	-	-	-	-	-	-	-	-	-	-	-
Sub-total	0.140	0.000	0.000	0.000	0.140	0.000	0.000	0.000	0.000	0.000	0.011
Jul	-	-	-	-	-	-	-	-	-	-	-
Aug	-	-	-	-	-	-	-	-	-	-	-
Sep	-	-	-	-	-	-	-	-	-	-	-
Oct	-	-	-	-	-	-	-	-	-	-	-
Nov	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-
Total	0.140	0.000	0.000	0.000	0.140	0.000	0.000	0.000	0.000	0.000	0.011

Notes: (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.

(2) Plastics refer to plastic bottles/containers, plastic sheets/ foam from packaging materials.

(3) Broken concrete for recycling into aggregates.

Appendix I

MONTHLY SUMMARY WASTE FLOW TABLE

Name of Department: CEDD

Contract Title: Liantang/ Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works – Contract 7

Contract No.: NE/2014/03

Monthly Summary Waste Flow Table for 2016 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of Inert C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/cardboard packaging	Plastic (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m3)
Jan	0	0	0	0	0	0	0	0	0	0	0
Feb	0.16	0	0	0	0.16	0	0	0	0	0	0
Mar	0.135	0	0	0	0.135	0	0	0	0	0	0.005
Apr	0.313	0	0	0	0.313	0	0	0	0	0	0.005
May	0.505	0	0	0	0.505	0	0	0	0	0	0
June	0.613	0	0	0	0.613	0	0	0.005	0.001	0	0
Sub-total	1.726	0	0	0	1.726	0	0	0.005	0.001	0	0.01
July	0.207	0	0	0	0.207	0	0	0.047	0.001	0	0
Aug	0.464	0	0	0	0.464	0	0	0.03	0.001	0	0
Sept	0.207	0	0	0	0.207	0	0.1	0.05	0.001	0	0
Oct	0	0	0	0	0	0	0.2	0.04	0.001	0	0
Nov	0	0	0	0	0	0	0.1	0.04	0.001	0	0.005
Dec	0	0	0	0	0	0	0.1	0.04	0.001	0	0.005
Total	2.604	0	0	0	2.604	0	0.5	0.252	0.007	0	0.02

Notes: (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
(2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.

Appendix I

MONTHLY SUMMARY WASTE FLOW TABLE

Name of Department: CEDD

Contract Title: Liantang/ Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works – Contract 7

Contract No.: NE/2014/03

Monthly Summary Waste Flow Table for 2017 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of Non-Inert C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/cardboard packaging	Plastic (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m3)
Jan	0	0	0	0	0	0	0.1	0.05	0.001	0	0.01
Feb	0	0	0	0	0	0	0.5	0.04	0.001	0	0.015
Mar	0.822	0	0	0	0.822	0	2.2	0.04	0.001	0	0.025
Apr	1.473	0	0	0	1.473	0	3.1	0.04	0.001	0	0.02
May	1.129	0	0	0	1.129	0	4.5	0.04	0.001	0	0.03
June	0.317	0	0	0	0.317	0	4	0.04	0.001	0	0.04
Sub-total	3.741	0	0	0	3.741	0	14.4	0.25	0.006	0	0.14
July	0.931	0	0	0	0.931	0	2	0.04	0.001	0	0.025
Aug	0	0	0	0	0	0	2.5	0.04	0.001	0	0.01
Sept	0.068	0	0	0	0.068	0	2	0.04	0.001	0	0.01
Oct	0.381	0	0	0	0.381	0	11.7	0.04	0.001	0	0.008
Nov	2.036	0	0	0	2.036	0	29.7	0.1	0.001	0	0.03
Dec	1.382	0	0	0	1.382	0	49.8	0.1	0.001	0	0.05
Total	8.53928	0	0	0	8.53928	0	112.1	0.61	0.012	0	0.273

Notes: (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
(2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.

