Agreement No. CE 20/2004(EP) North East New Territories (NENT) Landfill Extension

Quarterly Environmental Monitoring and Audit Report (No. 7) – July to September 2024

2024-10-14

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Our Ref.: CL/91823/1746-VES
Date: 14 October 2024

By Email

Veolia Hong Kong Holding Limited
40/F, One Taikoo Place
979 King's Road
Quarry Bay
Hong Kong

Attn.: Mr. Colin Mitchell

Dear Sir

Re: Contract No. EP/SP/77/15
North-East New Territories Landfill Extension (NENTX)
Quarterly Environmental Monitoring and Audit Report (No.7) – July to September 2024

I refer to Section 2.6 to 2.10 and Section 12.3 of the Environmental Monitoring and Audit Manual, regarding the submission of a quarterly Environmental Monitoring and Audit report. I hereby verify the captioned "Quarterly Environmental Monitoring and Audit Report (No.7) – July to September 2024" dated 14 October 2024.

Should you have any queries, please do not hesitate to contact the undersigned at 2859 5409.

Yours faithfully
MEINHARDT INFRASTRUCTURE AND ENVIRONMENT LTD

Claudine Lee
Independent Environmental Checker

Aurecon Hong Kong Limited
Unit 1608, 16/F, Tower B,
Manulife Financial Centre,
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Ref: P521530-0000-REP-NN-0096

By Email

14 October 2024

Meinhardt Infrastructure & Environment Ltd.
10/F Genesis
33-35 Wong Chuk Hand Road
Hong Kong

Attn: Ms. Claudine Lee,

Dear Claudine,

Re: Contract No. EP/SP/77/15
Northeast New Territories Landfill Extension
Quarterly Environmental Monitoring and Audit Report (No. 7) – July to September 2024 r0

In accordance with the requirement specified in Section 2.7 to 2.11 & Section 12.3 of Updated Environmental Monitoring and Audit (EM&A) Manual, we are pleased to submit the certified "Quarterly Environmental Monitoring and Audit Report (No. 7) – July to September 2024" dated 14 October 2024 r0 for your verification.

Should you require any further information or clarification, please do not hesitate to contact the undersigned or our Mr. Keith Chau on 3664 6788.

Yours faithfully,
For and on behalf of
Aurecon Hong Kong Limited

Fredrick Leong
Environmental Team Leader

Encl.
1. Quarterly Environmental Monitoring and Audit Report (No. 7) – July to September 2024 r0

cc.
1. Veolia (Contractor) – Mr. Matt Choy (By email: matt.choy@veolia.com)

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Approval			
Reviewer's signature		Approver's signature	
Name	Keith Chau	Name	Fredrick Leong
Title	Associate, Environmental	Title	Environmental Team Leader

Contents

Figure

Appendix

Executive Summary

ES1. Aurecon Hong Kong Limited (Aurecon) was appointed to undertake the role of Environmental Team (ET) and carry out Environmental Monitoring and Audit for the North East New Territories (NENT) Landfill Extension.

ES2. The construction phase and EM&A programme of the Project commenced on 1 December 2022.

ES3. This 7th Quarterly EM&A Report presents the EM&A works conducted from 1 July to 30 September 2024 in accordance with the Updated EM&A Manual.

Summary of Construction Works undertaken during Report Period

ES4. The major construction works undertaken during the reporting period include:

ES Table1 Major Construction Works undertaken during the Reporting Period

Construction Activities Undertaken	Reporting Month		
	Jul 2024	Aug 2024	Sep 2024
- Material loading and unloading, site traffic at Portion A, SBA to alternative disposal ground	✓	✓	✓
- Construction of site buildings at Portion D	✓	✓	✓
- Site clearance at Portion A, B2/E1, E3-1 & E4	✓	✓	✓
- Installation of permanent fencing at Portion A, B1 & E4	✓	✓	✓
- Site formation at Portion A, B2/E1, E3-1 & E4	✓	✓	✓
- Tree felling at whole site	✓	✓	✓
Shotcreting (Permanent and Temporary) at whole site	✓	✓	✓
Soil nail installation at Portion A, B2/E1 & E4	✓	✓	✓

Environmental Exceedance

Air Quality, Noise, Surface Water Quality & Landfill Gas Monitoring

ES5. No exceedance of the Action and Limit Levels were recorded at designated monitoring stations during the reporting period.

Environmental Non-conformance/Compliant/Summons and Prosecution

ES6. No non-conformance event, complaint, summons/prosecutions were recorded and received in this reporting period.

1. Introduction

1.1 Background

1.1.1 The North East New Territories Landfill Extension (the NENTX Project) is located adjacent to the existing North East New Territories (NENT) Landfill at Ta Kwu Ling. The extension site is located in a valley covering mainly the existing NENT Landfill Stockpile and Borrow Area that was formed to the east of the existing landfill as part of the original site development of the landfill, and layout plan shown in **Figure 1**.

1.1.2 The NENTX is a designated project. The Environmental Impact Assessment (EIA) Report (AEIAR-111/2007) and an Environmental Monitoring and Audit (EM&A) Manual were approved on 20 September 2007. The project is governed by an Environmental Permit (EP) (EP-292/2007) which was granted on 26 November 2007. A further of EP (FEP) was applied and the FEP (FEP-01/292/2007) was subsequently granted on 28 April 2022. Another further of EP (FEP-02/292/2007) was subsequently granted on 23 August 2023. The Updated EM&A Manual was approved by Director of Environmental Protection (DEP) on 4 January 2024.

1.1.3 In accordance with the requirements specified in Section 2.7 to 2.11 and Section 12.3 of the Updated EM&A Manual, Quarterly EM&A report should be submitted to the DEP within 10 working days after the end of the reporting quarter. The submissions shall be certified by the Environmental Team (ET) Leader and verified by the Independent Environmental Checker (IEC).

1.1.4 The construction phase and EM&A programme of the Project commenced on 1 December 2022.

1.2 Nature, Scale and Scope of the captioned Designated Project

1.2.1 The Nature, Scale and Scope of the captioned Designated Project is presented in **Table 1-1**.

Table 1-1 Nature, Scale and Scope of the captioned Designated Project

Item(s)	Content
Nature of Designated Project	Construction and operation of a landfill for waste as defined in the "Waste Disposal Ordinance" (Cap. 354)
Scale and Scope of Designated Project	The Project mainly consists of the followings: - Construction and operation of a landfill extension of about 70 hectares with a target void space of at least 19 million cubic metres on the eastern side of the existing NENT Landfill, including the followings: - i. Site formation and preparation; ii. Installation of liner system; iii. Installation of leachate collection, treatment and disposal facilities; iv. Installation of gas collection, utilization and management facilities; v. Utilities provisions and drainage diversion; vi. Landfilling operation; vii. Restoration and aftercare in subsequent stages; and viii. Measures to mitigate environmental impacts as well as environmental monitoring and auditing to be implemented.

1.3 Purpose of this Report

1.3.1 This is the 7th Quarterly EM&A Report which summarises the impact monitoring results and audit findings for the EM&A programme during the reporting period from 01 July to 30 September 2024.

1.4 Structure of the Report

1.4.1 The structure of the report is as follows:

Section 1 – Introduction
- details the background, purpose and structure of the report.

Section 2 – Project Information
- summarises background and scope of the Project, site description, project organization and contact details, construction programme, the construction works undertaken and the status of Environmental Permit(s)/License(s) during the reporting period.

Section 3 – Air Quality Monitoring

- Construction Dust

Section 4 – Noise Monitoring

Section 5 – Water Quality Monitoring

- Groundwater Monitoring

- Surface Water Monitoring

Section 6 – Waste Management

Section 7 – Landfill Gas Monitoring

Section 8 – Landscape and Visual

Section 9 – Cultural Heritage

Section 10 – Ecological Monitoring

Section 11 – Site Inspection and Audit

Section 12 – Environmental Non-Conformance

Section 13 – Implementation Status on Environmental Mitigation Measures

Section 14 – Conclusion

2. Project Information

2.1 Construction Activities

2.1.1 A summary of the major construction activities undertaken in this reporting period is shown in **Table 2-1**. Construction programme and detailed construction activities are illustrated in **Appendix A**.

Table 2-1 Major Construction Activities Undertaken in the Reporting Period

Construction Activities Undertaken	Reporting Month		
	Jul 2024	Aug 2024	Sep 2024
- Material loading and unloading, site traffic at Portion A, SBA to alternative disposal ground	✓	✓	✓
- Construction of site buildings at Portion D	✓	✓	✓
- Site clearance at Portion A, B2/E1, E3-1 & E4	✓	✓	✓
- Installation of permanent fencing at Portion A, B1 & E4	✓	✓	✓
- Site formation at Portion A, B2/E1, E3-1 & E4	✓	✓	✓
- Tree felling at whole site	✓	✓	✓
Shotcreting (Permanent and Temporary) at whole site	✓	✓	✓
Soil nail installation at Portion A, B2/E1 & E4	✓	✓	✓

2.2 Project Organization & Management Structure

2.2.1 The Project Organization Chart & Management Structure are shown in **Appendix B**. The key personnel contact information is summarized in **Table 2-2**.

Table 2-2 Contact Information of Key Personnel

Party	Name	Contact Number
Contractor (Veolia Hong Kong Holding Ltd.)	Mr. Matt Choy	2902 5296
Independent Environmental Checker (IEC) (Meinhardt Infrastructure and Environment Ltd.)	Ms. Claudine Lee	2859 5409
Environmental Team Leader (ETL) (Aurecon Hong Kong Limited)	Mr. Fredrick Leong	3664 6888

2.3 Status of Submission required under the FEP & EP during reporting period

2.3.1 The status of statutory environmental compliance with the EP & FEP conditions under the EIAO, submission status under the EP & FEP during reporting period are presented in **Table 2-3**. The detail status of statutory environmental compliance with the EP & FEP conditions under the EIAO, submission status under the EP & FEP for NENTX project are shown in **Appendix C**.

Table 2-3 Status of Submissions required under the EP & FEP during reporting period

EP Condition	FEP Condition	Submission / Measures	Status
2.3	2.1	Management Organization of Main Construction Companies	Submitted
2.4	2.2	Setting up of Community Liaison Group (CLG)	Community Liaison Group was set up.
2.5	2.3	Submission of EM&A Manual	Submitted
2.6	2.4	Submission of Preservation of Cultural Landscape Features	Submitted
2.7	2.5	Submission of Vegetation Survey (Transplantation Proposal)	Submitted
2.8	2.6	Submission of Translocation Proposal	Submitted
2.9	2.7	Submission of Transplantation Report and Post-Transplantation Monitoring	Submitted
2.10	2.8	Submission of Translocation Report and Post-Translocation Monitoring	Submitted
2.11	2.9	Submission of Detailed Landfill Gas Hazard Assessment Report	Submitted
2.12	2.10	Submission of Waste Management Plan	Submitted
3.2	3.2	Submission of Baseline Monitoring Report	Submitted
3.3	3.3	Submission of Monthly EM&A Report	20th report (Jul 2024) 21st report (Aug 2024) 22nd report (Sep 2024)

2.4 Status of Environmental Approval Document

2.4.1 A summary of the relevant valid permits, licences, and/or notifications on environmental protection for this Project since the granting of the EP & FEP is presented in **Table 2-4**.

Table 2-4 Summary of the relevant valid permits, licences, and/or notifications on environmental protection

Permit / Licenses / Notification	Reference	Expiry Date	Remark
Environmental Permit (EP)	EP-292/2007	Throughout the Contract	Permit granted on 26 November 2007
Further Environmental Permit (FEP)	FEP-01/292/2007	Throughout the Contract	Permit granted on 28 April 2022
	FEP-02/292/2007	Throughout the Contract	Permit granted on 23 August 2023
Notification of Construction Works as required under Air Pollution Control (Construction Dust) Regulation	479809	Throughout the Construction Phase	Notified on 13 May 2022
Registration of Waste Producer under Waste Disposal Ordinance	7043692	Throughout the Contract	Registered on 13 April 2022
Construction Noise Permit	GW-RN0702-24	18 September 2024	Permit granted on 17 June 2024
	GW-RN1050-24	18 December 2024	Permit granted on 6 September 2024
Registration as Chemical Waste Producer	5213-642-P1034-18	Throughout the Contract	Registered on 11 July 2022
Effluent Discharge License under Water Pollution Control Ordinance	WT00042301-2022	31 October 2027	Permit granted on 18 October 2022 Variation of Licence (Permit granted on 7 February 2023)

3. Air Quality Monitoring

3.1 Construction Dust

3.1.1 Monitoring Requirement

3.1.1.1 In accordance with the Updated EM&A Manual, 1-hr & 24-hr Total Suspended Particulates (TSP) levels should be measured at the designated air quality monitoring stations in every 6 days to ensure that any deteriorating air quality could be readily detected, and timely action shall be undertaken to rectify such situation. For 1-hr TSP monitoring, the sampling frequency of at least three times in every six-days should be undertaken when the highest dust impact occurs. The specific time to start and stop the 24- hr TSP monitoring shall be clearly defined for each location.

3.1.2 Monitoring Parameters, Frequency and Location

3.1.2.1 According to the Updated EM&A Manual, three monitoring stations namely AM(D)1, AM(D)2 and AM(D)3 are selected for the impact monitoring.

3.1.2.2 A baseline monitoring plan has been submitted to IEC and EPD on 31 May 2022 including the proposal with justification of change of monitoring locations. Due to limited access to the original monitoring locations at AM(D)1, AM(D)2 and AM(D)3, the adjusted stations at AM1, AM2 and AM3 were agreed with IEC prior to the baseline and impact monitoring. The locations of adjusted dust monitoring locations are shown in **Figure 2**.

3.1.2.3 The locations of dust monitoring stations are shown in **Table 3-1**. The monitoring parameters, frequency and duration are shown in **Table 3-2**.

Table 3-1 Locations of Dust Monitoring Stations

Monitoring Station	Representative for	Monitoring Parameters
AM1	Tung Lo Hang	1-hr and 24-hr TSP
AM2	Heung Yuen Wai	1-hr and 24-hr TSP
AM3	Wo Keng Shan Tsuen	1-hr and 24-hr TSP

Remarks:

The contractor passed correspondence including original monitoring locations specified on the Approved EM&A Manual to the village representatives on 26 April 2022. After a meeting with Ta Kwu Ling District Rural Committee (RC) Chairman, representative from the RC and a few villagers on 1 May 2022, all the Village Heads of Wo Keng Shan Tsuen, Heung Yuen Wai and Lin Ma Hang verbally refused to accept our proposal for installation of dust and / or noise monitoring equipment within or next to their villages, for the baseline & impact monitoring.

AM(D)1 Tung Lo Hang, AM(D)2 Heung Yuen Wai, AM(D)3 Wo Keng Shan Tsuen are the air monitoring stations for the construction phase EM&A programme as identified in the approved EM&A Manual for the Project. The access to Tung Lo Hang, Heung Yuen Wai and Wo Keng Shan Tsuen were denied. A search for alternative air monitoring locations (AM1, AM2 & AM3) was carried out during the site visit.

The Baseline Monitoring Plan has been submitted to IEC and EPD including the proposal of change of monitoring locations on 31 May 2022. This arrangement was conducted between baseline and impact monitoring and has been agreed by the Independent Environmental Checker (IEC) and no comment received from EPD.

Due to the adjustment of the location of AM(D)1, AM(D)2 & AM(D)3to AM1, AM2 & AM3, the measured air quality levels at AM1, AM2 & AM3 would represent the air quality levels at AM(D)1, AM(D)2 & AM(D)3.

Table 3-2 Dust Impact Monitoring Parameters, Frequency and Duration

Monitoring Station	Parameter	Frequency and Duration
AM1, AM2, AM3	1-hr TSP	At least 3 times per 6 days
	24-hr TSP	1 time per 6 days

3.1.3 Monitoring Results

3.1.3.1 The impact dust monitoring results are summarized in **Table 3-3** and **Table 3-4.** The graphical presentations of monitoring data are presented in **Appendix D**.

Table 3-3 Summary of Impact 1-hr TSP Monitoring Results

Month	Average 1-hr TSP Concentration, μg/m³ (Range)		
	Dust Monitoring Station		
	AM1	AM2	AM3
Jul 2024	28 (24 – 30)	38 (30 – 44)	47 (39 – 56)
Aug 2024	26 (21 – 36)	38 (29 – 46)	45 (40 – 53)
Sep 2024	26 (12 – 34)	43 (29 – 59)	50 (37 – 62)
Action Level	**>285**	**>279**	**>285**
Limit Level	**>500**		

Table 3-4 Summary of Impact 24-hr TSP Monitoring Results

Month	Average 24-hr TSP Concentration, μg/m³ (Range)		
	Dust Monitoring Station		
	AM1	AM2	AM3
Jul 2024	110 (93 – 128)	111 (100 – 119)	112 (99 – 135)
Aug 2024	94 (82 – 103)	112 (102 – 118)	118 (110 – 121)
Sep 2024	108 (101 – 117)	109 (98 – 123)	117 (110 – 129)
Action Level	**>164**	**>152**	**>163**
Limit Level	**>260**		

3.1.3.2 The Summary of Impact 1-hr & 24-hr TSP Exceedance are shown in **Table 3-5**.

Table 3-5 Summary of Impact 1-hr & 24-hr TSP Exceedance

Dust Monitoring Station		AM1		AM2		AM3	
Parameters / Level Exceedance		Action Level	Limit Level	Action Level	Limit Level	Action Level	Limit Level
1-hr TSP	Exceedance Date	-	-	-	-	-	-
	Exceedance Count	0	0	0	0	0	0
24-hr TSP	Exceedance Date	-	-	-	-	-	-
	Exceedance Count	0	0	0	0	0	0

Remarks: * equal to non-project related

3.1.3.3 No Action / Limit Level exceedance for 1-hr & 24-hr TSP impact monitoring at AM1, AM2 & AM3 was recorded during the reporting period. The Notification of Environmental Quality Limits Exceedances are presented in **Appendix E**.

3.1.4 Recommended Mitigation Measures

3.1.4.1 The recommended dust mitigation measures from EIA report are listed as followed:

- The contractor shall follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation.
- Dust emission from construction vehicle movement is confined within the worksites area.
- Watering facilities will be provided at every designated vehicular exit point.
- Good site practice is recommended during construction phase.

3.1.5 Event and Action Plan

3.1.5.1 Should non-compliance of the criteria occur, action in accordance with the action plan in **Table 3-6** shall be carried out.

Table 3-6 Event and Action Plan for dust impact

Event	ET	IEC	Contractor
Exceedance of Action Level			
Exceedance for one sample	• Identify source • Prepare Notification of Exceedance • Inform IEC and Contractor • Repeat measurement to confirm findings • Increase monitoring frequency to daily if exceedance is due to the Project and continue until the monitoring results reduce to below action level	• Verify the Notification of Exceedance • Check monitoring data submitted by ET and Contractor's working methods • Discuss with ET and Contractor on proposed remedial measures	• Rectify any unacceptable practice • Amend working methods if appropriate
Exceedance for two or more consecutive samples	• Identify source • Prepare Notification of Exceedance • Inform Contractor and IEC • Repeat measurements to confirm findings • Increase monitoring frequency to daily if exceedance is due to the Project and continue until the monitoring results reduce to below action level • Discuss with IEC for remedial action required • Ensure remedial measures are properly implemented • Continue monitoring at daily intervals if exceedance is due to the Project • If no exceedance for 3 consecutive days, cease additional monitoring	• Verify the Notification of Exceedance • Check monitoring data submitted by ET and Contractor's working methods • Discuss with ET and Contractor on proposed remedial measures • Review with analysed results submitted by ET • Review the proposed remedial measures by Contractor • Supervise the implementation of remedial measures	• Submit proposals for remedial actions to IEC within 3 working days of notification • Implement the agreed proposals • Amend proposal if appropriate

Event	ET	IEC	Contractor
Exceedance of Limit Level			
Exceedance for one sample	• Identify source • Prepare Notification of Exceedance • Inform IEC and Contractor • Repeat measurement to confirm findings • Increase monitoring frequency to daily if exceedance is due to the Project and continue until the monitoring results reduce to below limit level • Assess effectiveness of Contractor's remedial actions and keep EPD and IEC informed of the results	• Verify the Notification of Exceedance • Check monitoring data submitted by ET and Contractor's working methods • Discuss with ET and Contractor potential remedial actions • Supervise the implementation of remedial measures	• Take immediate action to avoid further exceedance • Submit proposals for remedial actions to IEC within 3 working days of notification • Implement the agreed proposals • Amend proposal if appropriate
Exceedance for two or more consecutive samples	• Identify source • Prepare Notification of Exceedance • Inform IEC and EPD the causes and actions taken for the exceedances • Discuss with IEC for remedial action required • Ensure remedial measures are properly implemented • Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and informed of the results • Increase monitoring frequency to confirm findings • If exceedance stops, cease additional monitoring	• Verify the Notification of Exceedance • Check monitoring data submitted by ET and Contractor's working methods • Discuss amongst ET and Contractor on the potential remedial actions. • Review Contractor's remedial actions whenever necessary to assure their effectiveness • Supervise the implementation of remedial measures	• Take immediate action to avoid further exceedance • Submit proposals for remedial actions to IEC of notification • Implement the agreed proposals • Resubmit proposals if problem still not under control • Stop the relevant activity of works until the exceedance is abated

4 Noise Monitoring

4.1 Monitoring Requirement

4.1.1 In accordance with the Updated EM&A manual, noise impact monitoring shall be carried out at 2 monitoring stations NM1 and NM2 once a week during normal construction working hour (0700-1900 Monday to Saturday). The minimum logging interval shall be 30 minutes with average of 6 consecutive Leq $_{(5\ mins)}$, L_{10} and L_{90} shall also be measured at 5 mins intervals.

4.2 Monitoring Locations, Parameters and Frequency

4.2.1 According to the Updated EM&A Manual, two monitoring stations namely NM1 and NM2 are selected for the impact monitoring.

4.2.2 A baseline monitoring plan has been submitted to IEC and EPD on 31 May 2022 including the proposal with justification of change of monitoring locations. Due to limited access to the original monitoring locations at NM1 and NM2, the adjusted stations at NM1a and NM2a were agreed with IEC prior to the baseline and impact monitoring. The noise monitoring locations are summarized in **Table 4-1** and shown in **Figure 2**. The frequency and duration are shown in **Table 4-2**.

Table 4-1 Noise Monitoring Locations

Monitoring Station	Representative for	Type of Measurement
NM1a	Wo Keng Shan Tsuen	Free field
NM2a	Lin Ma Hang	Free field

Remarks:

The contractor passed correspondence including original monitoring locations specified on the Approved EM&A Manual to the village representatives on 26 April 2022. After a meeting with Ta Kwu Ling District Rural Committee (RC) Chairman, representative from the RC and a few villagers on 1 May 2022, all the Village Heads of Wo Keng Shan Tsuen, Heung Yuen Wai and Lin Ma Hang verbally refused to accept our proposal for installation of dust and / or noise monitoring equipment within or next to their villages, for the baseline & impact monitoring.

NM1 Wo Keng Shan Tsuen & NM2 Lin Ma Hang are the noise monitoring stations for the construction phase EM&A programme as identified in the approved EM&A Manual for the Project. The access to Tung Lo Hang, Heung Yuen Wai and Wo Keng Shan Tsuen were denied. A search for alternative noise monitoring locations (NM1a & NM2a) was carried out during the site visit.

The Baseline Monitoring Plan has been submitted to IEC and EPD including the proposal of change of monitoring locations on 31 May 2022. This arrangement was conducted between baseline and impact monitoring and has been agreed by the Independent Environmental Checker (IEC) and no comments received from EPD. Noise measurement at NM1a & NM2a will be considered as free-field and a correction of +3dB(A) would be made to the noise monitoring results.

Due to the adjustment of the location of NM1 & NM2 to NM1a & NM2a, the measured noise levels at NM1 & NM2 would represent the noise levels at NM1 & NM2.

Table 4-2 Noise Monitoring Parameters, Frequency and Duration

Monitoring Station	Parameter	Frequency and Duration
NM1a and NM2a	$L_{Aeq\ (30mins)}$ average of 6 consecutive $L_{Aeq\ (5min)}$; $L_{A10(5min)}$ & $L_{A90(5min)}$	Once a week during normal construction working hour (0700-1900 Monday to Saturday)

4.3 Monitoring Results

4.3.1 The impact noise monitoring results are summarized in **Table 4-3**. The graphical presentations of monitoring data are presented in **Appendix D**.

Table 4-3 Summary of Noise Monitoring Results during normal working hours (07:00-19:00, Monday to Saturday)

Month	Average Leq, 30min, dB(A) (Range)	
	Noise Monitoring Station	
	NM1a	NM2a
Jul 2024	60.7 (58.6 – 62.4)	55.5 (50.1 – 58.4)
Aug 2024	59.9 (59.0 – 60.3)	55.9 (55.0 – 57.4)
Jun 2024	59.5 (59.0 – 60.3)	57.6 (55.4 – 59.0)
Action Level	**When one documented complaint is received**	
Limit Level	**>75dB(A)**	

Remark:

(1) * A correction of +3 dB(A) was made to the free field measurements

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

4.3.2 No exceedance of Action and Limit Levels of construction noise was recorded during the reporting period. Therefore, there was no record of Notification of Environmental Quality Limits Exceedance in the **Appendix E**.

