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## Quarterly EM&A Summary Report (January 2022 - March 2022)

0120/20/ED/0464 02

**Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1**

Ref.: DSDYLSTWEM00\_0\_0277L.22

27 April 2022

By E-mail and By Hand

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

Attention: Mr YEUNG H. M. Simon

Dear Mr YEUNG,

**Re: Contract No. SPW 08/2020  
Independent Environmental Checker for  
Construction of Yuen Long Effluent Polishing Plant Stage 1**

**Verification of the Quarterly EM&A Summary Report (January to March 2022)**

Reference is made to the Quarterly EM&A Summary Report (January to March 2022) by the ET with Fugro Document No. 0120/20/ED/0464 02 (the Report), which was received via e-mail dated 27 April 2022.

Having reminded that, in accordance with the Condition 3.6 of the EP-565/2019, it is the ET's responsibility to ensure all submitted EM&A data shall be true, valid and correct, we have no further comments and herewith verify that the Report has in general fulfilled all conditions stipulated in Section 12.4.5 of the EM&A Manual

Please contact the undersigned or our Mr. Y.H. HUI should you have any questions on the matter.

Yours sincerely,



WONG Fu Nam  
Independent Environmental Checker

c.c.

DSD  
Fugro

Mr LAM Yu Wang  
Mr YU Lap Bong

By E-mail  
By E-mail

# Document Control




## Document Information

Project Title	Contract No. SPW 07/2020 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1
Document Title	Quarterly EM&A Summary Report (January 2022 - March 2022)
Fugro Project No.	0120/20
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## Client Information

Client	Drainage Services Department
Client Address	45/F, Revenue Tower, 5 Gloucester Road, Wan Chai, Hong Kong
Client Contact	Mr. LAM Yu Wang

## Environmental Team

Initials	Name	Role	Signature
LB	Alvin L.B. Yu	Environmental Team Leader	
CY	Cyrus C.Y. Lai	Senior Environmental Consultant	
KH	Toby K.H. Wan	Assistant Environmental Consultant	

## EXECUTIVE SUMMARY

- i. This Quarterly Environmental Monitoring and Audit (EM&A) Summary Report is prepared for Contract No. SPW 07/2020 "Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1". Drainage Services Department (DSD) has appointed Fugro Technical Services Limited (FTS) to undertake the Environmental Team services for the project and implement the EM&A works.
- ii. This is the 4th Quarterly EM&A Summary Report for the Contract which summaries findings of the EM&A programme during the reporting period from 1 January 2022 to 31 March 2022. As informed by the Contractor, major activities in the reporting period were shown in section 1.4.1.
- iii. The EM&A methodology has been effective in monitoring the environmental impacts of the Project and the effectiveness of the mitigation measures. The data collected were useful in determining whether the Project had caused unacceptable impacts on the sensitive receivers. Analysis of all EM&A data collected throughout the baseline and the impact periods demonstrated the environmental acceptability of the Project.

### **Breaches of Environmental Quality Performance Limits (AL levels)**

- iv. No Action and Limit Level exceedance was recorded for air quality monitoring and construction noise monitoring in the reporting period.
- v. No Action and Limit Level exceedance was recorded for water quality in the reporting period.
- vi. No Action / Limit Level exceedance was recorded for noise levels at stations (NMS1 and NMS2) in close proximity to the active ardeid night roosts during the reporting period.
- vii. No Action / Limit Level exceedance for the ecological monitoring of birds during the reporting period.
- viii. No corrective actions were required according to the Event and Action Plans for the Monitoring Parameters.

### **Land Contamination**

- ix. Regular site inspection was carried out to ensure the recommended mitigation measures are properly implemented. Site investigation (SI) work was completed by 6 January 2022 and the signed final Contamination Assessment Report (CAR) for Main Storeroom & Workshops was submitted to EPD on 1 November 2021. The signed final Contamination Assessment Report (CAR) for Mechanical Workshop was submitted to EPD on 23 November 2021. No contaminated soil and ground water was found within the Main Storeroom & Workshop and the Mechanical Workshop, and no remedial action is required for both locations. While the laboratory results of sampling works show that there is no contaminated soil or groundwater within the Waste Storage Area, the findings are summarized in the draft CAR for the area which is under review and will be submitted to EPD.

### **Complaint Log**

- x. No complaints were received in the reporting period.

### **Notifications of any Summons and Successful Prosecutions**

xi. No notifications of summons and prosecutions were received in the reporting period.

**Reporting Change**

xii. There were no reporting changes during the reporting period.

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# 1. INTRODUCTION

## 1.1 Background

- 1.1.1 The existing Yuen Long Sewage Treatment Works (YLSTW) is a secondary sewage treatment works, located at Yuen Long Industrial Estate serves Yuen Long Town, Yuen Long Industrial Estate and Kam Tin areas with a design capacity of 70,000 m<sup>3</sup> per day. Based on the latest planning data, the volume of sewage generation from the YLSTW catchment is estimated to increase to 150,000 m<sup>3</sup> per day after 20 years. In addition, since YLSTW has been operating for over 30 years and most of its facilities are of out-dated design and reaching the end of their design life, the environmental facilities of the plant will also be upgraded and hence improving the adjacent environment through upgrading the YLSTW to Yuen Long Effluent Polishing Plant (YLEPP). The Location of Proposed Yuen Long Effluent Polishing Plant is given in **Figure 1**.
- 1.1.2 YLSTW will be reconstructed in two stages to increase its capacity to 150,000 m<sup>3</sup> per day. The proposed works, as Stage 1 of the project, will firstly increase the treatment capacity to 100,000 m<sup>3</sup> per day. In the course of Stage 1 construction, about half of the existing facilities of YLSTW would be demolished, while the other half would be kept in operation to maintain the sewage treatment service for Yuen Long area. This 72-month works contract commenced on 9 November 2020. Demolition of existing YLSTW for construction of new treatment facilities are in progress.
- 1.1.3 The Project is a designated project under Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO) (Cap. 499) for which Environmental Impact Assessment (EIA) report and Environmental Monitoring and Audit (EM&A) Manual was approved by EPD (Register No.: AEIAR-220/2019) on 25 April 2019. The Environmental Permit (EP) (EP No. EP-565/2019) to construct and operate was issued by EPD on 26 April 2019.
- 1.1.4 Fugro Technical Services Limited (FTS) has been appointed as the Environmental Team (ET) by Drainage Services Department (DSD) to undertake the Environmental Team services for the Project and implement the EM&A works under the Contract No. DC/2019/10 Yuen Long Effluent Polishing Plant -Main Works for Stage 1 (hereinafter referred as "the Contract").
- 1.1.5 This is the 4th Quarterly EM&A Summary Report to document the findings of site inspection activities and EM&A programme for this project from 1 January 2022 to 31 March 2022 (reporting period) and is submitted to fulfil Condition 3.5 of the EP and Section 12.4.5 of the EM&A Manual. According to Condition 4 of the EP, electronic reporting is provided on the internet website to facilitate public inspection of the report.



## 1.2 Project Organization

1.2.1 The Project Organization structure is shown in **Appendix B**. The key personnel contact names and numbers are summarized in **Table 1.1**.

Table 1.1 – Contact Information of Key Personnel

Party	Position	Name	Telephone
Project Proponent (Drainage Services Department)	Engineer	Mr. Lam Yu Wang	2594 7473
Engineer's Representative (AECOM Asia Co. Ltd.)	Chief Resident Engineer	Mr. Simon Yeung	9075 7172
	Senior Resident Engineer	Mr. Patrick Leung	6124 8838
Independent Environmental Checker (Ramboll Hong Kong Limited)	Independent Environmental Checker (IEC)	Mr. F.N. Wong	2531 0247
Contractor (Paul Y. - CREC Joint Venture)	Environmental Officer	Ms. Iris Ho	5490 5271
Environmental Team (Fugro Technical Services Limited)	Environmental Team Leader (ETL)	Mr. Alvin Yu	3565 4373

## 1.3 Construction Programme and Activities

1.3.1 The construction programme of this project is shown in **Appendix A**.

## 1.4 Works Undertaken During the Period

1.4.1 The main construction works carried out in the reporting period were summarized in **Table 1.2**:

Table 1.2 – Main Construction Works Carried out in the Reporting Period

January 2022	February 2022	March 2022
<ul style="list-style-type: none"> <li>• Temp. road pavement at PST no. 5 &amp; 6;</li> <li>• Demolition of FST no. 5-8 by crusher excavator;</li> <li>• Pre-drill work at Aeration tank by 1 rig;</li> <li>• Installation of sheet pile at IW &amp; PST;</li> <li>• Pile load test at IW &amp; PST;</li> <li>• Diversion work at Zone 2A;</li> <li>• Diversion work at Zone 2B;</li> <li>• Construction of 1600A temp. transformer room;</li> <li>• Reinstatement of road pavement at Zone 1;</li> <li>• Filter Disc Pilot Plant concrete plinth;</li> <li>• AGS Pilot Plant concrete plinth;</li> <li>• Pipe laying for Zone 3;</li> <li>• Construction RC structure at Zone 3;               <ol style="list-style-type: none"> <li>a. Temp. Gravity thickening tank;</li> <li>b. Temp. Sludge Holding Tank;</li> <li>c. Temp. water heater house;</li> <li>d. Temp. thickened sludge pump;</li> <li>e. Temp. digested sludge pump;</li> </ol> </li> <li>• Overhaul work at Sludge Digestion Tank; and</li> <li>• Ground investigation at A. tank no. 7-8.</li> </ul>	<ul style="list-style-type: none"> <li>• Temp. road pavement at PST no. 5 &amp; 6;</li> <li>• Demolition of FST no. 5-8 by excavator mounted crusher;</li> <li>• Pre-drill work at A.tank by 2 rigs;</li> <li>• Installation of sheet pile at IW &amp; PST;</li> <li>• Pile load test at IW &amp; PST;</li> <li>• Diversion work at Zone 2B;</li> <li>• Construction of 1600A temp. transformer room;</li> <li>• Reinstatement of road pavement at Zone 1 &amp; Zone 2A;</li> <li>• Pipe laying for Zone 3;</li> <li>• Construction RC structure at Zone 3;               <ol style="list-style-type: none"> <li>a. Temp. Gravity thickening tank;</li> <li>b. Temp. Sludge Holding Tank;</li> <li>c. Temp. water heater house;</li> <li>d. Temp. digested sludge pump;</li> </ol> </li> <li>• Overhaul work at Sludge Digestion Tank;</li> <li>• Ground investigation at Sludge Thickening Building by 2 rigs;</li> <li>• Site formation works at CLP substation;</li> <li>• Site formation works at MIC office;</li> <li>• Pipe laying for Zone 3 diversion;</li> <li>• Installation of CCTV and Wifi; and</li> <li>• Env. Drill holes inside Air Flotation Thickener.</li> </ul>	<ul style="list-style-type: none"> <li>• Demolition of FST no. 5-7 by excavator mounted crusher;</li> <li>• Pre-drill work at A.tank by 1 rigs;</li> <li>• Pre-drill work at STB by 2 rigs;</li> <li>• Installation of sheet pile at IW &amp; PST;</li> <li>• Pile load test at IW &amp; PST;</li> <li>• Sheet pipe work at Zone 2B;</li> <li>• Construction of 1600A temp. transformer room;</li> <li>• Pipe laying for Zone 3;</li> <li>• Construction RC structure at 3 zone;               <ol style="list-style-type: none"> <li>a. Temp. Gravity thickening tank;</li> <li>b. Temp. Sludge Holding Tank;</li> <li>c. Temp. water heater house;</li> <li>d. Temp. digested sludge pump;</li> <li>e. Digested Sludge Pumping Station;</li> </ol> </li> <li>• Demolition works at Sha Tin Treatment Plant;</li> <li>• Demolition of Sludge Holding Tank no. 3 &amp; 4;</li> <li>• Foundation works at CLP substation;</li> <li>• Foundation works at MIC office;</li> <li>• Trial pit for Env. Drill holes inside Air Flotation Thickener;</li> <li>• Drilling and installation of dewatering well and observation well at IW &amp; PST; and</li> <li>• Disposal of construction waste as indicated in <b>Appendix F</b>.</li> </ul>

1.4.2 The environmental mitigation measures corresponding to the main construction works implemented in the reporting period can be referred to **Appendix G**.

## 2. SUMMARY OF EM&A REQUIREMENTS AND MONITORING RESULTS

### 2.1 Monitoring Requirement

2.1.1 The EM&A programme was undertaken in accordance with the EM&A Manual. It should be noted that the air quality, noise, water quality and ecology monitoring works are covered by this contract.

#### Air quality Monitoring

2.1.2 1-hour Total Suspended Particulates (TSP) levels should be measured at the designated air quality monitoring stations to ensure that any deteriorating air quality could be readily detected and timely action shall be undertaken to rectify such situation. Impact 1-hour TSP monitoring was conducted for at least three times every 6 days when the highest dust impact occurs.

#### Noise Monitoring

2.1.3 Leq (30min) monitoring is conducted at least once a week when there are Project-related construction activities being undertaken within a radius of 300 m from the monitoring stations. The monitoring is conducted during the construction phase between 0700 and 1900 on normal weekdays at the designated monitoring locations.

#### Water quality Monitoring

2.1.4 Turbidity (in NTU), pH, DO (in mg/L and % of saturation), Temperature (in °C), Salinity (in ppt) and Suspended Solids are conducted for three days per week at mid-flood and mid-ebb with sampling and measurement at the designated monitoring stations.

#### Ecology Monitoring

2.1.5 Ardeid night roost monitoring was conducted once a month in areas within 100 m from the Project boundary to monitor the effectiveness of proposed mitigation measures and detect any unpredicted indirect ecological impacts arising from the Project.

2.1.6 Ecological monitoring of birds was conducted monthly during the quarter at point count sites and transect routes along the wetland habitats in Fung Lok Wai and Nam Sang Wai as well as along Shan Pui River and Kam Tin River within 500 m from the Project boundary.

## 2.2 Monitoring Locations

2.2.1 The air quality and noise monitoring are summarized in **Table 2.1**. The locations of the air quality and noise monitoring stations shown in **Figure 2** and **Figure 3**, respectively.

Table 2.1 – Air Quality and Noise Monitoring Location

Environmental Monitoring	Monitoring Station	Location
Air Quality	AM1	Topfine Machinery (China) Co. Ltd
	AM2	Squatter house at the west of Yuen Long STW
Noise	CM1	Squatter house at the north of Yuen Long STW
	CM2	Squatter house at the west of Yuen Long STW
	CM3	Squatter house at the east of Yuen Long STW

2.2.2 The coordinates of water quality monitoring locations are summarized in **Table 2.2**. The locations of the water quality monitoring stations shown in **Figure 4**.

Table 2.2 – Coordinates of Water Quality Monitoring Locations

Sampling Location		Easting	Northing
M1	Serve as the control station at upstream location of construction site (Flood Tide) / Serve as the impact station at downstream location of construction site (Ebb Tide)	821 086	836 656
M2	Serve as the impact station at downstream location of construction site (Flood Tide)/ Serve as the control station at upstream location of construction site (Ebb Tide)	820 996	836 246
M3	Serve as the impact station at downstream location of construction site (Flood Tide) / Serve as the control station at upstream location of construction site (Ebb Tide)	820 645	836 335

## 2.3 Results and Observations

2.3.1 Graphical presentation of the environmental monitoring data in the reporting period is presented in **Appendix D**.

### Air quality Monitoring

2.3.2 1-hour TSP impact monitoring at AM1 and AM2 were carried out in the reporting period, the air quality monitoring results are reported in the monthly EM&A Report prepared for this Contract.

2.3.3 No Action and Limit Level exceedance was recorded for air quality monitoring in the reporting period.

### Noise Monitoring

- 2.3.4 Construction noise monitoring were carried out in the reporting period, the construction noise monitoring results for CM1, CM2 and CM3 are reported in the monthly EM&A Reports prepared for this Contract.
- 2.3.5 No Action and Limit Level exceedance was recorded for construction noise monitoring in the reporting period.
- 2.3.6 No raining and wind with speed over 5 m/s was observed during noise monitoring according to the onsite observation.
- 2.3.7 During the noise monitoring period, at CM2, road traffic from the squatter house at the west of Yuen Long STW was observed, at CM3, road traffic from the Nam Sang Wai Road was observed. No effect that arose from the other special phenomena and work progress of the concerned site for CM1 was noted during the current monitoring period.

### Water quality Monitoring

- 2.3.8 Water quality monitoring were carried out in the reporting period, the monitoring results for M1, M2 and M3 are reported in the monthly EM&A Reports prepared for this Contract.
- 2.3.9 During the reporting period, no Action and Limit Level exceedance was recorded for Dissolved Oxygen, Turbidity, and Suspended Solids. Number of water quality exceedance recorded in the reporting period at each impact stations is summarized in **Table 2.3**.

Table 2.3 – Summary of Water Quality Exceedance

Sampling Location	Exceedance Level	DO		Turbidity		Suspended Solids		Total	
		Flood	Ebb	Flood	Ebb	Flood	Ebb	Flood	Ebb
M1	Action	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0
M2	Action	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0
M3	Action	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0
Total	Action	0	0	0	0	0	0	0	
	Limit	0	0	0	0	0	0	0	

### Ecology Monitoring

- 2.3.10 Ardeid night roost monitoring and ecological bird monitoring were carried out in the reporting period. The monitoring results are reported in the monthly EM&A Reports prepared for this Contract.
- 2.3.11 Results of the ardeid night roost monitoring showed that the two confirmed ardeid night roosts (ANR 1 and ANR 2) during the pre-construction survey, were still observed to be active from January 2022 to March 2022. No Action / Limit Level exceedance at NMS1 and NMS2 was recorded during the reporting period.
- 2.3.12 Results of the ecological bird monitoring recorded no exceedance in Action / Limit Level during the reporting period.

## **2.4 Action and Limit Levels**

- 2.4.1 The Action and Limit Levels for air quality, noise, water quality and ecology monitoring have been set and are presented in **Appendix C**.

## **2.5 Event and Action Plans**

- 2.5.1 The event and action plans for air quality, noise, water quality and ecology monitoring are presented in **Appendix E**.

## **2.6 Mitigation Measures**

- 2.6.1 The Contractor had implemented environmental mitigation measures and requirements as stated in the EIA Report, the EP and EM&A Manual. The implementation status of the environmental mitigation measures during the reporting period is summarized in **Appendix G**.

## 3. LANDSCAPE AND VISUAL

### 3.1 Audit Requirements

3.1.1 According to the EM&A Manual, a Landscape Architect or related professional shall be employed to audit the implementation of landscape construction works particularly during site clearance operations when the proposed tree felling and transplanting will take place and subsequent maintenance operations. Site audits should be undertaken every week during the construction phase to check that the proposed landscape and visual mitigation measures are properly implemented and maintained as per their intended objectives. The mitigation measure recommended in the EIA Report as the audit requirements for landscape and visual, including: preservation of existing vegetation, transplanting of affected trees, compensatory tree planning, control of night-time lighting glare, erection of decorative screen hoarding and management of construction activities and facilities are summarized in **Appendix G**.

### 3.2 Results and Observations

3.2.1 According to the EM&A Manual, site audits should be undertaken every week during the construction phase to check that the proposed landscape and visual mitigation measures are properly implemented and maintained as per their intended objectives.

3.2.2 To monitor and audit the implementation of landscape and visual mitigation measures, 12 weekly landscape and visual site audits were carried out in the reporting period (site audit of 15 February 2022 was cancelled and rescheduled to 23 February 2022). No outstanding issues were reported during the reporting period. Observations and recommendations during site audits are summarized in **Table 5.1**.

## 4. LAND CONTAMINATION

### 4.1 Contamination Assessment Report

- 4.1.1 Risk-Based Remediation Goals (RBRGs) for Industrial have been adopted for the “Main Storeroom & Workshops” and the laboratory results for the sampling works (conducted between 30 June 2021 to 16 July 2021) show that there are no exceedances of the adopted RBRGs for the “Main Storeroom & Workshops”. As no contaminated soil and groundwater was found within the “Main Storeroom & Workshops”, no remediation actions are required for contaminated soil and groundwater for the scheduled land use of the “Main Storeroom & Workshops”. Their findings are summarized in Contamination Assessment Report (CAR) and submitted to EPD on 1 November 2021.
- 4.1.2 Risk-Based Remediation Goals (RBRGs) for Industrial have been adopted for the “Mechanical Workshop” and the laboratory results for the sampling works (conducted between 23 July 2021 to 4 August 2021) show that there are no exceedances of the adopted RBRGs for the “Mechanical Workshop”. As no contaminated soil and groundwater was found within the “Mechanical Workshop”, no remediation actions are required for contaminated soil and groundwater for the scheduled land use of the “Mechanical Workshop”. Their findings are summarized in Contamination Assessment Report (CAR) and submitted to EPD on 23 November 2021.
- 4.1.3 Risk-Based Remediation Goals (RBRGs) for Industrial have been adopted for the “Waste Storage Area” and the laboratory results for the sampling works (conducted between 24 November 2021 to 26 January 2022) show that there are no exceedances of the adopted RBRGs for the “Waste Storage Area”, hence no contaminated soil or groundwater is found within the “Waste Storage Area”. Their findings are summarized in draft Contamination Assessment Report (CAR) which is under review and will be submitted to EPD.



## 5. SITE INSPECTION AND AUDIT

### 5.1 Site Inspection

- 5.1.1 Site audits were carried out by ET on weekly basis at least once per week to monitor the implementation of proper environmental management practices and mitigation measures in the Project site.
- 5.1.2 In the reporting period, 12 site inspections were carried out (site audit of 15 February 2022 was cancelled and rescheduled to 23 February 2022). No outstanding issues were reported during the reporting period. Details of observations recorded during the site inspections are presented in **Table 5.1**.

Table 5.1 – Observations and Recommendations of Site Audit

Parameters	Date	Observations and Recommendations	Follow-up
Air Quality	9 Feb 2022	Reminder 1: The Contractor is reminded to increase watering for dust suppression during the demolition of sediment tank.	9 Feb 2022
	8 Mar 2022	Reminder 1: The Contractor is reminded to increase watering for dust suppression during the demolition of sediment tank.	8 Mar 2022
Noise	NA		
Water Quality	26 Jan 2022	Observation 1: Silty deposit in gullies should be cleaned at Zone 2.	27 Jan 2022
		Observation 2: Mitigation measure should be provided to prevent direct discharge of runoff near the main entrance.	
	Reminder 1: The Contractor is reminded to de-silt the gullies near the main entrance.		
	23 Mar 2022	Reminder 1: The Contractor is reminded to prevent direct discharge of silt-laden water into the storm drain near the temporary transformer room.	23 Mar 2022
Chemical and Waste Management	11 Jan 2022	Reminder 1: The Contractor is reminded to provide drip tray for the chemical containers.	11 Jan 2022
Land Contamination	NA		
Ecological Impact	29 Mar 2022	Reminder 1: The Contractor is reminded to maintain and reinstate the bird curtain at the eastern site boundary.	NA
Landscape and Visual Impact	9 Feb 2022	Recommendation 1: Recommend to keep tree protection zone free of construction materials.	NA

Parameters	Date	Observations and Recommendations	Follow-up
		Recommendation 2: Recommend to provide regular maintenance check on dead branches and remove where necessary.	
	23 Feb 2022	Recommendation 1: Please exercise caution when operating heavy machinery close to existing trees.	NA
	8 Mar 2022	Follow-up 1: Provide damp hessian to cover exposed roots underneath existing footpath for Tree No. T168 – T173 near site entrance.	8 Mar 2022
		Follow-up 2: Remove stockpile under dripline area for Tree No. T173 – T188 near site entrance.	
	16 Mar 2022	Reminder 1: Avoid mechanical injury of crown and branches by sheet pile clamp during driving for Tree No. T168 – T173 near site entrance.	NA
		Reminder 1: Contractor is reminded to keep planting area free of construction debris such as T020 & T022.	16 Mar 2022
		Reminder 2: Caution when work next to existing trees at CLP station area.	NA
	23 Mar 2022	Reminder 1: Please exercise caution when working near existing trees at (former changing room area) CLP area.	NA
29 Mar 2022	Observation 1: Trunk damage observed for Tree T252, tree maintenance work is recommended.	NA	
Permit / Licenses	NA		
Others	NA		

## 5.2 Advice on the Solid and Liquid Waste Management Status

- 5.2.1 The Contractor registered as a chemical waste producer for the Contract. Sufficient numbers of receptacles were available for general refuse collection and sorting.
- 5.2.2 The management of waste generated by the construction is presented in **Table 5.2**.

Table 5.2 – Waste Generated by the Construction and Disposal Ground

Types of Waste	Disposal Ground
Inert C&D Waste (Excluding slurry and bentonite)	Tuen Mun Area 38
Inert C&D Waste (For slurry and bentonite)	Tseung Kwan O Area 137
Non-inert C&D Materials	North East New Territories Landfill (NENT)
Sludge	West New Territories Landfill (WENT)
Marine Sediment	Type 1 – Open Sea Disposal: South Cheung Chau Open Sea Sediment Disposal Area Type 1 – Open Sea Disposal (Dedicate Site) and Type 2 – Confined Marine Disposal: Contaminated Mud Pit Vb of the Confined Marine Disposal Facilities to the East of Sha Chau

- 5.2.3 The amount of wastes generated by the site activities in the reporting period is shown in **Appendix F**.
- 5.2.4 If off-site disposal is required, the excavated marine mud from the land-based works shall be disposed of at the designated disposal sites within Hong Kong as allocated by the Marine Fill Committee or other locations as agreed by the Director. The Contractor shall ensure no spilling and overflowing of materials during loading / unloading / transportation is allowed.
- 5.2.5 The Contractor was reminded that chemical waste should be properly handled temporarily in designated chemical waste storage area on site in accordance with the Code of Practice on the Packing, Labelling and Storage of Chemical Waste.

## 6. NON-COMPLIANCE, COMPLAINTS, NOTIFICATIONS OF SUMMONS AND SUCCESSFUL PROSECUTIONS

### 6.1 Non-compliance (Exceedances of AL levels)

- 6.1.1 No Action and Limit Level exceedance was recorded for air quality monitoring and construction noise monitoring in the reporting period.
- 6.1.2 No Action and Limit Level exceedance was recorded for water quality in the reporting period.
- 6.1.3 No Action / Limit exceedance was recorded for noise levels at stations (NMS1 and NMS2) in close proximity to the active ardeid night roosts in the reporting period.
- 6.1.4 No Action / Limit exceedance was noted for the ecological monitoring of birds during the reporting period.
- 6.1.5 No corrective actions were required according to the Even-Action Plans.

### 6.2 Complaints, Notification of Summons and Prosecution

- 6.2.1 No environmental complaint, notification of summons and successful prosecution were received in the reporting period.
- 6.2.2 Cumulative complaint log, summaries of complaints, notification of summons and successful prosecutions are presented in **Appendix H**.
- 6.2.3 No corrective actions were required.

## 7. IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURE

### 7.1 Implementation Status

The Contractor had implemented environmental mitigation measures as stated in the EIA Report, the EP and EM&A Manual. The implementation status of the recommended mitigation measures during the reporting period is summarized in **Appendix G**.

The status of required submissions under the EP as of the reporting period are summarized in **Table 7.1**.