Appendix I

MONTHLY SUMMARY WASTE FLOW TABLE

Name of Department: CEDD

Contract Title: Liantang/ Heung Yuen Wai Boundary Control Point
Site Formation and Infrastructure Works – Contract 7

Contract No.: NE/2014/03

Monthly Summary Waste Flow Table for 2018 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of Non-Inert C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/cardboard packaging	Plastic (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m3)
Jan	0.015	0	0	0	0.015	0	14.5	0.5	0.001	0	0.15
Feb	0	0	0	0	0	0	9	0.18	0.001	0	0.13
Mar	0.005	0	0	0	0.005	0	6	0.15	0.001	0	0.2
Apr	1.1	0	0	0	1.1	0	6.6	0.22	0.001	0	0.3
May	0.077	0	0	0	0.077	0	1.3	0.15	0.001	0	0.1
June	0	0	0	0	0	0	6	0.4	0.001	0	0.05
Sub-total	1.197	0	0	0	1.197	0	43.4	1.6	0.006	0	0.93
July	0.5	0	0	0	0.5	0	2.5	0.1	0.001	0	0.2
Aug	0.047	0	0	0	0.047	0	5.8	0.1	0.001	0	0.1
Sept	0.041	0	0	0	0.041	0	1.1	0.1	0.001	0	0.1
Oct	0.047	0	0	0	0.047	0	1.5	0.2	0.001	0	0.2
Nov	0	0	0	0	0	0	0.3	0.1	0.001	0	0.2
Dec	0	0	0	0	0	0	0.2	0.1	0.001	0	0.27
Total	1.832	0	0	0	1.832	0	54.8	2.3	0.012	0	2.000

Notes: (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
(2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.

Appendix I

MONTHLY SUMMARY WASTE FLOW TABLE

Name of Department: CEDD

Contract Title: Liantang/ Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works – Contract 7

Contract No.: NE/2014/03

Monthly Summary Waste Flow Table for 2019 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of Non-Inert C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/cardboard packaging	Plastic (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m3)
Jan	1.919	0.95	0	0	1.919	0	6.7	0.1	0.001	0	0.1
Feb	2.035	1.386	0	1.386	0.649	0	1.2	0.1	0.001	0	0.1
Mar	0.591	0.282	0	0.282	0.309	0	4.7	0.1	0.001	0	0.1
Apr	1.729	0.335	0	0.335	1.394	0	7.1	0.1	0.001	0	0.3
May	2.076	0	0	0	2.076	0	0.4	0.1	0.001	0	0.1
June	0.845	0	0	0	0.845	0	0.1	0.1	0.001	0	0.1
Sub-total	9.195	2.953	0	2.003	7.192	0	20.2	0.6	0.006	0	0.8
July	0.381	0	0	0	0.381	0	0.1	0.1	0.001	0	0.1
Aug	0.068	0	0	0	0.068	0	0.1	0.1	0.001	0	0.1
Sept	0.721	0	0	0	0.721	0	0	0	0	0	0.1
Oct	0.023	0	0	0	0.023	0	0	0	0	0	0.1
Nov	0	0	0	0	0	0	0	0	0	0	0.1
Dec	0.321	0	0	0	0.321	0	0.3	0.1	0.001	0	0.1
Total	10.709	2.953	0	2.003	8.706	0	20.7	0.9	0.009	0	1.400

Notes: (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
(2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.

Monthly Summary Waste Flow Table for _2020___ (year)

Name of Department:__CEDD

Contract Title : Liangtang / Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works – Contract 7 Contract No.: NE/2014/03

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 m^3)
Jan	0	0	0	0	0	0	0	0	0	0	0.1
Feb	0	0	0	0	0	0	0	0	0	0	0
Mar	0	0	0	0	0	0	0	0	0	0	0
Apr	0	0	0	0	0	0	0	0	0	0	0
May	0	0	0	0	0	0	0	0	0	0	0
Jun	0	0	0	0	0	0	0	0	0	0	0
Sub-total	0	0	0	0	0	0	0	0	0	0	0.1
Jul	0	0	0	0	0	0	0	0	0	0	0
Aug											
Sep											
Oct											
Nov											
Dec											
Total	0	0	0	0	0	0	0	0	0	0	0.1

Notes: (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
(2) Plastics refer to plastic bottles/containers, plastic sheets/ foam from packaging materials.