4.3.3 No particular observations are identified near the monitoring stations during the monitoring period.

4.4 Recommended Mitigation Measures

4.4.1 The recommended noise mitigation measures from EIA report are listed as followed:

1. Use of good site practices to limit noise emissions by considering the following:
   - Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme;
   - Machines and plant (such as trucks, cranes) 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, where possible, be orientated so that the noise is directed away from nearby NSRs;
   - Silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works;
   - Mobile plant should be sited as far away from NSRs as possible and practicable;
   - Material stockpiles, mobile container site officer and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.

2. Select “Quiet plants” which comply with the BS 5228 Part 1 or TM standards.

4.5 Event and Action Plan

4.5.1 Should non-compliance of the criteria occurs, action in accordance with the action plan in **Table 4-4** shall be carried out.

Table 4-4 Event and action plan for construction noise monitoring

Event	ET	IEC	Contractor
Exceedance of Action Level	• Identify source, investigate the causes of exceedance • Prepare Notification of Exceedance • Inform IEC and Contractor • Report the results of investigation to IEC, and Contractor • Discuss with Contractor and IEC for formulate remedial measures • Ensure remedial measures are properly implemented • Have additional monitoring if exceedance is due to the Project. If exceedance stops, cease additional monitoring	• Verify the Notification of Exceedance • Review the analysed results submitted by ET • Discuss with ET, and Contractor on the potential remedial actions • Review the proposed remedial measures • Supervise the implementation of remedial measures	• Submit noise mitigation proposals to IEC • Implement the agreed noise mitigation proposals
Exceedance of Limit Level	• Identify source, investigate the causes of exceedance • Prepare Notification of Exceedance • Inform IEC and Contractor • Repeat measurements to confirm findings • Discuss with Contractor and IEC for remedial measures • Ensure remedial measures are properly implemented • Assess effectiveness of Contractor's remedial actions and keep IEC and EPD informed of the results • Have additional monitoring if exceedance is due to the Project. If exceedance stops, cease additional monitoring	• Verify the Notification of Exceedance • Review the analysed results submitted by ET • Discuss with ET, and Contractor on the potential remedial actions • Review the proposed remedial measures • Supervise the implementation of remedial measures	• Take immediate action to avoid further exceedance • Submit proposals for remedial actions to IEC of notification • Implement the agreed proposals • Resubmit proposals if problem still not under control • Stop the relevant portion of works as determined by project proponent until the exceedance is abated.

5 Water Quality Monitoring

5.1 Groundwater Monitoring

5.1.1 Monitoring Requirement

5.1.1.1 In accordance with the Updated EM&A manual, groundwater quality monitoring shall be carried out at least once per month at the 35 designated groundwater monitoring locations (i.e. ED1 to ED35). Based on the existing construction programme, site clearance and site formation works for future landfilling area are in progress. The groundwater monitoring locations ED1 to ED35 will be installed after the site formation work of the landfilling area. No groundwater monitoring is required before the completion of site formation work of the landfilling area.

5.2 Surface Water Monitoring

5.2.1 Monitoring Requirement

5.2.1.1 In accordance with the Updated EM&A manual, impact surface water quality monitoring was carried out at the two designated surface water discharge points (i.e. WM1 and WM2) for once per month from commencement of construction works of the Project.

5.2.2 Monitoring Locations, Parameters and Frequency

5.2.2.1 Impact surface water monitoring was carried out at WM1 and WM2. The monitoring locations are indicated in **Table 5-1** and **Figure 2**.

5.2.2.2 The monitoring parameters, frequency and duration of surface water quality monitoring are summarized in **Table 5-2**.

Table 5-1 Surface water quality monitoring locations

Monitoring Station	Location	Coordinates (HK Grid)	
		Easting	Northing
WM1	Upstream of Lin Ma Hang River	836665	845020
WM2	Ping Yuen River	835592	844186

Table 5-2 Surface water quality monitoring Parameters, Frequency and Duration

Parameter	Frequency
pH, Electrical conductivity, DO, Turbidity, SS, Alkalinity, COD, BOD_5, TOC, Ammonia-nitrogen, TKN, Nitrate, Sulphate, Sulphite, Phosphate, Chloride, Sodium, Mg, Ca, K, Fe, Ni, Zn, Mn, Cu, Pb, Cd, Coliform Count, Oil and Grease	Once per month

5.2.3 Monitoring Results

5.2.3.1 The summary of monitoring results is presented in **Table 5-3** & **Table 5-4**. Detailed graphical presentations at each monitoring station of surface water quality (DO, SS and Turbidity) at the monitoring stations are given in **Appendix D.**

Table 5-3 Summary of Impact Surface Water Monitoring Results at WM1

Monitoring Parameter(s)	Monitoring Station WM1				
	Monitoring Results			Action Level	Limit Level
	Jul 2024	Aug 2024	Sep 2024		
pH	6.71	6.9	7.0	>7.7	>7.8
DO in mg/L	7.4	7.6	8.6	<7.4	<4
Turbidity in NTU	5.1	2.1	4.2	>9.2	>9.5
Electrical Conductivity in µS/cm	59	54	47	---	---
SS in mg/L	6.3	2.4	2.9	>9.7	>11.4
Alkalinity in mg/L	16	15	12	---	
COD in mg/L	9	8	<5		
BOD_5 in mg/L	<2	<2	<2		
TOC in mg/L	4	1	1		
Ammonia-nitrogen in mg/L	0.12	0.10	0.02		
TKN in mg/L	0.6	0.7	0.3		
Nitrate in mg/L	0.02	0.02	0.08		
Sulphate in mg/L	2	2	2		
Sulphite in mg/L	<2	<2	<2		
Phosphorus in mg/L	0.02	0.01	0.02		
Chloride in mg/L	5	6	5		
Sodium in µg/L	6970	7250	5940		
Magnesium in µg/L	510	480	460		
Calcium in µg/L	3380	2940	2520		
Potassium in µg/L	780	630	670		
Iron in µg/L	450	310	220		
Nickel in µg/L	<1	<1	<1		
Zinc in µg/L	<10	11	<10		
Manganese in µg/L	37	30	21		
Copper in µg/L	2.0	7	1.0		
Lead in µg/L	<1	<1	<1		
Cadmium in µg/L	<0.2	<0.2	<0.2		
Coliform Count in cfu/100mL	Not Detected	1500	230		
Oil and Grease in mg/L	<5	<5	<5		

Remarks:
"TBC" equal to To Be Confirm

Table 5-4 Summary of Impact Surface Water Monitoring Results at WM2

Monitoring Parameter(s)	Monitoring Station WM2				
	Monitoring Results			Action Level	Limit Level
	Jul 2024	Aug 2024	Sep 2024		
pH	6.9	7.1	7.3	>7.7	>7.8
DO in mg/L	7.8	7.9	8.9	<7.4	<4
Turbidity in NTU	34.3	19.3	14.2	>9.2	>9.5
Electrical Conductivity in µS/cm	147	130	155	---	---
SS in mg/L	22.6	12.8	10.6	>9.7	>11.4
Alkalinity in mg/L	41	33	42	---	
COD in mg/L	<5	19	7		
BOD_5 in mg/L	<2	<2	<2		
TOC in mg/L	2	4	2		
Ammonia-nitrogen in mg/L	0.18	0.07	0.09		
TKN in mg/L	0.4	0.3	0.4		
Nitrate in mg/L	0.27	0.17	0.23		
Sulphate in mg/L	25	19	26		
Sulphite in mg/L	<2	<2	<2		
Phosphorus in mg/L	<0.01	<0.01	<0.01		
Chloride in mg/L	6	5	4		
Sodium in µg/L	6320	5090	5290		
Magnesium in µg/L	1350	1170	1530		
Calcium in µg/L	19800	16300	22400		
Potassium in µg/L	2700	1680	1940		
Iron in µg/L	1720	940	380		
Nickel in µg/L	<1	<1	<1		
Zinc in µg/L	30	18	16		
Manganese in µg/L	577	381	578		
Copper in µg/L	2	1	2		
Lead in µg/L	2	1	<1		
Cadmium in µg/L	<0.2	<0.2	<0.2		
Coliform Count in cfu/100mL	4000	2100	Not Detected		
Oil and Grease in mg/L	<5	<5	<5		

Remarks:
"TBC" equal to To Be Confirm

5.2.3.2 The Summary of Impact Surface Water Quality Exceedance are shown in **Table 5-5**.

Table 5-5 Summary of Impact Surface Water Quality Exceedance during the reporting period

Surface Water Quality Monitoring Station		WM1		WM2	
Parameters \ Level Exceedance		Action Level	Limit Level	Action Level	Limit Level
pH	Exceedance Date	-	-	-	-
	Exceedance Count	0	0	0	0
DO	Exceedance Date	-	-	-	-
	Exceedance Count	0	0	0	0
Turbidity	Exceedance Date	-	-	-	-
	Exceedance Count	0	0	0	0
SS	Exceedance Date	-	-	-	-
	Exceedance Count	0	0	0	0

Remarks: * equal to non-project related

5.2.3.3 No exceedance of Action and Limit Levels of surface water monitoring was recorded during the reporting period. The Notification of Environmental Quality Limits Exceedance is presented in **Appendix E**.

5.2.4 Recommended Mitigation Measure

5.2.4.1 The recommended surface water mitigation measures from EIA report are listed as followed:

- 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 overall slope of the site should be kept to a minimum to reduce the erosive potential of surface water flows.
- The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94, which states that the retention time for silts and sediment traps should be 5 minutes under maximum flow conditions.
- 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.
- Construction solid waste, debris and rubbish on site should be collected, handled and disposed of properly to avoid water quality impacts.
- Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system.

5.2.5 Event and Action Plan

5.2.5.1 Should non-compliance of the criteria occurs, action in accordance with the action plan in **Table 5-6** shall be carried out.

Table 5-6 Event and Action Plan for Water Quality

Event	ET	IEC	Contractor
Action level being exceeded by one sampling day	• Repeat in situ measurement to confirm findings • Identify source(s) of impact • Prepare Notification of Exceedance • Inform IEC and Contractor • Check monitoring data, all plant, equipment and Contractor's working methods • Repeat measurement on next day of exceedance	• Verify Notification of Exceedance • Check monitoring data and Contractor's working methods	• Rectify unacceptable practice • Amend working methods if appropriate
Action level being exceeded by two or more consecutive sampling days	• Repeat in situ measurement to confirm findings • Identify source(s) of impact • Prepare Notification of Exceedance • Inform IEC and Contractor • Check monitoring data, all plant, equipment and Contractor's working methods • Discuss with Contractor and IEC for remedial measures • Ensure mitigation measures are implemented • Increase the monitoring frequency to daily until no exceedance of Action level • Repeat measurement on next day of exceedance	• Verify Notification of Exceedance • Check monitoring data and Contractor's working method • Discuss with ET and Contractor on possible remedial actions • Review the proposed mitigation measures • Supervise the implementation of mitigation measures	• Submit proposal of additional mitigation measures to IEC of notification • Implement the agreed mitigation measures • Amend proposal if appropriate

Event	ET	IEC	Contractor
Limit Level being exceeded by one sampling day	• Repeat in situ measurement to confirm findings • Identify source(s) of impact • Prepare Notification of Exceedance • Inform IEC and Contractor; • Check monitoring data, all plant, equipment and Contractor's working methods • Discuss mitigation measures with IEC and Contractor • Ensure mitigation measure are implemented	• Verify Notification of Exceedance • Check monitoring data submitted By ET and Contractor's working method • Discuss with ET and Contractor on possible remedial actions • Review the proposed mitigation measures • Supervise the implementation of mitigation measures	• Critically review the working method • Rectify unacceptable practice • Take immediate corrective actions to avoid further exceedance • Submit proposal of mitigation measures to IEC • Implement the agreed mitigation measures
Limit level being exceeded by two or more consecutive sampling days	• Repeat in situ measurement to confirm findings • Identify source(s) of impact • Prepare Notification of Exceedance • Inform IEC, contractor and EPD • Check monitoring data, all plant, equipment and Contractor's working methods • Discuss mitigation measures with IEC and Contractor • Ensure mitigation measure are implemented	• Verify Notification of Exceedance • Check monitoring data submitted by ET and Contractor's working method • Discuss with ET and Contractor on possible remedial actions • Review the proposed mitigation measures • Supervise the implementation of mitigation measures	• Critically review the working method • Rectify unacceptable practice • Take immediate corrective actions to avoid further exceedance • Submit proposal of mitigation measures to IEC • Implement the agreed mitigation measures • Resubmit proposals if problem still not under control • Slow down or to stop relevant activity until exceedance is abated

6 Waste Management

6.1 Wastes generated from this Project include inert construction and demolition (C&D) materials and non-inert C&D materials. Non-inert C&D materials were made up of general refuse, steels and paper/cardboard packaging materials. Steel materials generated from the Project were also grouped into non-inert C&D materials as the materials were not disposed of with other inert C&D materials. With reference to relevant handling records and trip tickets of this Project, the quantities of different types of waste generated in the reporting month are summarised in **Appendix F**.

6.2 The recommended waste management mitigation measures from EIA report are listed as followed:

- Implement a trip-ticket system to ensure that the movement of C&D materials are properly documented and verified in accordance with DEVB TC(W) No. 6/2010.
- Concrete and masonry should be used as general fill and steel reinforcement bars can be used by scrap steel mills.
- Proper areas should be designated for waste segregation and storage wherever site conditions permit.
- Maximise the use of reusable steel formwork to reduce the amount of C&D material.
- Maintain temporary stockpiles and reuse excavated fill material for backfilling and reinstatement.
- On-site sorting and segregation facility of all type of wastes is considered as one of the best practice in waste management and hence, should be implemented in all projects generating construction waste.
- The sorted public fill and C&D waste should be properly reused.
- Excavated slope, stockpiled material and bund walls should be covered by tarpaulin until used in order to prevent wind-blown dust during dry weather, and to reduce muddy runoff during wet weather.

7 Landfill Gas Monitoring

7.1 Monitoring Requirement during Construction

Monitoring for Construction Works

7.1.1 Intrinsically safe portable gas detectors should be used during excavation or when working in any confined spaces, which have the potential for presence of LFG and risk of explosion or asphyxiation. The monitoring equipment should alarm, both audibly and visually, when the concentrations of the following gases were exceeded:

- CH_4: >10% Lower Explosion Limit (LEL);
- CO_2: >0.5%; and
- O_2: <18% by volume.

7.2 Monitoring Location

7.2.1 During the construction works within the NENT Landfill Extension site with excavation of 1m deep or more, LFG concentrations should be monitored before entry and periodically during the progress of works. If drilling is required, the procedures for safety management and working procedures as stipulated in EPD's Landfill Gas Hazard Assessment – Guidance Note should be strictly adopted.

7.2.2 The monitoring frequency and areas to be monitored should be set down prior to commencement of groundworks by the Safety Officer. All measurements in excavations should be made with the monitoring tube located not more than 10mm from the exposed ground surface. Monitoring of excavations should be undertaken as follows:

7.2.3 For excavation works deeper than 1m, measurements should be made:

• at ground surface prior to excavation;

• immediately before any worker enters the excavation;

• at the beginning of each working day for the entire period the excavation remains open; and

• periodically through the working day whilst workers are in the excavation.

7.2.4 For excavation between 300mm and 1m deep, measurements should be made:

• directly after the excavation has been completed; and

• periodically whilst the excavation remains open.

7.2.5 For excavations less than 300mm deep, monitoring may be omitted, at the discretion of the Safety Officer.

7.2.6 The locations of LFG monitoring locations during reporting period are shown in **Table 7-1**. The Site formation layout plan is shown in **Figure 2** and the Layout of LFG monitoring locations is presented in **Figure 3**.

Table 7-1 Locations of LFG Monitoring during reporting period

Monitoring Period	Monitoring Location	Type of works
Jul to Sep 2024	Portion A +50 mpD to 70 mpD Platform	Excavation Works

7.3 Monitoring Results

7.3.1 The LFG monitoring was conducted at Portion A +50 mpD to 70 mpD Platform during the reporting period (conducted on working days). The LFG monitoring results are summarized in **Table 7-2.**

Table 7-2 Summary of LFG Monitoring Results

LFG Monitoring Station	Monitoring Date	Monitoring Parameter(s)			
		CH_4 in %	LEL in %/v	CO_2 in %	O_2 in %
		Average Monitoring Results (Range)			
Portion A +50 mpD to 70 mpD Platform	Jul 2024	0	0	0	20.1 (20.0 – 20.2)
	Aug 2024	0	0	0	20.0 (20.0 – 20.1)
	Sep 2024	0	0	0	20.0 (20.0 – 20.1)
Action Level		>10% LEL	---	>0.5%** CO_2	<19%
Limit Level		>20% LEL	---	>1.5% CO_2	<18%

* LEL: Lower Explosive Limit - concentrations in air below which there is not enough fuel to continue an explosion.

** This Limit Level of CO_2 at 0.5% is set for reference only, assuming no CO_2 emission from a particular location.

7.3.2 No exceedance of Action and Limit Levels of LFG was recorded during the reporting period. The Notification of Environmental Quality Limits Exceedance is presented in **Appendix E**.

7.3.3 No effect that arose from the other special phenomena and work progress of the concerned site was noted during the current monitoring month.

7.4 Recommended Mitigation Measures

7.4.1 The recommended landfill gas mitigation measures from EIA report are listed as followed:

- Special LFG precautions should be taken due to close proximity of NENT landfill extension site to existing landfill to avoid potential hazards of LFG exposure (ignition, explosion, asphyxiation, toxicity).
- Prominent safety warning signs should be erected on-site to alert all personnel and visitors of LFG hazards during excavation works.
- No smoking or burning should be permitted on-site.
- Prominent 'No smoking' and ‘No Naked Flames’ signs should be erected on-site.
- No worker should be allowed to work alone at any time in excavated trenches or confined areas on-site.
- Adequate fire fighting equipment should be provided on-site.
- Construction equipment should be equipped with vertical exhaust at least 0.6m above ground installed with spark arrestors.
- Electrical motors and extension cords should be explosion-proof and intrinsically safe for use on-site.
- ’Permit to Work' system should be implemented.

- Welding, flame-cutting or other hot works should be conducted only under 'Permit to Work' system following clear safety requirements, gas monitoring procedures and presence of qualified persons to supervise the works.

7.5 Event and Action Plan (EAP)

7.5.1 Should non-compliance of the criteria occur, action in accordance with the action plan in **Table 7-3** shall be carried out.

Table 7-3 Action Plan for the monitoring during construction phase

Parameter	Monitoring Result	Action
Oxygen (O_2)	Action Level <19% O_2	Ventilate trench/void to restore O_2 to >19%
	Limit Level <18% O_2	Stop works Evacuate personnel/prohibit entry Increase ventilation to restore O_2 to >19%
Methane (CH_4)	Action Level >10% LEL*	Prohibit hot works Increase ventilation to restore CH_4 to <10% LEL
	Limit Level >20% LEL*	Stop works Evacuate personnel/prohibit entry Increase ventilation to restore CH_4 to <10% LEL
Carbon dioxide (CO_2)	Action Level** >0.5%** CO_2	Ventilate to restore CO_2 to <0.5%
	Limit Level >1.5% CO_2	Stop works Evacuate personnel / prohibit entry Increase ventilation to restore CO_2 to <0.5%

* LEL: Lower Explosive Limit - concentrations in air below which there is not enough fuel to continue an explosion.

** This Action Level of CO_2 at 0.5% is set for reference only, assuming no CO_2 emission from a particular location.

Depending on the baseline CO_2 levels, the Action Level at a particular location will be changed.

8 Landscape and Visual

8.1 Monitoring Requirement

8.1.1 In order to monitor the landscape and visual impact after providing mitigation measures effectively, all the specified and affected LCAs, LRs and VSRs should be monitored. Implementation of the mitigation measures during construction phase of the Project has been monitored through the regular site inspection/audit.

8.1.2 All relevant environmental mitigation measures listed in the approved EIA Report and the Updated EM&A Manual, and their implementation status are summarised in **Appendix G**.

8.2 Result and Observation

8.2.1 Measures to mitigate the landscape and visual impacts during the construction phase has been checked to ensure compliance with the intended aims of the measures within the reporting period. The progress of the engineering works are regularly reviewed on site to identify the earliest practical opportunities for the landscape works to be undertaken.

8.2.2 In order to monitor the landscape and visual impact after providing mitigation measures effectively, all the specified and affected LCAs, LRs and VSRs should be monitored. Implementation of the mitigation measures during construction phase of the Project has been monitored through the regular site inspection/audit.

9 Cultural Heritage

9.1.1 The Mitigation measures for preservation of the cultural landscape feature located within the project area was conducted before commencement of construction of the project based on the requirement of Survey Report and Mapping Records for Boulder Paths BP1 & 2 & Conditions of G2, G4, G5 G6, G7, G8, G14, G15, G25, G26 and G27 within NENTX.

9.1.2 The survey and mapping works carried out on 25 April 2022 and the verification works carried out on 23 August 22 confirmed that both 2 boulder paths BP1 and BP2 are fall outside the site boundary and the Project area.

9.1.3 All the affected graves within the waste boundary have been removed in accordance with section 119(1) of the Public Health and Municipal Services Ordinance (Cap 132). Removal of the graves as shown on Figure 2 attached to the FEP was proven by the visit of graves on 22 August 2022. All the graves as shown on Figure 2 attached to the FEP were abandoned and removed and no mitigation or preservation measures is necessary.

9.1.4 The Survey Report and Mapping Records for Boulder Paths BP1 & 2 was certified by ET on 10 Oct 2022, was verified by IEC and submitted to EPD on 12 Oct 2022. The Conditions of G2, G4, G5 G6, G7, G8, G14, G15, G25, G26 and G27 within NENTX was certified by ET, was verified by IEC and submitted to EPD on 15 Oct 2022. No later than four weeks before commencement of construction of the project in accordance with Condition 2.4 of the FEP-01/292/2007.

9.1.5 Implementation of the mitigation measures such as permanent fencing to protect the boulder path and setting up warning notices during construction phase of the Project has been monitored through the regular site inspection/audit. The permanent fencing locations are shown in **Appendix H**. In case of any presence of undiscovered grave during construction phase, AMO will be informed as soon as possible.

10 Ecological Monitoring

10.1.1 The post-transplantation monitoring had been completed in October 2023. No further post-transplantation monitoring will be conducted in accordance with the requirement of the approved Transplantation Proposal for Plant Species of Conservation Importance (Rev.1).

10.1.2 The post-translocation monitoring had been completed in July 2023. No further post-translocation monitoring will be conducted in accordance with the requirements of the Revised Translocation Proposal for the Endemic Freshwater Crab *Somanniathelphusa zanklon*.

10.1.3 The details of requirements, monitoring results and site inspection with photos for the post-translocation monitoring and post-transplantation monitoring would be reported separately.

10.1.4 The milestone of the ecological monitoring is presented in **Table 10-1.** The softcopies of the submissions are provided in https://www.nentx-ema.com/ep-submissions/.

Table 10-1 Milestone of the Ecological Monitoring

Type of Monitoring	Monitoring Event No.	Monitoring Date
Post-transplantation Monitoring	1st	24 Nov 2022
	2nd	9 Dec 2022
	3rd	21 Dec 2022
	4th	13 Jan 2023
	5th	26 Jan 2023
	6th	8 Feb 2023
	7th	24 Feb 2023
	8th	20 Mar 2023
	9th	21 Apr 2023
	10th	12 May 2023
	11th	16 Jun 2023
	12th	18 Jul 2023
	13th	11 Aug 2023
	14th	15 Sep 2023
	15th	13 Oct 2023
Post-translocation Monitoring	1st (Aug 2022)	29 Aug 2022
	2nd (Sep 2022)	28 Sep 2022
	3rd (Oct 2022)	28 Oct 2022
	4th (Nov 2022)	22 Nov 2022
	5th (Dec 2022)	29 Dec 2022
	6th (Jan 2023)	30 Jan 2023
	7th (Feb 2023)	24 Feb 2023
	8th (Mar 2023)	20 Mar 2023
	9th (Apr 2023)	19 Apr 2023
	10th (May 2023)	17 May 2023
	11th (Jun 2023)	7 Jun 2023
	12th (Jul 2023)	12 Jul 2023

11 Site Inspection and Audit

11.1.1 Site Inspection and audits were carried out by ET on weekly basis to monitor the implementation of proper environmental management practices and mitigation measures in the Project Site.

11.1.2 Total 14 weekly environmental site inspections were conducted during the reporting period. 3 of them were the joint environmental site inspections with the representatives of ER, Contractor, IEC and ET. There was no noncompliance recorded during the site inspections.