Table 7.1 – Summary of EP Submissions Status

EP Condition (EP-565/2019)	Submission Title	Submission Status
Condition 2.9	Construction Phase Emergency Response Plan	Submitted to EPD with ET certification and IEC verification, to be finalised and made available for public inspection via the dedicated website.
Condition 2.11	Pre-construction Ardeid Night Roost Survey Report	Submitted to EPD with ET certification and IEC verification, finalised and available for public inspection via the dedicated website.
EM&A Manual Sec. 7.3.3 & 7.3.4	Baseline Bird Survey Report	Submitted to EPD with ET certification and IEC verification, finalised and available for public inspection via the dedicated website.
Condition 2.12	Noise Mitigation Measures Plan	Submitted to EPD with ET certification and IEC verification, to be finalised and made available for public inspection via the dedicated website.
Condition 2.13	Proposal for Minimization of Overspill Light to Ecological Sensitive Areas	Submitted to EPD with ET certification and IEC verification, finalised and available for public inspection via the dedicated website.
Condition 2.14	Supplementary Contamination Assessment Plan	Submitted to EPD with ET certification and IEC verification, finalised and available for public inspection via the dedicated website.
Condition 2.14	Contamination Assessment Report for Main Storeroom & Workshops	Submitted to EPD with ET certification and IEC verification, to be finalised and made available for public inspection via the dedicated website.
Condition 2.14	Contamination Assessment Report for Mechanical Workshop	Submitted to EPD with ET certification and IEC verification, to be finalised and made available for public inspection via the dedicated website.
Condition 2.15	Landscape and Visual Mitigation Plan	Submitted to EPD with ET certification and IEC verification, to be finalised and made available for public inspection via the dedicated website.
Condition 3.3	Baseline Monitoring Report	Submitted to EPD with ET certification and IEC verification, finalised and available for public inspection via the dedicated website.
Condition 3.4	Monthly EM&A Report (from April 2021 to March 2022)	Submitted to EPD with ET certification and IEC verification, finalised and available for public inspection via the dedicated website.

EP Condition (EP-565/2019)	Submission Title	Submission Status
Condition 3.5	Quarterly EM&A Report (from April to December 2021)	Submitted to EPD with ET certification and IEC verification, finalised and available for public inspection via the dedicated website.
Condition 4.2	Environmental Monitoring Data from April 2021 to March 2022	Submitted to EPD with ET certification and IEC verification, finalised and available for public inspection via the dedicated website.

## 8. CONCLUSION AND RECOMMENDATION

### 8.1 Conclusions

- 8.1.1 No Action and Limit Level exceedance was recorded for air quality monitoring and construction noise monitoring in the reporting period.
- 8.1.2 No Action and Limit Level exceedance was recorded for water quality in the reporting period.
- 8.1.3 No Action / Limit exceedance was recorded for noise levels at stations (NMS1 and NMS2) in close proximity to the active ardeid night roosts in the monitoring period.
- 8.1.4 No Action / Limit exceedance was noted for the ecological monitoring of birds during the reporting period.
- 8.1.5 12 environmental site inspections and 12 landscape and visual site audits were carried out in the reporting period. Recommendations on mitigation measures were given to the Contractor for remediating the deficiencies identified during the site inspections.
- 8.1.6 No environmental complaint, notification of summons and successful prosecution was recorded in the reporting period.
- 8.1.7 The EM&A methodology has been effective in monitoring the environmental impacts of the Project and the effectiveness of the mitigation measures. The data collected were useful in determining whether the Project had caused unacceptable impacts on the sensitive receivers. Analysis of all EM&A data collected throughout the baseline and the impact monitoring periods demonstrated the environmental acceptability of the Project.

## 8.2 Comment and Recommendations

8.2.1 The recommended environmental mitigation measures, as proposed in the EIA report and EM&A Manual 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.

8.2.2 According to the environmental site inspections performed in the reporting period, the following recommendations were provided:

### Air Quality Impact

- The Contractor is reminded to increase watering for dust suppression during the demolition of sediment tank.

### Construction Noise Impact

- No specific observation was identified in the reporting period.

### Water Quality Impact

- Silty deposit in gullies should be cleaned at Zone 2.
- Mitigation measure should be provided to prevent direct discharge of runoff near the main entrance.
- The Contractor is reminded to de-silt the gullies near the main entrance.
- The Contractor is reminded to prevent direct discharge of silt-laden water into the storm drain near the temporary transformer room.

### Chemical Waste and Construction Waste Management

- The Contractor is reminded to provide drip tray for the chemical containers.

### Land Contamination

- No specific observation was identified in the reporting period.

### Ecological Impact

- The Contractor is reminded to maintain and reinstate the bird curtain at the eastern site boundary.

### Landscape and Visual Impact

- Recommend to keep tree protection zone free of construction materials.
- Recommend to provide regular maintenance check on dead branches and remove where necessary.
- Please exercise caution when operating heavy machinery close to existing trees.
- Provide damp hessian to cover exposed roots underneath existing footpath for Tree No. T168 – T173 near site entrance.
- Remove stockpile under dripline area for Tree No. T173 – T188 near site entrance.
- Avoid mechanical injury of crown and branches by sheet pile clamp during driving for Tree No. T168 – T173 near site entrance.



- Contractor is reminded to keep planting area free of construction debris such as T020 & T022.
- Caution when work next to existing trees at CLP station area.
- Please exercise caution when working near existing trees at (former changing room area) CLP area.
- Trunk damage observed for Tree T252, tree maintenance work is recommended.

Hazard to Life

- No specific observation was identified in the reporting period.

Permit/ Licenses

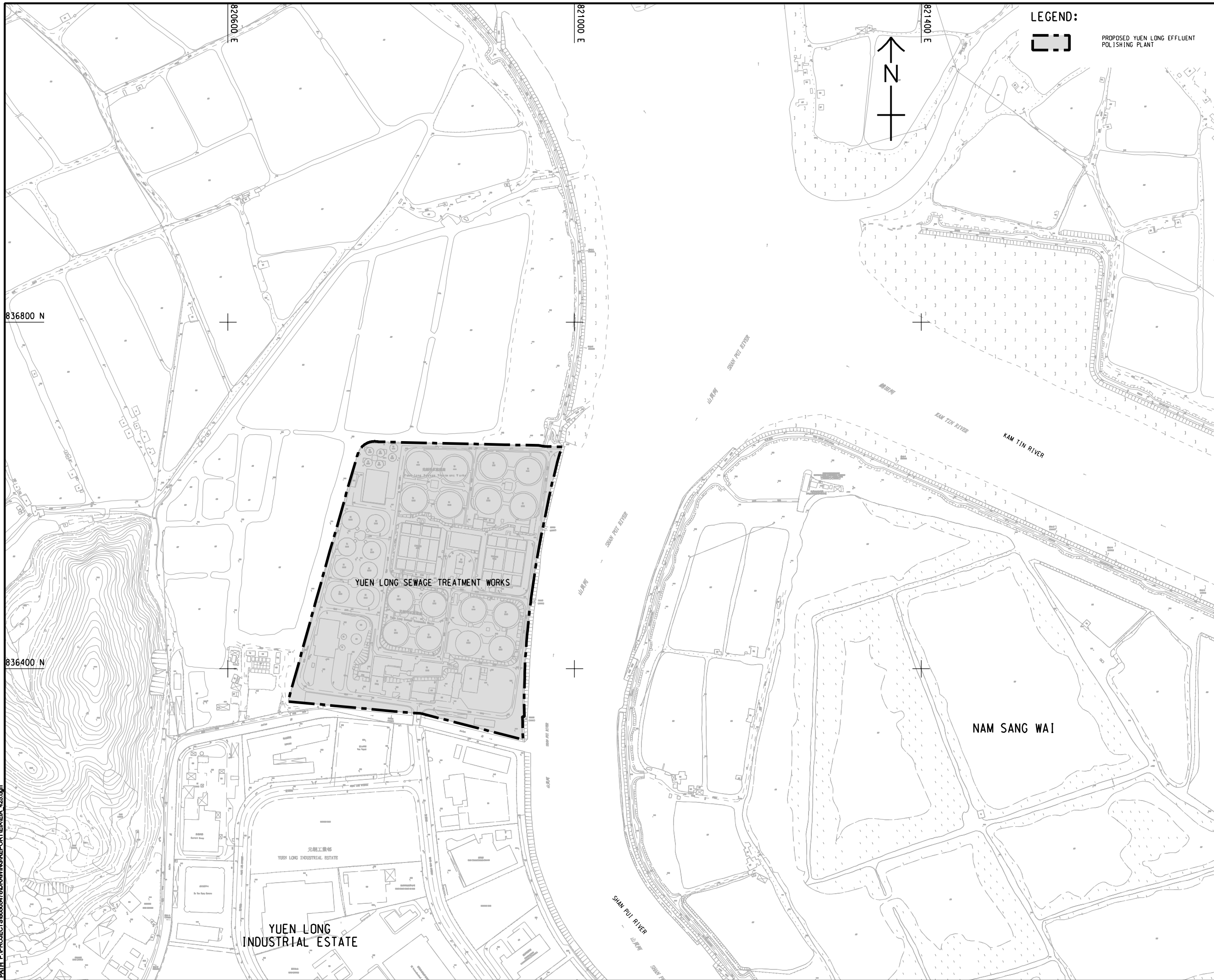
- No specific observation was identified in the reporting period.


# Figure 1

---

Location of Proposed Yuen Long Effluent  
Polishing Plant

Plot File by: Song YN 2018/02/27  
 PATH: P:\PROJECTS\6056547\DRAWING\REPORT\EA\EA\_425.dgn  
 Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm



**LEGEND:**  
 PROPOSED YUEN LONG EFFLUENT POLISHING PLANT

**AECOM**  
 PROJECT  
**YUEN LONG EFFLUENT POLISHING PLANT - INVESTIGATION, DESIGN AND CONSTRUCTION**

CLIENT  
 渠務署  
 Drainage Services Department

CONSULTANT  
 AECOM Asia Company Ltd.  
 www.aecom.com

SUB-CONSULTANTS  
 分判工程顧問公司

**ISSUE/REVISION**  
 批註

IR	DATE	DESCRIPTION	CHK.
批註	日期	內容摘要	核對

**STATUS**  
 階段

**SCALE**  
 比例: A1 1 : 2000

**DIMENSION UNIT**  
 尺寸單位: METRES

**KEY PLAN**  
 索引圖

**PROJECT NO.**  
 項目編號: 60505476

**CONTRACT NO.**  
 合約編號: CE 3/2015 (DS)

**SHEET TITLE**  
 圖紙名稱: LOCATION OF PROPOSED YUEN LONG EFFLUENT POLISHING PLANT

**SHEET NUMBER**  
 圖紙編號

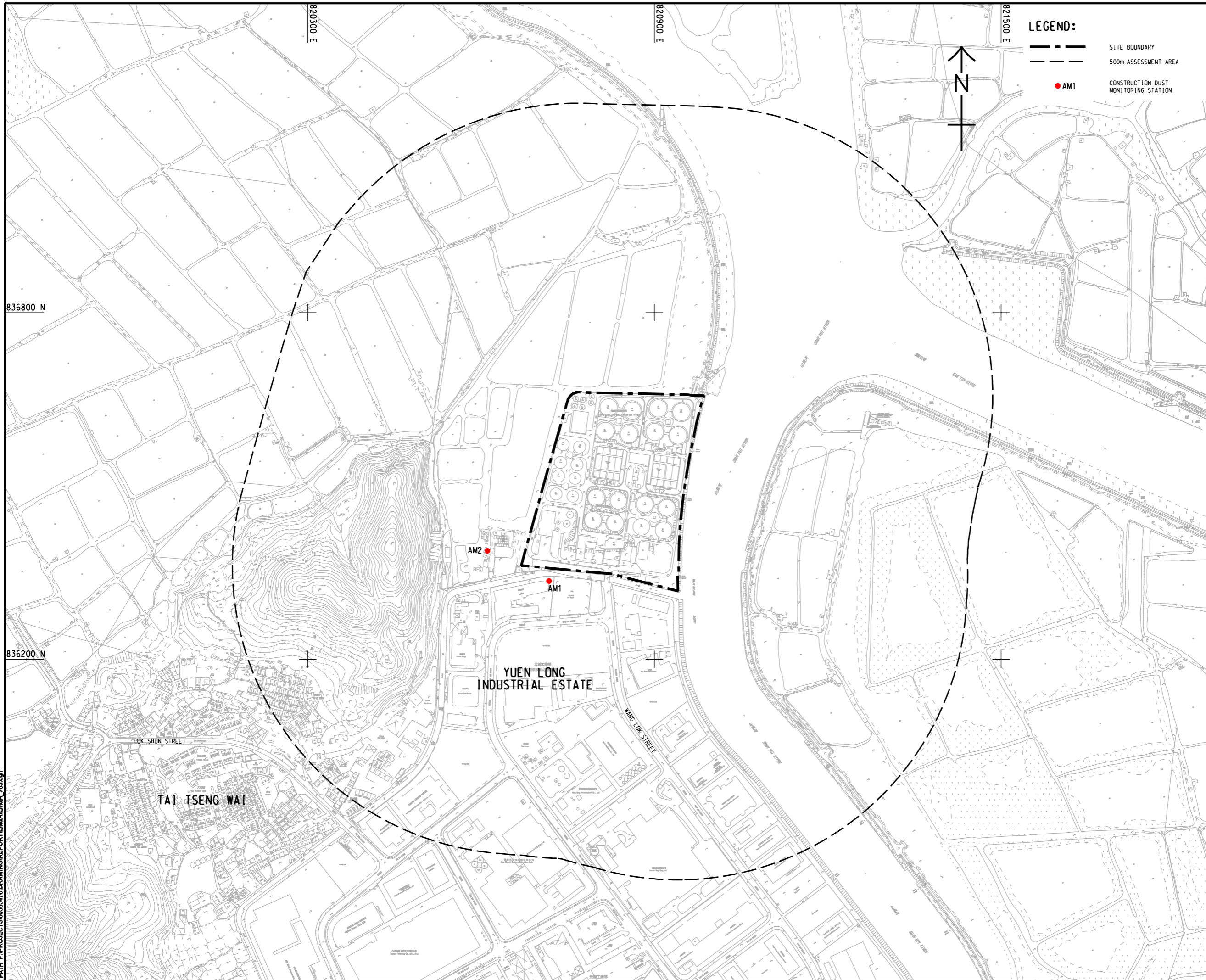
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## Figure 2

---

Location of Construction Dust  
Monitoring Stations

ISO A1 594mm x 841mm  
 Approved:  
 Checked:  
 Designer:  
 Project Management Initials:  
 836800 N  
 836200 N  
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 11/29  
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**LEGEND:**

- SITE BOUNDARY
- 500m ASSESSMENT AREA
- AM1 CONSTRUCTION DUST MONITORING STATION



**PROJECT**  
 項目  
**YUEN LONG EFFLUENT POLISHING PLANT - INVESTIGATION, DESIGN AND CONSTRUCTION**

**CLIENT**  
 業主  
**渠務署**  
 Drainage Services Department

**CONSULTANT**  
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號	日期	內容摘要	核對

**STATUS**  
 階段

**SCALE**  
 比例  
 A1 1 : 3000

**DIMENSION UNIT**  
 尺寸單位  
 METRES

**KEY PLAN**  
 索引圖

**PROJECT NO.**  
 項目編號  
 60505476

**CONTRACT NO.**  
 合約編號  
 CE 3/2015 (DS)

**SHEET TITLE**  
 圖紙名稱  
 LOCATION OF CONSTRUCTION DUST MONITORING STATIONS

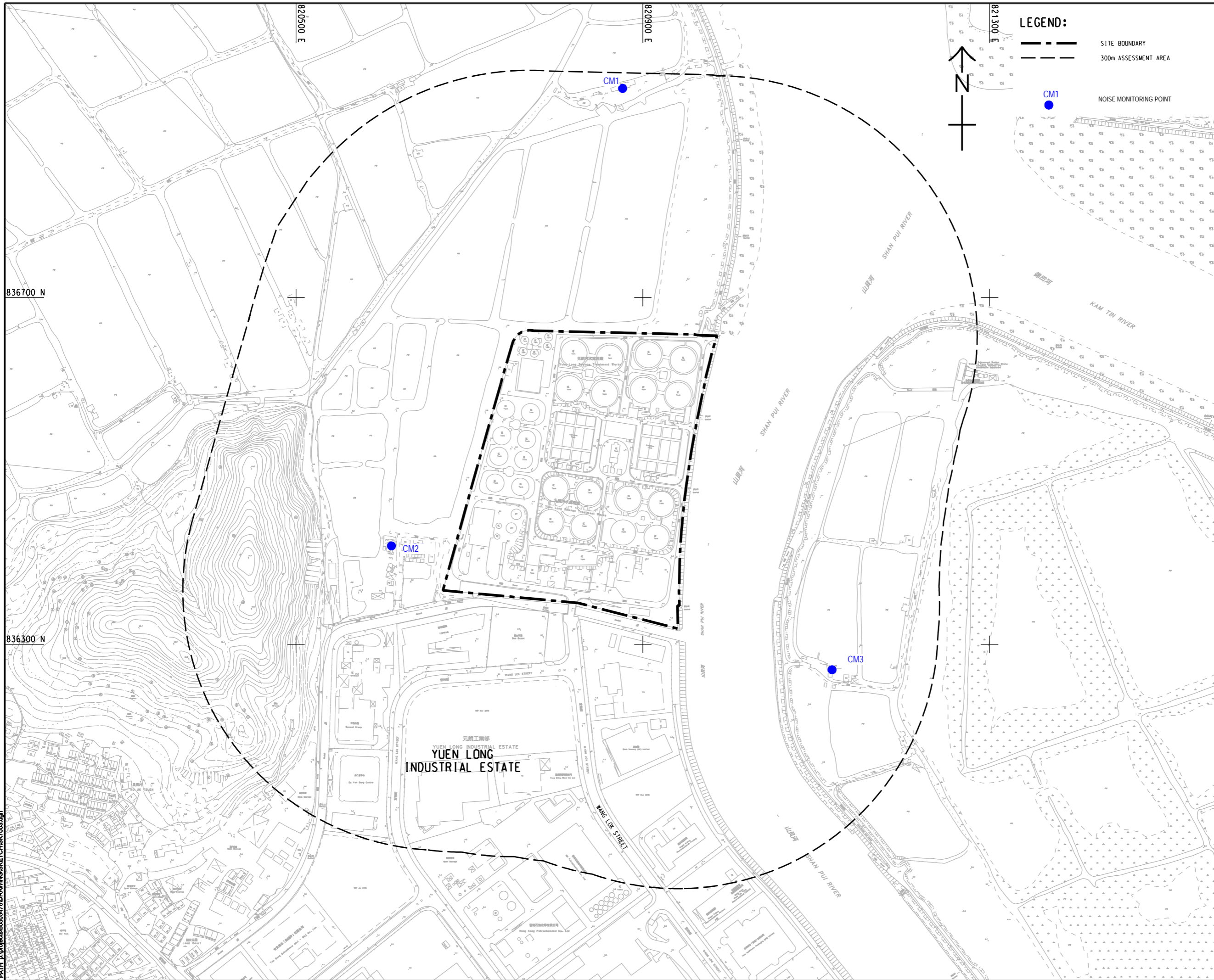
**SHEET NUMBER**  
 圖紙編號

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## Figure 3

---

Noise Monitoring Locations



LEGEND:

- SITE BOUNDARY
- 300m ASSESSMENT AREA
- NOISE MONITORING POINT

**AECOM**

**PROJECT**  
項目

**YUEN LONG EFFLUENT POLISHING PLANT - INVESTIGATION, DESIGN AND CONSTRUCTION**

**CLIENT**  
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渠務署  
Drainage Services Department

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**STATUS**  
圖版

**SCALE**  
比例

A1 1:2000

**DIMENSION UNIT**  
尺寸單位

METRES

**KEY PLAN**  
索引圖

**PROJECT NO.**  
項目編號

60505476

**CONTRACT NO.**  
合約編號

CE 3/2015 (DS)

**SHEET TITLE**  
圖版名稱

LOCATIONS OF NOISE MONITORING POINTS

**SHEET NUMBER**  
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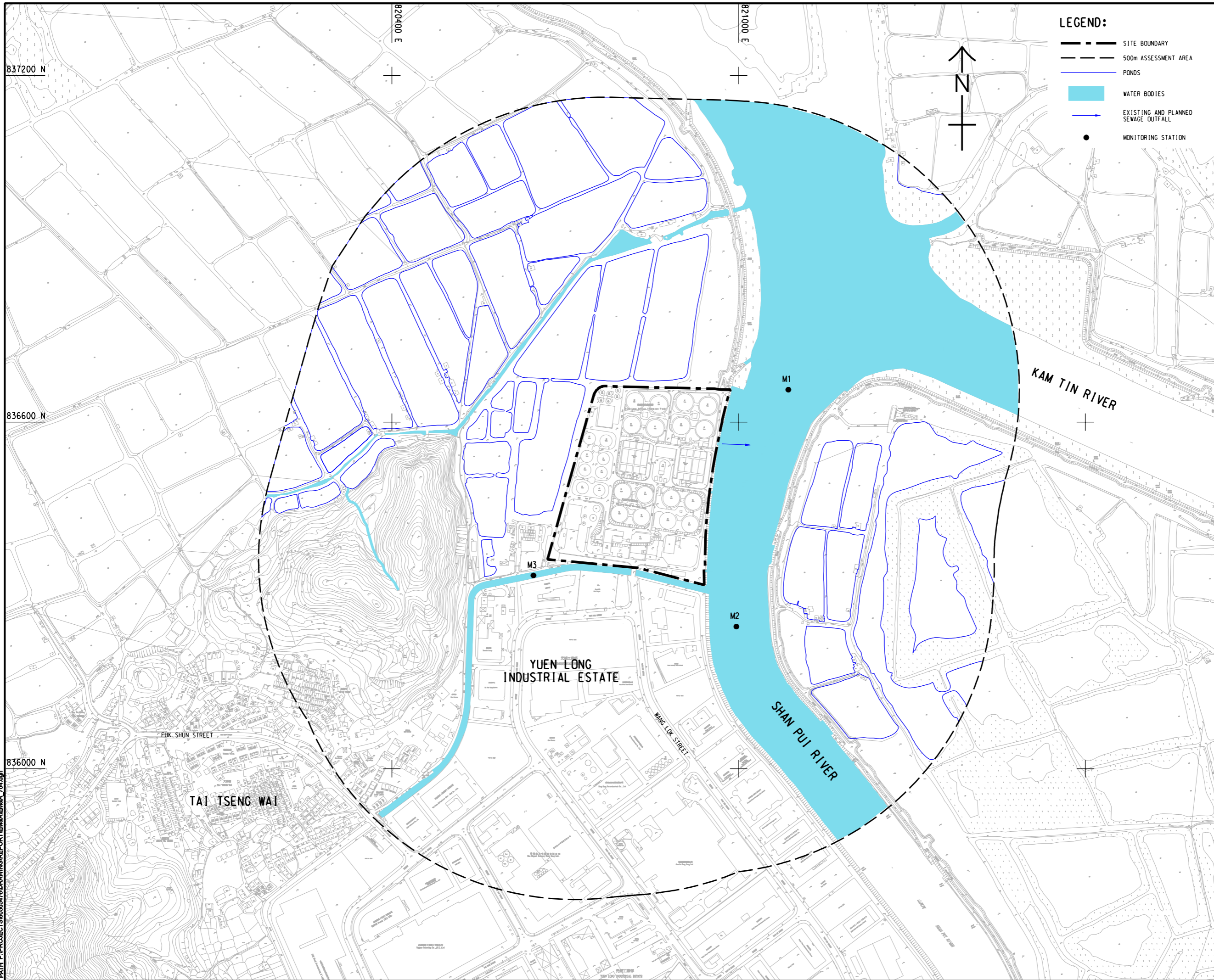
# Figure 4

---

Water Quality Monitoring Locations



ISO A1 594mm x 841mm  
 Approved:  
 Checked:  
 Designer:  
 Project Management Initials:  
 12/18  
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**PROJECT**  
 項目  
**YUEN LONG EFFLUENT POLISHING PLANT - INVESTIGATION, DESIGN AND CONSTRUCTION**

**CLIENT**  
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**ISSUE/REVISION**  
 更改

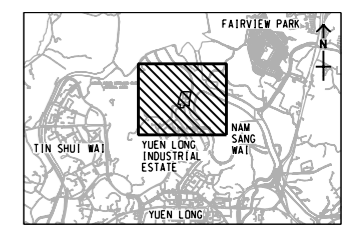
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**STATUS**  
 階段

**SCALE**  
 比例  
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**DIMENSION UNIT**  
 尺寸單位  
 METRES

**KEY PLAN** A3 1: 180000  
 索引圖



**PROJECT NO.**  
 項目編號  
 60505476

**CONTRACT NO.**  
 合約編號  
 CE 3/2015 (DS)

**SHEET TITLE**  
 圖名  
 LOCATIONS OF WATER QUALITY MONITORING STATIONS FOR CONSTRUCTION PHASE

**SHEET NUMBER**  
 圖號

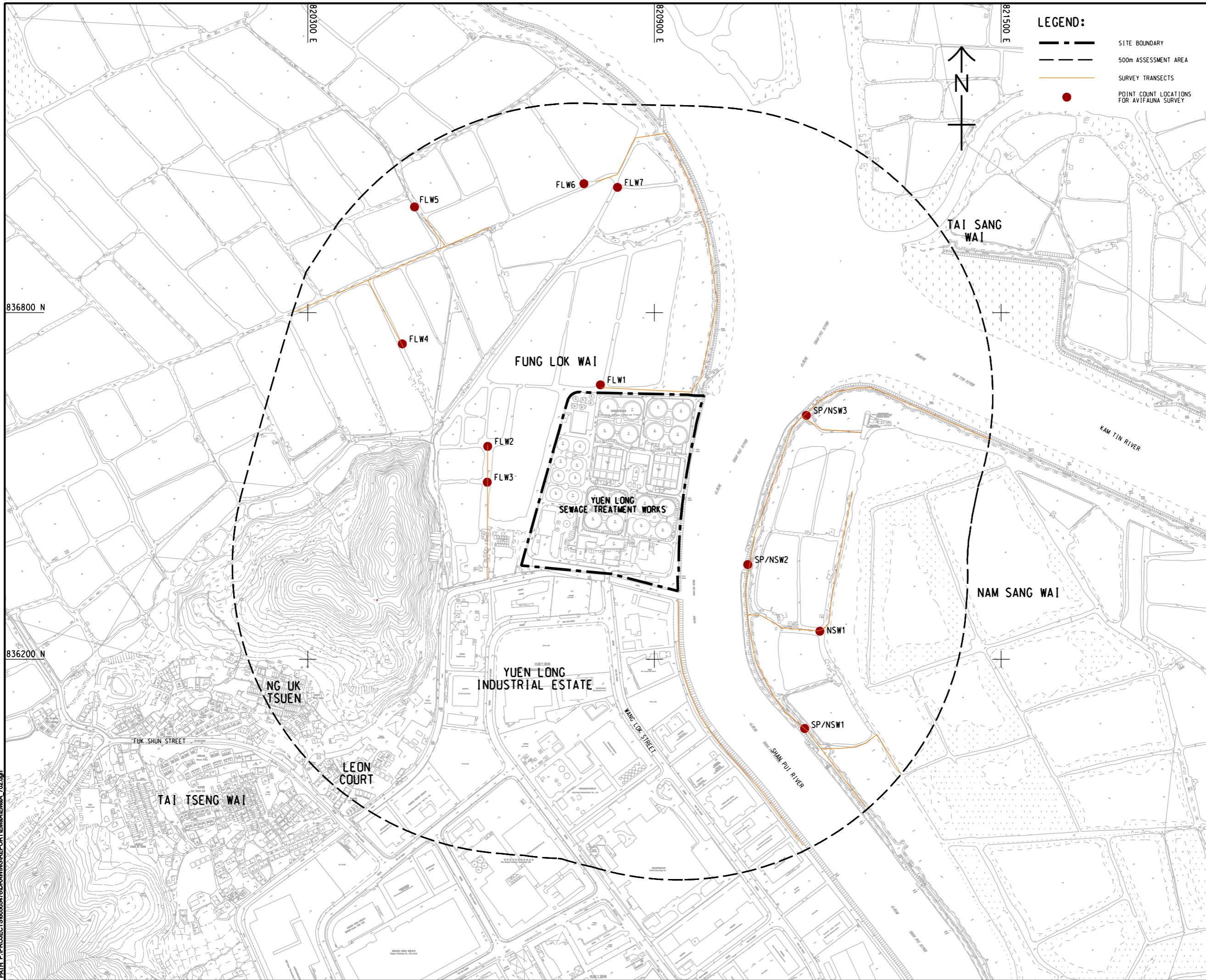
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# Figure 5