Appendix K

Complaint Log

Environmental Complaint Log for CE 45/2008

Log ref.	Date of complaint	Complaint route	Reference no.	Contract no.	Complaint nature	Investigation fining	Status
1							
2							
3	22 January 2014	CEDD	CE 45/2008 - 03	Contract 5	Construction Dust	Non-project related	Interim IR was submitted to EPD on 13 February 2014 and included in EM&A Report – Jan 2014
4	16 May 2014	Public	CE 45/2008 - 04	Contract 3	Muddy water discharge	Non-project related	Interim IR was submitted to EPD on 11 June 2014 and included in EM&A Report – May 2014
4a	16 May 2014	EPD	CE 45/2008 - 04a	Contract 2	Muddy water discharge	Project related	Interim IR was submitted to EPD on 11 June 2014 and included in EM&A Report – May 2014
5	27 June 2014	Public	CE 45/2008 - 05	Contract 3	General / Water	Non-project related	Interim IR was submitted to EPD on 14 July 2014 and included in EM&A Report – June 2014
6	27 June 2014	DSD	CE 45/2008 - 06	Contract 2	Muddy water discharge	Project related	Interim IR was submitted to EPD on 25 July 2014 and included in EM&A Report – June 2014
7	17 July 2014	Public	CE 45/2008 - 07	Contract 2	Dust	Project related	Interim IR was submitted to EPD on 14 August 2014 and included in EM&A Report – August 2014
8	3 November 2014	Public	CE 45/2008 - 08	Contract 2	Dust	Project related	Interim IR was submitted to EPD on 26 November 2014 and included in EM&A Report – November 2014
9	21 November 2014	EPD	CE 45/2008 - 09	Contract 3	Water Quality	Non-project related	Interim IR was submitted to EPD on 9 December 2014 and included in EM&A Report – November 2014
10	11 November 2014	RE	CE 45/2008 - 10	Contract 2	Noise and Dust	Non-project related	Interim IR was submitted to EPD on 10 December 2014 and included in EM&A Report – November 2014
11	16 December 2014	RE	CE 45/2008 - 11	Contract 2	Noise	Project related	Interim IR was submitted to EPD on 23 December 2014 and included in EM&A Report – December 2014
12	16 December 2014	EPD	CE 45/2008 - 12	Contract 2	Dust	Non-project related	Interim IR was submitted to EPD on 24 December 2014 and included in EM&A Report – December 2014
13	23 December 2014	EPD	CE 45/2008 - 13	Contract 2	Soil/ muddy water	Non-project related	Interim IR was submitted to EPD on 8 January 2015 and included in EM&A Report – December 2014

Log ref.	Date of complaint	Complaint route	Reference no.	Contract no.	Complaint nature	Investigation fining	Status
14	22 December 2014	EPD	CE 45/2008 - 14	Contract 5	Dust	Non-project related	Interim IR was submitted to EPD on 8 January 2015 and included in EM&A Report – December 2014
15	12 January 2015	1823	CE 45/2008 - 15	Contract 2	Dust	Non-project related	Interim IR was submitted to EPD on 23 January 2015 and included in EM&A Report – January 2015
16	27 January 2015	1823	CE 45/2008 - 16	Contract 2	Dust	Non-project related	Interim IR was submitted to EPD on 4 February 2015 and included in EM&A Report – January 2015
17	28 January 2015	EPD	CE 45/2008 - 17	Contract 2	Soil/ muddy water	Non-project related	Interim IR was submitted to EPD on 6 February 2015 and included in EM&A Report – January 2015
18	22 May 2015	EPD	CE 45/2008 - 18	Contract 2	Soil/ muddy water	Non-project related	Interim IR was submitted to EPD on 18 June 2015 and included in EM&A Report – June 2015
19	9 July 2015	DSD	CE 45/2008 - 19	Contract 2	Soil/ muddy water	Non-project related	Interim IR was submitted to EPD on 29 July 2015 and included in EM&A Report – July 2015
20	9 November 2015	CEDD / EPD / 1823	CE 45/2008 - 20	Contract 6	Soil/ muddy water	Project related	Interim IR was submitted to EPD on 16 November 2015 and included in EM&A Report – November 2015
21	1 December 2015	EPD	CE 45/2008 - 21	Contract 6	Dust	Project related	Interim IR was submitted to EPD on 8 January 2016 and included in EM&A Report – December 2015
22	16 December 2015	EPD	CE 45/2008 - 22	Contract 6	Muddy Water Discharge	Non-project related	Interim IR was submitted to EPD on 22 January 2016 and included in EM&A Report – January 2016
23	4 January 2016	RE	CE 45/2008 - 23	Contract 6	Muddy Water	Project related	Interim IR was submitted to EPD on 12 January 2016 and included in EM&A Report – January 2016
24	14 January 2016	EPD	CE 45/2008 - 24	Contract 6	Soil/ muddy water	Project related	Interim IR was submitted to EPD on 16 February 2016 and included in EM&A Report – January 2016
25	20 January 2016	EPD	CE 45/2008 - 25	Contract 6	Soil/ muddy Water	Project related	Interim IR was submitted to EPD on 4 February 2016 and included in EM&A Report – January 2016
26	18 February 2016	1823	CE 45/2008 - 26	Contract 3	Noise	Non-project related	Interim IR was submitted to EPD on 25 February 2016 and included in EM&A Report – February 2016