11.1.3 Details of observations and recommendations are summarized in **Table 11-1**.

Table 11-1 Observations and Recommendations of Site Audit

Parameter	Date	Observation and Reminders	Follow-up Action Taken
Air Quality	08 Jul 2024	**Reminder:** The Contractor was reminded that stockpiling of dusty material should be covered properly by impervious sheet to prevent dust dispersion at Portion E3-1.	
	15 Jul 2024	**Observation:** The unpaved access road at Portion E3-1 is dusty and fugitive dust was observed.	The Contractor was reminded that the unpaved assess road at Portion E3-1 should be wetted by water spraying to prevent dust dispersion.
	12 Aug 2024	**Observation:** The generator without NRMM label was observed at Portion E3-1.	The Contractor was reminded that NRMM label should be affixed on the generator at Portion E3-1.
Noise	No specific observation was identified in the reporting period.		
Water Quality	2 Jul 2024	**Reminder:** The Contractor was reminded that the precaution shall be taken with Appendix A2 of ProPECC PN 1/94 before, during and after rainstorm.	
	2 Jul 2024	**Reminder:** The Contractor was reminded that the slope protection should be scheduled and maintained at Portion A and SBA.	
	8 Jul 2024	**Observation:** The accumulation of deposited silt and grit was observed at Portion D.	The Contractor was advised to provide channel, earth bunds, or sandbag barriers to properly direct stormwater to silt removal facility and clean up the deposited silt and grit regularly at Portion D.

Parameter	Date	Observation and Reminders	Follow-up Action Taken
Water Quality	8 Jul 2024	**Reminder:** The Contractor was reminded that the slope protection should be scheduled and maintained at Portion A and SBA.	
	8 Jul 2024 15 Jul 2024 22 Jul 2024	**Reminder:** The Contractor was reminded that the precaution shall be taken with Appendix A2 of ProPECC PN 1/94 before, during and after rainstorm.	
	29 Jul 2024	**Observation:** Temporary channels, earth bunds, or sandbag barriers shall be provided at the low elevation of the slope and the roadside of the access road to properly direct stormwater to silt removal facilities at SBA.	The Contractor was advised that the channel, earth bunds, or sandbag barriers should be provided on site to prevent surface run-off and to properly direct stormwater to the silt removal facility at SBA.
	29 Jul 2024 5 Aug 2024 12 Aug 2024	**Reminder:** The Contractor was reminded that the precaution shall be taken with Appendix A2 of ProPECC PN 1/94 before, during and after rainstorm.	
	12 Aug 2024	**Reminder:** The Contractor was reminded that the exposed slope surface at Portion B2-1 should not only be covered with a green net, but also with tarpaulin sheets for short-term and shotcrete for long-term slope protection, to prevent silty stormwater runoff.	
	12 Aug 2024	**Reminder:** The Contractor was reminded that the excavation materials near the u-channel should be removed and kept away from the u-channel, and that sandbag barriers should be provided near the u-channel to minimize the excavation materials from entering the drainage system at Portion B2-1 directly when a rainstorm occurs.	

Parameter	Date	Observation and Reminders	Follow-up Action Taken
Water Quality	12 Aug 2024	**Reminder:** The Contractor was reminded that the deposited silt and grit under the sedimentation basins at Portions B2-1 and E3-1 should be removed regularly in order to maintain the effectiveness of these sedimentation basins.	
	19 Aug 2024	**Reminder:** The Contractor was reminded that the precaution shall be taken with Appendix A2 of ProPECC PN 1/94 before, during and after rainstorm.	
	19 Aug 2024	**Reminder:** The Contractor was reminded that the exposed slope surface at Portion B2-1 should not only be covered with a green net, but also with tarpaulin sheets for short-term and shotcrete for long-term slope protection, to prevent silty stormwater runoff.	
	19 Aug 2024	**Reminder:** The Contractor was reminded that the excavation materials near the u-channel should be removed and kept away from the u-channel, and that sandbag barriers should be provided near the u-channel to minimize the excavation materials from entering the drainage system at Portion B2-1 directly when a rainstorm occurs.	
	19 Aug 2024	**Reminder:** The Contractor was reminded that the deposited silt and grit under the sedimentation basins at Portions B2-1 and E3-1 should be removed regularly in order to maintain the effectiveness of these sedimentation basins.	
	19 Aug 2024	**Reminder:** The Contractor was reminded that the exposed slope should be covered by tarpaulin sheet instead of green net after earthwork at Portion A.	

Parameter	Date	Observation and Reminders	Follow-up Action Taken
Water Quality	19 Aug 2024	**Reminder:** The Contractor was reminded that any breaks in the slope protection should be maintained and covered properly by impervious sheeting for short-term and should be shotcrete for long-term slope protection at SBA.	
	27 Aug 2024	**Reminder:** The Contractor was reminded that the precaution shall be taken with Appendix A2 of ProPECC PN 1/94 before, during and after rainstorm.	
	27 Aug 2024	**Reminder:** The Contractor was reminded that the exposed slope surface at Portion B2-1 should not only be covered with a green net, but also with tarpaulin sheets for short-term and shotcrete for long-term slope protection, to prevent silty stormwater runoff.	
	27 Aug 2024	**Reminder:** The Contractor was reminded that the excavation materials near the u-channel should be removed and kept away from the u-channel, and that sandbag barriers should be provided near the u-channel to minimize the excavation materials from entering the drainage system at Portion B2-1 directly when a rainstorm occurs.	
	27 Aug 2024	**Reminder:** The Contractor was reminded that the deposited silt and grit under the sedimentation basins at Portions B2-1 and E3-1 should be removed regularly in order to maintain the effectiveness of these sedimentation basins.	
	27 Aug 2024	**Reminder:** The Contractor was reminded that the exposed slope should be covered by tarpaulin sheet instead of green net after earthwork at Portion A.	

Parameter	Date	Observation and Reminders	Follow-up Action Taken
Water Quality	27 Aug 2024	**Reminder:** The Contractor was reminded that any breaks in the slope protection should be maintained and covered properly by impervious sheeting for short-term and should be shotcrete for long-term slope protection at SBA.	
	2 Sep 2024	**Reminder:** The Contractor was reminded that the precaution shall be taken with Appendix A2 of ProPECC PN 1/94 before, during and after rainstorm.	
	2 Sep 2024	**Reminder:** The Contractor was reminded that the exposed slope surface at Portion B2-1 should not only be covered with a green net, but also with tarpaulin sheets for short-term and shotcrete for long-term slope protection, to prevent silty stormwater runoff.	
	2 Sep 2024	**Reminder:** The Contractor was reminded that the excavation materials near the u-channel should be removed and kept away from the u-channel, and that sandbag barriers should be provided near the u-channel to minimize the excavation materials from entering the drainage system at Portion B2-1 directly when a rainstorm occurs.	
	2 Sep 2024	**Reminder:** The Contractor was reminded that the deposited silt and grit under the sedimentation basins at Portions B2-1 and E3-1 should be removed regularly in order to maintain the effectiveness of these sedimentation basins.	
	2 Sep 2024	**Reminder:** The Contractor was reminded that the exposed slope should be covered by green net after earthwork at Portion A.	

Parameter	Date	Observation and Reminders	Follow-up Action Taken
Water Quality	2 Sep 2024	**Reminder:** The Contractor was reminded that any breaks in the slope protection should be maintained and shotcrete for long-term slope protection at SBA.	
	9 Sep 2024	**Observation:** The accumulated water should be removed to the silt removal facilities at Portion A.	The Contractor was reminded that accumulated water should be removed and directed to silt removal facilities for treatment at Portion A.
	9 Sep 2024	**Observation:** Silt fence maintenance should be conducted at SBA.	The Contractor was advised to conduct silt fence maintenance regularly to ensure the silt fence around the soil stockpile areas prevents sediment from entering the system at SBA.
	9 Sep 2024	**Reminder:** The Contractor was reminded that the precaution shall be taken with Appendix A2 of ProPECC PN 1/94 before, during and after rainstorm.	
	9 Sep 2024	**Reminder:** The Contractor was reminded that the exposed slope surface at Portion B2-1 should not only be covered with a green net, but also with tarpaulin sheets for short-term and shotcrete for long-term slope protection, to prevent silty stormwater runoff.	
	9 Sep 2024	**Reminder:** The Contractor was reminded that the excavation materials near the u-channel should be removed and kept away from the u-channel, and that sandbag barriers should be provided near the u-channel to minimize the excavation materials from entering the drainage system at Portion B2-1 directly when a rainstorm occurs.	
	9 Sep 2024	**Reminder:** The Contractor was reminded that the deposited silt and grit under the sedimentation basins at Portions B2-1 and E3-1 should be removed regularly in order to maintain the effectiveness of these sedimentation basins.	

Parameter	Date	Observation and Reminders	Follow-up Action Taken
Water Quality	9 Sep 2024	**Reminder:** The Contractor was reminded that the exposed slope should be covered by green net after earthwork at Portion A.	
	9 Sep 2024	**Reminder:** The Contractor was reminded that any breaks in the slope protection should be maintained and shotcrete for long-term slope protection at SBA.	
	16 Sep 2024	**Reminder:** The Contractor was reminded that the precaution shall be taken with Appendix A2 of ProPECC PN 1/94 before, during and after rainstorm.	
	16 Sep 2024	**Reminder:** The Contractor was reminded that the exposed slope surface at Portion B2-1 should not only be covered with a green net, but also with tarpaulin sheets for short-term and shotcrete for long-term slope protection, to prevent silty stormwater runoff.	
	16 Sep 2024	**Reminder:** The Contractor was reminded that the excavation materials near the u-channel should be removed and kept away from the u-channel, and that sandbag barriers should be provided near the u-channel to minimize the excavation materials from entering the drainage system at Portion B2-1 directly when a rainstorm occurs.	
	16 Sep 2024	**Reminder:** The Contractor was reminded that the deposited silt and grit under the sedimentation basins at Portions B2-1 and E3-1 should be removed regularly in order to maintain the effectiveness of these sedimentation basins.	
	16 Sep 2024	**Reminder:** The Contractor was reminded that the exposed slope should be covered by green net after earthwork at Portion A.	

Parameter	Date	Observation and Reminders	Follow-up Action Taken
Water Quality	16 Sep 2024	**Reminder:** The Contractor was reminded that any breaks in the slope protection should be maintained and shotcrete for long-term slope protection at SBA.	
	23 Sep 2024	**Reminder:** The Contractor was reminded that the precaution shall be taken with Appendix A2 of ProPECC PN 1/94 before, during and after rainstorm.	
	23 Sep 2024	**Reminder:** The Contractor was reminded that the exposed slope surface at Portion B2-1 should not only be covered with a green net, but also with tarpaulin sheets for short-term and shotcrete for long-term slope protection, to prevent silty stormwater runoff.	
	23 Sep 2024	**Reminder:** The Contractor was reminded that the excavation materials near the u-channel should be removed and kept away from the u-channel, and that sandbag barriers should be provided near the u-channel to minimize the excavation materials from entering the drainage system at Portion B2-1 directly when a rainstorm occurs.	
	23 Sep 2024	**Reminder:** The Contractor was reminded that the deposited silt and grit under the sedimentation basins at Portions B2-1 and E3-1 should be removed regularly in order to maintain the effectiveness of these sedimentation basins.	
	23 Sep 2024	**Reminder:** The Contractor was reminded that the exposed slope should be covered by green net after earthwork at Portion A.	
	23 Sep 2024	**Reminder:** The Contractor was reminded that any breaks in the slope protection should be maintained and shotcrete for long-term slope protection at SBA.	

Parameter	Date	Observation and Reminders	Follow-up Action Taken
Water Quality	30 Sep 2024	**Observation:** The accumulated water was found at waste skip and shovel bucket of SBA.	The Contractor was recommended to change the angle of placing the shovel bucket and provide the cover such as impervious sheet for waste skip to minimize the potential risk for accumulation of water. The accumulated water should be removed to silt removal facilities for treatment.
	30 Sep 2024	**Reminder:** The Contractor was reminded that the exposed slope surface at Portion B2-1 should not only be covered with a green net, but also with tarpaulin sheets for short-term and shotcrete for long-term slope protection, to prevent silty stormwater runoff.	
	30 Sep 2024	**Reminder:** The Contractor was reminded that the excavation materials near the u-channel should be removed and kept away from the u-channel, and that sandbag barriers should be provided near the u-channel to minimize the excavation materials from entering the drainage system at Portion B2-1 directly when a rainstorm occurs.	
	30 Sep 2024	**Reminder:** The Contractor was reminded that the deposited silt and grit under the sedimentation basins at Portions B2-1 and E3-1 should be removed regularly in order to maintain the effectiveness of these sedimentation basins.	
	30 Sep 2024	**Reminder:** The Contractor was reminded that the exposed slope should be covered by green net after earthwork at Portion A.	
	30 Sep 2024	**Reminder:** The Contractor was reminded that any breaks in the slope protection should be maintained and shotcrete for long-term slope protection at SBA.	

Parameter	Date	Observation and Reminders	Follow-up Action Taken
Water Quality	30 Sep 2024	**Reminder:** The Contractor was reminded that the dust control measures (including frequency of watering by water trucks and water sprinkler etc.) should be increased when the exposed area was dry and the operation of water sprinkler should be maintained in good conditions to ensure the high effectiveness of dust control in the project site.	
Waste and Chemical Management	22 Jul 2024	**Observation:** The chemical container without drip tray was observed at SBA.	The Contractor was reminded to provide chemical drip tray for chemical storage to prevent chemical spillage and land contamination at SBA.
	29 Jul 2024	**Observation:** The general waste and C&D waste shall be collected and stored separately at SBA.	The Contractor was reminded that the general waste and C&D waste should be segregated by enclosed bin and C&D waste skip to ensure general waste and C&D waste are stored separately and properly at SBA.
	12 Aug 2024	**Observation:** The general wastes were identified on the floor without proper disposal and collection at Portion E3-1.	The Contractor was advised that sufficient of enclosed bin should be provided for proper general waste collection and storage at Portion E3-1.
	12 Aug 2024	**Reminder:** The Contractor was reminded that the chemical drip tray should be kept clean at Portion E3-1 to prevent chemical leakage and land contamination.	
	9 Sep 2024	**Observation:** General waste should be collected and stored in the enclosed bin at SBA.	The Contractor was advised to provide an enclosed bin for general waste collection at SBA.
Landscape and Visual Impact	No specific observation was identified in the reporting period.		
Permit / Licenses	No specific observation was identified in the reporting period.		

11.1.4 Three general site inspections on 16 July 2024, 3 and 30 September 2024 were conducted by Environmental Protection Department-Regional Office (North) (EPD-RNG).

12 Environmental Non-conformance

12.1 Summary of Monitoring Exceedance

Air Quality Monitoring

12.1.1 No Action / Limit Level exceedance impact monitoring was recorded at designated monitoring stations during the reporting period. The Summary of Impact 1-hr & 24-hr TSP Exceedance are shown in **Table 12-1**.

Table 12-1 Summary of Impact 1-hr & 24-hr TSP Exceedance during the reporting period

Dust Monitoring Station		AM1		AM2		AM3	
Parameters / Level Exceedance		Action Level	Limit Level	Action Level	Limit Level	Action Level	Limit Level
1-hr TSP	Exceedance Date	-	-	-	-	-	-
	Exceedance Count	0	0	0	0	0	0
24-hr TSP	Exceedance Date	-	-	-	-	-	-
	Exceedance Count	0	0	0	0	0	0

Remarks: * equal to non-project related

Noise Monitoring

12.1.2 No exceedance of the Action and Limit Levels was recorded at designated monitoring stations during the reporting period. The Summary of Impact Noise Exceedance are shown in **Table 12-2**.

Table 12-2 Summary of Impact Noise Exceedance during the reporting period

Noise Monitoring Station		NM1(a)		NM2(a)	
Parameters / Level Exceedance		Action Level	Limit Level	Action Level	Limit Level
LA_{eq}(30mins)	Exceedance Date	-	-	-	-
	Exceedance Count	0	0	0	0

Remarks: * equal to non-project related

Surface Water Quality Monitoring

12.1.3 No exceedance of Action and Limit Levels of surface was recorded at designated monitoring stations during the reporting period. The Summary of Impact Surface Water Quality Exceedance are shown in **Table 12-3**.

Table 12-3 Summary of Impact Surface Water Quality Exceedance during the reporting period

Surface Water Quality Monitoring Station		WM1		WM2	
Parameters \ Level Exceedance		Action Level	Limit Level	Action Level	Limit Level
pH	Exceedance Date	-	-	-	-
	Exceedance Count	0	0	0	0
DO	Exceedance Date	-	-	-	-
	Exceedance Count	0	0	0	0
Turbidity	Exceedance Date	-	-	-	-
	Exceedance Count	0	0	0	0
SS	Exceedance Date	-	-	-	-
	Exceedance Count	0	0	0	0

Remarks: * equal to non-project related

Landfill Gas Monitoring

12.1.4 No exceedance of the Action and Limit Levels for were recorded at designated monitoring stations during the reporting period. The Summary of Landfill Gas Exceedance are shown in **Table 12-4**.

Table 12-4 Summary of Landfill Gas Exceedance during the reporting period

Landfill Gas Monitoring Station		Portion A +50 mpD to 70 mpD Platform	
Parameters \ Level Exceedance		Action Level	Limit Level
CH_4	Exceedance Date	-	-
	Exceedance Count	0	0
CO_2	Exceedance Date	-	-
	Exceedance Count	0	0
O_2	Exceedance Date	-	-
	Exceedance Count	0	0

Remarks: * equal to non-project related

12.2 Summary of Environmental Non-compliance

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

12.3 Summary of Environmental Complaint

12.3.1 No environmental complaint was recorded during the reporting period. The cumulative statistics on environmental complaints are presented in **Table 12-5.**

Table 12-5 Cumulative Statistics on Environmental Complaints

Reporting Period		Environmental Aspects				
		Air Quality	Noise	Water Quality	Waste	Ecology
Jul 2024	Complaint Date	-	-	-	-	-
	No. of Complaint	0	0	0	0	0
Aug 2024	Complaint Date	-	-	-	-	-
	No. of Complaint	0	0	0	0	0
Sep 2024	Complaint Date	-	-	-	-	-
	No. of Complaint	0	0	0	0	0
Total during the reporting period		0	0	0	0	0
Accumulate of project		1	0	6(1* & 1#)	0	0

Remarks: * equal to non-project related after the investigation.

12.3.2 Cumulative complaint / enquiry log, Summaries of complaints and enquiries & Environmental complaint reports are presented in **Appendix I**.

12.4 Summary of Environmental Summons and Successful Prosecution

12.4.1 No summons and prosecution were received during the reporting period.

13 Implementation Status on Environmental Mitigation Measures

13.1.1 The Contractor has generally implemented part of environmental mitigation measures and requirements as stated in the EIA Report, the EP and Updated EM&A Manual and the contract documents. The implemented mitigation measures are considered effective. The implementation status during the reporting period is summarized in **Appendix G**.

14 Conclusion

14.1.1 1-hr & 24-hr TSP impact monitoring was carried out in the reporting period. No Action / Limit Level exceedance for 1-hr & 24-hr TSP impact monitoring at AM1, AM2 & AM3 was recorded during the reporting period.

14.1.2 Construction noise monitoring was carried out in the reporting period. No Action / Limit Level exceedance for construction noise monitoring at NM1a & NM2a was recorded during the reporting period.

14.1.3 Site clearance of future landfilling area is in progress. The installation of groundwater monitoring boreholes will be installed after the site formation work of the landfilling area. The target commencement period of groundwater monitoring will be in 2026. No groundwater monitoring is required before the completion of site formation work of the landfilling area.

14.1.4 Surface water monitoring was carried out in the reporting period. No Action / Limit Level exceedance for surface water monitoring at WM1 & WM2 was recorded during the reporting period.

14.1.5 Landfill Gas Monitoring was carried out in the reporting period. No exceedance of Action and Limit Levels of LFG was recorded during the reporting period.

14.1.6 In terms of cultural heritage, implementation of the mitigation measures such as permanent fencing to protect the boulder path and setting up warning notices during construction phase of the Project has been monitored through the regular site inspection/audit in the reporting period. All the mitigation measures are in order.

14.1.7 no post-transplantation monitoring, and no post-translocation monitoring was conducted during the reporting period.

14.1.8 14 environmental site inspections were carried out in the reporting period. Recommendations on mitigation measures for Permit/ Licenses were given to the Contractor for remediating the deficiencies identified during the site inspections.

14.1.9 No environmental complaint was recorded during the reporting period.

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

14.1.11 No notification of summons and prosecution was received during the reporting period.

Comment and Recommendations

14.1.12 The recommended environmental mitigation measures, as proposed in the EIA reports and Updated EM&A Manuals shall be effectively implemented to minimize the potential environmental impacts from the Project. The EM&A programme would effectively monitor the environmental impacts generated from the construction activities and ensure the proper implementation of mitigation measures.

14.1.13 According to the environmental audit performed in the reporting period, the following recommendations were made:

<u>Air Quality Impact</u>

- The Contractor was reminded that stockpiling of dusty material should be covered properly by impervious sheet to prevent dust dispersion.
- The Contractor was reminded that the unpaved assess road should be wetted by water spraying to prevent dust dispersion.
- The Contractor was reminded that NRMM label should be affixed on the generator.
- The Contractor was reminded that the dust control measures (including frequency of watering by water trucks and water sprinkler etc.) should be increased when the exposed area was dry and the operation of water sprinkler should be maintained in good conditions to ensure the high effectiveness of dust control in the project site.

Construction Noise Impact

- No specific observation was identified in the reporting period.

Water Quality Impact

- The Contractor was advised to provide channel, earth bunds, or sandbag barriers to properly direct stormwater to silt removal facility and clean up the deposited silt and grit regularly.
- The Contractor was reminded that the slope protection should be scheduled and maintained.
- The Contractor was reminded that the precaution shall be taken with Appendix A2 of ProPECC PN 1/94 before, during and after rainstorm.
- The Contractor was reminded that the exposed slope surface should not only be covered with a green net, but also with tarpaulin sheets for short-term and shotcrete for long-term slope protection, to prevent silty stormwater runoff.
- The Contractor was reminded that the excavation materials near the u-channel should be removed and kept away from the u-channel, and that sandbag barriers should be provided near the u-channel to minimize the excavation materials from entering the drainage system directly when a rainstorm occurs.
- The Contractor was reminded that the deposited silt and grit under the sedimentation basins should be removed regularly in order to maintain the effectiveness of these sedimentation basins.
- The Contractor was reminded that accumulated water should be removed and directed to silt removal facilities for treatment.
- The Contractor was advised to conduct silt fence maintenance regularly to ensure the silt fence around the soil stockpile areas prevents sediment from entering the system.
- The Contractor was recommended to change the angle of placing the shovel bucket and provide the cover such as impervious sheet for waste skip to minimize the potential risk for accumulation of water. The accumulated water should be removed to silt removal facilities for treatment.

Waste and Chemical Management

- The Contractor was reminded to provide chemical drip tray for chemical storage to prevent chemical spillage and land contamination.
- The Contractor was reminded that the general waste and C&D waste should be segregated by enclosed bin and C&D waste skip to ensure general waste and C&D waste are stored separately and properly.

Landscape and Visual Impact

- No specific observation was identified in the reporting period.