---

Ecology Monitoring Locations

ISO A1 594mm x 841mm  
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 Checked:  
 Designer:  
 Project Management Initials:  
 836800 N  
 836200 N  
 Pld File by: ZENGFX, 2018/05/30  
 PATH: P:\PROJECTS\60505476\DRAWING\REPORT\EM\A\EM\_A\_702.dgn



**LEGEND:**

- SITE BOUNDARY
- 500m ASSESSMENT AREA
- SURVEY TRANSECTS
- POINT COUNT LOCATIONS FOR AVIFAUNA SURVEY

**AECOM**

**PROJECT**  
 項目  
**YUEN LONG EFFLUENT POLISHING PLANT - INVESTIGATION, DESIGN AND CONSTRUCTION**

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 業主  
**渠務署**  
 Drainage Services Department

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**STATUS**  
 階段

**SCALE**  
 比例  
 A1 1 : 3000

**DIMENSION UNIT**  
 尺寸單位  
 METRES

**KEY PLAN**  
 索引圖

**PROJECT NO.**  
 項目編號  
 60505476

**CONTRACT NO.**  
 合約編號  
 CE 3/2015 (DS)

**SHEET TITLE**  
 圖名  
 ECOLOGICAL MONITORING LOCATIONS

**SHEET NUMBER**  
 圖號

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# Appendix A

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Construction Programme

Activity ID	Activity Name	Orig Dur	Early Start	Early Finish	Total Float	December					January				February				March			April
						14					15				16				17			18
						28	05	12	19	26	02	09	16	23	30	06	13	20	27	06	13	20
<b>YL Effluent Polishing Plant - Main Works Stage 1 - Detailed Works Programme DWP rev.9</b>																						
UPDATE-R18	Data Date DWP Revision 9	0		31-Dec-21 A																		
UPDATE-R7	Data Date DWP Revision 8	0		30-Nov-21 A																		
<b>Contract Data Part 1</b>																						
<b>Access Dates</b>																						
ADWA2	Work Area WA2 (sd) (new site possession) validity for 12 months and subject to renewal	365	05-Mar-21 A	04-Mar-22*	0																	
<b>Environmental Constraints</b>																						
EBS-2155	Egrets Breeding Season 2022	184	01-Mar-22*	31-Aug-22	0																	
<b>Preliminary and Preparation Works</b>																						
ESUM-010	Subletting	331	09-Nov-20 A	08-Oct-22	779																	
ESUM-020	Design Submission	1248	30-Jan-21 A	10-May-25	198																	
ESUM-030	Material Submission, Procurement, Manufacturing and Delivery	241	09-Nov-20 A	04-Jan-22	637																	
ESUM-040	Site Establishment Works	1337	09-Nov-20 A	05-Jun-25	307																	
ESUM-050	PM and Contractor Accommodation	213	18-Feb-21 A	06-Jun-22	1																	
<b>Subletting</b>																						
SUB-230	Subletting for CLP Substation No.1 & 2 Structure	100	01-Jun-21 A	31-Dec-21	125																	
SUB-240	Subletting for CLP Substation No.1 & 2 ABWF & BS	100	30-Aug-21 A	16-Feb-22	173																	
SUB-250	Subletting for Ground Improvement works for Biogas Holder	86	07-Jul-21 A	31-Dec-21	66																	
SUB-270	Subletting for ELS works for IW, PST, SDB, STB, SD, MBB, TTB, underpass and open cut for admin. bldg	50	12-Oct-21 A	31-Dec-21	184																	
SUB-280	Subletting for RC works for IW, PST, SDB, STB, SD, Biogas holder, underpass and admin. bldg	105	29-Nov-21 A	13-Apr-22	3																	
SUB-310	Subletting for Utilities Corridor ELS	90	31-Jan-22	30-Apr-22	26																	
SUB-350	Subletting for Waterproofing membrane and protection board	86	29-Nov-21 A	10-Mar-22	209																	
SUB-360	Subletting for Rebar fixing	86	29-Nov-21 A	24-Feb-22	3																	
SUB-380	Subletting for Sheet piling works for remaining areas	150	12-Oct-21 A	10-May-22	50																	
<b>Design Submission</b>																						
<b>Temporary Works Design</b>																						
<b>Inlet Work and Primary Sedimentation Tank</b>																						
TWD-440	ELS Stage 2 - Resubmission for PMs & ICE review (7d prep & resub. + 7d ICE)	15	22-Jul-21 A	31-Dec-21	251																	
TWD-510	ELS Stage 2 - Submit to GEO (Dewatering Proposal)	30	05-Sep-21 A	04-Jan-22	251																	
<b>Mainstream Bio-Reactor System</b>																						
TWD-220	ELS - Prepare & Submission for PMs review	45	01-Sep-21 A	14-Feb-22	210																	
TWD-230	ELS - Review by PMs & ICE review (28 d + 7d)	35	16-Oct-21 A	15-Feb-22	209																	
TWD-240	ELS - Resubmission for PMs & ICE review (7d prep & resub. + 7d ICE)	14	16-Feb-22	01-Mar-22	209																	
TWD-250	ELS - Obtain Approval	7	30-Mar-22	05-Apr-22	209																	
TWD-520	ELS - Submit to GEO	28	02-Mar-22	29-Mar-22	209																	
<b>Sludge Thickening Building</b>																						
TWD-180	ELS - Prepare & Submission for PMs review	42	12-Jan-22*	22-Feb-22	80																	
TWD-190	ELS - Review by PMs & ICE review (28 d + 7d)	35	23-Feb-22	29-Mar-22	80																	
TWD-200	ELS - Resubmission for PMs & ICE review (7d prep & resub. + 7d ICE)	14	30-Mar-22	12-Apr-22	80																	
<b>Tertiary Treatment System</b>																						
TWD-140	ELS - Prepare & Submission for PMs review	45	02-Dec-21 A	13-Feb-22	59																	
TWD-150	ELS - Review by PMs & ICE review (28 d + 7d)	35	14-Feb-22	20-Mar-22	59																	
TWD-160	ELS - Resubmission for PMs & ICE review (7d prep & resub. + 7d ICE)	14	21-Mar-22	03-Apr-22	59																	
<b>Utilities Corridor</b>																						
TWD-340	ELS - Prepare & Submission for PMs review	45	31-Aug-21 A	31-Dec-21	26																	
TWD-350	ELS - Review by PMs & ICE review (28 d + 7d)	35	15-Oct-21 A	19-Jan-22	26																	
TWD-360	ELS - Resubmission for PMs & ICE review (7d prep & resub. + 7d ICE)	14	10-Jan-22	23-Jan-22	26																	
TWD-370	ELS - Obtain Approval	7	24-Jan-22	30-Jan-22	26																	
TWD-560	ELS - Submit to GEO (Dewatering Proposal)	28	03-Jan-22	30-Jan-22	34																	
<b>Sludge Digester</b>																						
TWD-460	ELS - Prepare & Submission for PMs review	45	31-Jan-22	16-Mar-22	389																	
TWD-470	ELS - Review by PMs & ICE review (28 d + 7d)	35	17-Mar-22	20-Apr-22	389																	
<b>Contractor's Permanent Works Design (include ATAL)</b>																						
<b>AIP</b>																						
<b>Package 2A - Tertiary Treatment System (TTS)</b>																						
AIP-480	E&MAIP Report for Tertiary Treatment System (TTS) - Resubmission for further review	14	21-Jan-22*	03-Feb-22	332																	
AIP-490	E&MAIP Report for Tertiary Treatment System (TTS) - Obtain Approval	7	04-Feb-22	10-Feb-22	332																	
<b>Package 3A - Plant Service Water</b>																						
AIP-520	E&MAIP Report for Plant Service Water - Resubmission for further review	14	14-Jan-22*	27-Jan-22	558																	
AIP-530	E&MAIP Report for Plant Service Water - Obtain Approval	7	28-Jan-22	03-Feb-22	558																	
<b>Package 4A - E&amp;M Report for Temp. Diversion Chamber and Pumping Station</b>																						



- Remaining Level of Effort
- Actual Work
- Remaining Work
- Critical Remaining Work
- ◆ Milestone

## Contract DC/2019/10 - YLEPP - Main Works for Stage 1

### Monthly Progress Report No. 14 - 3MRP (Decemeber 2021)

Project ID : DWP.DPr9\_220111  
 Layout : DC201910 2 3MRP\_rev.9  
 Date : 12-Jan-22 / Page 1 of 10

Monthly Progress Report No. 12 - 3MRP			
Date	Revision	Checked	Approved
31-Dec-21	Rev. 0		

Activity ID	Activity Name	Orig Dur	Early Start	Early Finish	Total Float	December					January					February					March					April
						14					15					16					17					18
						28	05	12	19	26	02	09	16	23	30	06	13	20	27	06	13	20	27	04	11	18
AIP-560	Advance Works - E&M Report for Temporary Diversion Chamber and Pumping Station - Resubmission for further review	14	01-Dec-21 A	15-Dec-21 A		[Gantt bar: 01-Dec-21 to 15-Dec-21]																				
AIP-570	Advance Works - E&M Report for Temporary Diversion Chamber and Pumping Station - Obtain Approval	7	16-Dec-21 A	22-Dec-21 A		[Gantt bar: 16-Dec-21 to 22-Dec-21]																				
<b>Package 6A - Control &amp; Monitoring System</b>																										
AIP-180	Control & Monitoring System - Prepare & Submission for PMs review	36	07-Jan-22*	11-Feb-22	112	[Gantt bar: 07-Jan-22 to 11-Feb-22]																				
AIP-190	Control & Monitoring System - Review by PMs & ICE review (28 d + 7d)	35	12-Feb-22	18-Mar-22	112	[Gantt bar: 12-Feb-22 to 18-Mar-22]																				
AIP-200	Control & Monitoring System - Resubmission for further review	14	19-Mar-22	01-Apr-22	112	[Gantt bar: 19-Mar-22 to 01-Apr-22]																				
<b>Package 7A - Building Services System</b>																										
AIP-240	BS System - Resubmission for further review	14	14-Jan-22*	27-Jan-22	206	[Gantt bar: 14-Jan-22 to 27-Jan-22]																				
AIP-250	BS System - Obtain Approval	7	28-Jan-22	03-Feb-22	206	[Gantt bar: 28-Jan-22 to 03-Feb-22]																				
<b>Package 9A - E&amp;M AIP Report for Inlet Work (IW)</b>																										
AIP-690	IW - Resubmission for further review	14	14-Jan-22*	27-Jan-22	350	[Gantt bar: 14-Jan-22 to 27-Jan-22]																				
AIP-700	IW - Obtain Approval	7	28-Jan-22	03-Feb-22	350	[Gantt bar: 28-Jan-22 to 03-Feb-22]																				
<b>Package 10A - E&amp;M AIP Report for Primary Sedimentation Tank (PST)</b>																										
AIP-730	IW - Resubmission for further review	14	07-Jan-22*	20-Jan-22	297	[Gantt bar: 07-Jan-22 to 20-Jan-22]																				
AIP-740	IW - Obtain Approval	7	21-Jan-22	27-Jan-22	297	[Gantt bar: 21-Jan-22 to 27-Jan-22]																				
<b>Package 14A - E&amp;M AIP Report for Deodorization Unit System</b>																										
AIP-850	DEO - Resubmission for further review	14	28-Jan-22*	10-Feb-22	276	[Gantt bar: 28-Jan-22 to 10-Feb-22]																				
AIP-860	DEO - Obtain Approval	7	11-Feb-22	17-Feb-22	276	[Gantt bar: 11-Feb-22 to 17-Feb-22]																				
<b>Package 15A - Civil, Structural &amp; Geotechnical</b>																										
AIP-400	Civil, Structural & Geotechnical - Resubmission for further review	14	05-Jan-22*	18-Jan-22	327	[Gantt bar: 05-Jan-22 to 18-Jan-22]																				
AIP-410	Civil, Structural & Geotechnical - Obtain Approval	7	19-Jan-22	25-Jan-22	327	[Gantt bar: 19-Jan-22 to 25-Jan-22]																				
<b>Package 16A - E&amp;M AIP Report for Hydraulic Design</b>																										
AIP-890	Hydraulic - Resubmission for further review	14	05-Jan-22*	18-Jan-22	564	[Gantt bar: 05-Jan-22 to 18-Jan-22]																				
AIP-900	Hydraulic - Obtain Approval	38	19-Jan-22	25-Feb-22	564	[Gantt bar: 19-Jan-22 to 25-Feb-22]																				
<b>Pipeworks System</b>																										
AIP-320	Pipeworks System - Resubmission for PMs review	14	01-Dec-21 A	14-Dec-21 A		[Gantt bar: 01-Dec-21 to 14-Dec-21]																				
AIP-330	Pipeworks System - Obtain Approval	7	15-Dec-21 A	21-Dec-21 A		[Gantt bar: 15-Dec-21 to 21-Dec-21]																				
<b>Architecture</b>																										
AIP-370	Architecture - Obtain Approval	7	06-Dec-21 A	12-Dec-21 A		[Gantt bar: 06-Dec-21 to 12-Dec-21]																				
<b>DDA</b>																										
<b>Package 1 - General Architecture, Civil, Structural &amp; Geotechnical</b>																										
DDA-1080	Contractor's Design for General Architecture, Civil, Structural & Geotechnical - Submit to GEO for comment and approval	28	19-Jan-22	15-Feb-22	327	[Gantt bar: 19-Jan-22 to 15-Feb-22]																				
DDA-120	Contractor's Design for General Architecture, Civil, Structural & Geotechnical - Resubmission for further review	14	05-Jan-22*	19-Jan-22	327	[Gantt bar: 05-Jan-22 to 19-Jan-22]																				
DDA-130	Contractor's Design for General Architecture, Civil, Structural & Geotechnical - Obtain Approval	7	09-Feb-22	15-Feb-22	327	[Gantt bar: 09-Feb-22 to 15-Feb-22]																				
<b>Package 2 - Tertiary Treatment System</b>																										
DDA-140	Architectural for TTS - Prepare (60d), Sub. & Review(45d), Comment & Resub.(14d) & Approval (7d)	126	16-Feb-22	21-Jun-22	327	[Gantt bar: 16-Feb-22 to 21-Jun-22]																				
DDA-150	Foundation for TTS - Prepare (90d), Sub. & Review(45d), Comment & Resub.(14d) & Approval (7d), GEO (28d)	184	08-Oct-21 A	02-Jun-22	342	[Gantt bar: 08-Oct-21 to 02-Jun-22]																				
DDA-170	Civil Req. for TTS (Foundation design) - Prepare(27d), Sub. & Review(45d), Comment & Resub.(14d), GEO(28d)& Approval (7d)	121	13-Jun-21 A	18-Feb-22	284	[Gantt bar: 13-Jun-21 to 18-Feb-22]																				
DDA-180	Civil Req. for TTS (Superstruct. design) - Prepare (147d), Sub. & Review(45d), Comment & Resub.(14d) & Approval (7d)	213	11-Oct-21 A	30-Jun-22	190	[Gantt bar: 11-Oct-21 to 30-Jun-22]																				
DDA-190	P&ID for TTS - Prepare (60d), Sub. & Review(45d), Comment & Resub.(14d) & Approval (7d)	126	31-Dec-21 A	05-May-22	593	[Gantt bar: 31-Dec-21 to 05-May-22]																				
DDA-200	Mechanical for TTS - Prepare (60d), Sub. & Review(45d), Comment & Resub.(14d) & Approval (7d)	126	31-Dec-21 A	05-May-22	593	[Gantt bar: 31-Dec-21 to 05-May-22]																				
DDA-210	Electrical& Control for TTS - Prepare (60d), Sub. & Review(45d), Comment & Resub.(14d) & Approval (7d)	126	31-Dec-21 A	05-May-22	593	[Gantt bar: 31-Dec-21 to 05-May-22]																				
DDA-220	Building Services (BS) for TTS - Prepare (60d), Sub. & Review(45d), Comment & Resub.(14d) & Approval (7d)	126	04-Feb-22	09-Jun-22	558	[Gantt bar: 04-Feb-22 to 09-Jun-22]																				
<b>Package 3 - Mainstream Bio-Reactor System</b>																										
DDA-230	Architectural for MBS - Prepare (60d), Sub. & Review(45d), Comment & Resub.(14d) & Approval (7d)	126	05-Oct-21 A	05-Apr-22	244	[Gantt bar: 05-Oct-21 to 05-Apr-22]																				
DDA-240	Foundation for MBS - Prepare (97d), Sub. & Review(45d), Comment & Resub.(14d),GEO (28d) & Approval (7d)	191	06-Mar-22	12-Sep-22	244	[Gantt bar: 06-Mar-22 to 12-Sep-22]																				
DDA-260	Civil Req. for MBS-AGS (Foundation design) - Prepare (60d), Sub. & Review(45d), Comment & Resub.(14d) & Approval (7d)	126	09-Jun-21 A	25-Feb-22	248	[Gantt bar: 09-Jun-21 to 25-Feb-22]																				
DDA-270	Civil Req. for MBS-AGS (Superstruct. design) - Prepare (60d), Sub. & Review(45d), Comment & Resub.(14d) & Approval (7d)	126	15-Sep-21 A	05-Mar-22	358	[Gantt bar: 15-Sep-21 to 05-Mar-22]																				
DDA-280	P&ID for TTS - MBS (60d), Sub. & Review(45d), Comment & Resub.(14d) & Approval (7d)	126	08-Oct-21 A	09-Apr-22	640	[Gantt bar: 08-Oct-21 to 09-Apr-22]																				
DDA-290	Mechanical for MBS - Prepare (60d), Sub. & Review(45d), Comment & Resub.(14d) & Approval (7d)	126	08-Oct-21 A	09-Apr-22	640	[Gantt bar: 08-Oct-21 to 09-Apr-22]																				
DDA-300	Electrical& Control for MBS - Prepare (60d), Sub. & Review(45d), Comment & Resub.(14d) & Approval (7d)	126	08-Oct-21 A	09-Apr-22	640	[Gantt bar: 08-Oct-21 to 09-Apr-22]																				
DDA-310	Building Services (BS) for MBS - Prepare (60d), Sub. & Review(45d), Comment & Resub.(14d) & Approval (7d)	126	08-Oct-21 A	09-Apr-22	640	[Gantt bar: 08-Oct-21 to 09-Apr-22]																				
<b>Package 5A - Master Water Meter Room</b>																										
DDA-360	Foundation for Master Water Meter RM- Prepare (60d), Sub. & Review(45d), Comment & Resub.(14d),GEO(28d) & Approval (7d)	154	28-Jan-22*	30-Jun-22	992	[Gantt bar: 28-Jan-22 to 30-Jun-22]																				
<b>Package 5B - Plant Service Water (PSW)</b>																										
DDA-1050	Civil Requirement Drawings - Prep(60d), Sub.&Review(45d), Comment&Resub (14d) & Approval (7d)	126	12-Jun-21 A	11-Mar-22	429	[Gantt bar: 12-Jun-21 to 11-Mar-22]																				
DDA-1060	Electrical & Control for PSW - Prep(60d), Sub.&Review(45d), Comment&Resub (14d) & Approval (7d)	126	31-Aug-21 A	05-Mar-22	654	[Gantt bar: 31-Aug-21 to 05-Mar-22]																				
DDA-1070	Mechanical for PSW - Prep(60d), Sub.&Review(45d), Comment&Resub (14d) & Approval (7d)	126	31-Aug-21 A	05-Mar-22	654	[Gantt bar: 31-Aug-21 to 05-Mar-22]																				
<b>Package 6 - Sludge Thickening Chemical and Dosing System</b>																										
DDA-1120	P&ID for STCDS - Prepare (60d), Sub. & Review(45d), Comment & Resub.(14d) & Approval (7d)	126	28-Jun-21 A	25-Feb-22	361	[Gantt bar: 28-Jun-21 to 25-Feb-22]																				
DDA-1130	Mechanical for STCDS - Prepare (60d), Sub. & Review(45d), Comment & Resub.(14d) & Approval (7d)	126	28-Jun-21 A	21-Feb-22	365	[Gantt bar: 28-Jun-21 to 21-Feb-22]																				
DDA-1140	Electrical & Control for STCDS - Prepare (60d), Sub. & Review(45d), Comment & Resub.(14d) & Approval (7d)	126	28-Jun-21 A	25-Feb-22	361	[Gantt bar: 28-Jun-21 to 25-Feb-22]																				



- Remaining Level of Effort
- Actual Work
- Remaining Work
- Critical Remaining Work
- ◆ Milestone

## Contract DC/2019/10 - YLEPP - Main Works for Stage 1

### Monthly Progress Report No. 14 - 3MRP (Decemeber 2021)

Project ID : DWP.DPr9\_220111  
 Layout : DC201910 2 3MRP\_rev.9  
 Date : 12-Jan-22 / Page 2 of 10

Monthly Progress Report No. 12 - 3MRP			
Date	Revision	Checked	Approved
31-Dec-21	Rev. 0		

Activity ID	Activity Name	Orig Dur	Early Start	Early Finish	Total Float	December					January					February				March				April		
						14					15					16				17				18		
						28	05	12	19	26	02	09	16	23	30	06	13	20	27	06	13	20	27	03		
DDA-1150	Building Services for STCDS - Prepare (60d), Sub. & Review (45d), Comment & Resub.(14d) & Approval (7d)	126	28-Jun-21 A	25-Feb-22	361																					
DDA-420	Arch. for STCS, Waste Gas Burner & Guard Hse - Prepare (60d), Sub. & Review.(45d), Com. & Resub.(14d) & Appr	126	05-Oct-21 A	04-Apr-22	146																					
DDA-430	Found.for STCS,WasteGasBurner & Guard Hse- Prepare(60d),Sub.&Review(45d),Comment & Resub.(14d),GEO(28d)	126	06-Mar-22	09-Jul-22	146																					
DDA-440	Civil & Struct. for STCS, WGB & Guard Hse - Prepare (60d), Sub. & Review.(45d), Comment & Resub.(14d) & Appr	126	09-Nov-21 A	09-Apr-22	318																					
DDA-440B	Civil Req. for STCDS - Prepare (60d), Sub. & Review.(45d), Comment & Resub.(14d) & Approval (7d)	126	28-Jun-21 A	18-Feb-22	368																					
<b>Package 7 - CLP Substation and 11kV Switchgear House</b>																										
DDA-1160	Earthing & Lighting System Design Report - Prepare (28d), Sub. & Review.(28d), Comment & Resub.(14d) & Appr	78	02-Jul-21 A	25-Feb-22	74																					
DDA-1450	VCAB, FSD & WSD Design Report - Prepare (28d), Sub. & Review.(28d), Comment & Resub.(14d) & Approval (7c	78	02-Jul-21 A	25-Feb-22	74																					
DDA-450	Found.for CLP Sub. & 11kV Switchgear Hse- Prepare (30d),Sub.&Review(30d), Comment&Resub.(14d),GEO(28d)	82	01-Jun-21 A	11-Feb-22	74																					
DDA-460	Civil&Struct. for CLP Sub. & 11kV Switchgear Hse- Prep. (30d), Sub. & Review.(30d), Comment & Resub.(14d) & A	82	01-Jun-21 A	11-Feb-22	74																					
DDA-470	Electrical System for all facilities - Prepare (28d), Sub. & Review.(28d), Comment & Resub.(14d) & Approval (7d)	78	01-Jun-21 A	25-Feb-22	74																					
DDA-480	UPS System for CLPSub.&11kV Switchgear Hse - Prepare (102d), Sub. & Review.(45d),Comment & Resub.(14d)&	168	03-Jun-21 A	25-Feb-22	221																					
DDA-490	BS for CLP Sub. & 11kV Switchgear Hse - Prepare (28d), Sub. & Review.(28d), Comment & Resub.(14d) & Approv	78	01-Jun-21 A	25-Feb-22	164																					
<b>Package 8 - Advance Works and SCADA Relocation</b>																										
DDA-500	Mechanical for Advance Works - Prepare (60d), Sub. & Review.(45d), Comment & Resub.(14d) & Approval (7d)	78	22-May-21 A	25-Feb-22	35																					
DDA-510	Electrical & Control for Advance Works - Prepare (60d), Sub. & Review.(45d), Comment & Resub.(14d) & Approva	78	04-Jun-21 A	18-Feb-22	42																					
DDA-520	BS for Advance Works - Prepare (60d), Sub. & Review.(45d), Comment & Resub.(14d) & Approval (7d)	78	04-May-21 A	25-Feb-22	35																					
DDA-530	E&M for Advance Works - SCADA Relocation - Prepare (60d), Sub. & Review.(45d), Comment & Resub.(14d) & A	76	24-Jun-21 A	25-Feb-22	35																					
<b>Package 9 - Inlet Work (IW)</b>																										
DDA-1170	Civil Req. Drawing for Inlet Work - Prepare (30d), Sub. & Review.(30d), Comment & Resub.(14d) & Approval (7d)	82	10-Jun-21 A	25-Feb-22	328																					
DDA-1180	PID for Inlet Work - Prepare (30d), Sub. & Review.(30d), Comment & Resub.(14d) & Approval (7d)	82	10-Jun-21 A	25-Feb-22	328																					
DDA-1190	Mechanical for Inlet Work - Prepare (28d), Sub. & Review.(28d), Comment & Resub.(14d) & Approval (7d)	78	09-Aug-21 A	25-Feb-22	328																					
DDA-1200	Electrical & Control for Inlet Work - Prepare (28d), Sub. & Review.(28d), Comment & Resub.(14d) & Approval (7d)	78	31-Aug-21 A	25-Feb-22	328																					
DDA-1210	Building Services for Inlet Work - Prepare (28d), Sub. & Review.(28d), Comment & Resub.(14d) & Approval (7d)	76	15-Oct-21 A	10-Mar-22	358																					
<b>Package 10 - Primary Sedimentation Tank (PST)</b>																										
DDA-1220	Civil Req. Drawing for PST - Prepare (46d), Sub. & Review(30d), Comment & Resub.(14d) & Approval (7d)	98	01-Jun-21 A	25-Feb-22	593																					
DDA-1230	PID for PST - Prepare (46d), Sub. & Review(30d), Comment & Resub.(14d) & Approval (7d)	98	01-Jun-21 A	25-Feb-22	593																					
DDA-1240	Mechanical for PST - Prepare (46d), Sub. & Review(30d), Comment & Resub.(14d) & Approval (7d)	98	01-Jun-21 A	25-Feb-22	593																					
DDA-1250	Electrical & Control for PST - Prepare (28d), Sub. & Review.(28d), Comment & Resub.(14d) & Approval (7d)	48	31-Aug-21 A	25-Feb-22	593																					
DDA-1260	Building Services for PST - Prepare (28d), Sub. & Review(28d), Comment & Resub.(14d) & Approval (7d)	78	01-Oct-21 A	04-Mar-22	593																					
<b>Package 11 - Control and Monitoring System</b>																										
DDA-550	Supervisory Control&Data Application (SCADA) System - Prep(28d), Sub.&Review(28d), Comment&Resub (14d) &	78	31-Aug-21 A	17-Jan-22	373																					
DDA-580	Power Quality & Energy Management System (PQEMS) - Prep(28d), Sub.&Review(28d), Comment&Resub (14d) &	78	02-Oct-21 A	16-Feb-22	373																					
<b>Package 13 - Pipework System</b>																										
DDA-1030	Pipeworks System for Sludge Digesters - Prep(60d),Sub.&Review(45d),Comment&Resub (14d) &Approval (7d)	126	17-Feb-22	22-Jun-22	586																					
DDA-670	Pipeworks System for Primary Sedimentation Tanks (PST) - Prep(57d), Sub.&Review(45d), Comment&Resub(14d)	123	18-Sep-21 A	02-Mar-22	202																					
DDA-680	Pipeworks System for Biogas Holder (BH) - Prep(57d), Sub.&Review(45d), Comment&Resub (14d) & Approval (7d)	123	18-Sep-21 A	02-Mar-22	202																					
DDA-690	Pipeworks System for Sludge Dewatering Building (SDB) - Prep(60d),Sub.&Review(45d),Comment&Resub (14d) &	126	17-Feb-22	22-Jun-22	264																					
DDA-700	Pipeworks System for Utility Corridor&Pipe Portal (UC/PP) - Prep(103d),Sub.&Review(45d),Comment&Resub(14d)&	126	17-Feb-22	22-Jun-22	264																					
<b>Package 14 - Sludge Anaerobic Digestion System (SDT)</b>																										
DDA-1290	Civil Req. Drawing for SDT - Prepare (47d), Sub. & Review(45d), Comment & Resub.(14d) & Approval (7d)	113	10-Jul-21 A	21-Feb-22	3																					
DDA-1300	PID for SDT - Prepare (47d), Sub. & Review(45d), Comment & Resub.(14d) & Approval (7d)	113	10-Jul-21 A	25-Feb-22	709																					
DDA-1310	Mechanical for SDT & UC/PP - Prepare (47d), Sub. & Review(45d), Comment & Resub.(14d) & Approval (7d)	113	10-Jul-21 A	25-Feb-22	709																					
DDA-1320	Electrical & Control for SDT & UC/PP - Prepare (55d), Sub. & Review(45d), Comment & Resub.(14d) & Approval (7	121	02-Jul-21 A	25-Feb-22	821																					
DDA-1340	Civil Req. Drawing for UC/PP - Prepare (47d), Sub. & Review(45d), Comment & Resub.(14d) & Approval (7d)	113	10-Jul-21 A	25-Feb-22	639																					
<b>Package 15 - Biogas H2S Removal, Storage and Delivery System</b>																										
DDA-1350	Civil Req. Drawing for Biogas Storage&Delivery System - Prepare(28d),Sub & Review(28d),Comment&Resub(14d)&	78	31-Aug-21 A	09-Feb-22	3																					
DDA-1360	PID for Biogas H2S Removal, Storage and Delivery System - Prepare(28d),Sub & Review(28d),Comment&Resub(14	75	13-Jul-21 A	04-Mar-22	3																					
DDA-1370	Mechanical for Biogas H2S Removal System - Prepare(28d),Sub & Review(28d),Comment&Resub(14d)&Approval (	78	05-Mar-22	21-May-22	122																					
DDA-1380	Electrical & Control for Biogas H2S Removal System - Prepare(28d),Sub & Review(28d),Comment&Resub(14d)&Appr	78	25-Feb-22	13-May-22	130																					
DDA-1390	Building Services for Biogas H2S Removal System - Prepare(28d),Sub & Review(28d),Comment&Resub(14d)&Appr	78	25-Feb-22	13-May-22	130																					
DDA-1400	Civil Req. Drawing for Biogas H2S Removal System - Prepare(28d),Sub & Review(28d),Comment&Resub(14d)&Appr	78	25-Feb-22	13-May-22	130																					
<b>Package 16 - Deodorization Unit System</b>																										
DDA-1410	PID for DOU System - Prepare(28d),Sub & Review(28d),Comment&Resub(14d)&Approval (7d)	78	28-Feb-22*	16-May-22	665																					
DDA-1420	Mechanical for DOU No. 1 - Prepare(28d),Sub & Review(28d),Comment&Resub(14d)&Approval (7d)	78	28-Feb-22	16-May-22	665																					
DDA-1430	Mechanical for DOU No. 2A and 2B - Prepare(28d),Sub & Review(28d),Comment&Resub(14d)&Approval (7d)	78	28-Feb-22	16-May-22	665																					
DDA-1440	Mechanical for DOU No. 3 - Prepare(28d),Sub & Review(28d),Comment&Resub(14d)&Approval (7d)	78	28-Feb-22	16-May-22	665																					
<b>Package 17 - Sludge Dewatering Building (SDB)</b>																										
DDA-890	Architectural for Sludge Dewatering Building (SDB) - Prep(60d), Sub.&Review(45d), Comment&Resub (14d) & App	126	07-Jun-21 A	04-Mar-22	1081																					
DDA-900	Found. for Sludge Dewatering Building (SDB) - Prep(60d), Sub.&Review(45d), Comment&Resub (14d), GEO (28d)	154	10-Nov-21 A	12-May-22	634																					
<b>Package 19 - Elevated Walkways</b>																										
DDA-710	Civil & Structural for Elevated Walkways - Prep(60d), Sub.&Review(45d), Comment&Resub (14d) & Approval(7d), C	154	05-Feb-22	08-Jul-22	974																					