Log ref.	Date of complaint	Complaint route	Reference no.	Contract no.	Complaint nature	Investigation fining	Status
27	23 February 2016	CEDD	CE 45/2008 - 27	Contract 6	Soil/ Debris	Non-project related	Interim IR was submitted to EPD on 29 February 2016 and included in EM&A Report – February 2016
28	22 February 2016	EPD	CE 45/2008 - 28	Contract 6	Turbid Water	Project related	Interim IR was submitted to EPD on 10 March 2016 and included in EM&A Report – February 2016
29	8 March 2016	1823	CE 45/2008 - 29	Contract 2	Dust	Non-project related	Interim IR was submitted to EPD on 12 April 2016 and included in EM&A Report – March 2016
30	8 April 2016	CEDD	CE 45/2008 - 30	Contract 6	Wastewater	Non-project related	Interim IR was submitted to EPD on 18 May 2016 and included in EM&A Report – May 2016
31	19 April 2016	HYD / CEDD	CE 45/2008 - 31	Contract 6	Wastewater	Not Valid	Interim IR was submitted to EPD on 31 May 2016 and included in EM&A Report – May 2016
32	21 April 2016	1823 / EPD / CEDD	CE 45/2008 - 32	Contract 6	Dust and muddy water	Non-project related	Interim IR was submitted to EPD on 17 June 2016 and included in EM&A Report – June 2016
33	18 April 2016	CEDD	CE 45/2008 - 33	Contract 6	Wastewater	Non-project related	Interim IR was submitted to EPD on 16 May 2016 and included in EM&A Report – May 2016
34	28 April 2016	CEDD	CE 45/2008 - 34	Contract 6	Muddy Water	Not evidenced	Interim IR was submitted to EPD on 21 May 2016 and included in EM&A Report – June 2016
35	3 May 2016	EPD	CE 45/2008 - 35	Contract 2	Wastewater	Project related	Interim IR was submitted to EPD on 8 June 2016 and included in EM&A Report – May 2016
36	28 May 2016	1823	CE 45/2008 - 36	Contract 2	Dust	Non-project related	Interim IR was submitted to EPD on 13 June 2016 and included in EM&A Report – May 2016
37	28 May 2016	1823	CE 45/2008 - 37	Contract 6	Dust	Non-project related	Interim IR was submitted to EPD on 17 June 2016 and included in EM&A Report – June 2016
38	unknown	CEDD	CE 45/2008 - 38	Contract 2	Noise	Non-project related	Interim IR was submitted to EPD on 5 July 2016 and included in EM&A Report – June 2016
39	31 May 2016	1823	CE 45/2008 - 39	Contract 2	Water	Not evidenced	Interim IR was submitted to EPD on 13 June 2016 and included in EM&A Report – May 2016