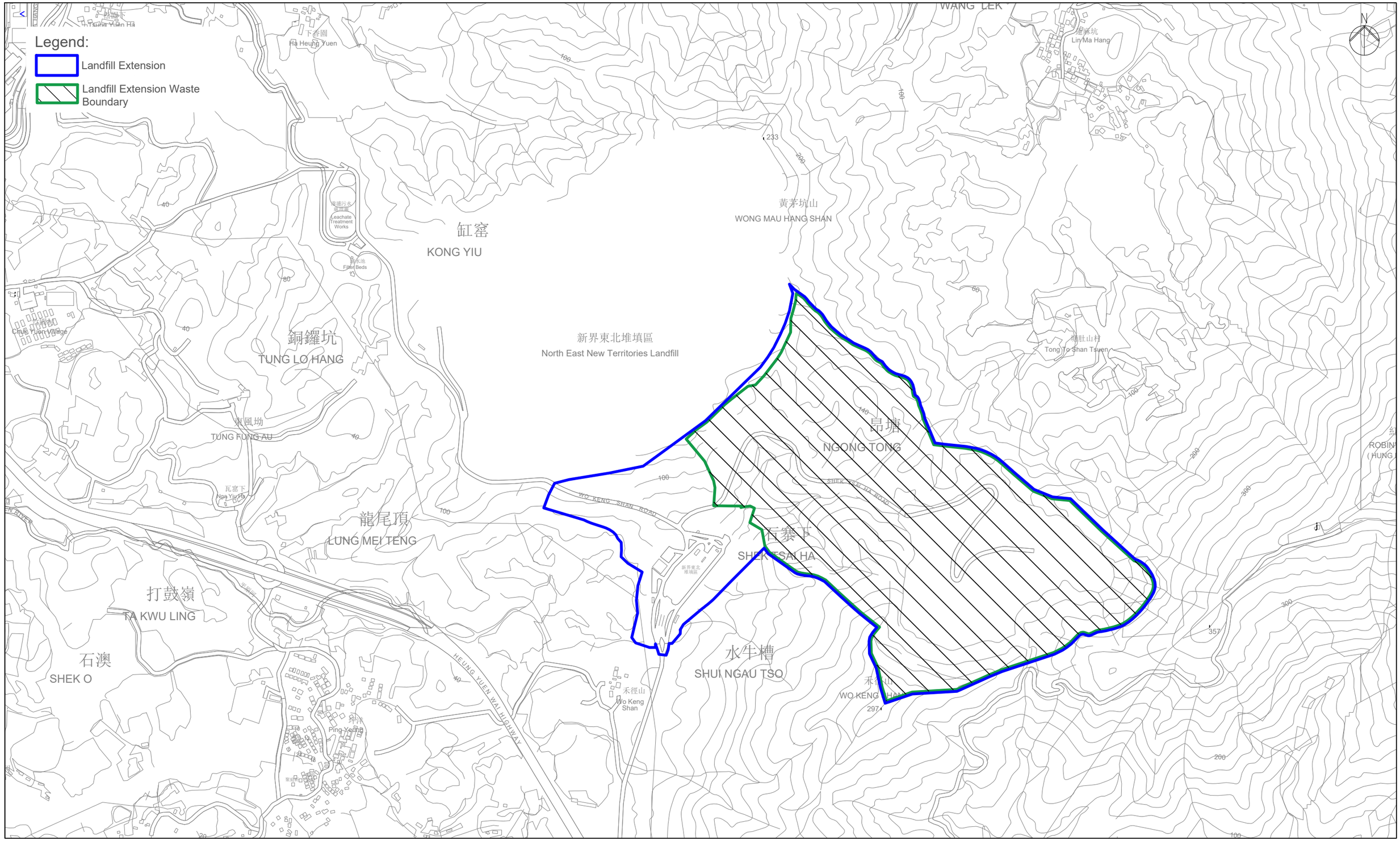
Permit / Licenses

- No specific observation was identified in the reporting period.

14.1.14 The Contractor has generally implemented environmental mitigation measures and requirements as stated in the EIA Report, the EP and Updated EM&A Manual and the contract documents. The implemented mitigation measures are considered effective.

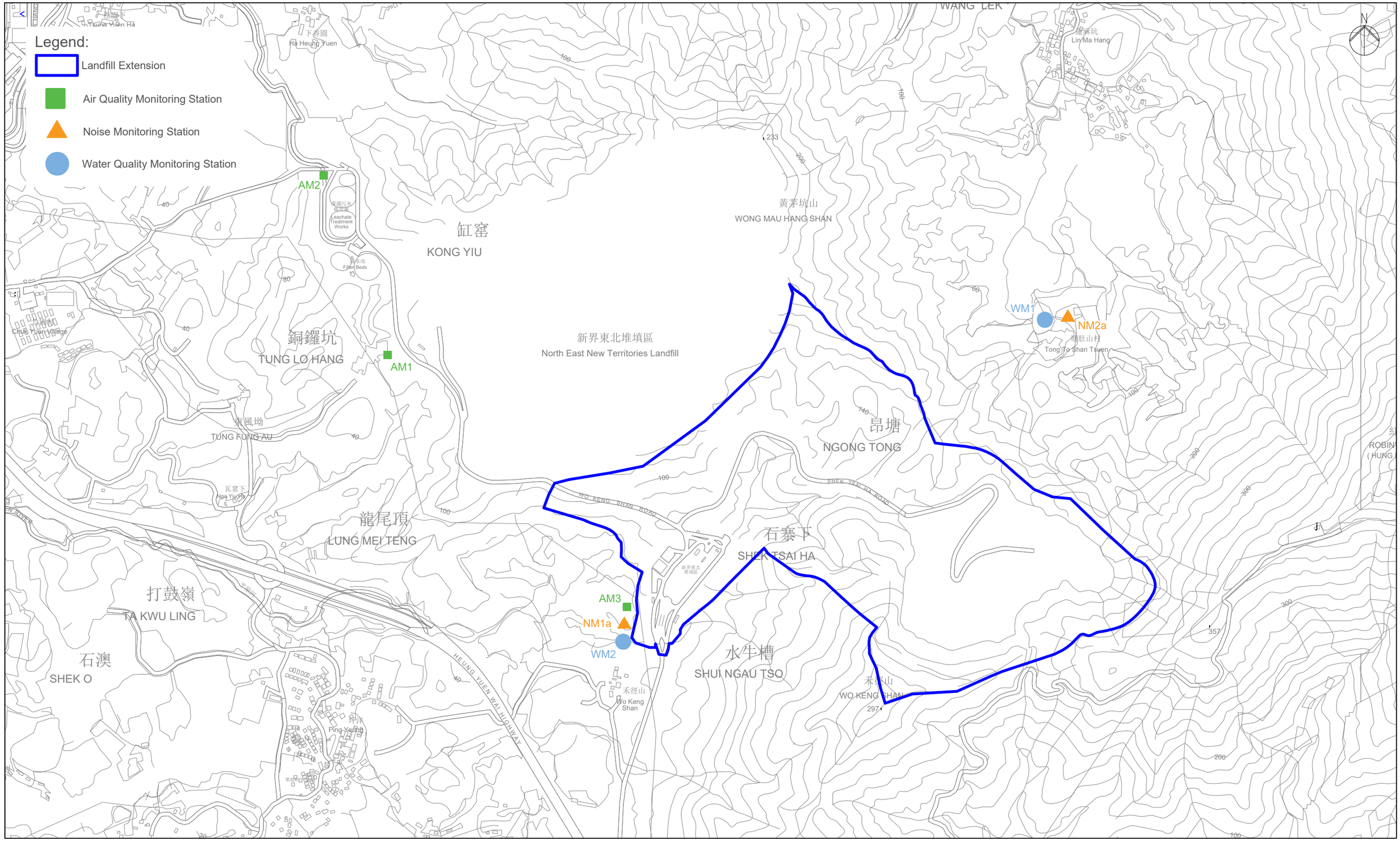
14.1.15 The ET will keep track on the EM&A programme to ensure compliance of environmental requirements and the proper implementation of all necessary mitigation measures.

Figure 1 Location of the Project Site



aurecon Aurecon Hong Kong Limited	North-East New Territories (NENT) Landfill Extension Location Plan of the Project Site	Figure 1.1 Scale: 1:10000

Figure 2 Impact Air, Noise & Surface Water Quality Monitoring Locations

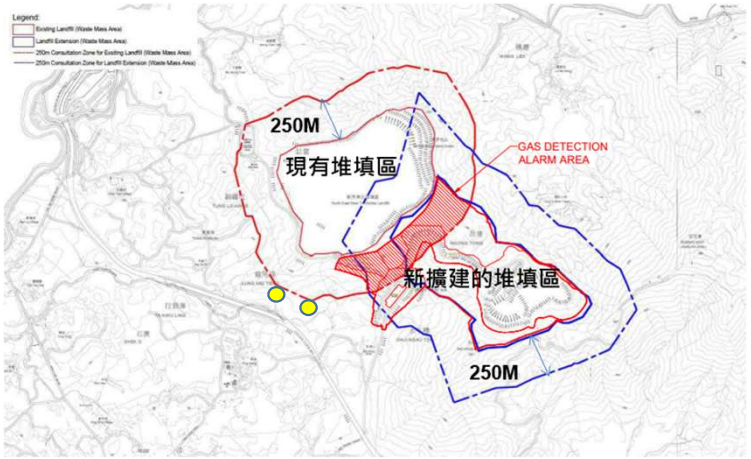


aurecon Aurecon Hong Kong Limited	North-East New Territories (NENT) Landfill Extension Impact Monitoring Locations	Figure 2 Scale: 1:10000

Figure 3 Landfill Gas Monitoring Locations

Gas Monitoring Point

Monitoring Frequency: 2 times per day



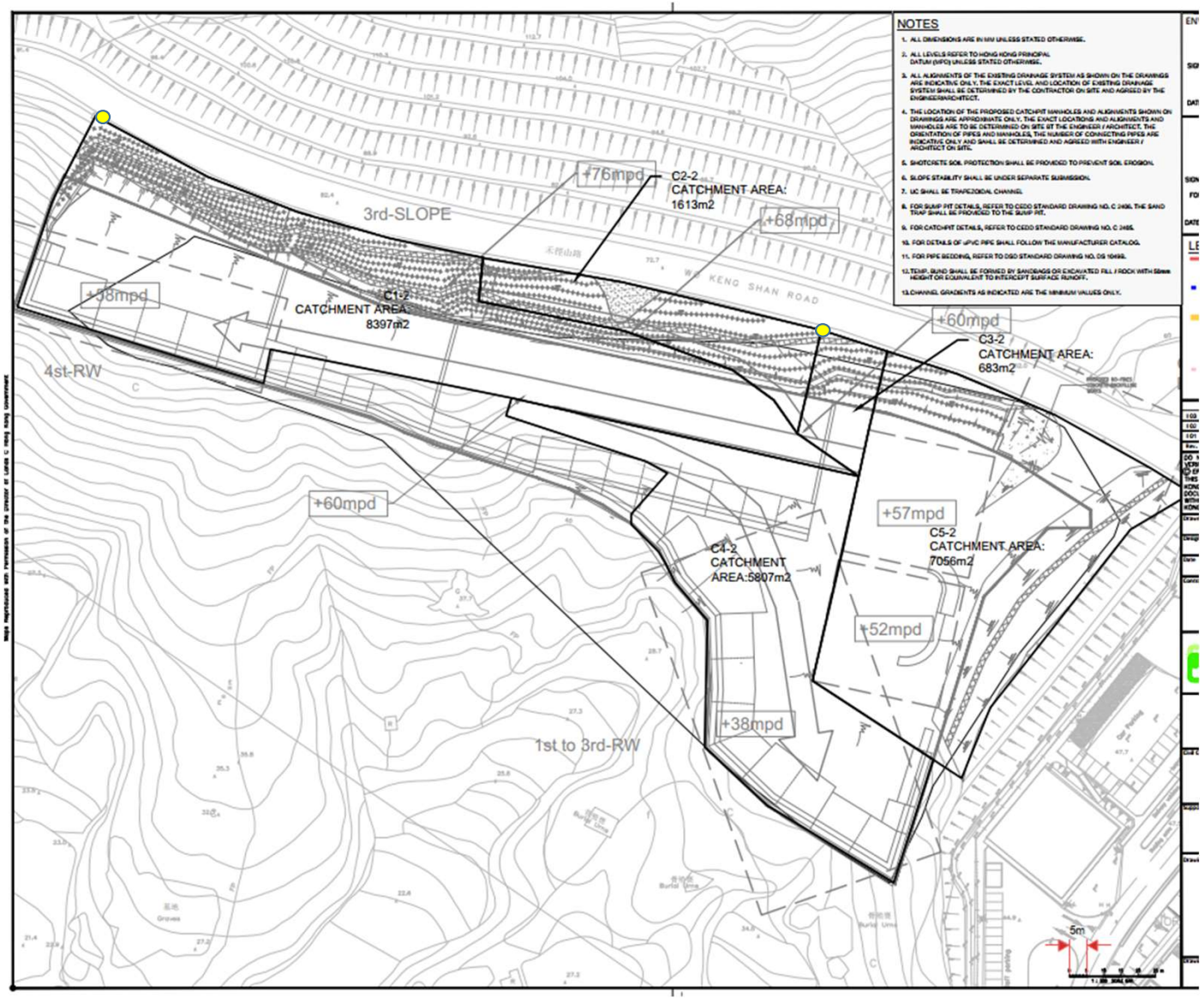
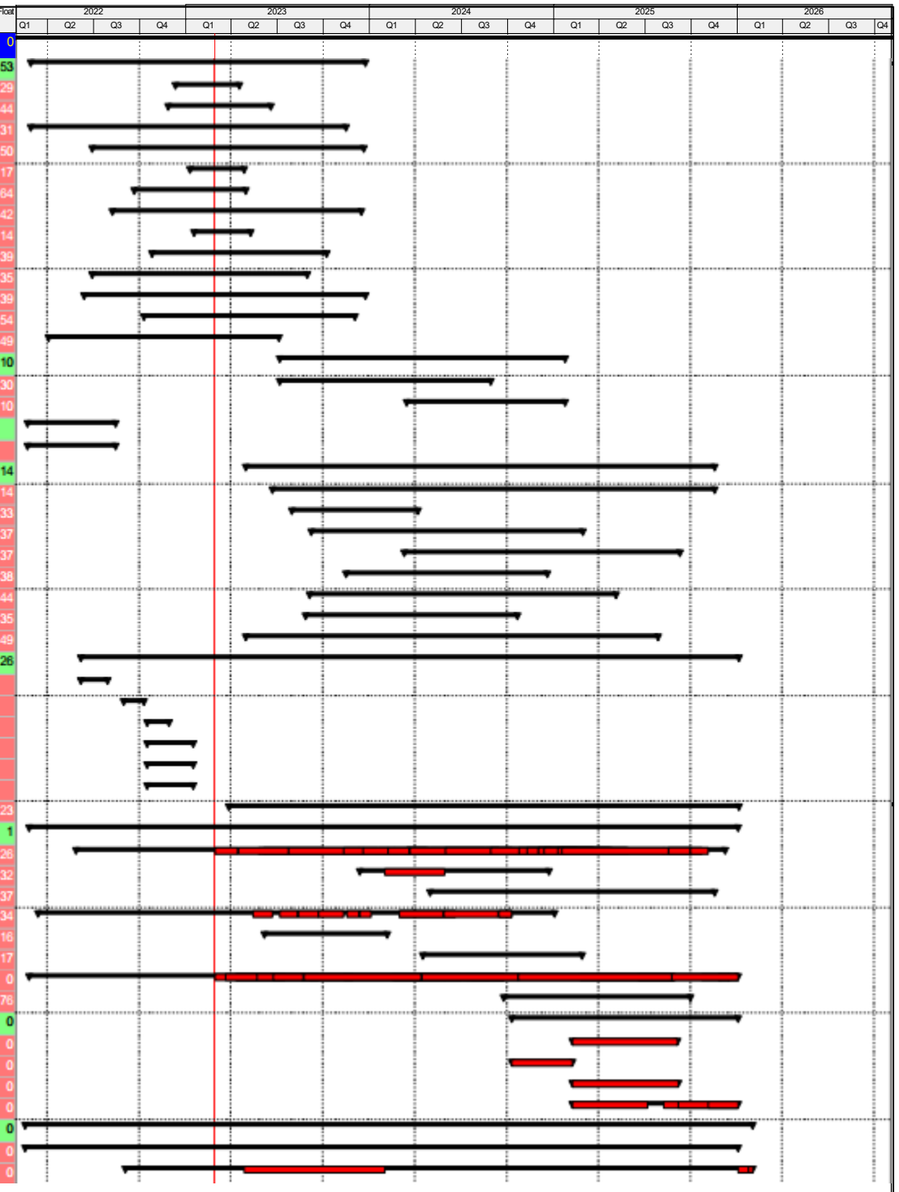


Figure 3 Landfill Gas Monitoring Locations

Appendix A Construction Programme & Construction Site Activities

Activity ID	Activity Name	At Completion Duration	Actual Start	Actual Finish	Early Start	Early Finish	Late Start	Late Finish	Predecessors	Successors	Total Float
NENTX_Updated Baseline Programme (Rev.4)		1826	25-Jan-22 A	25-Jan-27	28-Feb-23	25-Jan-27	28-Feb-23	25-Jan-27			0
DESIGN DEVELOPMENT		666	28-Feb-22 A	25-Dec-23	28-Feb-23	25-Dec-23	02-Mar-23	16-Feb-24			53
Portion A - Site Formation		91	12-Dec-22 A	17-Apr-23	28-Feb-23	17-Apr-23	07-Apr-23	26-May-23			29
Portion A & D Architectural Design		205	28-Nov-22 A	20-Jun-23	28-Feb-23	20-Jun-23	14-Mar-23	03-Aug-23			44
Portion A - Leachate Treatment Works & LFG Treatment Plant		626	28-Feb-22 A	15-Nov-23	28-Feb-23	15-Nov-23	05-Apr-23	16-Dec-23			31
Portion A - Process Building		540	30-Jun-22 A	21-Dec-23	28-Feb-23	21-Dec-23	04-Apr-23	09-Feb-24			50
Portion D Site Formation		109	10-Jan-23 A	28-Apr-23	04-Apr-23	28-Apr-23	20-Apr-23	15-May-23			17
Portion A and D Preliminary Utilities Arrangement		159	21-Sep-22 A	01-May-23	28-Feb-23	01-May-23	26-May-23	28-Jul-23			64
Site services detailed design for Portion A and D		496	09-Aug-22 A	17-Dec-23	28-Feb-23	17-Dec-23	11-Apr-23	28-Jan-24			42
Permanent Drainage - Portion A, C & D		80	19-Jan-23 A	10-May-23	28-Feb-23	10-May-23	20-Mar-23	30-May-23			14
Sewerage Management Plan - Portion A, C & D		249	26-Oct-22 A	09-Oct-23	25-Apr-23	09-Oct-23	19-Jun-23	01-Dec-23			39
Pavement Road and Traffic Design for Portoin A & D		306	30-Jun-22 A	31-Aug-23	06-Jul-23	31-Aug-23	24-Aug-23	19-Oct-23			35
Accommodation Buildings (Portion D)		401	13-Jun-22 A	25-Dec-23	28-Feb-23	25-Dec-23	08-Mar-23	16-Feb-24			39
Existing Structures (Portion C)		301	10-Oct-22 A	04-Dec-23	28-Feb-23	04-Dec-23	06-May-23	16-Feb-24			54
Landfill Area		457	04-Apr-22 A	05-Jul-23	28-Feb-23	05-Jul-23	02-Mar-23	23-Aug-23			49
FS Submisson and FSD Consent		406	07-Jul-23	24-Jan-25	07-Jul-23	24-Jan-25	21-Jul-23	07-Feb-25			10
Preliminary FS Submission		300	07-Jul-23	29-Aug-24	07-Jul-23	29-Aug-24	21-Jul-23	11-Oct-24			30
Process Building and Fire Services Building Detailed Design FS Submission		226	15-Mar-24	24-Jan-25	15-Mar-24	24-Jan-25	29-Mar-24	07-Feb-25			10
TECHNICAL SUBMISSION		125	22-Feb-22 A	16-Aug-22 A							
Project Control Plan and Report		125	22-Feb-22 A	16-Aug-22 A							
PROCUREMENT / FABRICATION / DELIVERY		933	01-May-23	18-Nov-25	01-May-23	18-Nov-25	18-Jun-23	03-Dec-25			14
General Material		880	23-Jun-23	18-Nov-25	23-Jun-23	18-Nov-25	07-Jul-23	03-Dec-25			14
LIFT		250	31-Jul-23	06-Apr-24	31-Jul-23	06-Apr-24	03-Sep-23	09-May-24			33
LTW - GFS and GRP Tanks		540	07-Sep-23	28-Feb-25	07-Sep-23	28-Feb-25	14-Oct-23	06-Apr-25			37
LTW - Lamella Settlers		550	10-Mar-24	10-Sep-25	10-Mar-24	10-Sep-25	15-Apr-24	17-Oct-25			37
LTW - Sludge Thicknening		400	16-Nov-23	20-Dec-24	16-Nov-23	20-Dec-24	24-Dec-23	27-Jan-25			38
LTW - Ammonia Stripper		610	04-Sep-23	06-May-25	04-Sep-23	06-May-25	19-Oct-23	20-Jun-25			44
Process Building(Electrial equipments)		420	28-Aug-23	21-Oct-24	28-Aug-23	21-Oct-24	03-Oct-23	25-Nov-24			35
LFG Plant		820	01-May-23	28-Jul-25	01-May-23	28-Jul-25	18-Jun-23	15-Sep-25			49
EPD REQUIREMENT - GI WORKS		1309	07-Jun-22 A	05-Jan-26	28-Mar-23	05-Jan-26	27-Apr-23	31-Jan-26			26
PORTION D		45	07-Jun-22 A	30-Jul-22 A							
PORTION A		32	31-Aug-22 A	11-Oct-22 A							
PORTION E3-1		38	17-Oct-22 A	30-Nov-22 A							
PORTION E4		76	17-Oct-22 A	17-Jan-23 A							
PORTION E3-1-A		76	17-Oct-22 A	17-Jan-23 A							
PORTION E1		76	17-Oct-22 A	17-Jan-23 A							
ENVIRONMENTAL MONITORING		821	28-Mar-23	05-Jan-26	28-Mar-23	05-Jan-26	27-Apr-23	31-Jan-26			23
CONSTRUCTION - INITIAL WORKS PHASE 1		1409	24-Feb-22 A	03-Jan-26	28-Feb-23	03-Jan-26	28-Feb-23	03-Jan-26			1
PORTION A		1291	28-May-22 A	08-Dec-25	28-Feb-23	08-Dec-25	28-Feb-23	03-Jan-26			26
SITEWIDE Underground UTILITIES (Portion A to Portion D)		302	14-Dec-23	23-Dec-24	14-Dec-23	23-Dec-24	02-Feb-24	08-Feb-25			32
Waste Reception Area (PORTION C) Construct by Others		460	02-May-24	18-Nov-25	02-May-24	18-Nov-25	27-May-24	03-Jan-26			37
PORTION D		1028	14-Mar-22 A	04-Jan-25	28-Feb-23	04-Jan-25	04-Mar-23	08-Feb-25			34
PORTION D - Underground Drainage / UG Utilities and Pipe Laying Works		200	07-Jun-23	05-Feb-24	07-Jun-23	05-Feb-24	28-Jun-23	01-Mar-24			16
PORTION D - EVA Road Road Pavement Works		257	16-Apr-24	27-Feb-25	16-Apr-24	27-Feb-25	07-May-24	19-Mar-25			17
Landfill Area (Portion E3-1, E4, E1, B1-1 & B2)		1409	24-Feb-22 A	03-Jan-26	28-Feb-23	03-Jan-26	28-Feb-23	03-Jan-26			0
Landscape Works (Landfill)		300	24-Sep-24	30-Sep-25	24-Sep-24	30-Sep-25	27-Dec-24	03-Jan-26			76
FS INSPECTION		450	11-Oct-24	04-Jan-26	11-Oct-24	04-Jan-26	11-Oct-24	04-Jan-26			0
Portion A - Readiness for FS inspection (Process Building)		210	07-Feb-25	05-Sep-25	07-Feb-25	05-Sep-25	08-Feb-25	06-Sep-25			0
Portion D : Readiness for FS inspection		120	11-Oct-24	08-Feb-25	11-Oct-24	08-Feb-25	11-Oct-24	08-Feb-25			0
2nd Inspection		210	07-Feb-25	06-Sep-25	07-Feb-25	06-Sep-25	08-Feb-25	06-Sep-25			0
FS Inspection Certificate		330	08-Feb-25	04-Jan-26	08-Feb-25	04-Jan-26	08-Feb-25	04-Jan-26			0
STATUTORY SUBMISSION		1446	16-Feb-22 A	01-Feb-26	28-Feb-23	01-Feb-26	02-Mar-23	01-Feb-26			0
Obtain Licences & Permits for Construction		1418	16-Feb-22 A	03-Jan-26	28-Feb-23	03-Jan-26	02-Mar-23	04-Jan-26			0
Obtain Licences & Permits for Operation		1246	04-Sep-22 A	01-Feb-26	28-Feb-23	01-Feb-26	15-Mar-23	01-Feb-26			0



環境保護署
Environmental Protection Department

Remaining Level of Effort
Remaining Work
Critical Remaining Work
Milestone
Summary

NORTH EAST NEW TERRITORIES (NENTX) LANDFILL EXTENSION
UPDATED BASELINE PROGRAMME (Rev.4)
Ececutive Summary
INITIAL WORKS (PHASE 1)