- Remaining Level of Effort
- Actual Work
- Remaining Work
- Critical Remaining Work
- ◆ Milestone

## Contract DC/2019/10 - YLEPP - Main Works for Stage 1

### Monthly Progress Report No. 14 - 3MRP (Decemeber 2021)

Project ID : DWP.DPr9\_220111  
 Layout : DC201910 2 3MRP\_rev.9  
 Date : 12-Jan-22 / Page 3 of 10

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Activity ID	Activity Name	Orig Dur	Early Start	Early Finish	Total Float	December					January				February				March				April	
						14					15				16				17				18	
						28	05	12	19	26	02	09	16	23	30	06	13	20	27	06	13	20	27	03
<b>Package 20 - Trellis</b>																								
DDA-720	Civil & Structural for Trellis - Prep(60d), Sub.&Review(45d), Comment&Resub (14d) & Approval(7d)	126	31-Aug-21 A	06-Mar-22	974	Civil & Structural for Trellis - Prep(60d)																		
<b>Package 21 - Steel Working Platform</b>																								
DDA-730	Civil & Structural for Steel Working Platform - Prep(60d), Sub.&Review(45d), Comment&Resub (14d) & Approval(7c)	126	05-Feb-22	10-Jun-22	974	Civil & Structural for Steel Working Platform - Prep(60d)																		
<b>Building Services</b>																								
DDA-590	BS for Inlet Works (IW) - Prepare (60d), Sub. & Review.(45d) ,Comment & Resub.(14d) & Approval (7d)	126	31-Aug-21 A	06-Mar-22	362	BS for Inlet Works (IW) - Prepare (60d)																		
DDA-600	BS for Sludge Thickening Building (STB) - Prepare (60d), Sub. & Review.(45d) ,Comment & Resub.(14d) & Approv	126	31-Aug-21 A	06-Mar-22	236	BS for Sludge Thickening Building (STB) - Prepare (60d)																		
DDA-610	BS for Primary Sedimentation Tanks (PST) - Prepare (60d), Sub. & Review.(45d) ,Comment & Resub.(14d) & Apprc	126	30-Sep-21 A	05-Apr-22	115	BS for Primary Sedimentation Tanks (PST) - Prepare (60d)																		
DDA-620	BS for Biogas Holder (BH) - Prepare (60d), Sub. & Review.(45d) ,Comment & Resub.(14d) & Approval (7d)	126	31-Aug-21 A	06-Mar-22	175	BS for Biogas Holder (BH) - Prepare (60d)																		
<b>Technical Submission</b>																								
<b>Inlet Works (IW)</b>																								
TS-890	PID - Sub.&Review(45d), Comment&resub(14d) & Approval (7d)	66	03-Sep-21 A	22-Feb-22	28	PID - Sub.&Review(45d), Comment&resub(14d) & Approval (7d)																		
TS-900	Equipment Loading Summary - Sub.&Review(45d), Comment&resub(14d) & Approval (7d)	66	03-Sep-21 A	22-Feb-22	28	Equipment Loading Summary - Sub.&Review(45d), Comment&resub(14d) & Approval (7d)																		
TS-910	General Arrangement Drawing - Sub.&Review(45d), Comment&resub(14d) & Approval (7d)	66	30-May-21 A	25-Feb-22	328	General Arrangement Drawing - Sub.&Review(45d), Comment&resub(14d) & Approval (7d)																		
TS-920	Civil Requirement Drawings (Superstructure) - Sub.&Review(45d), Comment&resub(14d) & Approval (7d)	66	30-May-21 A	25-Feb-22	328	Civil Requirement Drawings (Superstructure) - Sub.&Review(45d), Comment&resub(14d) & Approval (7d)																		
<b>Primary Sedimentation Tank (PST)</b>																								
TS-930	Equipment Loading Summary - Sub.&Review(45d), Comment&resub(14d) & Approval (7d)	66	03-Sep-21 A	22-Feb-22	28	Equipment Loading Summary - Sub.&Review(45d), Comment&resub(14d) & Approval (7d)																		
TS-940	PID - Sub.&Review(45d), Comment&resub(14d) & Approval (7d)	66	03-Sep-21 A	08-Mar-22	28	PID - Sub.&Review(45d), Comment&resub(14d) & Approval (7d)																		
TS-950	General Arrangement Drawing - Sub.&Review(45d), Comment&resub(14d) & Approval (7d)	66	28-Jan-22*	03-Apr-22	0	General Arrangement Drawing - Sub.&Review(45d), Comment&resub(14d) & Approval (7d)																		
TS-960	Civil Requirement Drawings (Superstructure) - Sub.&Review(45d), Comment&resub(14d) & Approval (7d)	66	28-Jan-22*	03-Apr-22	0	Civil Requirement Drawings (Superstructure) - Sub.&Review(45d), Comment&resub(14d) & Approval (7d)																		
<b>Sludge Thickening Building (STB)</b>																								
TS-820	Architectural for Sludge Thickening Building (STB) - Prep(60d), Sub.&Review(45d), Comment&Resub (14d) & Appr	126	01-Jun-21 A	18-Feb-22	250	Architectural for Sludge Thickening Building (STB) - Prep(60d), Sub.&Review(45d), Comment&Resub (14d) & Appr																		
TS-830	Found. for Sludge Thickening Building (STB) - Prep(60d), Sub.&Review(45d), Comment&Resub (14d), GEO(28d) & Appr	154	01-Jun-21 A	18-Feb-22	93	Found. for Sludge Thickening Building (STB) - Prep(60d), Sub.&Review(45d), Comment&Resub (14d), GEO(28d) & Appr																		
TS-840	Civil & Structural for Sludge Thickening Bldg (STB) - Prep(27d), Sub.&Review(45d), Comment&Resub (14d) & Appr	93	16-Mar-22	16-Jun-22	250	Civil & Structural for Sludge Thickening Bldg (STB) - Prep(27d), Sub.&Review(45d), Comment&Resub (14d) & Appr																		
TS-850	General Arrangement & Civil Req. Drawings for STB - Prep(27d), Sub.&Review(45d), Comment&Resub (14d) & Appr	93	16-Mar-22	16-Jun-22	466	General Arrangement & Civil Req. Drawings for STB - Prep(27d), Sub.&Review(45d), Comment&Resub (14d) & Appr																		
TS-970	PID - Prep(27d), Sub.&Review(45d), Comment&resub(14d) & Approval (7d)	93	16-Mar-22	16-Jun-22	250	PID - Prep(27d), Sub.&Review(45d), Comment&resub(14d) & Approval (7d)																		
TS-980	Equipment Loading Summary - Prep(27d), Sub.&Review(45d), Comment&resub(14d) & Approval (7d)	93	16-Mar-22	16-Jun-22	634	Equipment Loading Summary - Prep(27d), Sub.&Review(45d), Comment&resub(14d) & Approval (7d)																		
<b>Sludge Digesters (SD)</b>																								
TS-1030	PID - Prep(60d), Sub.&Review(45d), Comment&resub(14d) & Approval (7d)	126	25-Sep-21 A	06-Mar-22	934	PID - Prep(60d), Sub.&Review(45d), Comment&resub(14d) & Approval (7d)																		
TS-1040	Equipment Loading Summary - Prep(60d), Sub.&Review(45d), Comment&resub(14d) & Approval (7d)	126	25-Sep-21 A	06-Mar-22	934	Equipment Loading Summary - Prep(60d), Sub.&Review(45d), Comment&resub(14d) & Approval (7d)																		
TS-740	Found. for Sludge Digesters (SD) - Prep(60d), Sub.&Review(45d), Comment&Resub (14d), GEO (28d) & Approval (7d)	126	25-Sep-21 A	06-Mar-22	402	Found. for Sludge Digesters (SD) - Prep(60d), Sub.&Review(45d), Comment&Resub (14d), GEO (28d) & Approval (7d)																		
TS-750	Civil & Structural for Sludge Digesters (SD) - Prep(60d), Sub.&Review(45d), Comment&Resub (14d) & Approval(7d)	126	25-Sep-21 A	06-Mar-22	700	Civil & Structural for Sludge Digesters (SD) - Prep(60d), Sub.&Review(45d), Comment&Resub (14d) & Approval(7d)																		
TS-760	General Arrangement & Civil Req. Drawings for SD - Prep(60d), Sub.&Review(45d), Comment&Resub (14d) & App	126	25-Sep-21 A	06-Mar-22	813	General Arrangement & Civil Req. Drawings for SD - Prep(60d), Sub.&Review(45d), Comment&Resub (14d) & App																		
TS-770	Mechanical for Sludge Digesters (SD) - Prep(60d), Sub.&Review(45d), Comment&Resub (14d) & Approval(7d)	126	02-Mar-22	05-Jul-22	813	Mechanical for Sludge Digesters (SD) - Prep(60d), Sub.&Review(45d), Comment&Resub (14d) & Approval(7d)																		
<b>Biogas Holders (BH)</b>																								
TS-1050	PID - Sub.&Review(45d), Comment&resub(14d) & Approval (7d)	66	31-Aug-21 A	05-Jan-22	163	PID - Sub.&Review(45d), Comment&resub(14d) & Approval (7d)																		
TS-1060	Equipment Loading Summary - Sub.&Review(45d), Comment&resub(14d) & Approval (7d)	66	31-Aug-21 A	05-Jan-22	163	Equipment Loading Summary - Sub.&Review(45d), Comment&resub(14d) & Approval (7d)																		
TS-780	Foundation for Biogas Holders (BH) - Prep(53d), Sub.&Review(45d), Comment&Resub (14d), GEO (28d) & Appr	147	12-Jun-21 A	30-Jan-22	36	Foundation for Biogas Holders (BH) - Prep(53d), Sub.&Review(45d), Comment&Resub (14d), GEO (28d) & Appr																		
TS-790	Civil & Structural for Biogas Holders (BH) - Sub.&Review(45d), Comment&Resub (14d) & Approval(7d)	66	12-Jun-21 A	30-Jan-22	100	Civil & Structural for Biogas Holders (BH) - Sub.&Review(45d), Comment&Resub (14d) & Approval(7d)																		
TS-800	General Arrangement & Civil Req. Drawings for BH - Prep(127d), Sub.&Review(45d), Comment&Resub (14d) & Appr	193	16-Sep-21 A	12-Jun-22	100	General Arrangement & Civil Req. Drawings for BH - Prep(127d), Sub.&Review(45d), Comment&Resub (14d) & Appr																		
TS-810	Mechanical for Biogas Holders (BH) - Prep(60d), Sub.&Review(45d), Comment&Resub (14d) & Approval (7d)	126	05-Nov-21 A	10-Apr-22	163	Mechanical for Biogas Holders (BH) - Prep(60d), Sub.&Review(45d), Comment&Resub (14d) & Approval (7d)																		
<b>Hazardous Area Classification and Fire Risk Assessment</b>																								
TS-1800	Hazardous Area Classification and Fire Risk Assessment Specialist - Submission & Approval	20	31-Aug-21 A	31-Dec-21	197	Hazardous Area Classification and Fire Risk Assessment Specialist - Submission & Approval																		
TS-1810	Hazardous Area Classification Assessment - Prep(60), Sub.&Review(45d), Comment&resub(14d) & Approval (7d)	126	20-Sep-21 A	07-Mar-22	197	Hazardous Area Classification Assessment - Prep(60), Sub.&Review(45d), Comment&resub(14d) & Approval (7d)																		
TS-1820	Fire Risk Assessment - Prep(60), Sub.&Review(45d), Comment&resub(14d) & Approval (7d)	126	20-Sep-21 A	07-Mar-22	197	Fire Risk Assessment - Prep(60), Sub.&Review(45d), Comment&resub(14d) & Approval (7d)																		
<b>Material Submission, Procurement, Manufacturing and Delivery</b>																								
PRE-230	Submit/Procure/Manufacture/Deliver Main Stream Bio-Reactor E&M Equip.	270	09-Nov-20 A	31-Dec-21	739	Submit/Procure/Manufacture/Deliver Main Stream Bio-Reactor E&M Equip.																		
PRE-240	Submit/Procure/Manufacture/Deliver TTS & Auxillary Facility Equip.	270	09-Nov-20 A	31-Dec-21	718	Submit/Procure/Manufacture/Deliver TTS & Auxillary Facility Equip.																		
PRE-250	Submit/Procure/Manufacture/Deliver Thickening System/Digestion/sludge holding Tanks	300	09-Nov-20 A	04-Jan-22	797	Submit/Procure/Manufacture/Deliver Thickening System/Digestion/sludge holding Tanks																		
<b>Site Establishment Works</b>																								
<b>Temporary Transformer 1600A</b>																								
1600A-0060	Substation Trench Excavation	3	15-Nov-21 A	18-Nov-21 A	0	Substation Trench Excavation																		
1600A-0070	Rebar Fixing and RC Works (Trench & Floor Slab); Scaffolding Works for Platform	28	14-Dec-21 A	16-Feb-22	0	Rebar Fixing and RC Works (Trench & Floor Slab); Scaffolding Works for Platform																		
1600A-0080	ABWF & E&M works	6	17-Feb-22	23-Feb-22	1	ABWF & E&M works																		
1600A-0090	Defects Rectification	3	24-Feb-22	26-Feb-22	1	Defects Rectification																		
P5-140	CLP Inspection	1	28-Feb-22	28-Feb-22	1	CLP Inspection																		
P5-150	Energization of Temporary Transformer	0		28-Feb-22*	1	Energization of Temporary Transformer																		
P5-160	LV switchboard metering	2	17-Feb-22	18-Feb-22*	0	LV switchboard metering																		
<b>PM and Contractor Accomodation</b>																								
<b>Project Manager's &amp; Contractor Site Accommodation</b>																								
<b>MIC Section</b>																								
PMCA-190	Installation of Green Roof	16	09-Nov-21 A	05-Mar-22	1686	Installation of Green Roof																		



- Remaining Level of Effort
- Actual Work
- Remaining Work
- Critical Remaining Work
- ◆ Milestone

## Contract DC/2019/10 - YLEPP - Main Works for Stage 1

### Monthly Progress Report No. 14 - 3MRP (Decemeber 2021)

Project ID : DWP.DPr9\_220111  
 Layout : DC201910 2 3MRP\_rev.9  
 Date : 12-Jan-22 / Page 4 of 10

Monthly Progress Report No. 12 - 3MRP			
Date	Revision	Checked	Approved
31-Dec-21	Rev. 0		



Activity ID	Activity Name	Orig Dur	Early Start	Early Finish	Total Float	December					January				February				March				April
						28	05	12	19	26	02	09	16	23	30	06	13	20	27	06	13	20	27
PMCA-200	Fabrication & Construction of Covered Car Park	39	01-Dec-21 A	18-Jan-22	5																		
PMCA-220	Installation of Energy Efficient Features	12	01-Dec-21 A	14-Dec-21 A																			
PMCA-230	Construction of Rain and Surface Water Drainage Works	10	12-Nov-21 A	30-Nov-21 A																			
PMCA-260	Completion of PMMIC	0		16-Dec-21 A																			
<b>Caving System</b>																							
PMCA-240	Caving System Construction	48	17-Jan-22*	19-Mar-22	1																		
PMCA-250	Caving System Installation (Set-Up & T&C)	60	21-Mar-22	06-Jun-22	1																		
<b>FSI, FSD and OP Requirements</b>																							
<b>FSI Submission &amp; Approval</b>																							
FSD-1020	1st DRAFT AGS & TTS GBP (Subject to Availability of Original Drawing Files)	0	12-Nov-21 A																				
FSD-1030	PM Review	31	12-Nov-21 A	19-Feb-22	328																		
FSD-1040	Submission Period for FSD Review (Assumed 12 Months) - Full GBP+GBP for TCP1	367	20-Feb-22	21-Feb-23	328																		
<b>Application Form Schedule EMSD (ATAL)</b>																							
<b>Phase 1</b>																							
ATAL-FS-0010	Form 104 for Biogas Holder Tank 1 (Submission and Approval Period)	184	01-Mar-22*	31-Aug-22	1408																		
<b>General Advance Works</b>																							
ESUM-080	General Advance Works	638	01-Jun-21 A	03-Aug-23	178																		
<b>NSWSPS Sensors</b>																							
ATALGA-1160	CGS - Method Statement for Installation	101	03-Aug-21 A	07-Feb-22	617																		
ATALGA-1170	Procurement & Delivery of Sensor	101	03-Aug-21 A	07-Feb-22	617																		
ATALGA-1260	Installation of pressure sensors at NSWSPS	22	03-Jan-22	27-Jan-22	617																		
<b>Disc Filter (DF) Pilot Plant</b>																							
ATALGA-1000	Civil Structural Construction of DF Pilot Plant from STSTW c/w of relevant underground pipeworks	211	27-Jan-22*	19-Oct-22	334																		
ATALGA-1090	Procurement & Delivery of Materials	97	04-Aug-21 A	26-Jan-22	334																		
<b>Dissolved Air Flotation (DAF) Pilot Plant</b>																							
ATALGA-1100	CGS - Method Statement for Relocation	47	31-Aug-21 A	19-Feb-22	233																		
ATALGA-1110	Procurement & Delivery of Materials	97	28-Oct-21 A	16-May-22	233																		
<b>Aerobic Granular Sludge (AGS) Pilot Plant</b>																							
ATALGA-1010	Civil Structural Construction of AGS Pilot Plant	19	21-Feb-22*	14-Mar-22	387																		
ATALGA-1060	CGS - Method Statement for Installation	15	25-Mar-21 A	19-Feb-22	387																		
ATALGA-1180	E&M installation of AGS Pilot Plant	6	15-Mar-22	21-Mar-22	387																		
ATALGA-1210	Seeding, process start-up and T&C	52	22-Mar-22	27-May-22	387																		
<b>Zone 1 Construction</b>																							
ESUM-090	Demolition and Temporary Modification/Diversion Works	270	09-Nov-20 A	31-Dec-21	1735																		
ESUM-100	Inlet Works	972	16-Jan-21 A	20-Feb-24	17																		
ESUM-110	CLP Substations No. 1 & 2	263	30-Sep-21 A	17-Nov-22	76																		
ESUM-120	Primary Sedimentation Tank (PST)	792	16-Jul-21 A	26-Jan-24	5																		
ESUM-150	Administration Building (ADB)	1256	31-Dec-21	17-Apr-26	132																		
<b>Inlet Works (IW)</b>																							
<b>IW Foundation &amp; ELS Works</b>																							
<b>IW Foundation - Stage 1</b>																							
IW-2880	Inlet Work Stage 1 - Submit piling record to GEO (28d)	30	01-Nov-21 A	01-Dec-21 A																			
<b>IW Basement</b>																							
Z1-IW-3930	Sheet Piling Works (9,915m2), (62m2/ Day Installation Rate/Rig, 4rigs)	40	15-Nov-21 A	27-Jan-22	30																		
Z1-IW-3940	Set-up and Installation for Total ~60 Nos. Wells(2 - 2.5 Days/Well, 4rigs)	33	31-Dec-21	15-Feb-22	20																		
Z1-IW-3950	Pumping Test & Commissioning Period	14	11-Mar-22	26-Mar-22	0																		
Z1-IW-4070	1st Pile Loading Test (Batch 1 Completion: IW:225nos.+ PST:70nos.) (compression test failed for PA08 & PA28)	20	12-Nov-21 A	28-Nov-21 A																			
Z1-IW-4290	Noise Mitigation 2021-2022	121	01-Nov-21 A	31-Mar-22*	0																		
Z1-IW-4300	Submit to GEO (28d)	28	24-Jan-22	03-Mar-22	20																		
Z1-IW-4650	2nd Pile Loading Test (IW: P27+ PST: PA72)	5	04-Jan-22*	08-Jan-22	0																		
Z1-IW-4660	Review failure of pile load test and proposed alternative piles for 2nd attempt	20	29-Nov-21 A	03-Jan-22	0																		
Z1-IW-4670	3rd Pile Loading Test (re-test P122 & P34 due to failure of pile load test for PA08 & PA28)	5	18-Jan-22*	22-Jan-22	0																		
Z1-IW-4680	Preboring for sheet piling work (approx. 80 nos.) & Sheet piling works	40	17-Jan-22*	10-Mar-22	0																		
Z1-IW-4690	NCE-0048 Load test at IW & PST	0	08-Dec-21 A																				
Z1-IW-4700	NCE-0051 Unforeseen underground obstruction in IW & PST area for sheet piling works	0	03-Jan-22*		0																		
<b>Excavation Works &amp; ELS (Excavation Volume: 32,857m3)</b>																							
Z1-IW-4450	IWB - Excavation to S1 Level (+4.35 mPD), (4,422m3, 1500m3/day)	4	28-Mar-22	31-Mar-22	0																		
<b>Primary Sedimentation Tank (PST)</b>																							
<b>PST Stage 1 of Works</b>																							
<b>PST Stage 1 - Foundation (At First 3 Tanks, PST 7-8 Footprint)</b>																							
EBS-2022	Egrets Breeding Season 2022	184	01-Mar-22*	31-Aug-22	0																		



- Remaining Level of Effort
- Actual Work
- Remaining Work
- Critical Remaining Work
- Milestone

## Contract DC/2019/10 - YLEPP - Main Works for Stage 1

### Monthly Progress Report No. 14 - 3MRP (December 2021)

Project ID : DWP.DPR9\_220111  
 Layout : DC201910 2 3MRP\_rev.9  
 Date : 12-Jan-22 / Page 5 of 10