Log ref.	Date of complaint	Complaint route	Reference no.	Contract no.	Complaint nature	Investigation fining	Status
40	10 June 2016	1823	CE 45/2008 - 40	Contract 5, Contract 6, Contract 7	Dust	Non-project related	Interim IR was submitted to EPD on 20 June 2016 and included in EM&A Report – June 2016
41	20 June 2016	1823	CE 45/2008 - 41	Contract 5, Contract 6, Contract 7	Noise	Non-project related	Interim IR was submitted to EPD on 28 June 2016 and included in EM&A Report – June 2016
42	20 June 2016	ICC	CE 45/2008 - 42	Contract 6	Muddy water	Non-project related	Interim IR was submitted to EPD on 13 July 2016 and included in EM&A Report – June 2016
43	10 July 2016	1823	CE 45/2008 - 43	Contract 2, Contract 6	Dust and Muddy water	Non-project related	Interim IR was submitted to EPD on 21 July 2016 and included in EM&A Report – July 2016
44	13 July 2016	EPD	CE 45/2008 - 44	Contract 6	Muddy water	Non-project related	Interim IR was submitted to EPD on 25 July 2016 and included in EM&A Report – July 2016
45	4 July 2016	ICC	CE 45/2008 - 45	Contract 6	Muddy water	Non-project related	Interim IR was submitted to EPD on 21 July 2016 and included in EM&A Report – July 2016
46	22 July 2016	EPD	CE 45/2008 - 46	Contract 2, Contract 6	Muddy water	Non-project related	Interim IR was submitted to EPD on 16 August 2016 and included in EM&A Report – August 2016
47	24 August 2016	DSD	CE 45/2008 - 47	Contract 6	Water Quality	Non-project related	Interim IR was submitted to EPD on 5 September 2016 and included in EM&A Report – August 2016
48	9 September 2016	1823	CE 45/2008 - 48	Contract 6	wastewater	Project related	Interim IR was submitted to EPD on 23 September 2016 and included in EM&A Report – September 2016
49	20 September 2016	EPD	CE 45/2008 - 49	Contract 2, Contract 6	Muddy water	Non-project related	Interim IR was submitted to EPD on 3 October 2016 and included in EM&A Report – September 2016
50	20 October 2016	EPD	CE 45/2008 - 50	Contract 6	Dust	Project related	Interim IR was submitted to EPD on 7 November 2016 and included in EM&A Report – October 2016
51	28 October 2016	1823	CE 45/2008 - 51	Contract 2, Contract 6	Muddy water	Non-project related	Interim IR was submitted to EPD on 8 November 2016 and included in EM&A Report – October 2016

Log ref.	Date of complaint	Complaint route	Reference no.	Contract no.	Complaint nature	Investigation fining	Status
52	4 November 2016	1823	CE 45/2008 - 52	Contract 2, Contract 6	Muddy water	Non-project related	Interim IR was submitted to EPD on 18 November 2016 and included in EM&A Report – November 2016
53	31 October 2016 and 2 November 2016	1823	CE 45/2008 - 53	Contract 7	Noise	Non-project related	Interim IR was submitted to EPD on 7 December 2016 and included in EM&A Report – November 2016
54	16 November 2016	1823	CE 45/2008 - 54	Contract 6	Noise	Not evidenced	Interim IR was submitted to EPD on 5 December 2016 and included in EM&A Report – November 2016
55	19 December 2016	project hotline	CE 45/2008 - 55	Contract 6	Noise	Project related	Interim IR was submitted to EPD on 5 January 2017 and included in EM&A Report – December 2016
56	3 January 2017	DSD	CE 45/2008 - 56	Contract 1	Water quality	Project related	Interim IR was submitted to EPD on 8 February 2017 and included in EM&A Report – January 2017
57	16 January 2017	1823	CE 45/2008 - 57	Contract 2 and Contract 6	Muddy water	Non-project related	Interim IR was submitted to EPD on 23 January 2017 and included in EM&A Report – January 2017
58	25 January 2017	EPD	CE 45/2008 - 58	Contract 2	Water quality	Project related	Interim IR was submitted to EPD on 2 March 2017 and included in EM&A Report – February 2017
59	January 2017	EPD	CE 45/2008 - 59	Contract 6	Noise	Invalid	Interim IR was submitted to EPD on 14 March 2017 and included in EM&A Report – March 2017
60	6 and 7 March 2017	RE	CE 45/2008 - 60	Contract 2	Noise	Invalid	Interim IR was submitted to EPD on 27 April 2017 and included in EM&A Report – April 2017
61	24 March 2017	1823	CE 45/2008 - 61	Contract 3	Noise	Non-project related	Interim IR was submitted to EPD on 6 April 2017 and included in EM&A Report – March 2017
62	1 April 2017	Contract 2's hotline	CE 45/2008 - 62	Contract 2	Noise	Invalid	Interim IR was submitted to EPD on 8 May 2017 and included in EM&A Report – April 2017
63	10 April 2017	1823	CE 45/2008 - 63	Contract 2 and Contract 6	Muddy water	Non-project related	Interim IR was submitted to EPD on 2 May 2017 and included in EM&A Report – April 2017