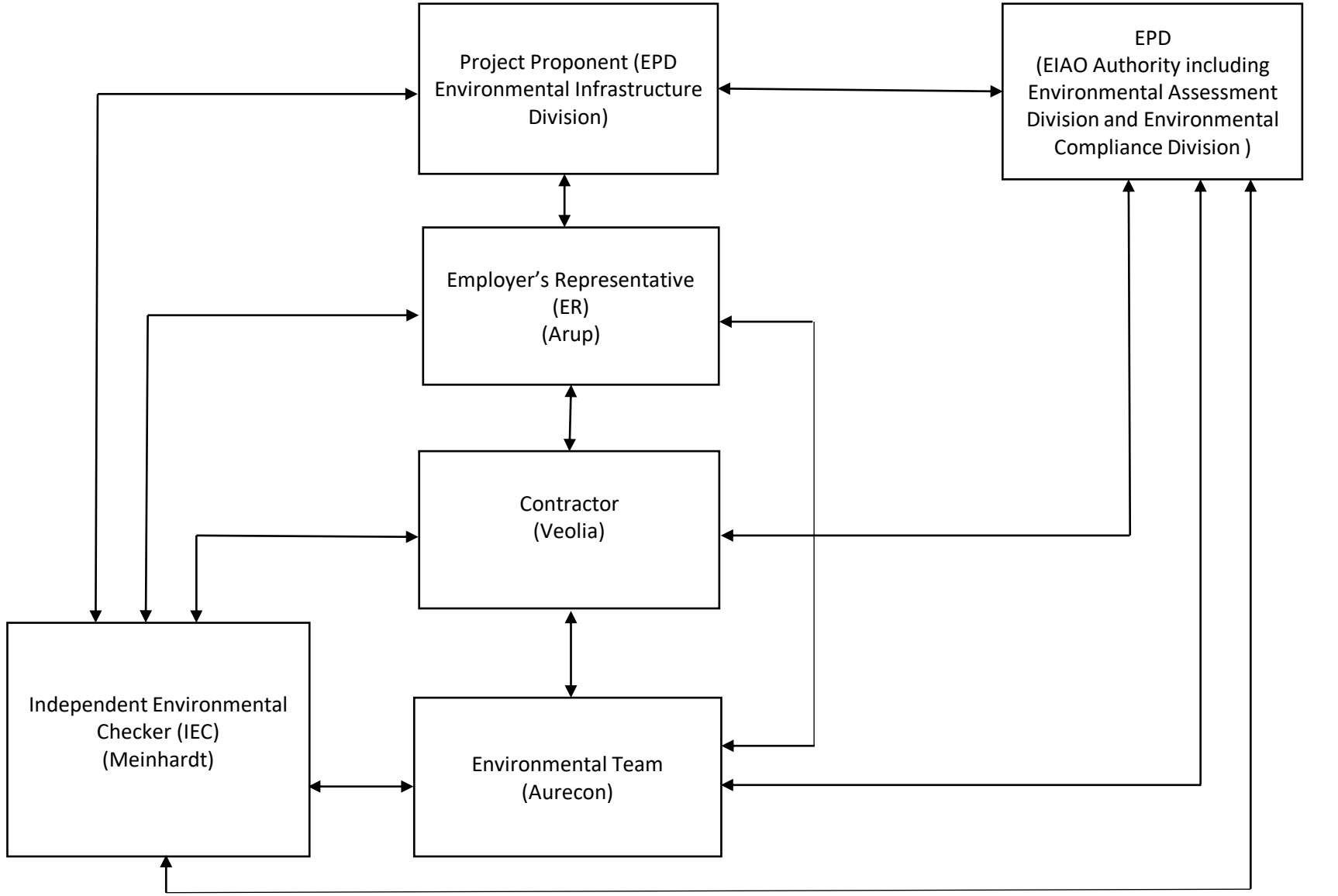
VEOLIA

Date	Revision	Ch...	Appr...
22-Jun-22	GENERAL REVISION		
31-Mar-23	GENERAL REVISION		

Construction Activities	Where	Who	What - ENV Impacts	Mitigation Measures
Material loading and unloading, site traffic	Portion A, SBA to Alternative Disposal Ground	PYE	Dust, bringing mud to the common haul road	Speed limit, covering of materials and water spraying, lorry washing at the exit of the site
Construction of Site buildings	Portion D	PYE	Washout flowing to site water discharge point, dust emissions	Avoid the spillage of concrete, lorry washing at designated area, operation and maintenance of water treatment facility at discharge point
Site clearance	Portion A, Portion E3-1, Portion E4, Portion E1/B2	PYE	Wash out going to surface water channel and site water discharge point, generation of yard waste	Cover exposed slope by tarpaulin, diversion of surface water, operation and maintenance of water treatment facility at discharge point, implementation of trip ticket system
Installation of permanent fencing	Portion A, Portion B1, Portion E4	PYE	Dust	Covering of cement storage area, enclosure of mixing area
Site formation	Portion A, Portion E3-1	PYE	Generation of C&D waste	Implementation of trip ticket system, waste recycling, internal waste transfer
Tree Felling	Portion E3-1, E4, E1/B2	PYE	Generation of yard waste	Implementation of trip ticket system, waste recycling, internal waste transfer
Shotcreting (permanent and temporary)	Whole site	PYE	Dust	Covering of cement storage area, enclosure of mixing area
Soil Nail Installation	Portion A, E1/B2, E4	PYE	Dust	Covering of cement storage area, enclosure of mixing area, watering during works, install dust screen at work area

Remark:
PYE is the Sub-contractor for this project

Appendix B Project Organization Chart & Management Structure



Notes:
EPD - Environmental Protection Department
Arup – Ove Arup & Partners Limited
Veolia - Veolia Environmental Services Hong Kong Limited
Meinhardt - Meinhardt Infrastructure And Environment Limited
Aurecon - Aurecon Hong Kong Limited

Line of Communication

Appendix C Detail Status of FEP & EP Submission

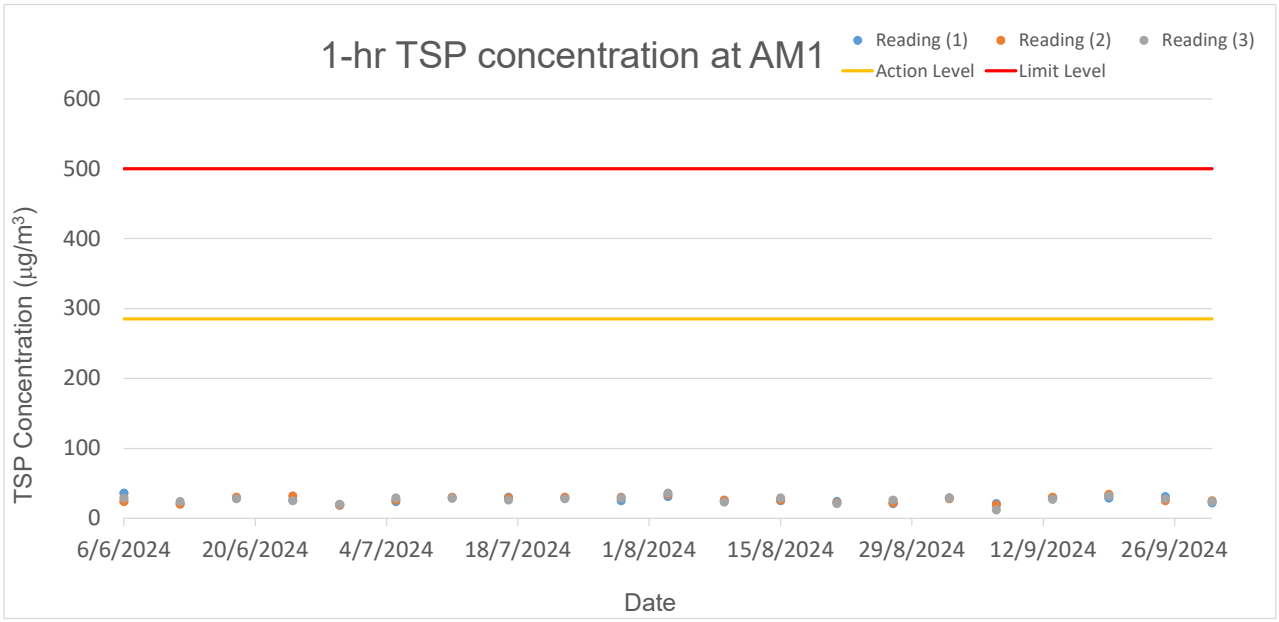
Detail Status of Submissions required under the FEP & EP

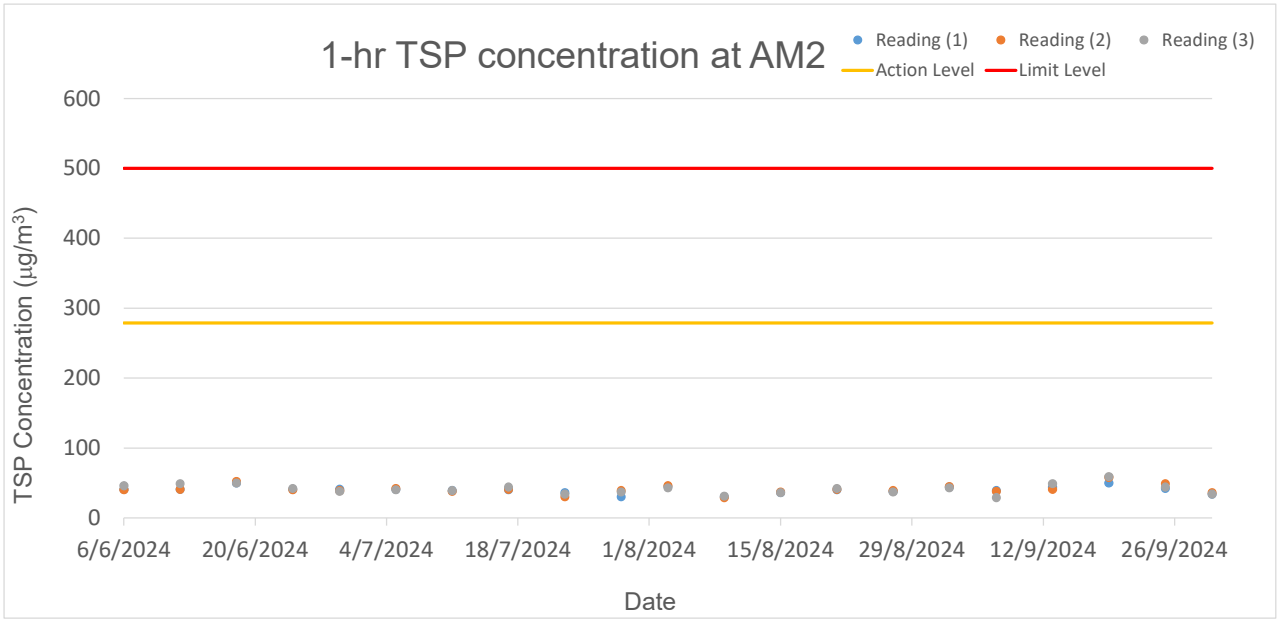
FEP Condition	EP Condition	Submission / Measures	Status
2.1	2.3	Management Organization of Main Construction Companies	Submission Date (12 Oct 2022)
2.2	2.4	Setting up of Community Liaison Group (CLG)	Submission Date (12 Oct 2022) 1st CLG meeting (12 Jan 2023)
2.3	2.5	Submission of EM&A Manual	Submission Date (12 Oct 2022)
2.4	2.6	Submission of Preservation of Cultural Landscape Features	Survey and Preservation of Grave Records: Submission Date (15 Oct 2022) Survey and Preservation of Boulder Paths: Submission Date (12 Oct 2022)
2.5	2.7	Submission of Vegetation Survey (Transplantation Proposal)	Submission Date (2 September 2022)
2.6	2.8	Submission of translocation proposal	Submission Date (8 July 2022)
2.7	2.9	Submission of Transplantation Report and Post-Transplantation Monitoring	Submission Date (19 Jan 2023) 1st monitoring (24 Nov 2022) 2nd monitoring (9 Dec 2022) 3rd monitoring (21 Dec 2022) 4th monitoring (13 Jan 2023) 5th monitoring (26 Jan 2023) 6th monitoring (8 Feb 2023) 7th monitoring (24 Feb 2023) 8th monitoring (20 Mar 2023) 9th monitoring (21 Apr 2023) 10th monitoring (12 May 2023) 11th monitoring (16 Jun 2023) 12th monitoring (18 Jul 2023) 13th monitoring (11 Aug 2023) 14th monitoring (15 Sep 2023) 15th monitoring (13 Oct 2023)

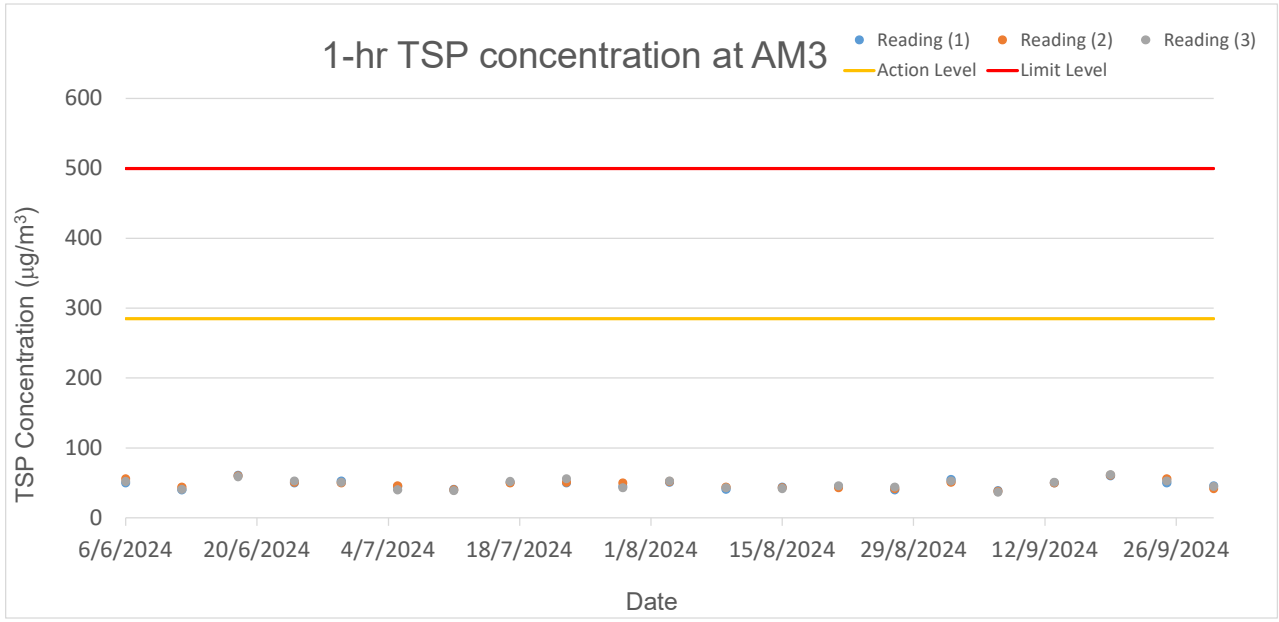
FEP Condition	EP Condition	Submission / Measures	Status
2.8	2.10	Submission of Translocation Report and Post-Translocation Monitoring	Translocation was carried out in July 2022 Submission Date (27 December 2022) 1st monitoring (29 Aug 2022) 2nd monitoring (28 Sep 2022) 3rd monitoring (28 Oct 2022) 4th monitoring (22 Nov 2022) 5th monitoring (29 Dec 2022) 6th monitoring (30 Jan 2023) 7th monitoring (24 Feb 2023) 8th monitoring (20 Mar 2023) 9th monitoring (19 Apr 2023) 10th monitoring (17 May 2023) 11th monitoring (7 Jun 2023) 12th monitoring (12 Jul 2023)
2.9	2.11	Submission of Detailed Landfill Gas Hazard Assessment Report	Submission Date (6 Oct 2022)
2.10	2.12	Submission of Waste Management Plan	Submission Date (30 December 2022)
3.2	3.2	Submission of Baseline Monitoring Report	Submission Date (30 Nov 2022)
3.3	3.3	Submission of Monthly EM&A Report	1st report (Dec 2022) 2nd report (Jan 2023) 3rd report (Feb 2023) 4th report (Mar 2023) 5th report (Apr 2023) 6th report (May 2023) 7th report (Jun 2023) 8th report (Jul 2023) 9th report (Aug 2023) 10th report (Sep 2023) 11th report (Oct 2023) 12th report (Nov 2023) 13th report (Dec 2023) 14th report (Jan 2024) 15th report (Feb 2024) 16th report (Mar 2024) 17th report (Apr 2024) 18th report (May 2024) 19th report (Jun 2024) 20th report (Jul 2024) 21st report (Aug 2024) 22nd report (Sep 2024)

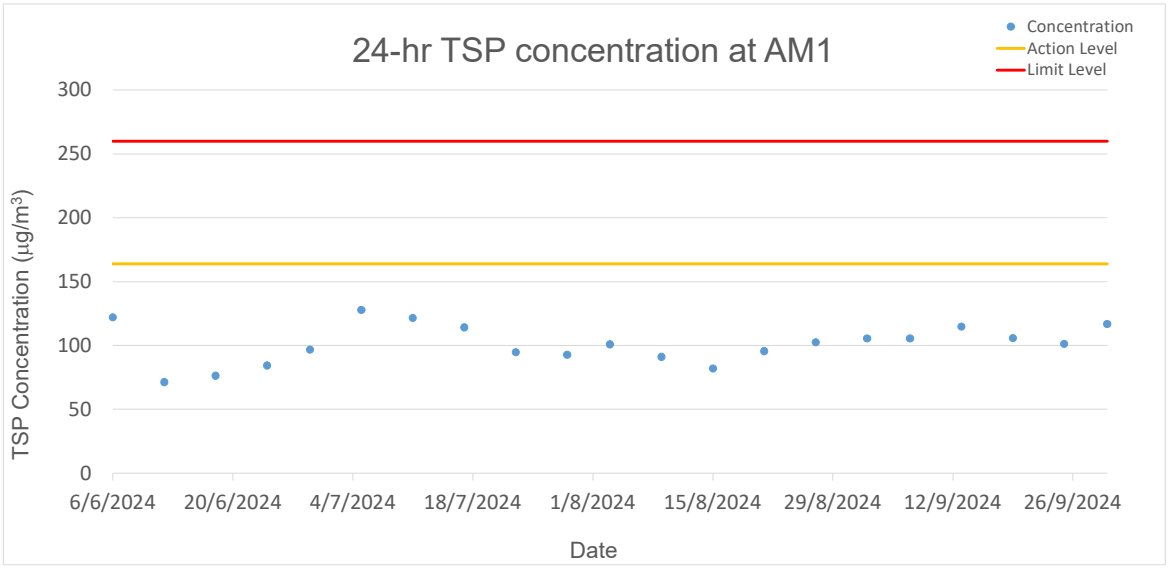
Appendix D Graphical Presentations

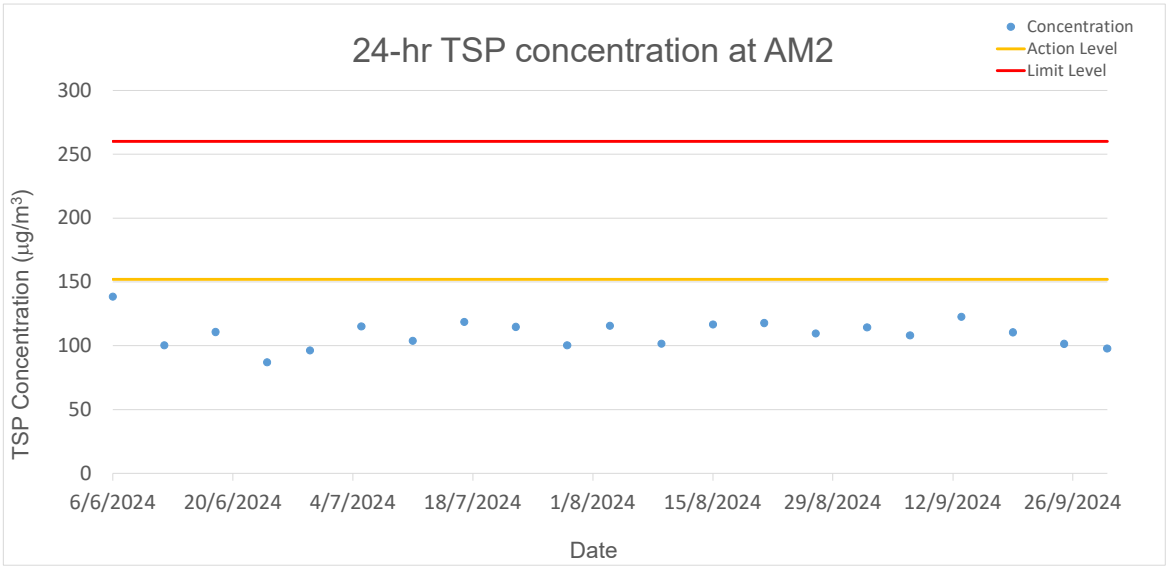
Air Quality

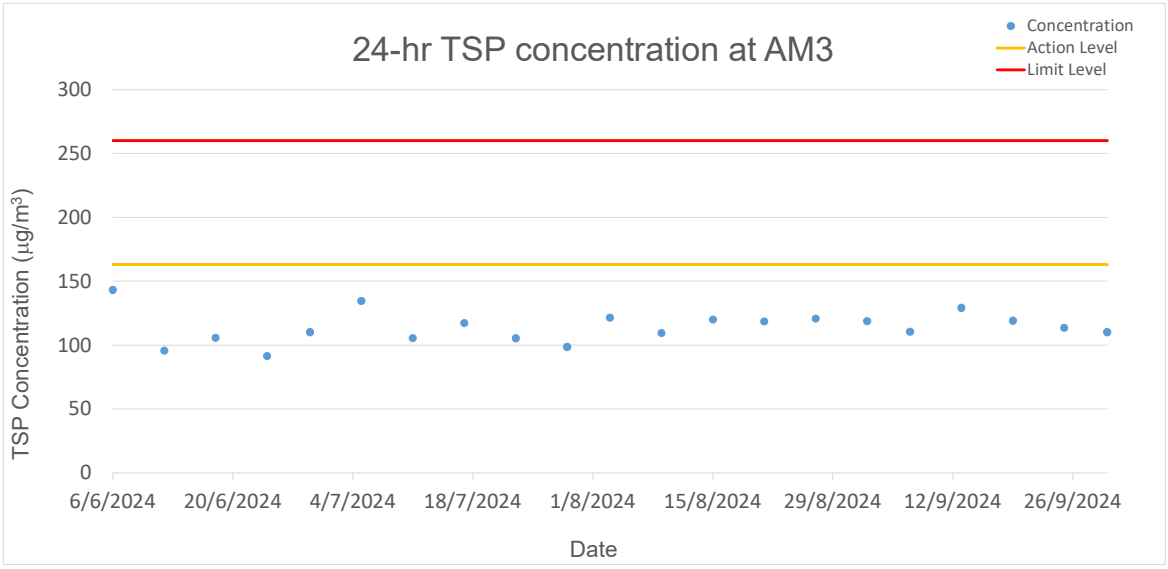

1-hr TSP concentration at AM1
Reading (1)
Reading (2)
Reading (3)
Action Level
Limit Level
TSP Concentration (µg/m³)
600
500
400
300
200
100
0
6/6/2024
20/6/2024
4/7/2024
18/7/2024
1/8/2024
15/8/2024
29/8/2024
12/9/2024
26/9/2024
Date


1-hr TSP concentration at AM2
Reading (1)
Reading (2)
Reading (3)
Action Level
Limit Level
TSP Concentration (µg/m³)
600
500
400
300
200
100
0
6/6/2024
20/6/2024
4/7/2024
18/7/2024
1/8/2024
15/8/2024
29/8/2024
12/9/2024
26/9/2024
Date

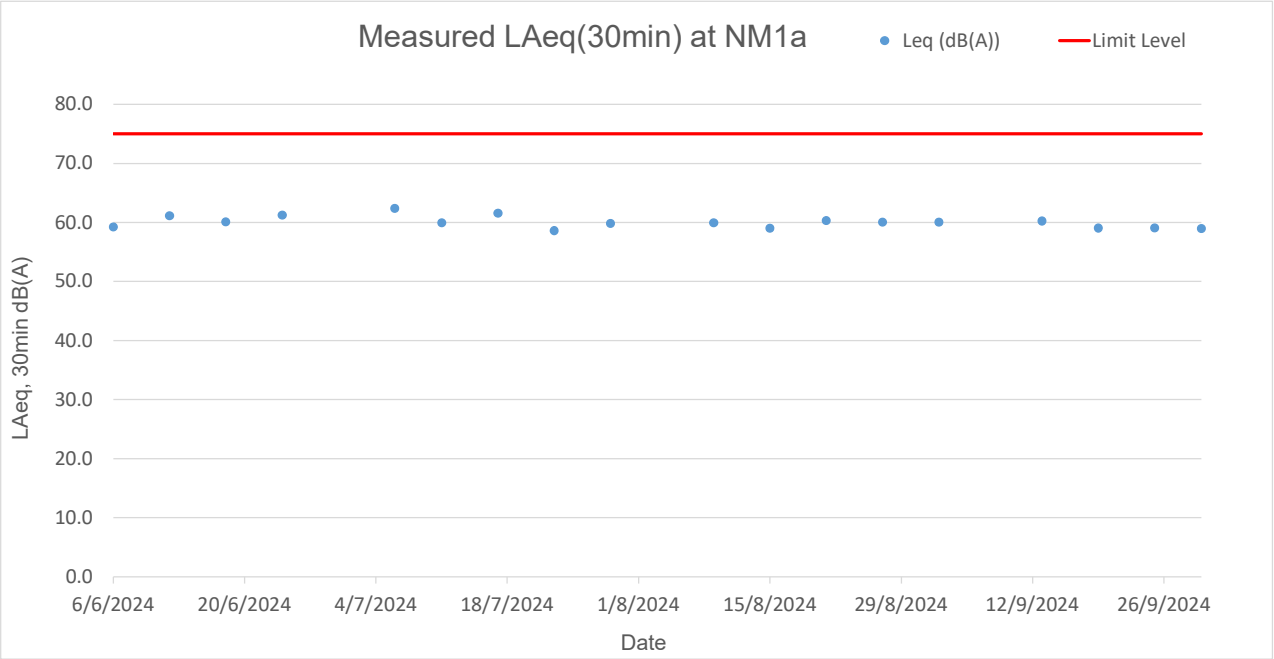

1-hr TSP concentration at AM3
Reading (1)
Reading (2)
Reading (3)
Action Level
Limit Level
TSP Concentration (µg/m³)
600
500
400
300
200
100
0
6/6/2024
20/6/2024
4/7/2024
18/7/2024
1/8/2024
15/8/2024
29/8/2024
12/9/2024
26/9/2024
Date