Monthly Progress Report No. 12 - 3MRP

Date	Revision	Checked	Approved
31-Dec-21	Rev. 0		

Activity ID	Activity Name	Orig Dur	Early Start	Early Finish	Total Float	December					January				February				March				April	
						14					15				16				17				18	
						28	05	12	19	26	02	09	16	23	30	06	13	20	27	06	13	20	27	04
NMM-2021	PS 1.105A Noise Mitigation Measures 2021-2022	151	01-Nov-21 A	30-Mar-22*	1	PS																		
PST-1210	PST Stage 1 - H-pile Testing (Batch 1 with IW Piles)	21	15-Nov-21 A	06-Jan-22	10	PST Stage 1 - H-pile Testing (Batch 1 with IW Piles)																		
PST-3020	PST Stage 1 - Submit to GEO (28d)	28	07-Jan-22	15-Feb-22	10	PST Stage 1 - Submit to GEO (28d)																		
<b>PST Stage 1</b>																								
<b>Excavation Works (South Portion), (Excavation Volume: 5,795m3)</b>																								
Z1-PST-3580	PST(S1) - Excavation S1 Level (+1.875mPD), (3744m3, 800m3/day)	5	25-Jan-22	29-Jan-22	0	PST(S1) - Excavation S1 Level (+1.875mPD), (3744m3, 800m3/day)																		
Z1-PST-3600	PST(S1) - Excavation FEL Level (-1.125, -1.625, -3.225mPD), (1181m3, 400m3/day)	3	24-Feb-22	26-Feb-22	0	PST(S1) - Excavation FEL Level (-1.125, -1.625, -3.225mPD), (1181m3, 400m3/day)																		
Z1-PST-3840	PST(S1) - Excavation S2 Level (+0.375 mPD), (870m3, 400m3/day)	3	14-Feb-22	16-Feb-22	0	PST(S1) - Excavation S2 Level (+0.375 mPD), (870m3, 400m3/day)																		
Z1-PST-4270	PST(S1) - Sheetpiling for PST Trench	18	10-Jan-22*	29-Jan-22	0	PST(S1) - Sheetpiling for PST Trench																		
<b>ELS Erection Works</b>																								
Z1-PST-3590	PST(S1) - Erection and Installation of S1 Strut & W1 Waling (+1.875 mPD)	6	07-Feb-22	12-Feb-22	0	PST(S1) - Erection and Installation of S1 Strut & W1 Waling (+1.875 mPD)																		
Z1-PST-3850	PST(S1) - Erection and Installation of S2 Strut & W2 Waling (+0.375 mPD)	6	17-Feb-22	23-Feb-22	0	PST(S1) - Erection and Installation of S2 Strut & W2 Waling (+0.375 mPD)																		
<b>Basement RC Works (Stage 1 - Southern Portion)</b>																								
<b>Excavation for Southern Trench (Lower Portion)</b>																								
Z1-PST-3610	PST(S1) - Install Reprops R2	2	23-Mar-22	24-Mar-22	0	PST(S1) - Install Reprops R2																		
Z1-PST-3640	PST(S1) - Wall Erection of Formworks and RC Works (Ground Level)	6	28-Mar-22	02-Apr-22	0	PST(S1) - Wall Erection of Formworks and RC Works (Ground Level)																		
Z1-PST-3800	PST(S1) - Removal of S1	2	25-Mar-22	26-Mar-22	0	PST(S1) - Removal of S1																		
Z1-PST-3860	PST(S1) - Base Slab & Wall Erection of Formworks and RC Works (+0.325 mPD)	10	28-Feb-22	10-Mar-22	0	PST(S1) - Base Slab & Wall Erection of Formworks and RC Works (+0.325 mPD)																		
Z1-PST-3870	PST(S1) - Removal of S2	4	11-Mar-22	15-Mar-22	0	PST(S1) - Removal of S2																		
Z1-PST-3880	PST(S1) - Wall Erection of Formworks and RC Works (+1.875 mPD & +3.875mPD)	6	16-Mar-22	22-Mar-22	0	PST(S1) - Wall Erection of Formworks and RC Works (+1.875 mPD & +3.875mPD)																		
<b>PST Stage 2 of Works</b>																								
<b>PST GI - Propose Predrilling for Piling Works</b>																								
<b>Pre-drilling @ Existing PST 6 (including Trial Pit Excavation, Level Checking, Core Inspection, SPT)</b>																								
PST-2000	PD1 (w/ obstruction, relocated)	14	30-Nov-21 A	15-Dec-21 A		PD1 (w/ obstruction, relocated)																		
<b>PST Foundation - Stage 2 (At Remaining 2 Tanks, PST 5-6 Footprint)</b>																								
EBS-2115	Egrets Breeding Season 2022	184	01-Mar-22*	31-Aug-22	0	Egrets Breeding Season 2022																		
NMM-2105	PS 1.105A Noise Mitigation Measures 2021-2022	151	01-Nov-21 A	31-Mar-22	34	PS																		
<b>CLP Substations No. 1 &amp; 2</b>																								
CLP-1240	Demolition Carpark (28)	14	01-Dec-21 A	16-Dec-21 A		Demolition Carpark (28)																		
<b>Foundation</b>																								
CLP-1200	Raft Foundation	38	07-Jan-22	28-Feb-22	52	Raft Foundation																		
CLP-1250	Method Statement Submission & Approval	0		07-Jan-22*	0	Method Statement Submission & Approval																		
<b>CLP Substation No. 1</b>																								
CLP-1010	CLP Substation No.1 - Structure	76	28-Feb-22	04-Jun-22	52	CLP Substation No.1 - Structure																		
<b>CLP Substation No. 2</b>																								
CLP-1020	CLP Substation No.2 - Structure	76	28-Feb-22	04-Jun-22	52	CLP Substation No.2 - Structure																		
<b>DSD 11kV Switchgear</b>																								
CLP-1030	DSD11KV Switchgear - Structure	78	28-Feb-22	07-Jun-22	52	DSD11KV Switchgear - Structure																		
<b>Sludge Dewatering Building (SDB)</b>																								
<b>SDB Foundation &amp; ELS - Stage 1</b>																								
<b>SDB Foundation - PST 1-4 Footprint</b>																								
EBS-2105	Egrets Breeding Season 2022	184	01-Mar-22*	31-Aug-22	0	Egrets Breeding Season 2022																		
NMM-2095	PS 1.105A Noise Mitigation Measures 2021-2022	151	01-Nov-21 A	30-Apr-22	184	PS																		
<b>Administration Building (ADB)</b>																								
<b>Temporary Admin Office and Control Room</b>																								
ADB-1040	Handover of Temp. Admin Office and Control Room	20	29-Mar-22	25-Apr-22	5	Handover of Temp. Admin Office and Control Room																		
ADB-1250	Relocation of Existing SCADA System of Admin Bldg (23) and Document Centre (24)	21	29-Mar-22	26-Apr-22	5	Relocation of Existing SCADA System of Admin Bldg (23) and Document Centre (24)																		
<b>Temp Admin Office - MIC Section</b>																								
ADB-1020A100	Fabrication and Delivery of MIC Unit	36	03-Jan-22	12-Feb-22	5	Fabrication and Delivery of MIC Unit																		
ADB-1020A20	Construction/Installation	41	09-Feb-22	28-Mar-22	5	Construction/Installation																		
ADB-1020A30	E&M Installation and T&C	24	01-Mar-22	28-Mar-22	5	E&M Installation and T&C																		
ADB-1020A40	Relocation of Admin Office (MIC)	18	29-Mar-22	22-Apr-22	7	Relocation of Admin Office (MIC)																		
<b>Zone 2 Construction</b>																								
ESUM-170	Overhaul, Relocation and Diversion Works	1114	30-Jan-21 A	27-Apr-24	51	Overhaul, Relocation and Diversion Works																		
ESUM-180	Mainstream Bio-Reactor & Auxiliary Facility (MBR and AF)	1159	31-Dec-21	11-Dec-25	45	Mainstream Bio-Reactor & Auxiliary Facility (MBR and AF)																		
<b>Temporary Works Design</b>																								
<b>TTS Building</b>																								
TWD-1150	ELS for TTS(Tertiary Treatment System) Building - ICE Period Submission	31	16-Dec-21 A	30-Jan-22	39	ELS for TTS(Tertiary Treatment System) Building - ICE Period Submission																		
TWD-1160	ELS for TTS(Tertiary Treatment System) Building - ICE Review Period	31	31-Jan-22	02-Mar-22	39	ELS for TTS(Tertiary Treatment System) Building - ICE Review Period																		
TWD-1170	ELS for TTS(Tertiary Treatment System) Building - PM Review Period	46	03-Mar-22	17-Apr-22	39	ELS for TTS(Tertiary Treatment System) Building - PM Review Period																		
<b>MBS Building (AGS)</b>																								



- █ Remaining Level of Effort
- █ Actual Work
- █ Remaining Work
- █ Critical Remaining Work
- ◆ Milestone

## Contract DC/2019/10 - YLEPP - Main Works for Stage 1

### Monthly Progress Report No. 14 - 3MRP (Decemeber 2021)

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Activity ID	Activity Name	Orig Dur	Early Start	Early Finish	Total Float	December					January					February					March					April
						14					15					16					17					18
						28	05	12	19	26	02	09	16	23	30	06	13	20	27	06	13	20	27	04		
TWD-1190	ELS for MBS(Mainstream Bio-Reactor System) Building(AGS) - ICE Period Submission	45	02-Dec-21 A	13-Feb-22	0	[Gantt bar: Dec 28 to Feb 13]																				ELS for MBS(Mainstream Bio-Reactor System) Building(AGS) - ICE P
TWD-1200	ELS for MBS(Mainstream Bio-Reactor System) Building(AGS) - ICE Review Period	31	14-Feb-22	16-Mar-22	0	[Gantt bar: Feb 14 to Mar 16]																				ELS for MBS(Mainstream
TWD-1210	ELS for MBS(Mainstream Bio-Reactor System) Building(AGS) - PM Review Period	46	14-Feb-22	31-Mar-22	0	[Gantt bar: Feb 14 to Mar 31]																				EL
<b>Overhaul, Relocation and Diversion Works</b>																										
Z2D-4240	Completion of Overhaul (Zone 2)	0		15-Feb-22	1	[Gantt bar: Feb 15]																				◆ Completion of Overhaul (Zone 2)
<b>Overhaul Works for Aeration Tanks (A-Tank)</b>																										
Z2D-4260	Completion of Overhaul A-Tanks	0		15-Feb-22*	1	[Gantt bar: Feb 15]																				◆ Completion of Overhaul A-Tanks
<b>A-Tank No. 3</b>																										
Z2D-4160	Final Level Adjustment and Conduct Air Balancing Test	5	09-Nov-21 A	18-Nov-21 A		[Gantt bar: Nov 9 to Nov 18]																				Final Level Adjustment and Conduct Air Balancing Test
Z2D-4170	Power Reconnection and Testing	3	15-Nov-21 A	18-Nov-21 A		[Gantt bar: Nov 15 to Nov 18]																				Power Reconnection and Testing
<b>A-Tank No. 4</b>																										
Z2D-4180	Switch Duty A-Tank from No. 4 to Other Tanks	3	18-Nov-21 A	20-Nov-21 A		[Gantt bar: Nov 18 to Nov 20]																				Switch Duty A-Tank from No. 4 to Other Tanks
Z2D-4190	Isolation (Water/Power/Air) and Tank Cleaning	2	03-Dec-21 A	04-Dec-21 A		[Gantt bar: Dec 3 to Dec 4]																				Isolation (Water/Power/Air) and Tank Cleaning
Z2D-4200	Erection of Access Platform Scaffolding	2	06-Dec-21 A	07-Dec-21 A		[Gantt bar: Dec 6 to Dec 7]																				Erection of Access Platform Scaffolding
Z2D-4210	Replacement of Diffuser Membrane and Other Defective Components	34	10-Nov-21 A	29-Jan-22	1	[Gantt bar: Nov 10 to Jan 29]																				Replacement of Diffuser Membrane and Other Defective Components
Z2D-4220	Final Level Adjustment and Conduct Air Balancing Test	5	30-Dec-21 A	11-Feb-22	1	[Gantt bar: Dec 30 to Feb 11]																				Final Level Adjustment and Conduct Air Balancing Test
Z2D-4230	Power Reconnection and Testing	3	11-Feb-22	15-Feb-22	1	[Gantt bar: Feb 11 to Feb 15]																				Power Reconnection and Testing
<b>Temporary Diversion</b>																										
<b>Zone 2A : PST To Aeration Tanks</b>																										
Z2A-1060	Excavation to 1st Layer of Strut	2	05-Nov-21 A	13-Nov-21 A		[Gantt bar: Nov 5 to Nov 13]																				Excavation to 1st Layer of Strut
Z2A-1070	Strut and Waling Installation	7	15-Nov-21 A	17-Nov-21 A		[Gantt bar: Nov 15 to Nov 17]																				Strut and Waling Installation
Z2A-1080	Excavation to Formation Level	5	18-Nov-21 A	26-Nov-21 A		[Gantt bar: Nov 18 to Nov 26]																				Excavation to Formation Level
Z2A-1090	Manhole Base Slab & Wall	5	22-Nov-21 A	06-Dec-21 A		[Gantt bar: Nov 22 to Dec 6]																				Manhole Base Slab & Wall
Z2A-1100	Pipe Installation (Manhole to Section before T-Joint Connection)	4	01-Dec-21 A	06-Dec-21 A		[Gantt bar: Dec 1 to Dec 6]																				Pipe Installation (Manhole to Section before T-Joint Connection)
Z2A-1110	Manhole Wall	5	07-Dec-21 A	13-Dec-21 A		[Gantt bar: Dec 7 to Dec 13]																				Manhole Wall
Z2A-1130	Pipe Testing	1	07-Dec-21 A	08-Dec-21 A		[Gantt bar: Dec 7 to Dec 8]																				Pipe Testing
Z2A-1140	1st Day Work (Demolition of Existing DN1000 pipe and joint the new pipeline)	1	18-Dec-21 A	18-Dec-21 A		[Gantt bar: Dec 18]																				1st Day Work (Demolition of Existing DN1000 pipe and joint the new pipeline)
Z2A-1160	Backfill Pipeline to Ground Level	6	23-Dec-21 A	28-Feb-22	77	[Gantt bar: Dec 23 to Feb 28]																				Backfill Pipeline to Ground Level
Z2A-1170	Complete Zone 2A Temporary Diversion	0		28-Feb-22	77	[Gantt bar: Feb 28]																				◆ Complete Zone 2A Temporary Diversion
Z2A-1180	Strike formwork	1	14-Dec-21 A	15-Dec-21 A		[Gantt bar: Dec 14 to Dec 15]																				Strike formwork
Z2A-1190	1st Night Work (cut existing DN1200 pipe inside manhole)	0	21-Dec-21 A	21-Dec-21 A		[Gantt bar: Dec 21]																				1st Night Work (cut existing DN1200 pipe inside manhole)
Z2A-1200	2nd Night work (cut existing DN1200 pipe outside manhole & cap the pipe)	0	23-Dec-21 A	23-Dec-21 A		[Gantt bar: Dec 23]																				2nd Night work (cut existing DN1200 pipe outside manhole & cap the pipe)
<b>Zone 2B : FST, Temporary RAS to Aeration Tanks</b>																										
<b>Temporary RAS</b>																										
Z2B-1000	Advance works including UU detection, removal of existing hard paving, Expose UU	8	31-Dec-21*	10-Jan-22	0	[Gantt bar: Dec 31 to Jan 10]																				Advance works including UU detection, removal of existing hard paving, Expose UU
Z2B-1010	Install sheet piles for ELS	7	11-Jan-22	18-Jan-22	0	[Gantt bar: Jan 11 to Jan 18]																				Install sheet piles for ELS
Z2B-1020	ELS & Excavation	12	19-Jan-22	08-Feb-22	0	[Gantt bar: Jan 19 to Feb 8]																				ELS & Excavation
Z2B-1030	Construction of Temp RAS	17	09-Feb-22	28-Feb-22	0	[Gantt bar: Feb 9 to Feb 28]																				Construction of Temp RAS
Z2B-1040	Temp RAS E&M installation	19	01-Mar-22	22-Mar-22	0	[Gantt bar: Mar 1 to Mar 22]																				Temp RAS E&M
Z2B-1200	Laying of pipes from temp. RAS to Consolidation tanks & Aeration tanks	19	01-Mar-22	22-Mar-22	0	[Gantt bar: Mar 1 to Mar 22]																				Laying of pipes
Z2B-1210	T&C	40	23-Mar-22	14-May-22	0	[Gantt bar: Mar 23 to May 14]																				T&C
<b>Demolition Works</b>																										
EBS-2125	Egrets Breeding Season 2022	184	01-Mar-22*	31-Aug-22	0	[Gantt bar: Mar 1 to Aug 31]																				Egrets Breeding Season 2022
NMM-2115	PS 1.105A Noise Mitigation Measures 2021-2022	151	01-Nov-21 A	31-Mar-22	106	[Gantt bar: Nov 1 to Mar 31]																				PS
<b>Advance Works</b>																										
MBR-1480	MBR - Relocation of Noise barrier/ bird curtain	58	28-Feb-22	12-May-22	40	[Gantt bar: Feb 28 to May 12]																				MBR - Relocation of Noise barrier/ bird curtain
MBR-1490	MBR - Decommission of Auxiliary PS & Associated pipes and Modification of Washwater PS	20	28-Feb-22	22-Mar-22	40	[Gantt bar: Feb 28 to Mar 22]																				MBR - Decomm
MBR-1520	MBR - Design submission of Relocation of Noise barrier/ bird curtain	43	31-Dec-21	26-Feb-22	40	[Gantt bar: Dec 31 to Feb 26]																				MBR - Design submission of Relocation of Noise b
Z2D-4280	Submit/Approve Method Statement for Sheetpiling Works	15	11-Sep-21 A	31-Dec-21	127	[Gantt bar: Sep 11 to Dec 31]																				Submit/Approve Method Statement for Sheetpiling Works
Z2D-4290	Submit/Approve Design for Sheetpiles	55	01-Jun-21 A	05-Jan-22	117	[Gantt bar: Jun 1 to Jan 5]																				Submit/Approve Design for Sheetpiles
Z2D-4310	Procurement and Delivery of Sheetpiles	21	04-Sep-21 A	31-Dec-21	127	[Gantt bar: Sep 4 to Dec 31]																				Procurement and Delivery of Sheetpiles
<b>Other Existing Pumping Stations</b>																										
<b>Auxiliary Pumping Stations</b>																										
Z2T-150B	Demolition of Auxiliary Pumping Station (19) above ground	20	23-Mar-22	19-Apr-22	40	[Gantt bar: Mar 23 to Apr 19]																				Demolition of Auxiliary Pumping Station (19) above ground
<b>Final Sedimentation Tanks</b>																										
Z2T-180	Demolition of Final Sedimentation Tank No.5-6 (6 and 37)	50	08-Feb-22	07-Apr-22	47	[Gantt bar: Feb 8 to Apr 7]																				Demolition of Final Sedimentation Tank No.5-6 (6 and 37)
Z2T-190	Demolition of Final Sedimentation Tank No.7-8 (6)	50	25-Oct-21 A	07-Feb-22	47	[Gantt bar: Oct 25 to Feb 7]																				Demolition of Final Sedimentation Tank No.7-8 (6)
<b>Mainstream Bio-Reactor &amp; Auxiliary Facility (MBR and AF)</b>																										
<b>MBR Stage 1 and AF Structure</b>																										
<b>A-Tanks Demolition and ELS Works</b>																										
MBR-1010	MBR - Sheet Piles Install (approx. 391m, 9,390m <sup>2</sup> @ 120m <sup>2</sup> /d) After Advance works (zone 2A)	58	23-Mar-22	06-Jun-22	58	[Gantt bar: Mar 23 to Jun 6]																				MBR - Sheet Piles Install (approx. 391m, 9,390m <sup>2</sup> @ 120m <sup>2</sup> /d) After Advance works (zone 2A)
MBR-1540	MBR - advance coring for king post installation & wells installation	25	17-Jan-22*	21-Feb-22	154	[Gantt bar: Jan 17 to Feb 21]																				MBR - advance coring for king post installation & wells installation



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## Contract DC/2019/10 - YLEPP - Main Works for Stage 1

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Activity ID	Activity Name	Orig Dur	Early Start	Early Finish	Total Float	December					January					February					March					April
						14					15					16					17					
						28	05	12	19	26	02	09	16	23	30	06	13	20	27	06	13	20	27	04	11	
Z3A-000530	Civil and Structural Works Construction	12	17-Jan-22	29-Jan-22	76																					
Z3A-000540	E&M Installation and T&C(ATAL)	24	31-Jan-22	26-Feb-22	76																					
<b>AGS Pilot Plant</b>																										
Z3A-000220	Design Consent	0		15-Jan-22*	0																					
Z3A-000230	Method Statement Approval	0		15-Jan-22	75																					
Z3A-000240	Civil and Structural Works Construction	19	17-Jan-22	14-Feb-22	75																					
Z3A-000250	E&M Installation (ATAL)	6	15-Feb-22	21-Feb-22	75																					
<b>Pipe Laying</b>																										
Z3A-000190	Design Consent	0		31-Dec-21*	0																					
Z3A-000200	Method Statement Approval	0		18-Nov-21 A																						
Z3A-000210	Pipe Installation between SDT and Temp. SHT & SDB (Batch 1 & 4 - DN200 Sludge)	30	17-Dec-21 A	28-Feb-22	20																					
Z3A-000330	Pipe Installation between Compressor House and Gas Holders (Batch 3 - DN300 Gas, SS316L)	34	08-Jan-22	23-Feb-22	0																					
Z3A-000340	Pipe Installation between Compressor House and Temp. Water Heater House (Batch 4 - DN200 Hotwater)	30	17-Dec-21 A	28-Feb-22	0																					
Z3A-000350	Pipe Installation between Gas Holders and Temp. Water Heater House (Batch 5 - DN200 Gas, SS316L)	6	17-Jan-22	22-Jan-22	17																					
<b>Pipe Connection</b>																										
Z3A-000370	240m3 Temp SHT Completion (Location B)	0		18-Feb-22	29																					
Z3A-000390	Digested Sludge Pumping Station Structural Completion (Location F)	0		22-Jan-22	45																					
Z3A-000400	Temp. Water Heater House Structural Completion (Location C)	0		12-Jan-22	26																					
<b>Sludge/Supernatant DI Pipe</b>																										
Z3A-000360	Connection between SDT and Temp. SHT & SDB	5	01-Mar-22	05-Mar-22	20																					
<b>Gas Pipe - SS316L</b>																										
<b>DN300 from Gas Holders to Compressor House</b>																										
Z3A-000380	Connection at Gas Holders	10	21-Feb-22	03-Mar-22	30																					
Z3A-000420	Connection at Compressor House	5	24-Feb-22	01-Mar-22	32																					
<b>DN300 from SDT, Compressor House to Gas Holders</b>																										
Z3A-000450	Connection at Gas Holders	10	24-Feb-22	07-Mar-22	27																					
Z3A-000460	Gas Purging of SDT No.2 (YLEPP)	21	24-Feb-22	16-Mar-22	0																					
Z3A-000470	Connection at SDT No.2,3 & 4	1	17-Mar-22	17-Mar-22	0																					
Z3A-000480	Gas Purging of SDT No.1 (YLEPP)	21	18-Mar-22	07-Apr-22	0																					
<b>DN200 from Gas Holder to Temp. Water Heater House</b>																										
Z3A-000440	Connection at Gas Holders	10	24-Jan-22	10-Feb-22	17																					
<b>Hotwater DI Pipe</b>																										
Z3A-000500	Connection between Compressor House and Temp. Water Heater House	2	01-Mar-22	02-Mar-22	0																					
<b>Demolition Works above ground</b>																										
Z3A-000005	Mobilization, Site Clearance & Preparation	11	15-Nov-21 A	26-Nov-21 A																						
Z3A-000010	Demolition Works for Sludge Holding Tank(SHT 3 & 4) [10] above ground	30	09-Dec-21 A	15-Jan-22	0																					
Z3A-000050	Decommission Works for Sludge Holding Tank(SHT 3 & 4) & Sludge Digestion Tank(SDT 3 & 4)	10	27-Nov-21 A	08-Dec-21 A																						
<b>Demolition Works below ground</b>																										
Z3A-000120	Open Cut Excavation at Sludge Holding Tank No. 3	10	17-Jan-22	27-Jan-22	0																					
Z3A-000130	Demolition Works for Sludge Holding Tank No. 3 (below ground)	20	28-Jan-22	26-Feb-22	0																					
Z3A-000140	Backfill to Ground Level	7	28-Feb-22	07-Mar-22	0																					
<b>Zone 3B (at STB)</b>																										
<b>Gravity Thickening Tank (Location A)</b>																										
Z3B-000040	Design Consent	0		19-Nov-21 A																						
Z3B-000050	Method Statement Approval	0		12-Nov-21 A																						
Z3B-000070	Civil and Structural Works Construction (North Tank)	25	20-Nov-21 A	06-Jan-22	0																					
Z3B-000080	Civil and Structural Works Construction (South Tank)	40	11-Dec-21 A	25-Jan-22	0																					
Z3B-000090	E&M Works (North Tank) (ATAL)	12	20-Jan-22	09-Feb-22	0																					
Z3B-000100	E&M Works (South Tank) (ATAL)	12	22-Jan-22	11-Feb-22	28																					
Z3B-000110	T&C Works (North & South Tank) (ATAL)	30	10-Feb-22	16-Mar-22	0																					
Z3B-000250	Civil and Structural Works Construction (Plinths of Sludge Pump)	4	15-Jan-22	19-Jan-22	0																					
Z3B-000260	Temp. Gravity Thickening Tank (Location A) Completion	0		16-Mar-22	13																					
<b>Temporary Primary Sludge Pumping Station (Location D)</b>																										
Z3A-250	Method Statement Approval	0		08-Jan-22*	9																					
Z3A-260	Design Consent	0		08-Jan-22	9																					
Z3A-270	ELS Design	0		08-Jan-22	9																					
Z3A-290	Civil and Structural Works Construction	27	08-Jan-22	15-Feb-22	9																					
Z3A-300	E&M Installation (ATAL)	16	16-Feb-22	05-Mar-22	9																					
Z3A-310	T&C Works (ATAL)	13	07-Mar-22	21-Mar-22	9																					
Z3A-430	Temp. Primary Sludge Pumping Station (Location D) Completion	0		21-Mar-22	9																					
<b>Temporary Thickened Sludge / Supernatant Pumping Station (Location E)</b>																										
Z3B-000115	ELS Design Consent	0		24-Dec-21 A																						
Z3B-000117	Method Statement Approval	0		20-Dec-21 A																						



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## Contract DC/2019/10 - YLEPP - Main Works for Stage 1