Log ref.	Date of complaint	Complaint route	Reference no.	Contract no.	Complaint nature	Investigation fining	Status
64	4 August 2017	EPD	CE 45/2008 - 64	Contract 2	Water quality	Project related	Interim IR was submitted to EPD on 11 August 2017 and included in EM&A Report – July 2017
65	30 August 2017	Contract 6's Project Hotline	CE 45/2008 - 65	Contract 6	Muddy water and Dust	Project related	Interim IR was submitted to EPD on 2 November 2017 and included in EM&A Report – October 2017
66	8 September 2017	Contract 6's Project Hotline	CE 45/2008 - 66	Contract 7	Muddy water and Dust	Project related	Interim IR was submitted to EPD on 9 November 2017 and included in EM&A Report – October 2017
67	by 1823 on 23 September 2017 and referred to AECOM on 25 October 2017	1823	CE 45/2008 - 67	Contract 6	Muddy water and Dust	Invalid	Interim IR was submitted to EPD on 13 November 2017 and included in EM&A Report – October 2017
68	7 and 21 November 2017	1823	CE 45/2008 - 68	Contract 2 and Contract 6	Dust	Non-project related	Interim IR was submitted to EPD on 24 November 2017 and included in EM&A Report – November 2017
69	27 September 2017	Police Hotline	CE 45/2008 – 69a	Contract 2	Noise	invalid	Interim IR was submitted to EPD on 30 November 2017 and included in EM&A Report – November 2017
70	27 December 2017	1823	CE 45/2008 – 69b	Contract 3	Dust	Project related	Interim IR was submitted to EPD on 4 January 2018 and included in EM&A Report – December 2017
71	28 December 2017	CEDD	CE 45/2008 – 70	Contract 6	Noise	Project related	Interim IR was submitted to EPD on 27 February 2018 and included in EM&A Report – February 2018
72	24 January 2018	EPD	CE 45/2008 – 71	Contract 2	Waste Management	Project related	Interim IR was submitted to EPD on 6 March 2018 and included in EM&A Report – February 2018
73	4 March 2018	1823	CE 45/2008 – 72	Contract 7	Muddy water and Dust	Project related	Interim IR was submitted to EPD on 15 March 2018 and included in EM&A Report – March 2018
74	4 March 2018	1823	CE 45/2008 – 73	Contract 6	Muddy water and Dust	Non-project related	Interim IR was submitted to EPD on 15 March 2018 and included in EM&A Report – March 2018
75	28 February 2018	Project Hotline	CE 45/2008 – 74	Contract 2 and Contract 6	Muddy water	Non-project related	Interim IR was submitted to EPD on 19 March 2018 and included in EM&A Report – March 2017