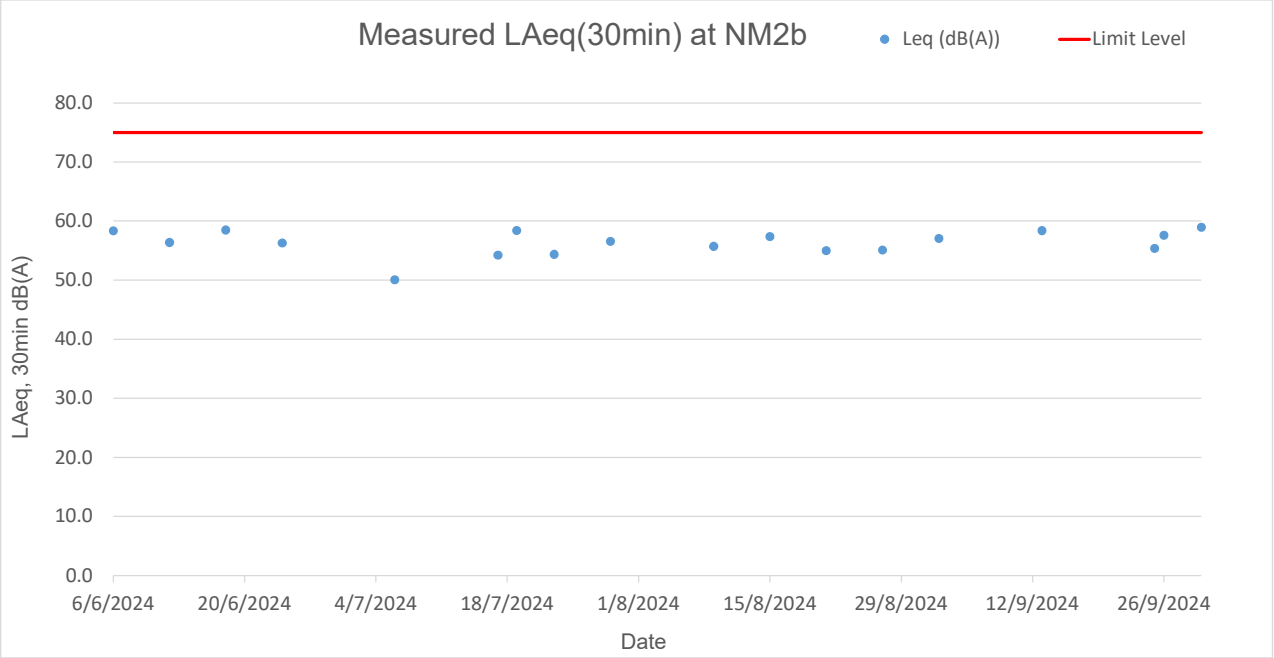

24-hr TSP concentration at AM1
Concentration
Action Level
Limit Level
TSP Concentration (µg/m³)
300
250
200
150
100
50
0
6/6/2024
20/6/2024
4/7/2024
18/7/2024
1/8/2024
15/8/2024
29/8/2024
12/9/2024
26/9/2024
Date


24-hr TSP concentration at AM2
Concentration
Action Level
Limit Level
TSP Concentration (µg/m³)
300
250
200
150
100
50
0
6/6/2024
20/6/2024
4/7/2024
18/7/2024
1/8/2024
15/8/2024
29/8/2024
12/9/2024
26/9/2024
Date


24-hr TSP concentration at AM3
Concentration
Action Level
Limit Level
TSP Concentration (µg/m³)
300
250
200
150
100
50
0
6/6/2024
20/6/2024
4/7/2024
18/7/2024
1/8/2024
15/8/2024
29/8/2024
12/9/2024
26/9/2024
Date

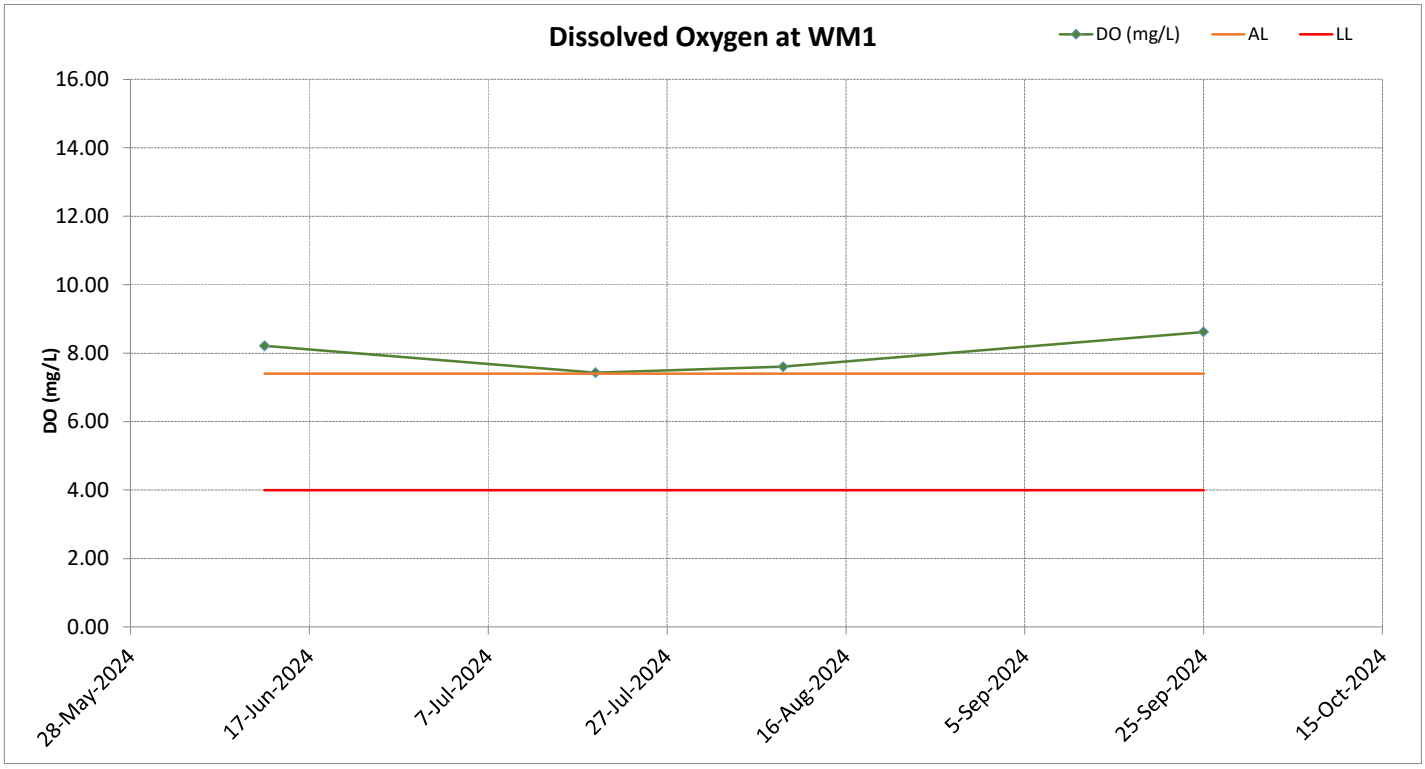
Noise

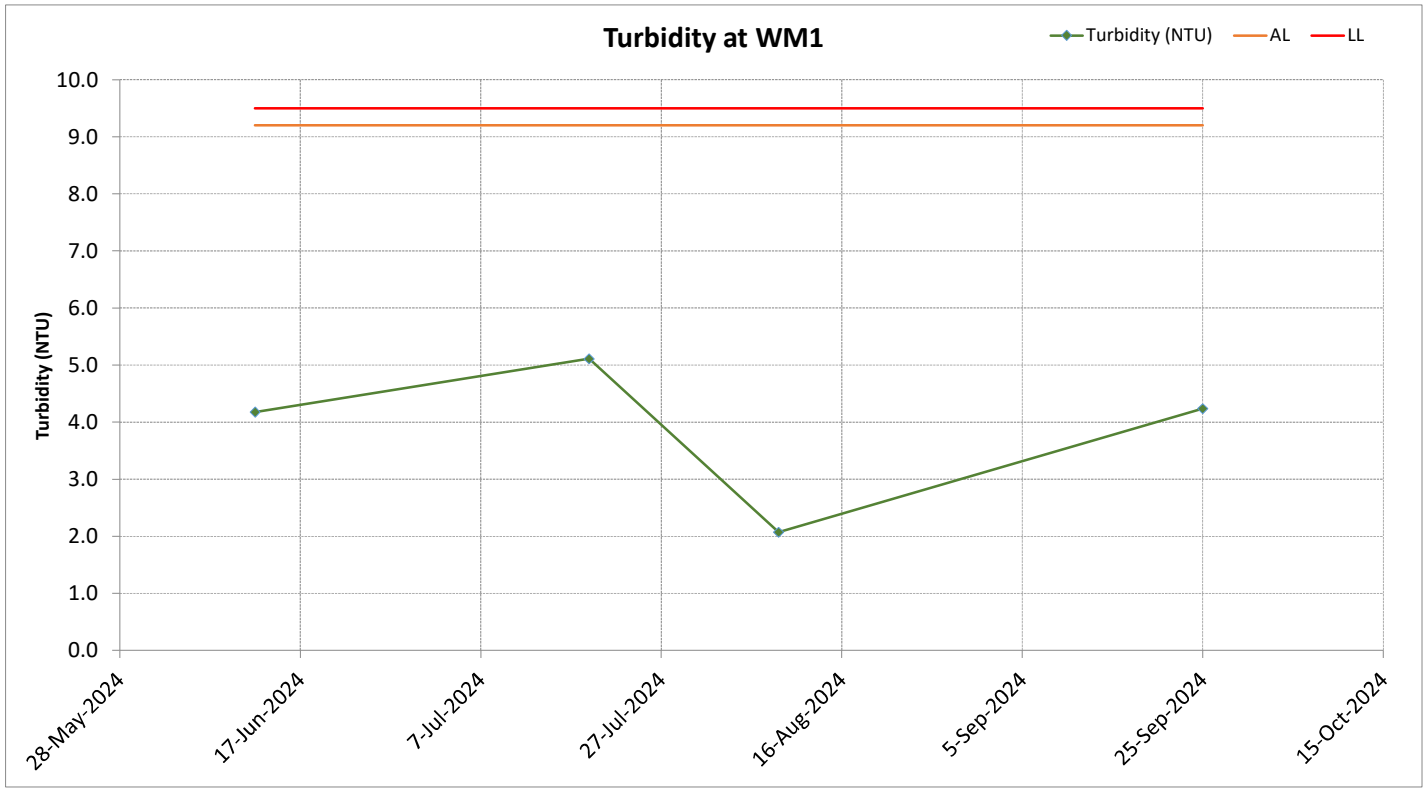

Measured LAeq(30min) at NM1a
Leq (dB(A))
Limit Level
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
LAeq, 30min dB(A)
6/6/2024
20/6/2024
4/7/2024
18/7/2024
1/8/2024
15/8/2024
29/8/2024
12/9/2024
26/9/2024
Date


Measured LAeq(30min) at NM2b
Leq (dB(A))
Limit Level
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
LAeq, 30min dB(A)
6/6/2024
20/6/2024
4/7/2024
18/7/2024
1/8/2024
15/8/2024
29/8/2024
12/9/2024
26/9/2024
Date