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						14					15					16					17					18
						28	05	12	19	26	02	09	16	23	30	06	13	20	27	06	13	20	27	03		
Z3B-000120	Design Consent	0		03-Jan-22	5						◆ Design Consent															
Z3B-000130	Underground Utilities(UU) Diversion Works	10	15-Oct-21 A	07-Jan-22	0						■ Underground Utilities(UU) Diversion Works															
Z3B-000140	Civil and Structural Works Construction	40	10-Jan-22	03-Mar-22	0						■ Civil and Structural Works Construction															
Z3B-000150	E&M Works (ATAL)	13	04-Mar-22	18-Mar-22	0						■ E&M Works (ATAL)															
Z3B-000160	T&C Works (ATAL)	11	19-Mar-22	31-Mar-22	0						■ T&C Works (ATAL)															
<b>Relocation of Ferric Chloride (FeCl3) Dosing System &amp; LV Switchboard (Location E)</b>																										
Z3B-000170	Design Consent	0		08-Jan-22*	18						◆ Design Consent															
Z3B-000180	Method Statement Approval	0		08-Jan-22	18						◆ Method Statement Approval															
Z3B-000190	Civil and Structural Works Construction	22	10-Jan-22	10-Feb-22	18						■ Civil and Structural Works Construction															
Z3B-000200	E&M Works (ATAL)	12	11-Feb-22	24-Feb-22	18						■ E&M Works (ATAL)															
Z3B-000210	T&C Works (ATAL)	12	25-Feb-22	10-Mar-22	18						■ T&C Works (ATAL)															
Z3B-000280	FeCl3 Relocation (Location E) Completion	0		10-Mar-22	18						◆ FeCl3 Relocation (Location E) Completion															
<b>Pipe Laying</b>																										
Z3B-000215	Pipe Support Consent	0		30-Nov-21 A							◆ Pipe Support Consent															
Z3B-000220	Hydraulic Design Consent	0		30-Nov-21 A							◆ Hydraulic Design Consent															
Z3B-000230	Method Statement Approval	0		18-Nov-21 A							◆ Method Statement Approval															
Z3B-000240	Pipe Installation from CT to MH2 (Batch 1 - DN250 Supernatant)	20	18-Dec-21 A	24-Jan-22	52						■ Pipe Installation from CT to MH2 (Batch 1 - DN250 Supernatant)															
Z3B-000350	Pipe Installation from Location A to Location E (Batch 6 - DN250 Supernatant)	36	31-Dec-21	18-Feb-22	35						■ Pipe Installation from Location A to Location E (Batch 6 - DN250 Supernatant)															
Z3B-000360	Pipe Installation from Location A to Location E & SDT (Batch 7 - DN200 Sludge)	36	17-Jan-22	05-Mar-22	22						■ Pipe Installation from Location A to Location E & SDT (Batch 7 - DN200 Sludge)															
Z3B-000370	Pipe Installation from Temp. Primary Sludge Pumping Station (Location D) to CT (Batch 7 - DN200 Sludge)	20	17-Jan-22	15-Feb-22	38						■ Pipe Installation from Temp. Primary Sludge Pumping Station (Location D) to CT (Batch 7 - DN200 Sludge)															
<b>Pipe Connection</b>																										
Z3B-000390	Temp. Gravity Thickening Tank (Location A) Completion	0		16-Mar-22	13						◆ Temp. Gravity Thickening Tank (Location A) Completion															
Z3B-000400	Temp. Primary Sludge Pumping Station (Location D) Completion	0		21-Mar-22	9						◆ Temp. Primary Sludge Pumping Station (Location D) Completion															
Z3B-000410	Connection at Temp. Primary Sludge Pumping Station (Location D)	1	22-Mar-22	22-Mar-22	9						■ Connection at Temp. Primary Sludge Pumping Station (Location D)															
Z3B-000420	FeCl3 System (Location E) Relocation Completion	0		10-Mar-22	18						◆ FeCl3 System (Location E) Relocation Completion															
<b>Stage 2</b>																										
<b>Stage 2 : Existing Sludge Holding Tanks</b>																										
Z3S1a.7-60	Completion Connection to Temporary SHT & Dewatering House	0		16-Mar-22*	0						◆ Completion Connection to Temporary SHT & Dewatering House															
<b>Stage 2 : Biogas Holder No. 1</b>																										
Z3BH-1000	Biogas Holder No. 1 - Ground Improvement Including Surcharge	124	08-Mar-22	08-Aug-22	0						■ Biogas Holder No. 1 - Ground Improvement Including Surcharge															



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Project ID : DWP.DPr9\_220111  
Layout : DC201910 2 3MRP\_rev.9  
Date : 12-Jan-22 / Page 10 of 10

Monthly Progress Report No. 12 - 3MRP			
Date	Revision	Checked	Approved
31-Dec-21	Rev. 0		

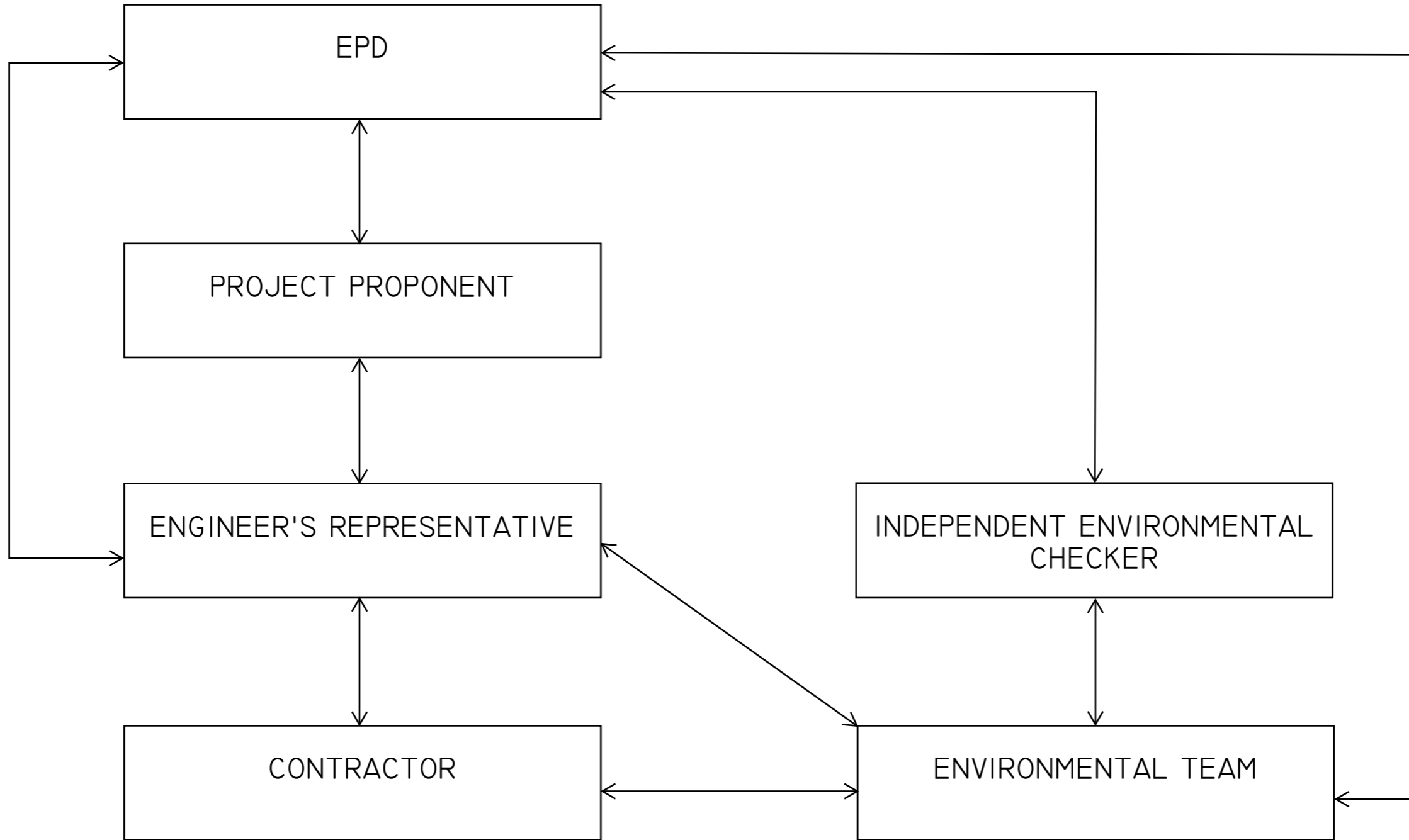
# Appendix B

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## Project Organization Chart

### LEGEND:

↔ LINE OF COMMUNICATION



#### PROJECT

YUEN LONG EFFLUENT  
POLISHING PLANT -  
INVESTIGATION, DESIGN  
AND CONSTRUCTION

#### CLIENT

渠務署  
Drainage Services Department

#### CONSULTANT

AECOM Asia Company Ltd.  
www.aecom.com

#### SUB-CONSULTANTS

#### ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.

#### STATUS

#### SCALE

A3 1 : 40000

#### DIMENSION UNIT

METRES

#### KEY PLAN

#### PROJECT NO.

60505476

#### CONTRACT NO.

CE 3/2015 (DS)

#### SHEET TITLE

PROJECT ORGANISATION

#### SHEET NUMBER

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# Appendix C

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## Action and Limit Levels

## Action and Limit Levels for Air Quality

Parameters	Action Level	Limit Level
1-hour TSP Level in $\mu\text{g}/\text{m}^3$	<sup>1</sup> For baseline level $\leq 384 \mu\text{g}/\text{m}^3$ , Action level = $(\text{baseline level} * 1.3 + \text{Limit level})/2$ ; For baseline level $> 384 \mu\text{g}/\text{m}^3$ , Action level = Limit level	500 $\mu\text{g}/\text{m}^3$

### Notes:

1. The Action Level for 1-hour TSP Level:

a)  $\text{AMS 2} = (63 * 1.3 + 500) / 2 = 291 \mu\text{g}/\text{m}^3$ ;

b)  $\text{AMS 3C} = (70 * 1.3 + 500) / 2 = 296 \mu\text{g}/\text{m}^3$ .

## Action and Limit Levels for Construction Noise

Time Period	Action Level	Limit Level
0700 - 1900 hours on normal weekdays	When one documented complaint is received	75 dB(A) *

### Notes:

- 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.
- Correction of +3 dB(A) shall be made to the free field measurements.

## Action and Limit Levels for Water Quality

Parameters	Action Levels	Limit Levels
<i>Construction Phase Water Quality Monitoring</i>		
DO in mg/L (Surface, Middle & Bottom) <sup>2</sup>	<p><u>Surface &amp; Middle</u> 5%-ile of baseline data for surface and middle layer.</p> <p><u>Bottom</u> 5%-ile of baseline data for bottom layer.</p>	<p><u>Surface &amp; Middle</u> 4 mg/L or 1%-ile of baseline data for surface and middle layer.</p> <p><u>Bottom</u> 2 mg/L or 1%-ile of baseline data for bottom layer.</p>
SS in mg/L (depth-averaged <sup>1</sup> ) <sup>3</sup>	95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day	99%-ile of baseline data or 130% of upstream control station's SS recorded on the same day
Turbidity in NTU (depth-averaged <sup>1</sup> ) <sup>3</sup>	95%-ile of baseline data or 120% of upstream control station's turbidity recorded on the same day	99%-ile of baseline data or 130% of upstream control station's turbidity recorded on the same day

### Notes:

- "Depth-averaged" is calculated by taking the arithmetic means of reading of all three depths;
- For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits;
- For SS and turbidity, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.

## Action and Limit Levels for Ecology

### Active Ardeid Night Roost Survey

As there are no specific guidelines on noise thresholds for roosting ardeids, the Action and Limit levels specified in below table were based on study conducted on exploring behavioural responses of shorebirds to impulsive noise (Wright et al. 2010).

Time Period	Action Level	Limit Level
after 17:30 during dry season after 18:00 during wet season	65.5 dB(A) <sup>1</sup>	72.2 dB(A) <sup>2</sup>

Notes:

1. Behavioural response of some kind more likely to occur
2. Flight with abandonment of the site becomes the most likely outcome of the disturbance

### Ecological Monitoring of Birds

Method	Parameters	Action Level <sup>3</sup>	Limit Level <sup>3</sup>
Transect	Abundance of all avifauna species (including but not only limited to overwintering waterbirds) in the community	Significant decline <sup>1,2</sup> in any of these parameters during the current monitoring month relative to the corresponding month during the baseline survey.	Significant decline in any of these parameters for three consecutive months.
	Species diversity of all avifauna species (including but not only limited to overwintering waterbirds) in the community		
	Abundance of species with conservation importance only		
	Species diversity of species with conservation importance only		
Point Count	Abundance of all avifauna species (including but not only limited to overwintering waterbirds) in the community		
	Species diversity of all avifauna species (including but not only limited to overwintering waterbirds) in the community		
	Abundance of species with conservation importance only		
	Species diversity of species with conservation importance only		

Notes:

1. Significant decline in abundance will be determined using two-tailed t-test,  $\alpha = 0.05$ .
2. Significant decline in species diversity will be determined using the Hutcheson t-test, two tailed.
3. Response will be triggered if any of the above level is reached for each parameter.

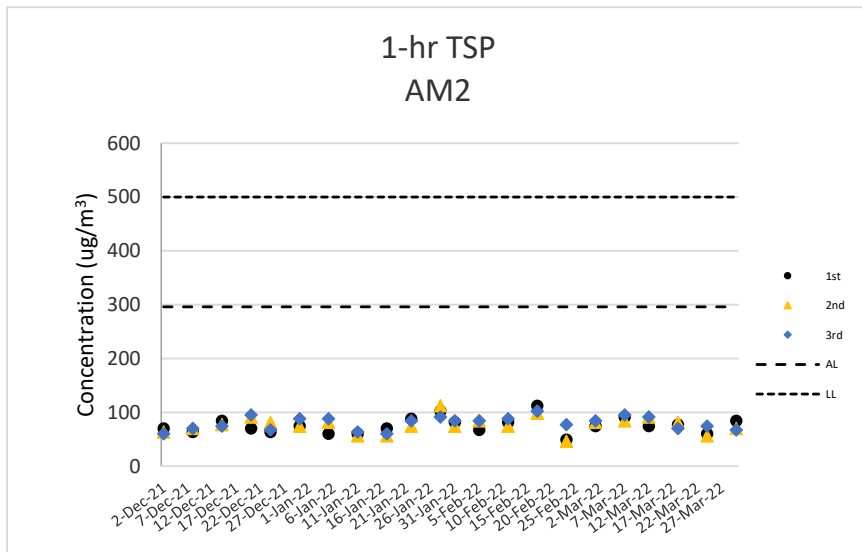
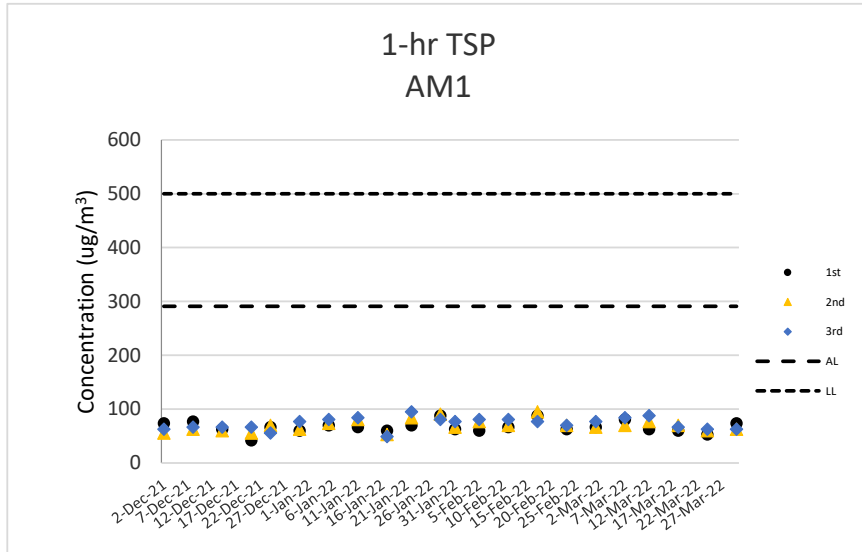
# Appendix D

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Graphical Presentation of Monitoring Data

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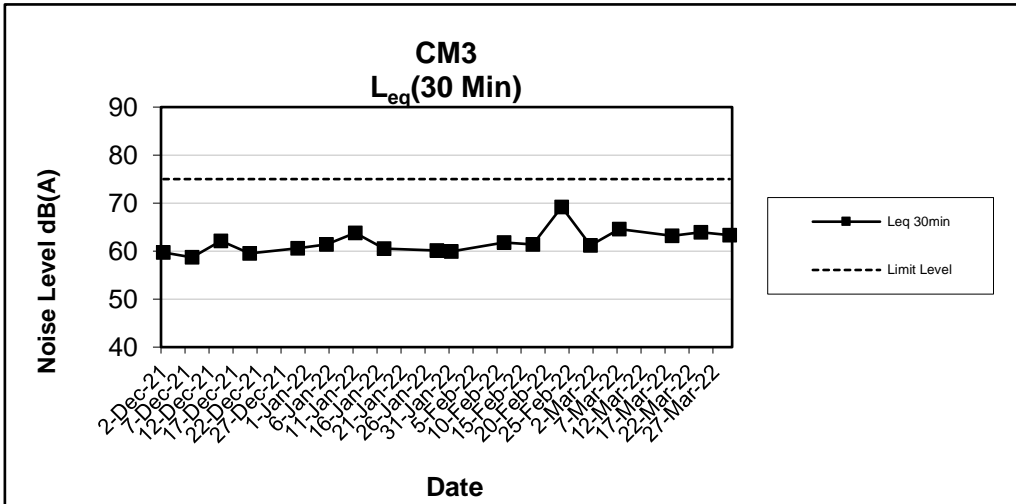
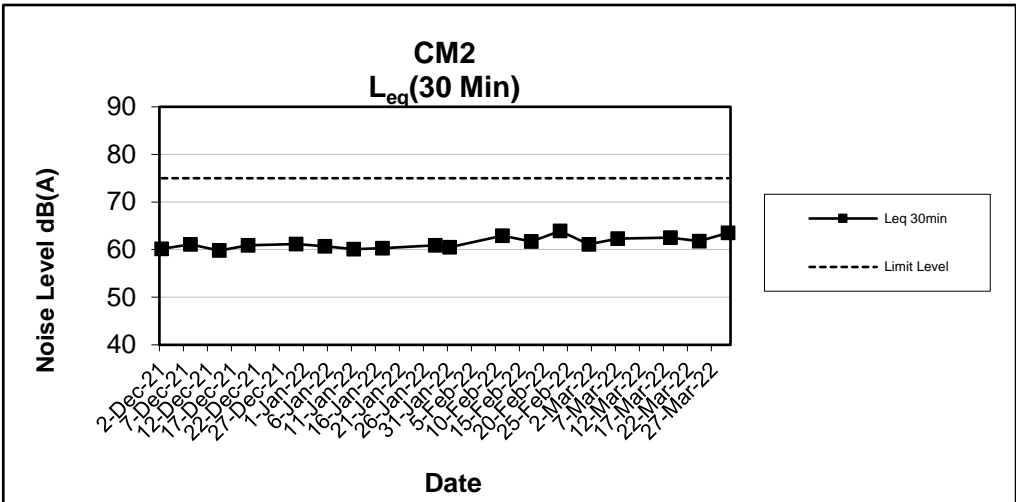
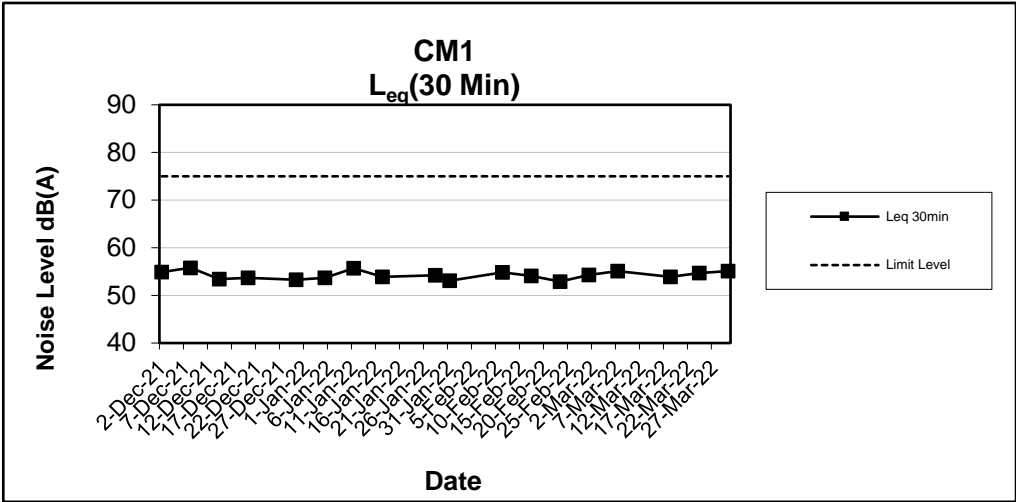
## Air Quality Monitoring Results



**Air Quality Monitoring Results**

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## Noise Monitoring Results



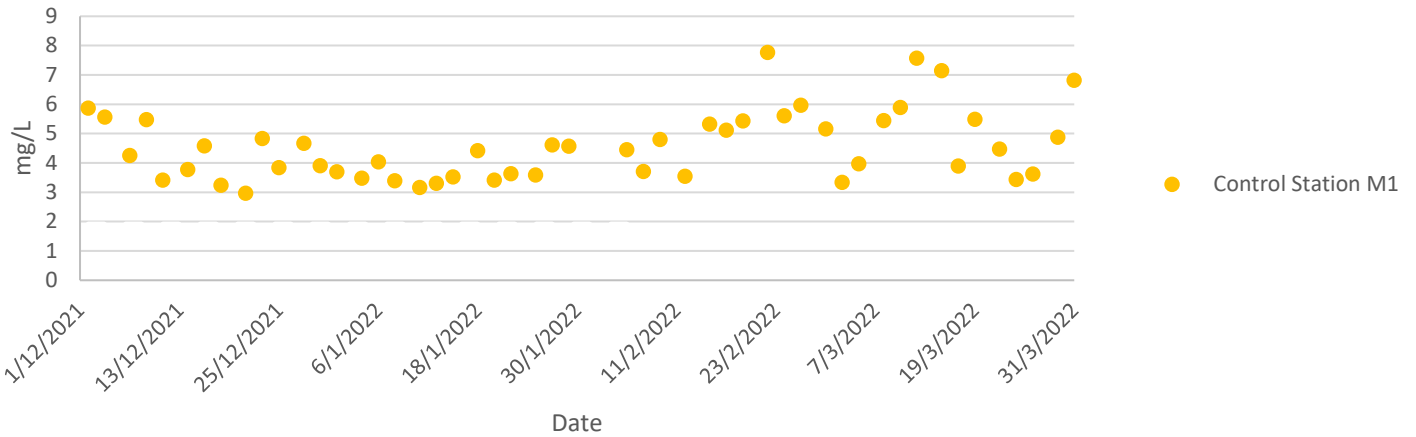
**Noise Monitoring Results**



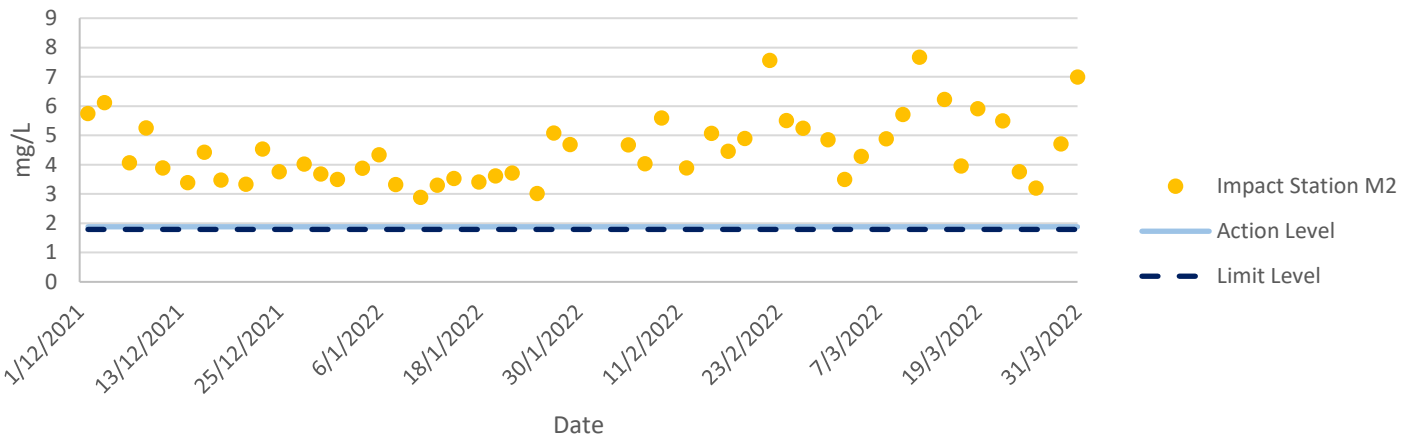
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## Water Quality Monitoring Results