Log ref.	Date of complaint	Complaint route	Reference no.	Contract no.	Complaint nature	Investigation fining	Status
76	13 April 2018	EPD	CE 45/2008 – 75	Contract 2	Water quality	Project related	Interim IR was submitted to EPD on 28 May 2018 and included in EM&A Report – May 2018
77	15 August 2018	1823	CE 45/2008 – 76	Contract 6	Muddy water	Project related	Interim IR was submitted to EPD on 12 September 2018 and included in EM&A Report – August 2018
78	5 October 2018	Project hotline	CE 45/2008 – 77	Contract 2 and Contract 6	Dust	Non-project related	Interim IR was submitted to EPD on 22 October 2018 and included in EM&A Report – October 2018
79	5 October 2018	1823	CE 45/2008 – 78	Contract 6	Wastewater and Noise	Partly Project related	Interim IR was submitted to EPD on 4 November 2018 and included in EM&A Report – October 2018
80	25 October 2018	1823	CE 45/2008 – 79	Contract 6	Dust	Non-project related	Interim IR was submitted to EPD on 5 November 2018 and included in EM&A Report – October 2018
81	19 November 2018	EPD	CE 45/2008 – 80	Contract 2	Dust	Project related	Interim IR was submitted to EPD on 27 December 2018 and included in EM&A Report – December 2018
82	13 December 2018	1823	CE 45/2008 - 81	Contract 6	Dust	Project related	Interim IR was submitted to EPD on 9 January 2019 and included in EM&A Report – December 2018
83	19 August 2018	1823	CE 45/2008 – 82	Contract 6	Dust	Non-project related	Interim IR was submitted to EPD on 8 February 2019 and included in EM&A Report – January 2019
84	29 November 2018	1823	CE 45/2008 – 83	Contract 6, Contract 7	Dust and wastewater	Non-project related	Interim IR was submitted to EPD on 25 February 2019 and included in EM&A Report – February 2019
85	30 January 2019	EPD	CE 45/2008 – 84	Contract 3	Dust	Non-project related	Interim IR was submitted to EPD on 21 February 2019 and included in EM&A Report – February 2019
86	28 January 2019	EPD	CE 45/2008 – 85	Contract 3	Noise	Non-project related	Interim IR was submitted to EPD on 8 March 2019 and included in EM&A Report – February 2019
87	21 February 2019	1823	CE 45/2008 – 86	Contract 3	Dust and wastewater	Project related	Interim IR was submitted to EPD on 8 March 2019 and included in EM&A Report – February 2019
88	12 March 2019	1823	CE 45/2008 – 87	Contract 3	Wastewater	Project related	Interim IR was submitted to EPD on 9 April 2019 and included in EM&A Report – March 2019

Log ref.	Date of complaint	Complaint route	Reference no.	Contract no.	Complaint nature	Investigation fining	Status
89	13 March 2019	1823	CE 45/2008 – 88	Contract 2	Noise	Non-project related	Interim IR was submitted to EPD on 4 June 2019 and included in EM&A Report – May 2019
90	Early March 2020	EPD	CE 45/2008 – 89	Contract 6	Noise and dust	Non-project related	Interim IR was submitted to EPD on 8 April 2020 and included in EM&A Report – March 2020
91	16 February 2023	EPD	CE 45/2008 – 90	Contract 6	Soil/ Muddy Water	Non-project related	Interim IR was submitted to EPD on 2 March 2023 and included in EM&A Report – February 2023

(*) Not for reporting used.

Environmental Complaint Log for SS C505

Log ref.	Date of complaint	Complaint route	Reference no.	Complaint nature	Investigation fining	Status
1	20 June 2016	1823	SS C505 – 01a	Noise	Project related	Interim IR was submitted to EPD on 14 July 2016 and included in EM&A Report – July 2016
2	30 August 2017	CEDD Project Hotline	SS C505 – 01b	Muddy water and Dust	Project related	Interim IR was submitted to EPD on 6 November 2017 and included in EM&A Report – October 2017
3	4 March 2018	1823	SS C505 – 02	Muddy water and Dust	Non-project related	Interim IR was submitted to EPD on 28 March 2018 and included in EM&A Report – March 2018
4	29 April 2018	ArchSD	SS C505 – 03	Muddy water	Non-project related	Interim IR was submitted to EPD on 5 June 2018 and included in EM&A Report – May 2018
5	19 August 2018	1823	CE 45/2008 – 82	Dust	Non-project related	Interim IR was submitted to EPD on 8 February 2019 and included in EM&A Report – January 2019
6	29 November 2018	1823	SS C505 – 04	Dust and wastewater	Non-project related	Interim IR was submitted to EPD on 21 February 2019 and included in EM&A Report – February 2019
7	19 August 2018	1823	SS C505 – 05	Dust	Non-project related	Interim IR was submitted to EPD on 4 February 2019 and included in EM&A Report – January 2019
8	8 January 2020	EPD	SS C505 – 06	Water quality	Non-project related	Interim IR was submitted to EPD on 19 February 2019 and included in EM&A Report – February 2019