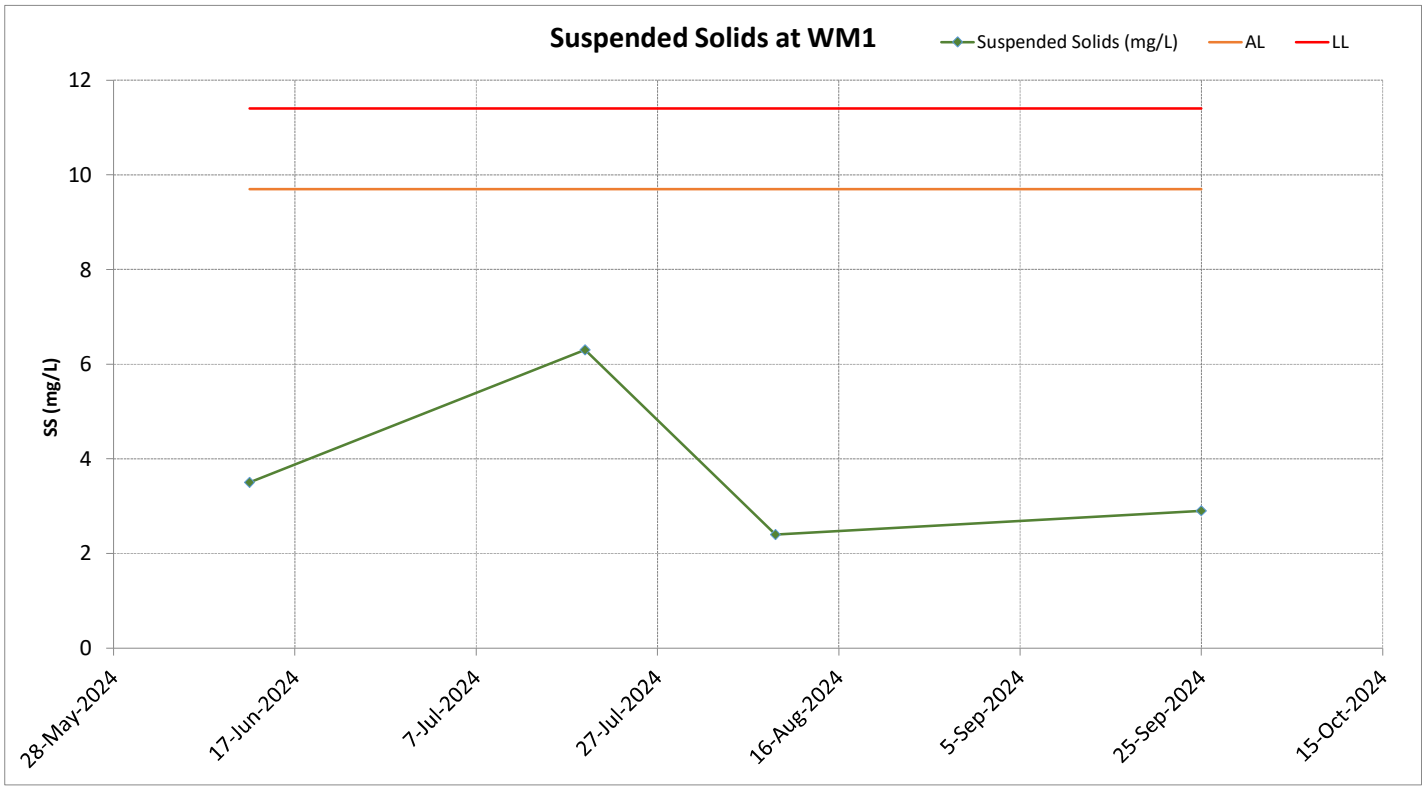
Water Quality

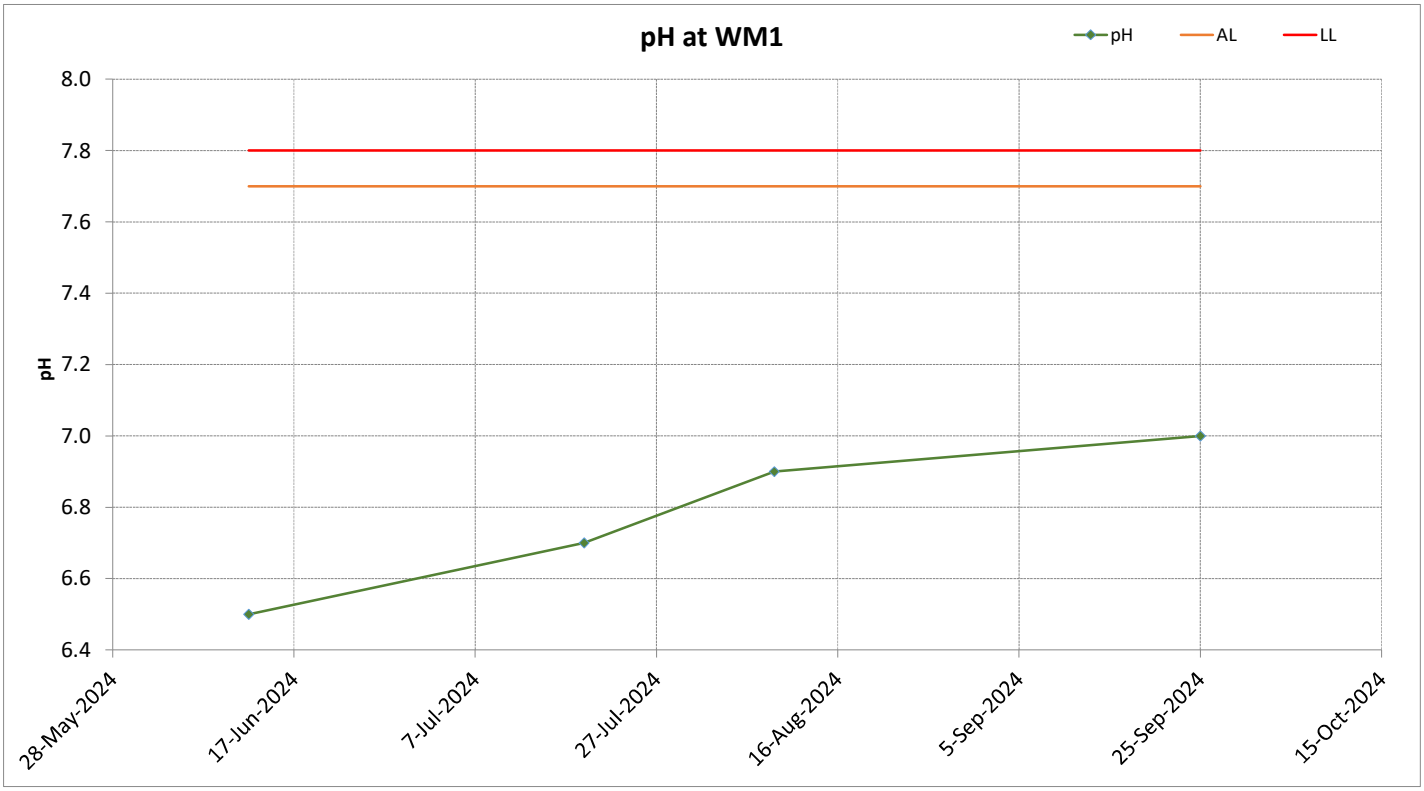
Surface Water Monitoring Results at WM1



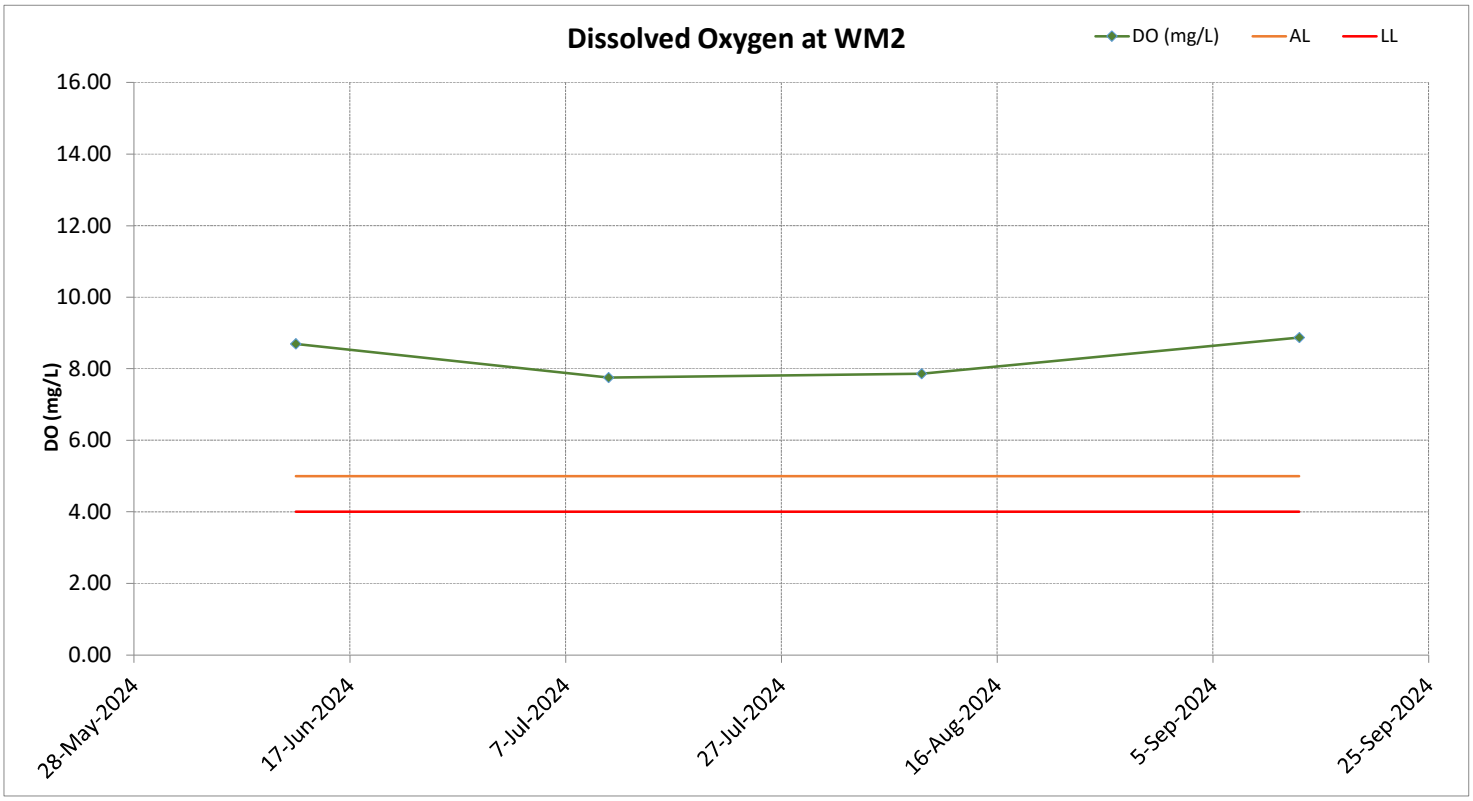


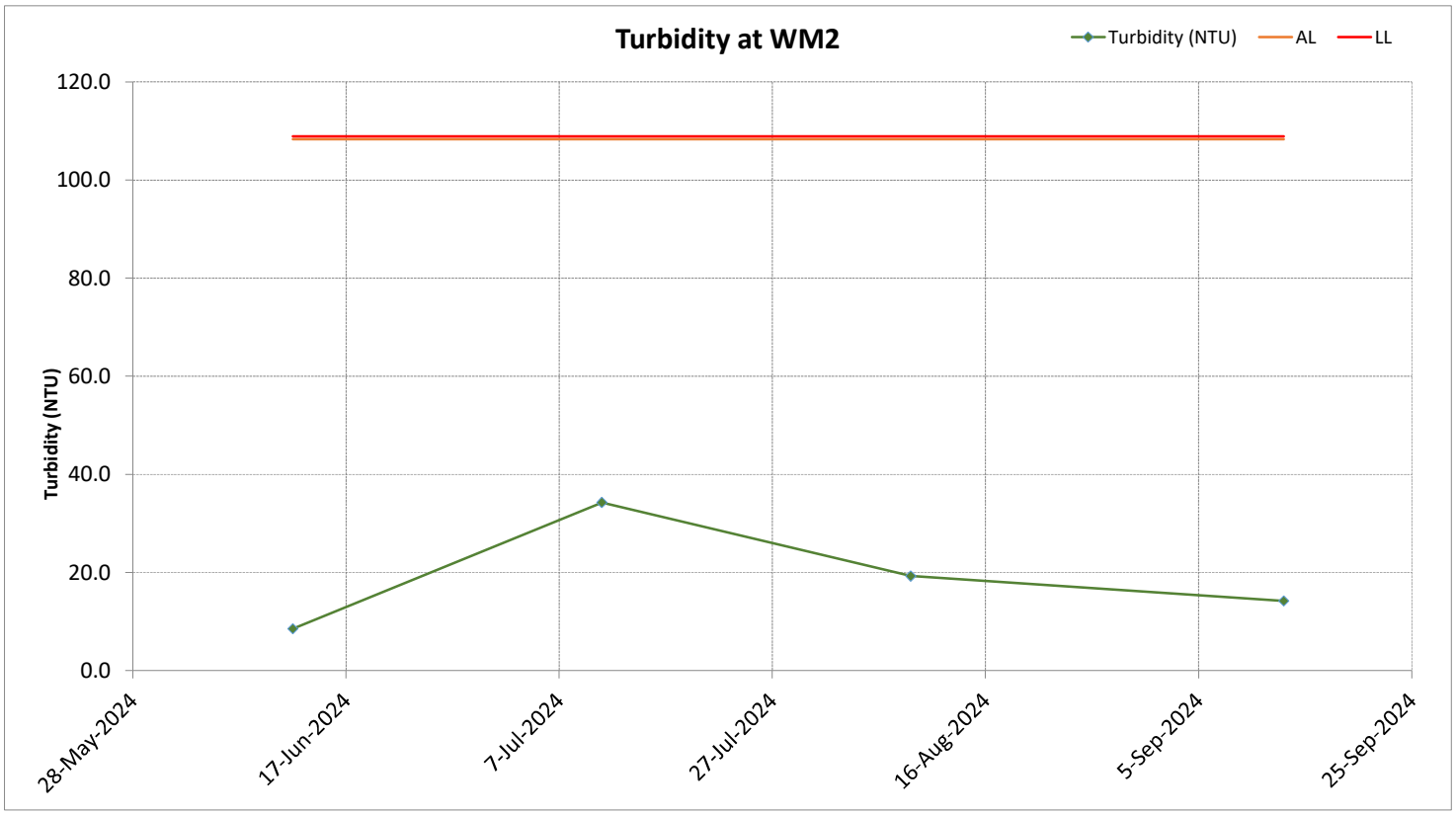
Surface Water Monitoring Results at WM1



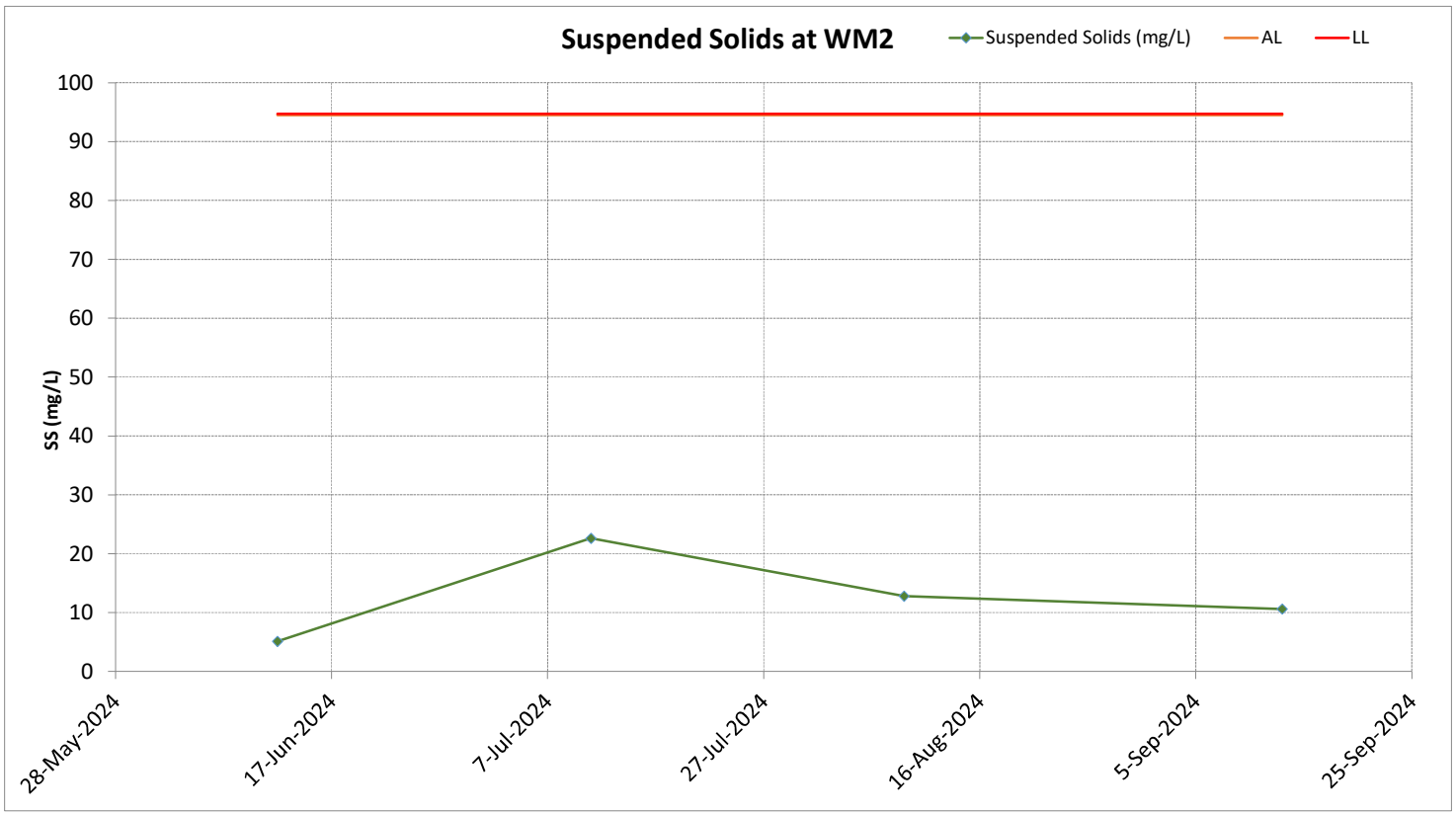


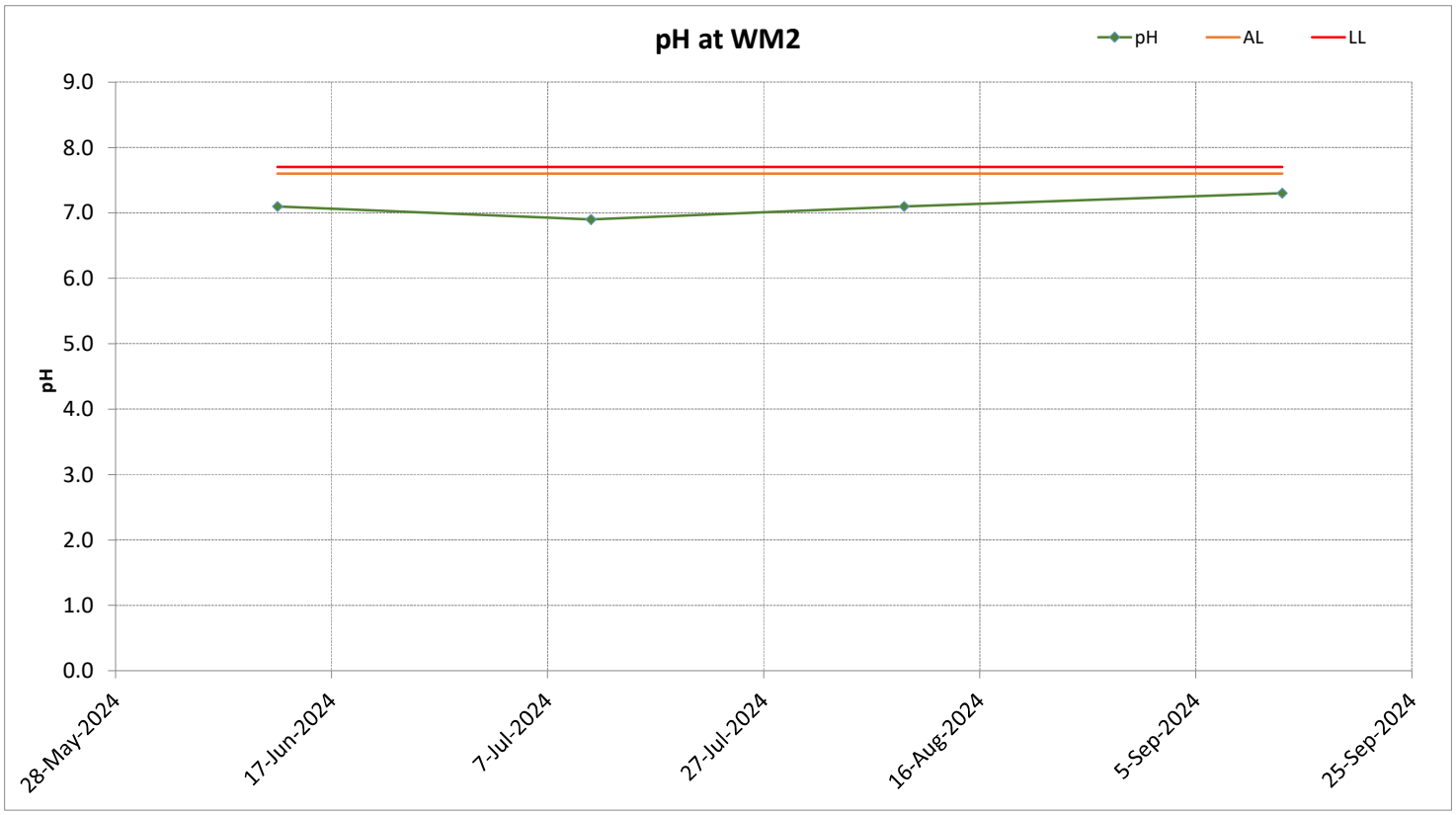
Surface Water Monitoring Results at WM2





Surface Water Monitoring Results at WM2





Appendix E Notification of Environmental Quality Limits Exceedance

Notification of Environmental Quality Limits Exceedance

Air Quality Monitoring - Construction Dust

Dust Monitoring Station	Level Exceedance	1-hr TSP Exceedance Count				24-hr TSP Exceedance Count			
		Reporting period		Accumulate project to date		Reporting period		Accumulate project to date	
		Project related	Non-project related	Project related	Non-project related	Project related	Non-project related	Project related	Non-project replated
AM1	Action	0	0	0	0	0	0	0	2
	Limit	0	0	0	0	0	0	0	3
AM2	Action	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0
AM3	Action	0	0	0	0	0	0	0	4
	Limit	0	0	0	0	0	0	0	3

Noise Monitoring

Noise Monitoring Station	Level Exceedance	LAeq (30mins) Exceedance Count			
		Reporting period		Accumulate project to date	
		Project related	Non-project related	Project related	Non-project related
NM1a	Action	0	0	0	0
	Limit	0	0	0	0
NM2a	Action	0	0	0	0
	Limit	0	0	0	0

Notification of Environmental Quality Limits Exceedance

Surface Water Monitoring

Surface Water Quality Monitoring Station	Level Exceedance	Exceedance Count															
		Reporting period								Accumulate project to date							
		Project related				Non-project replated				Project related				Non-project replated			
		DO	pH	Turb	SS	DO	pH	Turb	SS	DO	pH	Turb	SS	DO	pH	Turb	SS
WM1	Action	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WM2	Action	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0

Remarks:

1. “DO” equal to Dissolved Oxygen
2. “Turb” equal to Turbidity
3. “SS” equal to Suspended Solids

Landfill Gas (LFG) Monitoring

LFG Monitoring Station	Level Exceedance	Exceedance Count											
		Reporting period						Accumulate project to date					
		Project related			Non-project replated			Project related			Non-project replated		
		CH_4	CO_2	O_2	CH_4	CO_2	O_2	CH_4	CO_2	O_2	CH_4	CO_2	O_2
Portion A +50 mpD to +70 mpD Platform	Action	0	0	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0	0	0

Appendix F Waste Flow Table

Waste Flow Table

Month	Total Quantity Generated	Total Quantities of Inert C&D Materials to be Generated from the Contract					Total Quantities of Recyclables Generation				Total Quantities of C&D Materials to be Generated from the Contract		
		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	Yard Waste (to Y-Park)	Chemical Waste	General Refuse	Others, e.g. non-recyclable yard waste
	(in tonne)	(in tonne)	(in tonne)	(in tonne)	(in tonne)	(in tonne)	(in tonne)	(in tonne)	(in tonne)	(in tonne)	(in '000L)	(in tonne)	(in tonne)
Dec-22	84.77	0	0	0	0	0	0	0	0	11.49	0	7.53	65.75
Jan-23	24.51	0	0	0	0	0	0	0	0	0	0	24.51	0
Feb-23	506.45	0	0	0	0	0	0	0	0	3.16	0	5.85	497.44
Mar-23	9,581.15	0	0	9,187	0	0	0	0	0	3.69	0	6.96	383.5
Apr-23	18,532.07	0	0	18,466	0	0	0	0	0	1.97	0	5.81	58.29
May-23	28,889.61	0	0	28,473	0	0	0	0	0	0	0	7.45	409.16
Jun-23	11,574.89	0	0	11,211	0	0	0	0	0	2.38	0	14.69	346.82
Jul-23	50,595.49	0	0	50,307	0	0	0	0	0	0	0	25.54	262.95
Aug-23	63,178.52	0	0	63,076	0	0	0	0	0	0	0	30.77	71.75
Sep-23	42,709.75	0	0	42,676	0	0	0	0	0	0	0	33.38	0
Oct-23	55,551.68	0	0	55,405	0	0	0	0	0	2.56	0	28.05	116.07
Nov-23	76,127.24	0	0	73,352	0	2629.37	0	0	0	0	0	35.13	110.74
Dec-23	63,389.25	0	0	57,681	0	5296.17	0	0	0	2.48	0	34.26	375.34
Jan-24	125,840.50	0	0	125,010	0	0	0	0	0	5.59	0	71.13	753.78
Feb-24	108,176.42	0	0	106,218	0	1771.16	0	0	0	0	0	53.76	133.17
Mar-24	70,683.04	0	0	68,989	0	1324.13	0	0	0	3.26	0	108.43	258.01
Apr-24	77,385.12	0	0	75,092	0	1883.87	0	0	0	0	0	112.54	296.71
May-24	45,429.31	0	1396.88	42,809	0	1022.68	0	0	0	0	0	90.72	110.1
Jun-24	24,576.63	0	4716.43	19,274	0	532.8	0	0	0	2.77	0	41.98	8.58
Jul-24	60,797.99	0	3676.77	55,948	0	1114.17	0	0	0	0	0	30.1	28.82
Aug-24	70,135.60	0	16982.92	51,327	0	1792.8	0	0	0	0	0	33.16	0
Sep-24	56,649.14	0	24837.59	28,116	0	3663	0	0	0	0	0	26.76	5.47
Total	1,060,419.13	0.00	51,610.59	982,618	0.00	21,030.15	0.00	0.00	0.00	39.35	0.00	828.51	4,292.45

Note:

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 G Environmental Mitigation Implementation Schedule (EMIS)

EIA Ref.	EM&A Log Ref.	Weekly Site Inspection Item	Recommended Precautionary/Mitigation Measures (to be implemented when the trigger level is exceeded, where necessary)	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	What requirement or standards for the measures to achieve?	Status
Air Quality								
S3.8.1	S3.1.8	B7 – B36	The contractor shall follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation.	Good construction site practices to control the dust impact at the nearby sensitive receivers to within the relevant criteria.	Contractor	Entire NENT Landfill Extension site	To control the dust impact to within the criteria of EIA Report (Register No. AEIAR-111/2007)	✓
		B4, B15 & B18	• Dust emission from construction vehicle movement is confined within the worksites area.					✓
		B11 – B12	• Watering facilities will be provided at every designated vehicular exit point.					Vehicle washing facilities provided at vehicular exit point in Portion A, B1-2, D, E3-1 & E4
		-	• Good site practice is recommended during construction phase.					✓
Construction Noise								
S4	S4.9	C1	1) Use of good site practices to limit noise emissions by considering the following: (a) Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme;	Control construction airborne noise by means of good site practices	Contractor	Entire construction site	Noise Control Ordinance	✓
		C2	(b) Machines and plant (such as trucks, cranes) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum;					✓
		C3	(c) Plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs;					✓
		C4	(d) Silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works;					N/A
		C5	(e) Mobile plant should be sited as far away from NSRs as possible and practicable;					✓
		C6	(f) Material stockpiles, mobile container site officer and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.					✓
S4	S4.9	C11 – C13	2) Select “Quiet plants” which comply with the BS 5228 Part 1 or TM standards.	Reduce the noise levels of plant items	Contractor	Entire construction site	Noise Control Ordinance & its TM Annex 5, TM-EIA	✓
Construction Runoff								
S5.8.1	S5.2.1	D1	<u>Construction on Site Runoff</u> • (a) At the start of site establishment, perimeter cut-off drains to direct off-site water around the site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented. (b) 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.	Control construction runoff and erosion from site surface, drainage channel, stockpiles, wheel washing facilities, etc to minimize water quality during construction stage	Contractor	Entire Construction site	ProPECC PN 1/94 Water Pollution Control Ordinance	(a) ✓ (b) ✓
		D2	(a) The dikes or embankments for flood protection should be implemented around the boundaries of earthwork areas. (b) Temporary ditches should be provided to facilitate the runoff discharge into an appropriate watercourse, through a silt/sediment trap. (c) The sediment/silt traps should be incorporated in the permanent drainage channels to enhance deposition rates.					(a) ✓ (b) ✓ (c) ✓
		D3	The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94, which states that the retention time for silts and sediment traps should be 5 minutes under maximum flow conditions.					✓
		D4	(a) Construction works should be programmed to minimize surface excavation works during the rainy seasons (April to September). (b) All exposed earth areas should be completed and vegetated as soon as possible after earthworks have been completed, or alternatively, within 14 days of the cessation of earthworks where practicable. (c) If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or other means.					(a) ✓ (b) ✓ (c) ✓

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Construction Runoff (Cont'd)								
S5.8.1	S5.2.1	D5	• (a) The overall slope of the site should be kept to a minimum to reduce the erosive potential of surface water flows, and (b) all traffic areas and access roads protected by coarse stone ballast. An additional advantage accruing from the use of crushed stone is the positive traction gained during prolonged periods of inclement weather and the reduction of surface sheet flows.	Control construction runoff and erosion from site surface, drainage channel, stockpiles, wheel washing facilities, etc to minimize water quality during construction stage	Contractor	Entire Construction site	ProPECC PN 1/94 DSD Technical Circular TC01/2017 Water Pollution Control Ordinance	(a) ✓ (b) ✓
		D6	• (a) All drainage facilities and erosion and sediment control structures should be regularly inspected and (b) maintained to ensure proper and efficient operation at all times and particularly following rainstorms. (c) Deposited silt and grit should be removed regularly and disposed of by spreading evenly over stable, vegetated areas.					(a) ✓ (b) ✓ (c) ✓
		D7	• (a) Measures should be taken to minimise the ingress of site drainage into excavations. If the excavation of trenches in wet periods is necessary, they should be dug and backfilled in short sections wherever practicable. (b) Water pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities.					(a) ✓ (b) ✓
		D8	• Open stockpiles of construction materials (for example, aggregates, sand and fill material) of more than 50 m^3 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.					✓
		D9	• (a) Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as (b) to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed into foul sewers.					(a) ✓ (b) ✓
		D10	• Precautions to be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecasted, and actions to be taken during or after rainstorms are summarised in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silly surface runoff during storm events, especially for areas located near steep slopes.					✓
		D11	• (a) 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. (b) An adequately designed and sited wheel washing bay should be provided at every construction site exit. (c) Wash-water should have sand and silt settled out and removed at least on a weekly basis (d) to ensure the continued efficiency of the process. (e) 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 silly water to public roads and drains.					(a) ✓ (b) ✓ (c) ✓ (d) ✓ (e) ✓
		D12	• (a) Oil interceptors should be provided in the site drainage system downstream of any oil/fuel pollution sources. (b) The oil interceptors should be emptied and cleaned regularly to prevent the release of oil and grease into the storm water drainage system after accidental spillage. (c) A bypass should be provided for the oil interceptors to prevent flushing during heavy rain.					(a) N/A (b) N/A (c) N/A
		D13	• Construction solid waste, debris and rubbish on site should be collected, handled and disposed of properly to avoid water quality impacts. Requirements for solid waste management are detailed in Section 6 of this Report.					✓
		D14	• All fuel tanks and storage areas should be provided with docks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled fuel oils from reaching water sensitive receivers nearby.					✓
		D15	• To prevent pollution risks arising from works area (waste reception area) and haul roads, intercepting bund or barrier along the roadside should be constructed.					✓
		D19	<u>Sewage Effluent from Workforce</u> • (a) Portable chemical toilets and sewage holding tanks are recommended for handling the construction sewage generated by the workforce. (b) A licensed contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance.					(a) ✓ (b) ✓
		D20	• Notices will be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment during the construction phase of the Project.					N/A

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Construction Runoff (Cont'd)								
S5.8.1	S5.2.1	D19	<u>Sewage Effluent from Workforce</u> • (a) Portable chemical toilets and sewage holding tanks are recommended for handling the construction sewage generated by the workforce. (b) A licensed contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance.	Control sewage effluent arising from the sanitary facilities provided for the on-site construction workforce	Contractor	On-site sanitary facilities	ProPECC PN 1/94 DSD Technical Circular TC01/2017 Water Pollution Control Ordinance Waste Disposal Ordinance	(a) ✓ (b) ✓
		D20	• Notices will be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment during the construction phase of the Project.					N/A
		-	Regular environmental audit on the construction site can provide an effective control of any malpractices and can achieve continual improvement of environmental performance on site.					✓
S5.8.1	S5.2.1	D21	<u>Accidental Spillage of Chemical</u> • (a) Any service workshop and maintenance facilities shall be located within a bunded area, and sumps and oil interceptors shall be provided. (b) Maintenance of equipment involving activities with potential for leakage and spillage will only be undertaken within the areas.	Control of chemical leakage	Contractor	Service workshop and maintenance facilities	ProPECC PN 1/94 Water Pollution Control Ordinance Waste Disposal Ordinance	(a) N/A (b) N/A
Erosion Control Measures								
S5.8.2	S5.2.2	-	<u>Erosion Control /Measures</u> a. Preserve Natural Vegetation This Best Management Practices will involve preserving natural vegetation to the greatest extent possible during the construction process. and after construction where appropriate. Maintaining natural vegetation is the most effective and inexpensive form of erosion prevention control.	Erosion control	Contractor	Drainage system	ProPECC PN 1/94 Water Pollution Control Ordinance	✓
		-	b. Provision of Buffer Zone A buffer zone consists of an undisturbed area or strip of natural vegetation or an established suitable planting adjacent to a disturbed area that reduces erosion and runoff. The rooted vegetation holds soils acts as a wind break and filters runoff that may leave the site.					✓
		-	c. Seeding (Temporary/Permanent) A well-established vegetative cover is one of the most effective methods of reducing erosion. Vegetation should be established on construction sites as the slopes are finished, rather than waiting until all the grading is complete. Besides, Hydroseeding will be applied on the surface of stockpiled soil and on temporary soil covers for inactive tipping areas to prevent soil erosion during rainy season.					✓
		-	d. Ground Cover Ground Cover is a protective layer of straw or other suitable material applied to the soil surface. Straw mulch and/or hydromulch are also used in conjunction with seeding of critical areas for the establishment of temporary or permanent vegetation. Ground cover provides immediate temporary protection from erosion. Mulch also enhances plant establishment by conserving moisture, holding fertilizer, seed, and topsoil in place, and moderating soil temperatures.					To be implemented
		-	e. Hydraulic Application Hydraulic application is a mechanical method of applying erosion control materials to bare soil in order to establish erosion-resistant vegetation on disturbed areas and critical slopes. By using hydraulic equipment, soil amendments, mulch, tackifying agents, Bonded Fiber Matrix (BFM) and liquid co-polymers can be uniformly broadcast, as homogenous slurry, onto the soil. These erosion and dust control materials can often be applied in one operation.					To be implemented
			f. Sod Establishes permanent turf for immediate erosion protection and stabilizes drainageways.					✓
			g. Matting There are numerous erosion control products available that can be described in various ways, such as matting, blankets, fabric and nets. These products are referred as matting. A wide range of materials and combination of materials are used to produce matting including, but not limited to: straw, jute, wood fiber, coir (coconut fiber), plastic netting, and Bonded Fiber Matrix. The selection of matting materials for a site can make a significant difference in the effectiveness of the Best Management Practices.					✓