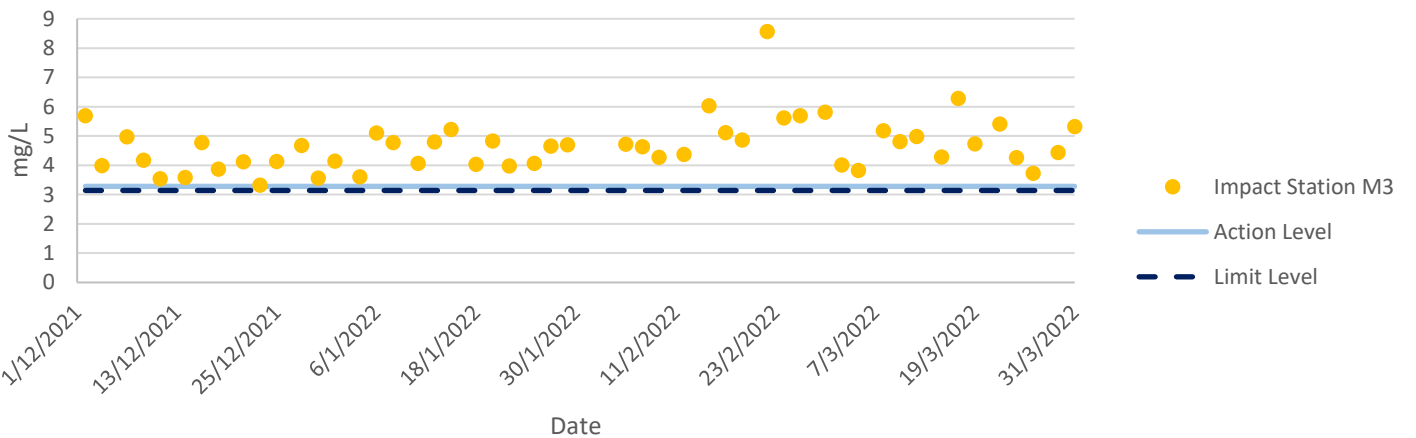
### Dissolved Oxygen at Mid-Flood Tide



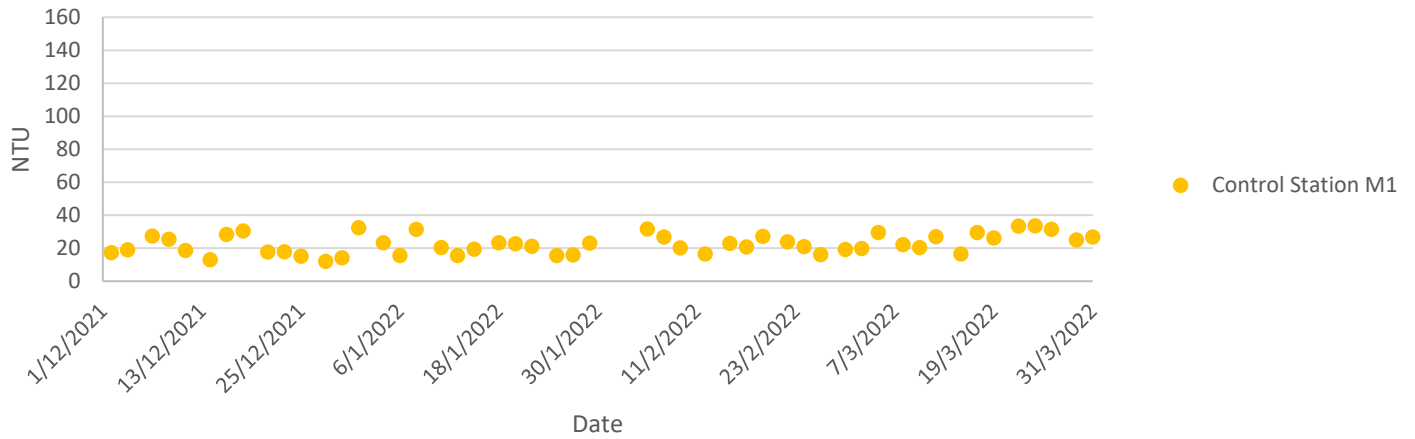
### Dissolved Oxygen at Mid-Flood Tide



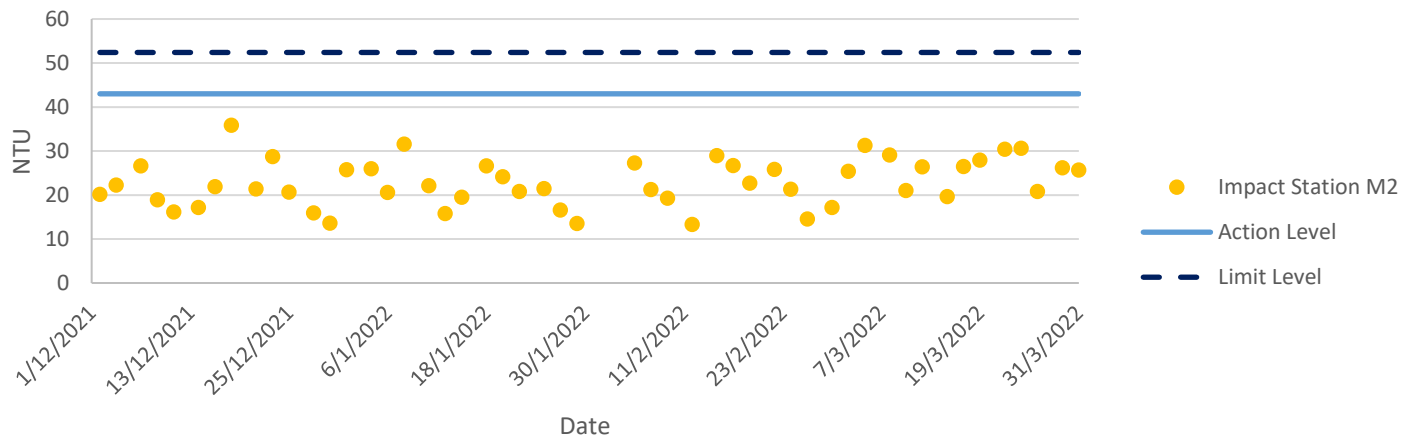
### Dissolved Oxygen at Mid-Flood Tide



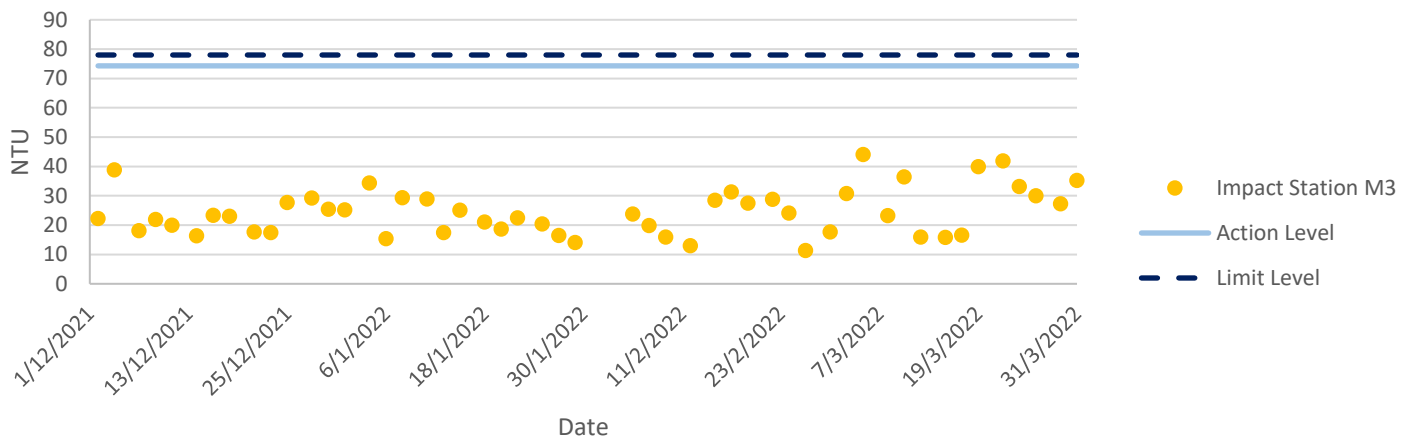
### Turbidity at Mid-Flood Tide



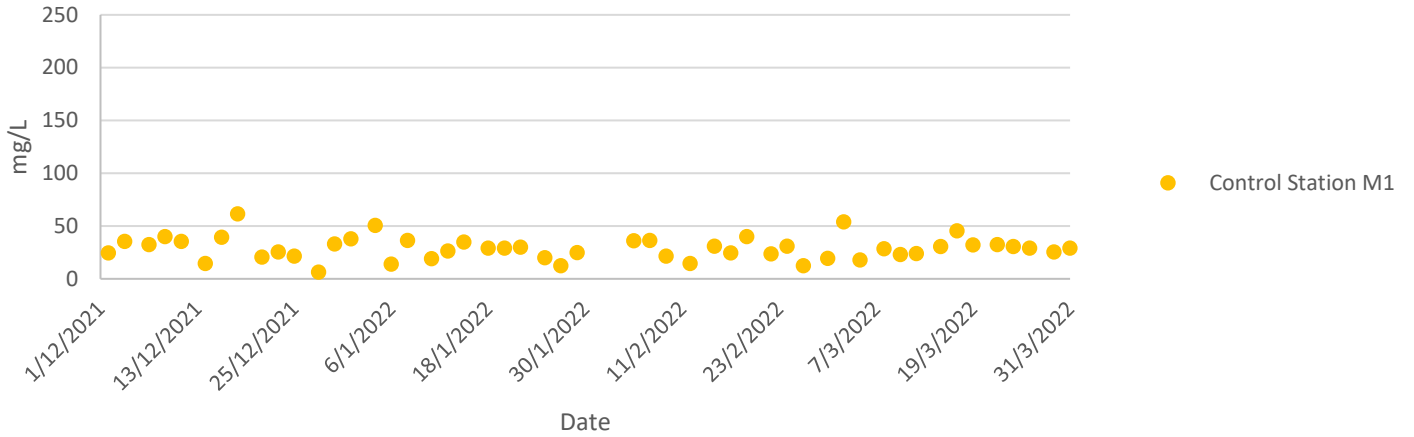
### Turbidity at Mid-Flood Tide



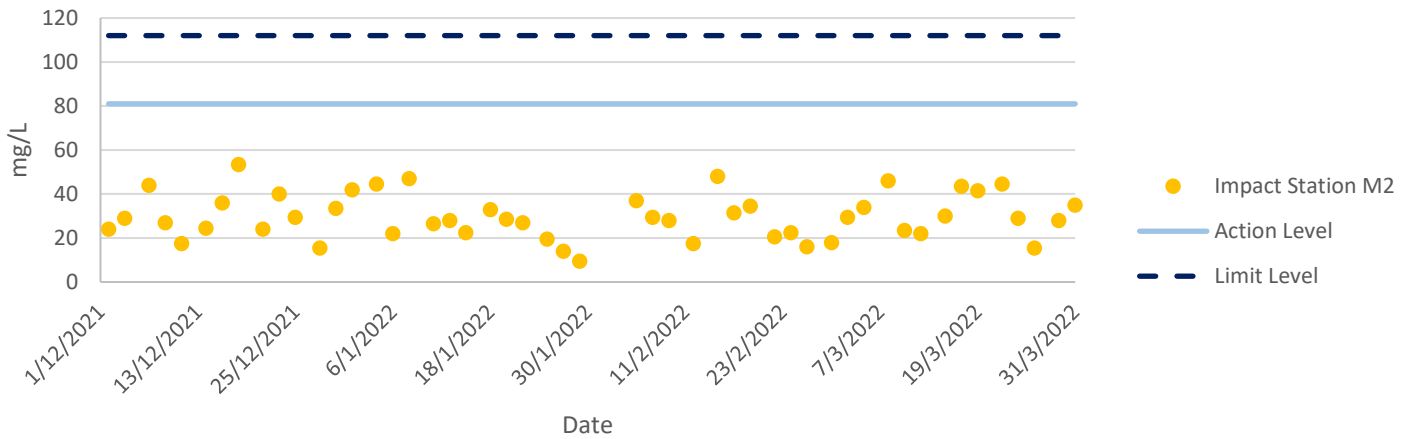
### Turbidity at Mid-Flood Tide



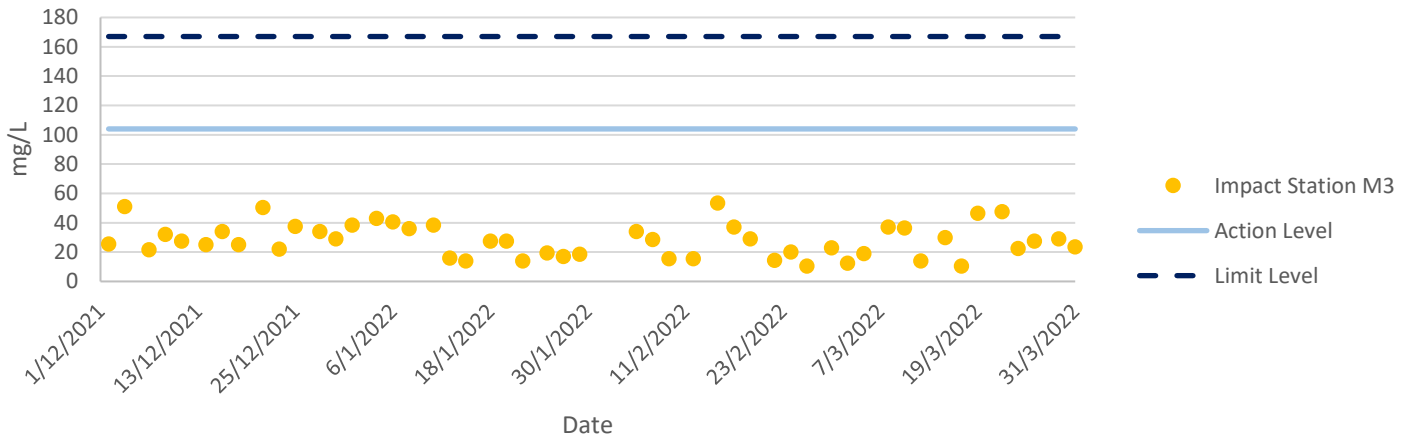
### Total Suspended Solids at Mid-Flood Tide



### Total Suspended Solids at Mid-Flood Tide

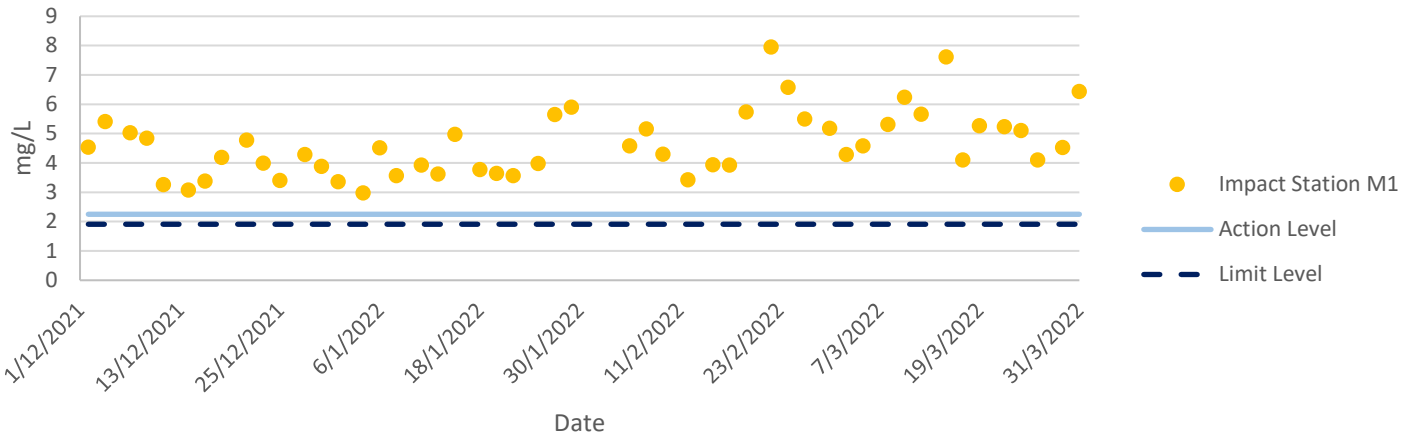


### Total Suspended Solids at Mid-Flood Tide

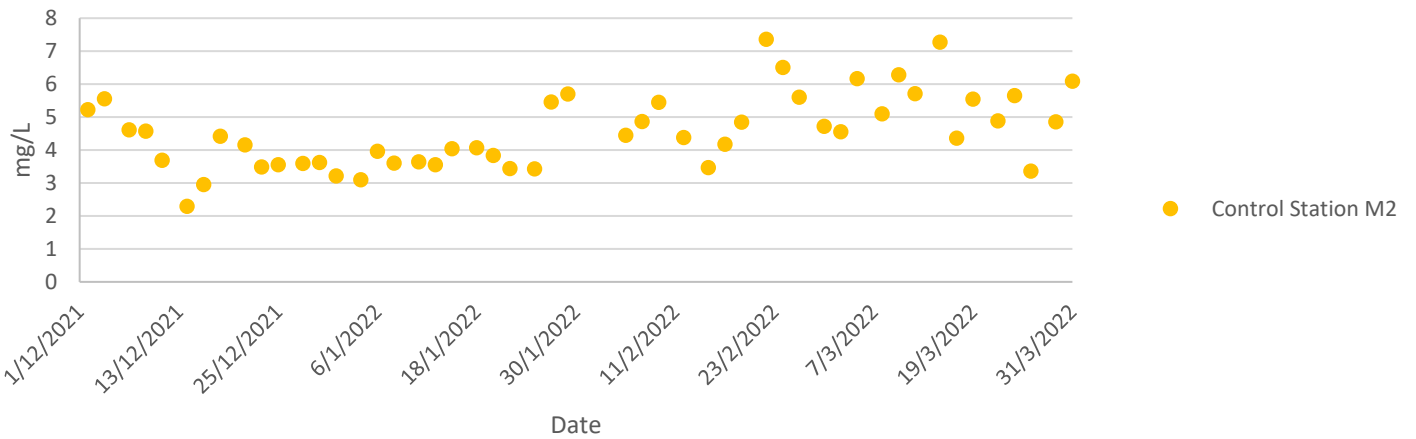


## Water Quality Monitoring Results

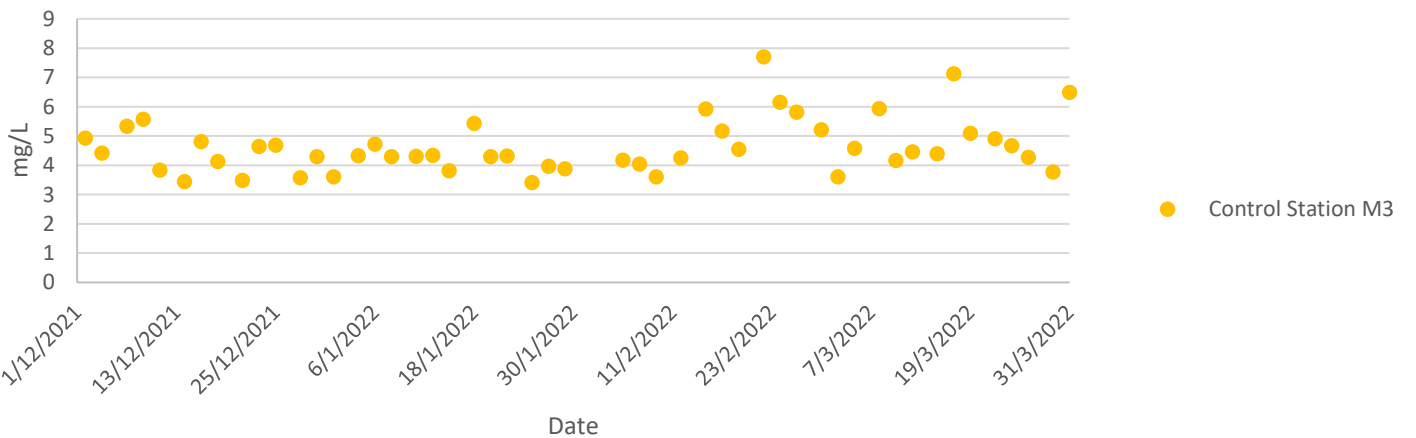
### Dissolved Oxygen at Mid-Ebb Tide



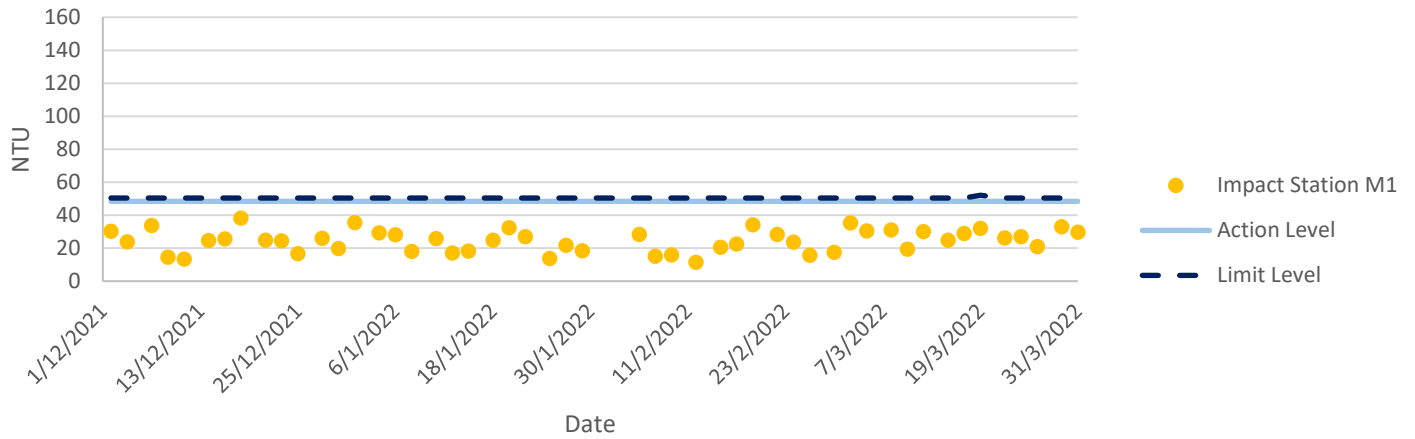
### Dissolved Oxygen at Mid-Ebb Tide



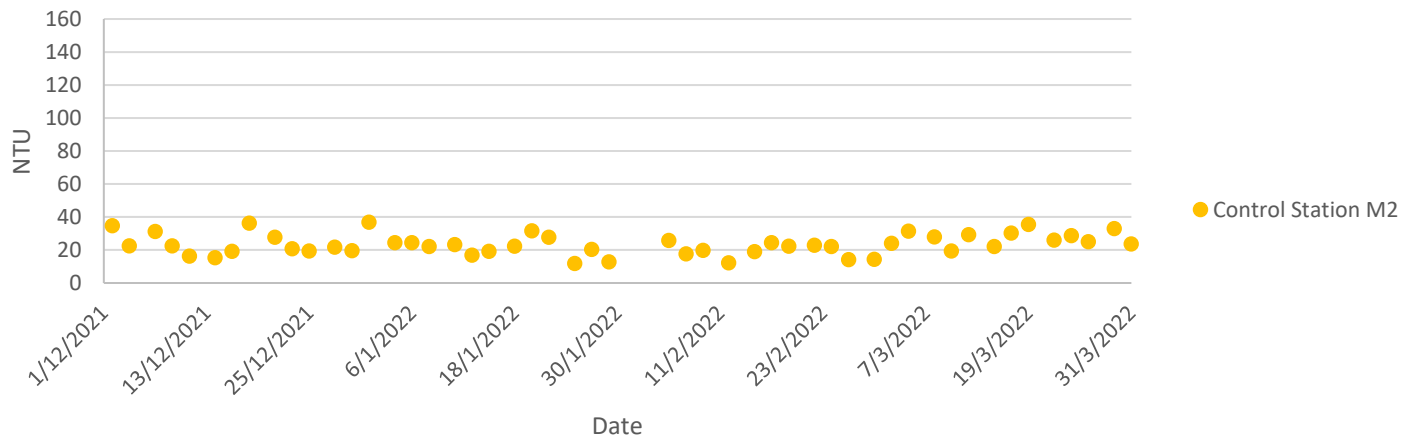
### Dissolved Oxygen at Mid-Ebb Tide



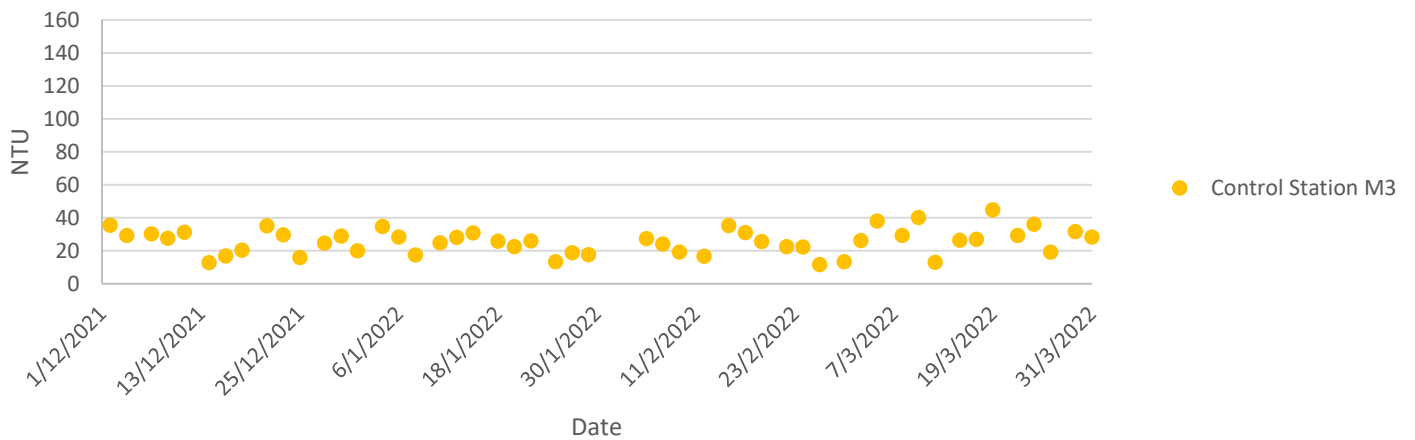
### Turbidity at Mid-Ebb Tide

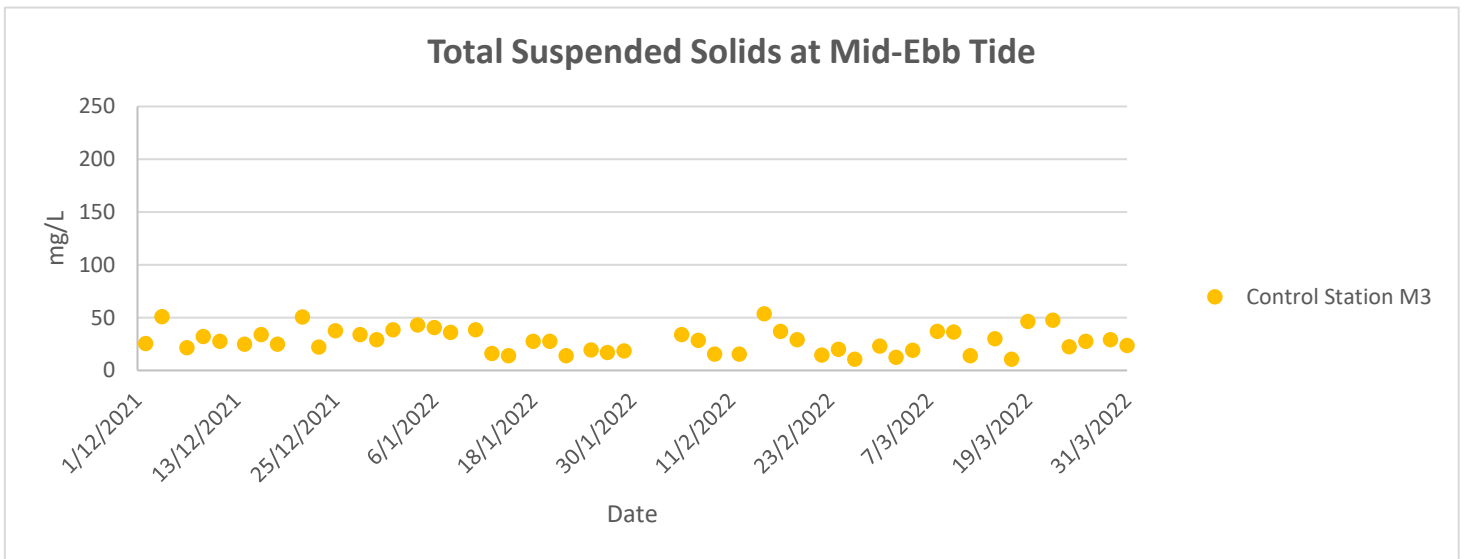
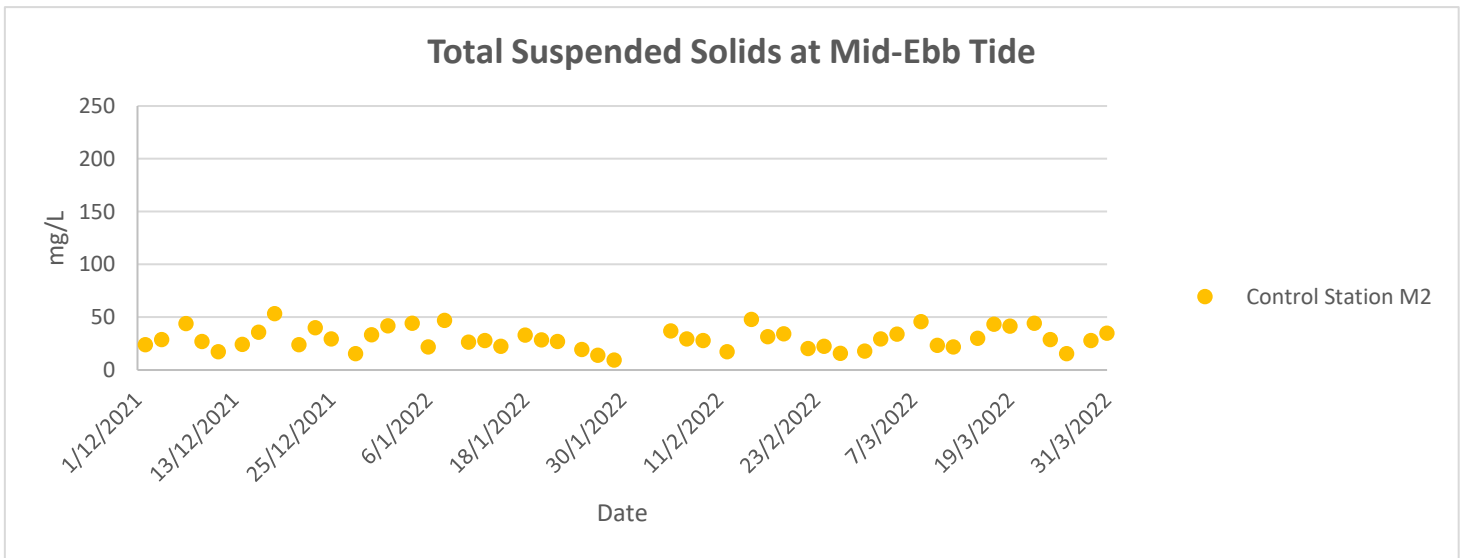
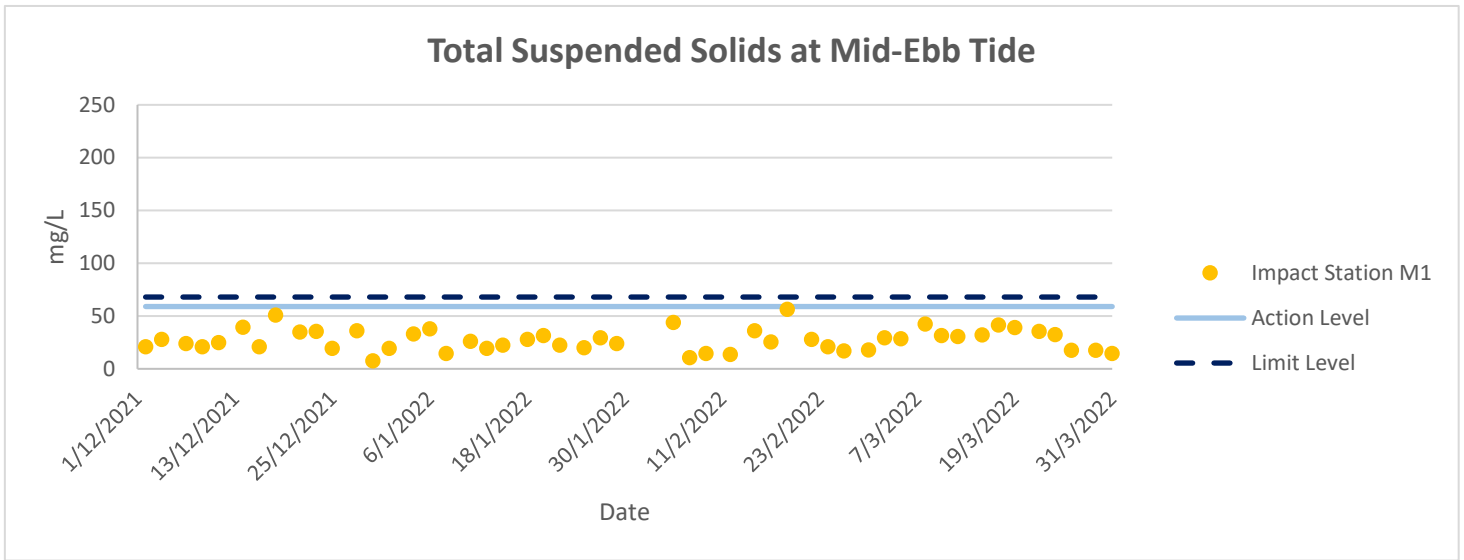