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Erosion Control Measures (Cont'd)								
S5.8.2	S5.2.2		h. Plastic Sheeting Plastic Sheeting will provide immediate protection to slopes and stockpiles. However, it has been known to transfer erosion problems because water will sheet flow off the plastic at high velocity. This is usually attributable to poor application, installation and maintenance.	Erosion control	Contractor	Drainage system	ProPECC PN 1/94 Water Pollution Control Ordinance	✓
		-	i. Dust Control Dust Control is one preventative measure to minimize the wind transport of soil, prevent traffic hazards and reduce sediment transported by wind and deposited in water resources.					✓
Surface Water Drainage System								
S5.8.2	S5.2.2	D22	• (a) Temporary surface water drainage system will be provided to manage runoff during construction and operation. (b) This system will consist of channels as constructed around the perimeter of the site area. (c) This system will collect surface water from the areas of higher elevations to those of lower elevations and ultimately to the point of discharge. (d) Erosion will therefore be minimised.	Surface Water Management/ Control run off	Contractor	Surface water system Construction	Water Pollution Control Ordinance TM-water	(a) ✓ (b) ✓ (c) ✓ (d) ✓
		D23	• (a) The temporary surface water drainage system will include the use of a silt fence around the soil stockpile areas to prevent sediment from entering the system. (b) Regular cleaning will be carried out to prevent blockage of the passage of water flow in silt fence.					(a) ✓ (b) ✓
		-	• Intermediate drainage system will be installed for filled cell/phase. The major purpose of the intermediate drainage system is to prevent the clean surface water run-off from the filled phases coming into contact with the waste mass in active cell and to prevent excessive surface water infiltration through the intermediate cover, thus contribute to increasing volume of leachate. The intermediate drainage system will collect the clean surface water run-off and divert it to the permanent discharge channels connected to the public drainage system.					N/A
		-	• In addition, surface flow from the haul road (especially near the wheel washing facility) will be collected to a dry weather flow interceptor and conveyed to the on-site leachate treatment plant for further treatment.					N/A
Waste Management								
S6	WM1	-	<u>C&D Materials</u> • Implement proper waste management measures during construction phase as stipulated in the Environmental Management Plan (EMP) in accordance with the ETWB TC(W) No. 19/2005 Environmental Management in Construction Sites.	Good site practice to minimise C&D waste generation and reuse/recycle all C&D on-site as far as possible	Contractor	Entire construction site	Waste Disposal Ordinance ETWB TC(W) No. 19/2005 DEVB TC(W) No. 6/2010	✓
		-	• Implement a trip-ticket system to ensure that the movement of C&D materials are properly documented and verified in accordance with DEVB TC(W) No. 6/2010. Copies/counterfoils from trip-tickets (with quantities of C&D Materials off-site) should be kept for record purposes.					✓
		-	• Appropriate waste management should be implemented in accordance with the ETWB TC(W) No. 19/2005.					✓
		E4	• (a) Make provisions in Contract documents to allow and promote the use of recycled aggregates where appropriate. Ensure material balance in terms of excavated C&D materials in the design of NENT landfill extension project. (b) The contract specifications should specify no excavated materials should be removed from the landfill extension site, but should be fully reused.					(a) ✓ (b) ✓
		E5	• Careful design, planning and good site management to minimise over-ordering and waste materials such as concrete, mortars and cement grouts. (a)(b) The design of formwork should maximise the use of standard wooden panels so that high reuse levels can be achieved. (c) Alternatives such as steel formwork or plastic fencing should be considered to increase the potential for reuse.					(a) ✓ (b) ✓ (c) ✓
		E6	• (a) The Contractor should recycle as much as possible the C&D waste on-site through proper waste segregation on-site. (b) Concrete and masonry should be used as general fill and steel reinforcement bars can be used by scrap steel mills. (c) Proper areas should be designated for waste segregation and storage wherever site conditions permit. (d) Maximise the use of reusable steel formwork to reduce the amount of C&D material.					(a) ✓ (b) ✓ (c) ✓ (d) ✓

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Waste Management (Cont'd)								
S6	WM1	E7	• (a) Maintain temporary stockpiles and reuse excavated fill material for backfilling and reinstatement. On-site sorting and segregation facility of all type of wastes is considered as one of the best practice in waste management and hence, should be implemented in all projects generating construction waste. (b) The sorted public fill and C&D waste should be properly reused.	Good site practice to minimise C&D waste generation and reuse/recycle all C&D on-site as far as possible	Contractor	Entire construction site	Waste Disposal Ordinance ETWB TC(W) No. 19/2005 DEVB TC(W) No. 6/2010	(a) ✓ (b) ✓
		E8	• (a) Excavated slope, stockpiled material and bund walls should be covered by tarpaulin until used in order to prevent wind-blown dust during dry weather, and to reduce muddy runoff during wet weather. (b)(c) Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers					(a) ✓ (b) ✓ (c) ✓
		E9	• If any topsoil-like materials need to be stockpiled for any length of time, consideration should be given to hydroseeding of the topsoil on the stockpile to improve its visual appearance and prevent soil erosion.					✓
		E10	• Nomination of approved personnel to be responsible for good site practices and making arrangements for collection of all wastes generated on-site and effective disposal.					✓
		E11	• Training of site personnel for cleanliness, proper waste management procedures including chemical waste handling, and waste reduction, reuse and recycling concepts.					✓
		E12	• Regular cleaning and maintenance programme systems, sumps and oil interceptors.					✓
		E13	• (a) Prior to disposal of C&D waste, wood, steel and other metals should be separated for re-use and/or recycling to minimise the quantity of waste to be disposed of to landfill. (b)(c) Proper storage and site practices should be implemented to minimise the potential for damage or contamination of construction materials.					(a) ✓ (b) ✓ (c) N/A
			• Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste. Minimise excessive ordering of concrete, mortars and cement grout by doing careful check before ordering.					✓
S6	WM2	E16 – E23	<u>Chemical Waste</u> • Chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, should be handled in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes.	Ensure proper disposal of chemical waste generated on-site to minimise the associated hazards on human health and environment	Contractor	Entire construction site	Waste Disposal (Chemical Waste) General Regulation Code of Practice on the Packaging, Labelling and Storage of Chemical Waste	✓
		-	• Plant/equipment maintenance schedule should be designed to optimise maintenance effectiveness and to minimise the generation of chemical wastes. Where possible, chemical wastes (e.g. waste lube oil) should be recycled by licensed treatment facilities					✓
		E17 & E18	• Containers used for storage of chemical wastes should be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed; have a capacity of less than 450 liters unless the specification has been approved by the EPD. Display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Regulation.					✓
		E19	• (a) The storage area for chemical wastes should be clearly labelled and used solely for storage of chemical waste, (b) enclosed with at least 3 sides, having an impermeable floor and bund of sufficient capacity to accommodate 110% of volume of the largest container or 20 % of total volume of waste stored in that area, (c)(d) whichever is the greatest, having adequate ventilation, being covered to prevent rainfall entering, and being arranged so that incompatible materials are adequately separated.					(a) ✓ (b) N/A (c) N/A (d) N/A
		E20	• Chemical waste should be collected by licensed waste collectors and disposed of at licensed facility, e.g. Chemical Waste Treatment Centre.					✓

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Waste Management (Cont'd)								
S6	WM3	E1	<u>General Refuse</u> • General refuse generated on-site should be properly stored in enclosed bins or compaction units separately from construction and chemical wastes.	Minimise generation of general refuse to avoid odour, pest and visual nuisance	Contractor	Entire construction site	Waste Disposal Ordinance	✓
		E2	• (a) All recyclable materials (separated from the general waste) should be stored on-site in appropriate containers with cover prior to collection by a local recycler for subsequent reuse and recycling. Residual, non-recyclable, general waste should be stored in appropriate containers to avoid odour. (b)(c)(d) Regular collection should be arranged by an approved waste collector in purpose-built vehicles that minimise environmental impacts during transportation					(a) ✓ (b) ✓ (c) ✓ (d) ✓
		-	• Reputable waste collector should be employed by the Contractor to remove general refuse from the site, separately from construction and chemical wastes, on a daily basis to minimise odour, pest and litter impacts. Burning of refuse on construction sites is prohibited by law.					✓
		-	• Aluminium cans should be separated from general waste stream and collected by recyclers. Proper collection bins should be provided on- site to facilitate the waste sorting.					✓
		-	• Office waste paper should recycled if the volume warrant collection by recyclers. Participation in community waste paper recycling programme should be considered by the Contractor, including waste paper, aluminium cans, plastic bottles, waste batteries, etc.					✓
LFG								
Within NENT Landfill Extension								
S7	LFG1	F1	Special LFG precautions should be taken due to close proximity of NENT landfill extension site to existing landfill to avoid potential hazards of LFG exposure (ignition, explosion, asphyxiation, toxicity).	To minimise the risk of LFG hazards to personnel in construction site	Contractor	Entire construction site	Landfill Gas Hazard Assessment Guidance Note (EPD/TR8/97)	N/A
	LFG2	F2	Prominent safety warning signs should be erected on-site to alert all personnel and visitors of LFG hazards during excavation works.					✓
	LFG3	F3	No smoking or burning should be permitted on-site.				F&IU (Confined Spaces) Regulations	✓
	LFG4	F4	Prominent 'No smoking' and 'No Naked Flames' signs should be erected on-site.					✓
	LFG5	F5	No worker should be allowed to work alone at any time in excavated trenches or confined areas on-site.					✓
	LFG6	F6	Adequate fire fighting equipment should be provided on-site.				Code of Practice on Safety and Health at Work in Confined Spaces	✓
	LFG7	F7	Construction equipment should be equipped with vertical exhaust at least 0.6m above ground installed with spark arrestors.					✓
	LFG8	F8	Electrical motors and extension cords should be explosion-proof and intrinsically safe for use on-site.					✓
	LFG9	F9	'Permit to Work' system should be implemented.					✓
	LFG10	F10	Welding, flame-cutting or other hot works should be conducted only under 'Permit to Work' system following clear safety requirements, gas monitoring procedures and presence of qualified persons to supervise the works.					✓
	LFG11	F11	(a) For piping assembly or conduit construction, all valves and seals should be closed immediately after installation to avoid accumulation and migration of LFG. (b) If installation of large diameter pipes (diameter >600mm) is required, the pipe ends should be sealed on one side during installation. (c) Forced ventilation is required prior to operation of installed pipeline. (d) Forced ventilation should also be required for works inside trenches deeper than 1m.					(a) N/A (b) N/A (c) N/A (d) N/A
	LFG12	F12	Frequency and location of LFG monitoring within excavation area should be determined prior to commencement of works. LFG monitoring in excavations should be conducted at no more than 10mm from exposed ground surface.					✓
	LFG13	F13	For excavation works, LFG monitoring should be conducted (1) at ground surface prior to excavation, (2) immediately before workers entering excavations, (3) at the beginning of each half-day work, and (4) periodically throughout the working day when workers are in the excavation.					✓
	LFG14	F14	Any cracks on ground level encountered on-site should be monitored for LFG periodically. Appropriate action should be taken in accordance with the action plan in Table 7.6 of EIA Report.					✓
	LFG15	F15	(a) LFG precautionary measures involved in excavation and piping works should be provided in accordance with LFG Guidance Note and included in Safety Plan of construction phase. (b) Temporary offices or buildings should be located where free LFG has been proven or raised clear of ground at a separation distance of at least 500mm.					(a) N/A (b) N/A

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LFG (Cont'd)								
Within NENT Landfill Extension								
S7	LFG16	F16	For large development such as NENT landfill extension, a Safety Officer trained in the use of gas detection equipment and LFG- related hazards should be present on-site throughout the groundwork phase. The Safety Officer should be provided with an intrinsically safe portable instrument appropriately calibrated and capable of measuring the following gases: •CH_4: 0-100% and LEL: 0-100%/v •CO_2: 0-100% •O_2: 0-21%	To minimise the risk of LFG hazards to personnel in construction site	Contractor	Entire construction site	Landfill Gas Hazard Assessment Guidance Note (EPD/TR8/97) F&IU (Confined Spaces) Regulations Code of Practice on Safety and Health at Work in Confined Spaces	✓
	LFG17	F17	(a) Periodically during groundwork construction, the works area should be monitored for CH_4 CO_2 and O_2 using appropriately calibrated portable gas detection equipment. The monitoring frequency and areas should be established prior to commencement of groundwork either by Safety Officer or appropriately qualified person. (b) Routine monitoring should be carried out in all excavations, manholes, created by temporary storage of building materials on-site. (c) All measurements in excavations should be made with monitoring tube located not more than 10mm from exposed ground surface.					(a) N/A (b) N/A (c) N/A
	LFG18	F18	For excavations deeper than 1m, measurements should be conducted: • At ground surface before excavation commences; • Immediately before any worker enters the excavation; • At the beginning of each working day for entire period the excavation remains open; and Periodically throughout the working day whilst workers are in excavation.					✓
	LFG19	F19	For excavations between 300mm and 1m, measurements should be conducted: • Directly after excavation has been completed; and Periodic all whilst excavation remains open.					✓
	LFG20	F20	For excavations less than 300mm, monitoring may be omitted at the discretion of Safety Officer or appropriately qualified person.					✓
Landscape and Visual Phases								
S8	LV1	G4	<u>Advanced screening tree planting</u> • Early planting using fast growing trees and tall shrubs at strategic locations within site to block major view corridors to the site from the VSRs, and to locally screen haul roads, excavation works and site preparation works. • Roadside planter and shrub planting design in front of Cheung Shan Temple.	To minimise the impact on existing vegetation retained by personnel in construction To provide initiation on permanent landscape and visual mitigation measures	Contractor	Entire construction site	DEVB TC(W) No. 4/2020 - Tree Preservation DEVB TC(W)) No. 6/2015 - Maintenance of Vegetation and Hard Landscape Features DEVB TC(W) No. 6/2011 - Maintenance of Man-made Slopes and Emergency Repair on Stability of Land	✓
S8	LV2	G5	<u>Boundary Green Belt planting</u> Considerable planting belts proposed around the site perimeter and the construction of temporary soil bunds will screen the landfill operations to a certain degree. Fast growing and fire resistant plant species will be used.					To be implemented during operation phase
S8	LV3	G6	<u>Temporary landscape treatment as green surface cover</u> For certain areas where landfilling operations would have to be suspended temporarily for periods of years, simple temporary landscape treatment such as hydroseeding should be considered. During construction and operational phases, grass hydroseeding or synthetic covering material of green colour should also be used as a temporary slope cover if applicable.					✓
S8	LV4	G7	<u>Existing tree preservation</u> Transplant existing trees and vegetation, which are identified as ecologically significant in Ecological Impact Assessment and as rare tree species recorded in the tree survey, under circumstances where technically feasible. For all affected trees, the principle of avoidance of tree felling and tree transplanting of tree before felling should apply whenever possible. A tree felling application should be submitted to DEVB-GLTMS and be approved before any trees are felled or transplanted.					✓

Remarks:

✓	Compliance of mitigation measure
*	Recommendation was made during site audit but improved/rectified by the contractor
#	Recommendation was made during site audit but not yet improved/rectified by the contractor.
N/A	Not Applicable at this stage were conducted in the reporting period.
@ (Which measure)	Alternative measure was made by the contractor.

EIA Ref.	EM&A Log Ref	Weekly Site Inspection Item	Recommended Precautionary/Mitigation Measures (to be implemented when the trigger level is exceeded, where necessary)	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	What requirement or standards for the measures to achieve?	Status
Ecology								
General Protection Measures:								
S10	E1	-	Restriction of construction activities to the work areas that would be clearly demarcated.	To minimise environmental impacts and therefore potential ecological impacts within and near the construction site	Contractor	Entire construction site	Practice Note for Professional Persons (ProPECC), Construction Site Drainage (PN1/94) Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes, EPD (1992) ETWB TC(W)) No. 33/2002 Management of Construction and Demolition Material Including Rock DEVB TC(W) No. 6/2010 Trip Ticket System for Disposal of Construction and Demolition Materials ETWB TC(W)No.19/2005 Environmental Management on Construction Sites	✓
	E2	-	Reinstatement of the work areas immediately after completion of the works.					✓
	E3	-	Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme.					✓
	E4	-	Machines and plant (such as trucks, cranes) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.					✓
	E5	-	Plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs.					✓
	E6	-	Silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works.					N/A
	E7	-	Mobile plant should be sited as far away from NSRs as possible and practicable.					✓
	E8	-	Material stockpiles, site office and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.					✓
	E9	-	Use of “quiet” plant and working methods.					✓
	E10	-	Construction phase mitigation measures in the Practice Note for Professional Persons on Construction Site Drainage.					✓
	E11	-	Design and set up of the temporary on-site drainage system will be undertaken by the contractor prior to the commencement of construction.					✓
	E12	-	Design and incorporation of silt/sediment traps in the permanent drainage channels to enhance deposition rates and regular removal of reposited silt and grit.					✓
	E13	-	Minimization of surface excavation works during the rainy seasons (April to September), and in particular,control of silty surface runoff during storm events, especially for areas located near steep slopes.					✓
	E14	-	Regular inspection and maintenance of all drainage facilities and erosion and sediment control structures to ensure proper and efficient operation at all times and particularly following rainstorms.					✓
	E15	-	Provision of oil interceptors in the drainage system downstream of any oil/fuel pollution sources					N/A

Remarks:

✓	Compliance of mitigation measure
*	Recommendation was made during site audit but improved/rectified by the contractor
#	Recommendation was made during site audit but not yet improved/rectified by the contractor.
N/A	Not Applicable at this stage were conducted in the reporting period.
@ (Which measure)	Alternative measure was made by the contractor.

Appendix H Mitigation Measures of Cultural Landscape Features

Completed Site Fencing

SITE BOUNDARY

Appendix I Cumulative complaint / enquiry log & Summaries of complaints and enquiries

Environmental Complaints Log

Complaint Ref. No.	Date of Complaint Received	Received from	Received by	Aspect of Complaint	Date of Investigation	Investigation Summary & Conclusion	Date of Reply
C001_20221220	21 Dec 2022	Veolia (Contractor)	ET	Air Quality (Construction Dust)	5, 12 & 19 Dec 2022	It was noted from Veolia's email to the ET on 20 December 2022 that Veolia received complaint lodged regarding presenting much dusty materials at roundabout at Wo Keng Shan Road & dusty flying problem at Kowloon-bound traffic at Lung Shan Tunnel. No dusty materials and wastes were transported out from the NENTX site during the complaint period. During the regular weekly site inspection on 5, 12 & 19 December 2022, it was observed that the wheel washing facilities with high-pressure water jets have been provided at all site exits of NENTX and cleaned all vehicles before allowing them to leave the construction site to ensure that no mud or debris would be brought to the public area. All site vehicles of NENTX are also required to go through the auto wheel washing facility, which is managed by the operator of the NENT landfill, before entering the public area. The road section between the washing facilities and the exit point was paved with concrete, or bituminous materials were implemented in all site entrances. No mud generated from vehicles under the NENTX project after exiting the site entrance was observed. In conclusion, there is no direct evidence showing that the complaint is likely related to the NENTX project.	5 Jan 2023
C002_20230614	14 Jun 2023	EPD-RNG	ET	Water Quality	16, 21 Jun, 24, 25 Jul & 2 Aug 2023	It was noted from EPD-RNG's email to the ET on 14 Jun 2023 that EPD received complaint lodged regarding the muddy water was observed at Lin MA Hang International Bridge. In summary of the investigation, the pollutant water appeared crimson colour with bubbles ay the LMH-OP01 (Monitoring Point from EPD). The colour and pattern of pollutant water is different from the runoff at surface WQM monitoring location WM1. Hence, the project is not the major source causing the pollutant water. To minimise the potential impact of the project, the enhancement of mitigation measures at north boundary were advised to implement by contractor. The related rectified actions had been conducted by the contractor.	29 Jun & 21 Aug 2023

Complaint Ref. No.	Date of Complaint Received	Received from	Received by	Aspect of Complaint	Date of Investigation	Investigation Summary & Conclusion	Date of Reply
C003_20230615	15 Jun 2023	EPD-RNG	ET	Water Quality	16, 19, 21 Jun, 18 Jul 2023	It was noted from EPD-RNG's email to the ET on 15 June 2023 that EPD received information regarding the muddy water was observed at River Ganges (GR3) (Water Quality Monitoring Location from EPD). In summary of the investigation, the muddy water caused from multi-potential sources while the runoff from the box culvert under the Wo Keng Shan Road is the major source including runoff from Existing channel near Portion E3-1, discharge water from the silt removal facilities at Portion E3-1 of the project, runoff from branch near the entrance of Portion E3-1, runoff from weighting plaza of NENT Landfill & natural stream near Wo Keng Shan & Shui Ngau Tso etc.. Hence, the project is a part of factor causing the high turbidity muddy water. To minimise the potential impact of construction runoff from the project, the further mitigation measures and enhancement of the temporary surface water drainage system were advised to implement by contractor. The related rectified actions had been conducted by the contractor.	15 Jun, 21 Aug 2023
C004_20230803	3 Aug 2023	EPD-RNG	ET	Water Quality	18 Jul 2023	It was noted from EPD-RNG's email to the ET on 3 Aug 2023 that EPD received information regarding the muddy water was observed at River Ganges (GR3) (Water Quality Monitoring Location from EPD). In summary of the investigation, the muddy water caused from multi-potential sources while the runoff from the box culvert under the Wo Keng Shan Road is the major source including runoff from Existing channel near Portion E3-1, discharge water from the silt removal facilities at Portion E3-1 of the project, runoff from branch near the entrance of Portion E3-1, runoff from weighting plaza of NENT Landfill & natural stream near Wo Keng Shan & Shui Ngau Tso etc.. Hence, the project is a part of factor causing the high turbidity muddy water. To minimise the potential impact of construction runoff from the project, the further mitigation measures and enhancement of the temporary surface water drainage system were advised to implement by contractor. The related rectified actions had been conducted by the contractor.	14 Aug 2023

Complaint Ref. No.	Date of Complaint Received	Received from	Received by	Aspect of Complaint	Date of Investigation	Investigation Summary & Conclusion	Date of Reply
C005_20230818	18 Aug 2023	EPD-RNG	ET	Water Quality	18 Sep 2023	It was noted from EPD-RNG's email to the ET on 18 August 2023 that EPD received information regarding the muddy water was observed at River Ganges (GR3) (Water Quality Monitoring Location from EPD) on 14 August 2023. In summary of the investigation, the complaint is project related. It viewed that muddy water arising from wheel washing water from the site entrance at Portion E4 & Runoff from Existing Channel near Portion E3-1 & discharge water from the silt removal facilities at Portion E3-1 eventually flows into the box culvert under Wo Keng Shan Road, WM2 and ultimately to GR3. The related rectified actions had been conducted by the contractor.	13 October 2023
C006_20230914	14 Sep 2023	EPD-RNG	ET	Water Quality	18 Sep 2023	It was noted from EPD-RNG's email to the ET on 14 September 2023 that EPD received information regarding the muddy water was observed at River Ganges (GR3) (Water Quality Monitoring Location from EPD) on 11 September 2023. In summary of the investigation, the complaint is project related. It viewed that muddy water arising from wheel washing water from the site entrance at Portion E4 & Runoff from Existing Channel near Portion E3-1 & discharge water from the silt removal facilities at Portion E3-1 eventually flows into the box culvert under Wo Keng Shan Road, WM2 and ultimately to GR3. The related rectified actions had been conducted by the contractor.	13 October 2023
C007_20240509	9 May 2024	EPD-RNG	ET	Water Quality	13 May 2024	It was noted from EPD-RNG's email to the ET on 9 May 2024 that EPD receipted a memo from DSD/Mainland North regarding the incident of muddy water observed in Ping Yuen River, at the downstream of NENTX, on 23 April 2024. In summary of the investigation, the muddy water at the complaint location involved multi-potential sources (including the construction runoff of the project and runoff from existing landfill) based on the distance between the outlet of the project discharge point and the complaint location (distance around 1.16 km). The mitigation measures are recommended and reminded to implement and review by the contractor.	16 July 2024

Remarks:

1. "ET" equal to "Environmental Team"
2. "EPD-RNG" equal to "Environmental Protection Department-Regional Office (North)"
3. "TBC" equal to "To Be Confirm"

Environmental Enquiries Log

Enquiry Ref. No.	Date of Enquiry Received	Received from	Received by	Aspect of Complaint	Date of Investigation	Investigation Summary & Conclusion	Date of Reply
NA	NA	NA	NA	NA	NA	NA	NA

Remarks:

1. "ET" equal to "Environmental Team"
2. "EPD-RNG" equal to "Environmental Protection Department-Regional Office (North)"
3. "NA" equal to "Not Applicable"

Cumulative Statistics on Complaints

Aspects	Cumulative No. Brought Forward	No. of Complaints during reporting period	Cumulative Project-to-Date
Air Quality	1*	0	1*
Noise	0	0	0
Water Quality	6(1*)	0	6(1*)
Waste Management	0	0	0
Total	7(2*)	0	7(2*)

Remarks:

1. * Equal to non-project related
2. # Equal to the complaint under the investigation.

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