### Turbidity at Mid-Ebb Tide



### Turbidity at Mid-Ebb Tide





**Water Quality Monitoring Results**

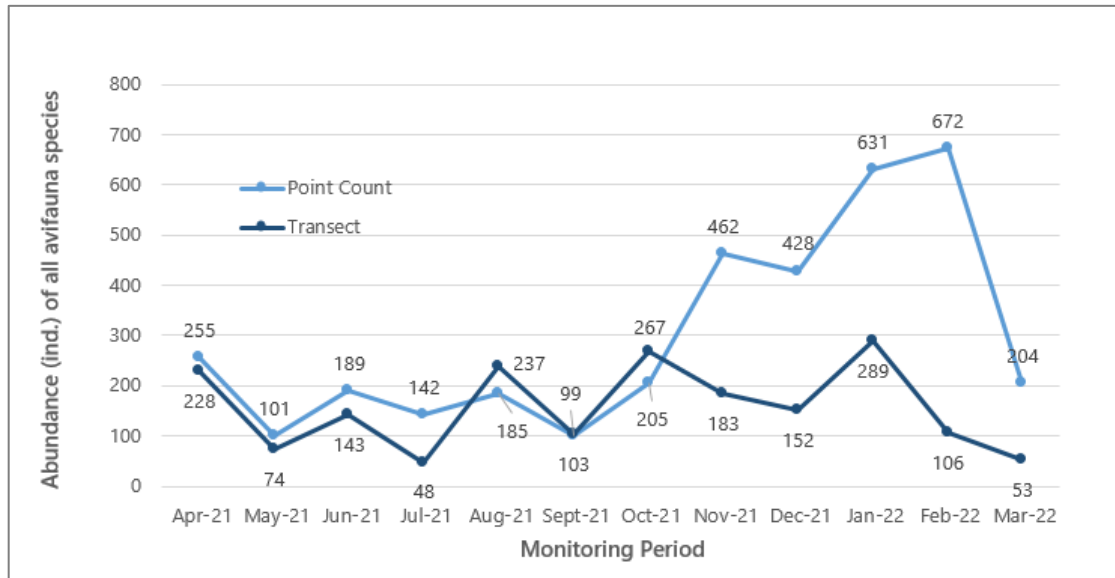
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## Ecology Monitoring Results

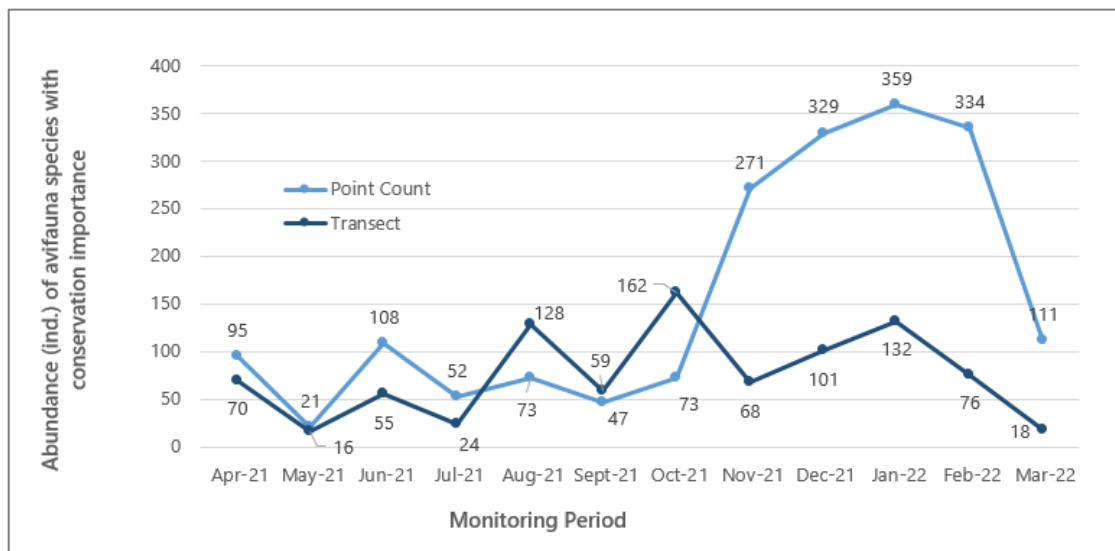


## Ecology Monitoring Results

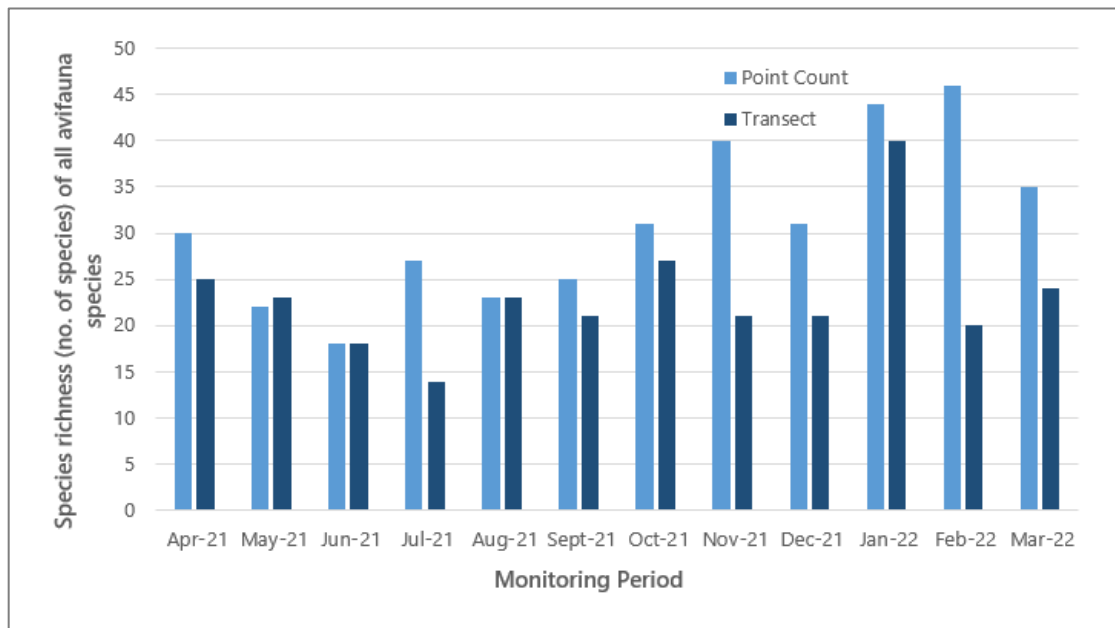
### Abundance of all avifauna species throughout the monitoring period



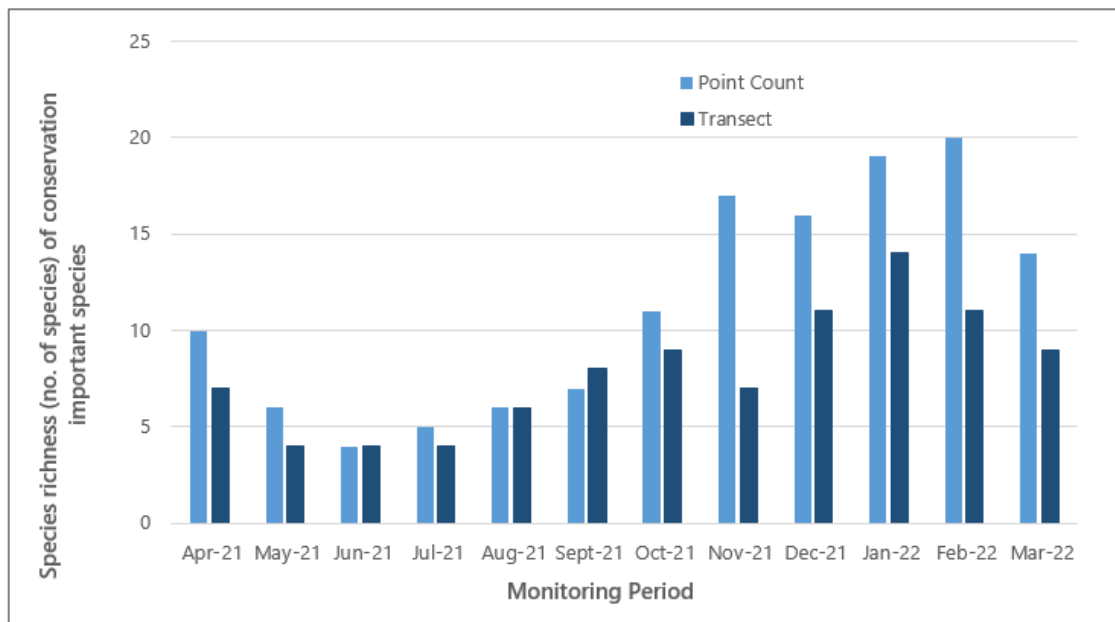
### Abundance of avifauna species with conservation importance throughout the monitoring period



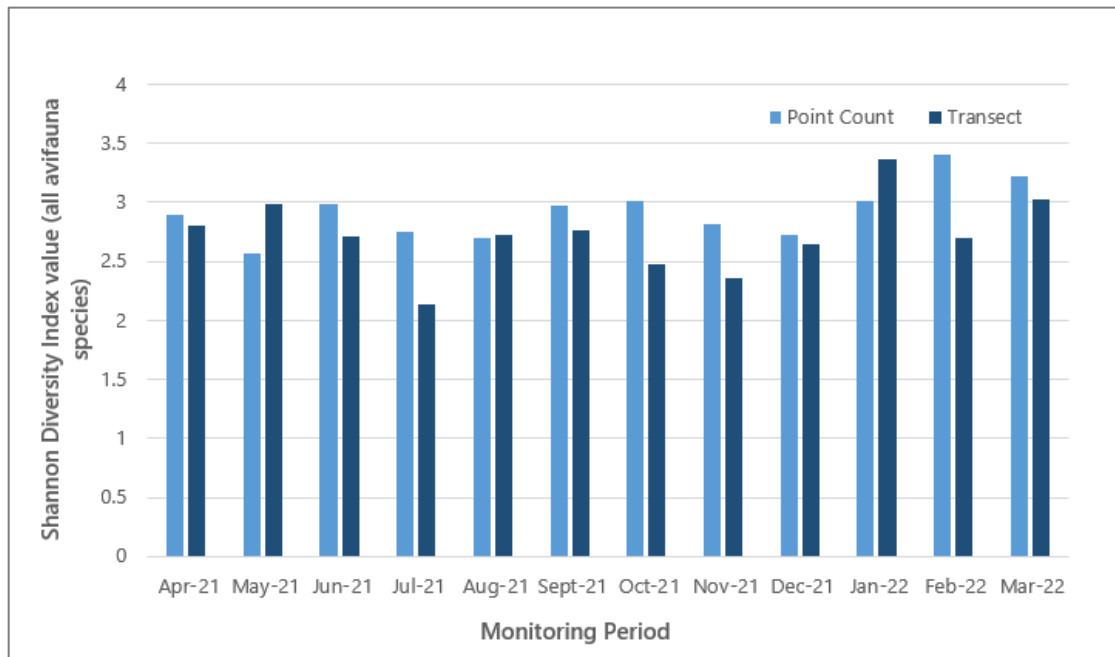
### Species richness of all avifauna species throughout the monitoring period



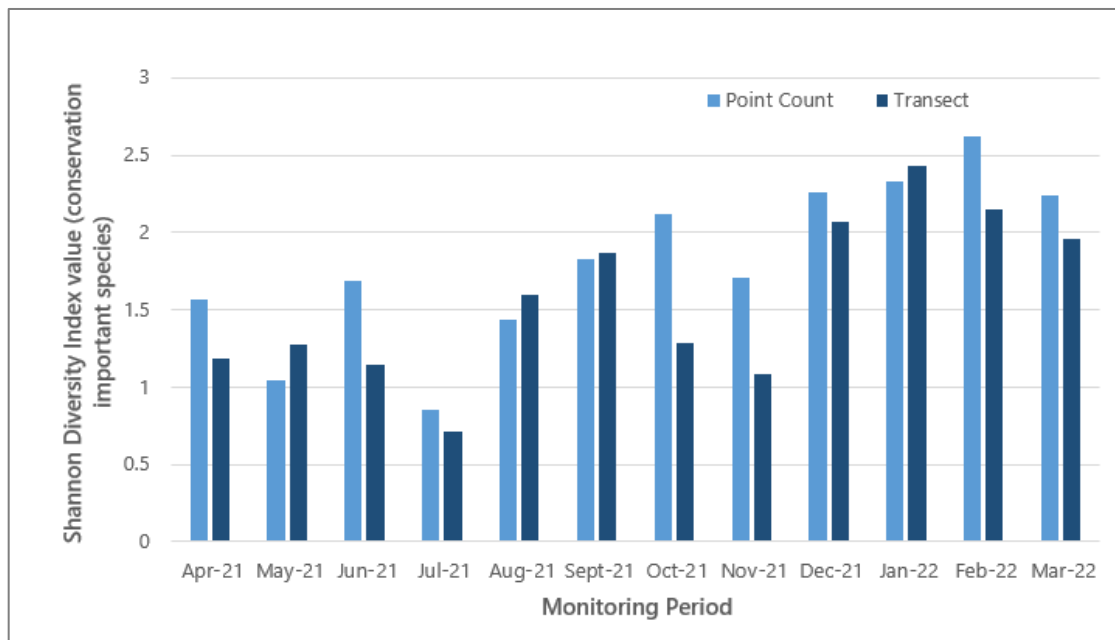
### Species richness of avifauna species with conservation importance throughout the monitoring period



Shannon Diversity Index values of all avifauna species throughout the monitoring period



Shannon Diversity Index values of avifauna species with conservation importance throughout the monitoring period



# Appendix E

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Event and Action Plan

## Event and Action Plan for Air Quality (Construction Dust)

EVENT	ACTION			
	ET	IEC	ER	Contractor
Action level being exceeded by one sampling	<ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of complaint and propose remedial measures;</li> <li>2. Inform Contractor, IEC and ER;</li> <li>3. Repeat measurement to confirm finding; and</li> <li>4. Increase monitoring frequency to daily.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method; and</li> <li>3. Review and advise the ET and ER on the effectiveness of the proposed remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify Contractor.</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify source(s), investigate the causes of exceedance and propose remedial measures;</li> <li>2. Implement remedial measures; and</li> <li>3. Amend working methods agreed with the ER as appropriate.</li> </ol>
Action level being exceeded by two or more consecutive sampling	<ol style="list-style-type: none"> <li>1. Identify source;</li> <li>2. Inform Contractor, IEC and ER;</li> <li>3. Advise the Contractor and ER on the effectiveness of the proposed remedial measures;</li> <li>4. Repeat measurements to confirm findings;</li> <li>5. Increase monitoring frequency to daily;</li> <li>6. Discuss with IEC and Contractor on remedial actions required;</li> <li>7. If exceedance continues, arrange meeting with Contractor, IEC and ER; and</li> <li>8. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method;</li> <li>3. Discuss with ET, ER and Contractor on possible remedial measures;</li> <li>4. Advise the ET and ER on the effectiveness of the proposed remedial measures; and</li> <li>5. Supervise Implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Notify Contractor;</li> <li>3. Ensure remedial measures properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify source and investigate the causes of exceedance;</li> <li>2. Submit proposals for remedial measures to the ER with a copy to ET and IEC within three working days of notification;</li> <li>3. Implement the agreed proposals; and</li> <li>4. Amend proposal as appropriate.</li> </ol>
Limit level being exceeded by one sampling	<ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of exceedance and propose remedial measures;</li> <li>2. Inform Contractor, IEC, ER, and EPD;</li> <li>3. Repeat measurement to confirm finding;</li> <li>4. Increase monitoring frequency to daily; and</li> <li>5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method;</li> <li>3. Discuss with ET and Contractor on possible remedial measures;</li> <li>4. Advise the ER on the effectiveness of the proposed remedial measures; and</li> <li>5. Supervise implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Notify Contractor;</li> <li>3. Ensure remedial measures properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify source(s) and investigate the causes of exceedance;</li> <li>2. Take immediate action to avoid further exceedance;</li> <li>3. Submit proposals for remedial measures to ER with a copy to ET and IEC within three working days of notification;</li> <li>4. Implement the agreed proposals; and</li> <li>5. Amend proposal if appropriate.</li> </ol>
Limit level being exceeded by two or more consecutive sampling	<ol style="list-style-type: none"> <li>1. Notify IEC, ER, Contractor and EPD;</li> <li>2. Identify source;</li> <li>3. Repeat measurement to confirm findings;</li> <li>4. Increase monitoring frequency to daily;</li> <li>5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;</li> <li>6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken;</li> <li>7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; and</li> <li>8. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by the ET;</li> <li>2. Discuss amongst ER, ET, and Contractor on the potential remedial actions;</li> <li>3. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; and</li> <li>4. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. In consultation with the ET and IEC, agree with the Contractor on the remedial measures to be implemented;</li> <li>3. Supervise the implementation of remedial measures; and</li> <li>4. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify source(s) and investigate the causes of exceedance;</li> <li>2. Take immediate action to avoid further exceedance;</li> <li>3. Submit proposals for remedial measures to the ER with a copy to the IEC and ET within three working days of notification;</li> <li>4. Implement the agreed proposals;</li> <li>5. Revise and resubmit proposals if problem still not under control; and</li> <li>6. Stop the relevant portion of works as determined by the ER until the exceedance is abated.</li> </ol>

## Event and Action Plan for Noise (Construction)

EVENT	ACTION			
	ET	IEC	ER	Contractor
Action Level	<ol style="list-style-type: none"> <li>1. Notify IEC and Contractor;</li> <li>2. Carry out investigation;</li> <li>3. Report the results of investigation to the IEC, ER and Contractor;</li> <li>4. Discuss with the Contractor and formulate remedial measures; and</li> <li>5. Increase monitoring frequency to check mitigation effectiveness.</li> </ol>	<ol style="list-style-type: none"> <li>1. Review the analyzed results submitted by the ET;</li> <li>2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; and</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. Require Contractor to propose remedial measures for the analyzed noise problem; and</li> <li>4. Ensure remedial measures are properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Submit noise mitigation proposals to IEC; and</li> <li>2. Implement noise mitigation proposals.</li> </ol>
Limit Level	<ol style="list-style-type: none"> <li>1. Identify source;</li> <li>2. Inform IEC, ER, EPD and Contractor;</li> <li>3. Repeat measurements to confirm findings;</li> <li>4. Increase monitoring frequency;</li> <li>5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;</li> <li>6. Inform IEC, ER and EPD the causes and actions taken for the exceedances;</li> <li>7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; and</li> <li>8. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss amongst ER, ET, and Contractor on the potential remedial actions;</li> <li>2. Review Contractors remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; and</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. Require Contractor to propose remedial measures for the analyzed noise problem;</li> <li>4. Ensure remedial measures properly implemented; and</li> <li>5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance;</li> <li>2. Submit proposals for remedial actions to IEC within 3 working days of notification;</li> <li>3. Implement the agreed proposals;</li> <li>4. Resubmit proposals if problem still not under control; and</li> <li>5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.</li> </ol>

## Event and Action Plan for Water Quality Monitoring

EVENT	ACTION			
	ET	IEC	ER	Contractor
Action level being exceeded by one sampling day	<ol style="list-style-type: none"> <li>1. Repeat in situ measurement on the next day of exceedance to confirm findings;</li> <li>2. Check monitoring data, plant, equipment and Contractor(s)'s working methods;</li> <li>3. Identify source(s) of impact and record in notification of exceedance;</li> <li>4. Inform IEC, Contractor(s) and ER</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET and Contractor(s)'s working methods;</li> <li>2. Inform EPD and AFCD.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Check plant and equipment and rectify unacceptable practice</li> </ol>
Action level being exceeded by two or more consecutive sampling days	<ol style="list-style-type: none"> <li>1. Repeat in situ measurement on the next day of exceedance to confirm findings;</li> <li>2. Check monitoring data, plant, equipment and Contractor(s)'s working methods;</li> <li>3. Identify source(s) of impact and record in notification of exceedance;</li> <li>4. Inform IEC, Contractor(s) and ER;</li> <li>5. Discuss with IEC and Contractor(s) on additional mitigation measures and ensure that they are implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET and Contractor(s)'s working methods;</li> <li>2. Inform EPD and AFCD;</li> <li>3. Discuss with ET and Contractor(s) on additional mitigation measures and advise ER accordingly;</li> <li>4. Assess the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Discuss with the IEC on the proposed additional mitigation measures and agree on the mitigation measures to be implemented.</li> <li>3. Ensure additional mitigation measures are properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Check plant and equipment and rectify unacceptable practice;</li> <li>3. Consider changes of working methods;</li> <li>4. Discuss with ET and IEC on additional mitigation measures and propose them to ER within 3 working days;</li> <li>5. Implement the agreed mitigation measures.</li> </ol>

EVENT	ACTION			
	ET	IEC	ER	Contractor
Limit level being exceeded by one sampling day	<ol style="list-style-type: none"> <li>1. Repeat in situ measurement on the next day of exceedance to confirm findings;</li> <li>2. Check monitoring data, plant, equipment and Contractor(s)'s working methods;</li> <li>3. Identify source(s) of impact and record in notification of exceedance;</li> <li>4. Inform IEC, Contractor(s) and ER;</li> <li>5. Discuss with IEC and Contractor(s) on additional mitigation measures and ensure that they are implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET and Contractor(s)'s working methods;</li> <li>2. Inform EPD and AFCD;</li> <li>3. Discuss with ET and Contractor(s) on additional mitigation measures and advise ER accordingly;</li> <li>4. Assess the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Discuss with the IEC on the proposed additional mitigation measures and agree on the mitigation measures to be implemented.</li> <li>3. Ensure additional mitigation measures are properly implemented.</li> <li>4. Request Contractor(s) to critically review the working methods.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Check plant and equipment and rectify unacceptable practice;</li> <li>3. Critically review the need to change working methods;</li> <li>4. Discuss with ET and IEC on additional mitigation measures and propose them to ER within 3 working days;</li> <li>5. Implement the agreed mitigation measures.</li> </ol>
Limit level being exceeded by two or more consecutive sampling days	<ol style="list-style-type: none"> <li>1. Repeat in situ measurement on the next day of exceedance to confirm findings;</li> <li>2. Check monitoring data, plant, equipment and Contractor(s)'s working methods;</li> <li>3. Identify source(s) of impact and record in notification of exceedance;</li> <li>4. Inform IEC, Contractor(s) and ER;</li> <li>5. Discuss with IEC and Contractor(s) on additional mitigation measures and ensure that they are implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET and Contractor(s)'s working methods;</li> <li>2. Inform EPD and AFCD;</li> <li>3. Discuss with ET and Contractor(s) on additional mitigation measures and advise ER accordingly;</li> <li>4. Assess the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Discuss with the IEC on the proposed additional mitigation measures and agree on the mitigation measures to be implemented.</li> <li>3. Ensure additional mitigation measures are properly implemented.</li> <li>4. Request Contractor(s) to critically review the working methods.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Check plant and equipment and rectify unacceptable practice;</li> <li>3. Critically review the need to change working methods;</li> <li>4. Discuss with ET and IEC on additional mitigation measures and propose them to ER within 3 working days;</li> <li>5. Implement the agreed mitigation measures.</li> </ol>



## Event and Action Plan for Ecology Monitoring

Event	Action			
	ET	IEC	ER	Contractor
Action Level	<ol style="list-style-type: none"> <li>1. Notify IEC and Contractor;</li> <li>2. Carry out investigation;</li> <li>3. Report the results of investigation to the IEC, ER and Contractor;</li> <li>4. Discuss with the Contractor and formulate remedial measures; and</li> <li>5. Increase monitoring frequency to check mitigation effectiveness.</li> </ol>	<ol style="list-style-type: none"> <li>1. Review the analyzed results submitted by the ET;</li> <li>2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; and</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. Require Contractor to propose remedial measures for the analyzed noise problem; and</li> <li>4. Ensure remedial measures are properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Submit noise mitigation proposals to IEC; and</li> <li>2. Implement noise mitigation proposals.</li> </ol>
Limit Level	<ol style="list-style-type: none"> <li>1. Identify source;</li> <li>2. Inform IEC, ER, EPD and Contractor;</li> <li>3. Repeat measurements to confirm findings;</li> <li>4. Increase monitoring frequency;</li> <li>5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;</li> <li>6. Inform IEC, ER and EPD the causes and actions taken for the exceedances;</li> <li>7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; and</li> <li>8. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss amongst ER, ET, and Contractor on the potential remedial actions;</li> <li>2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; and</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. Require Contractor to propose remedial measures for the analysed noise problem;</li> <li>4. Ensure remedial measures are properly implemented; and</li> <li>5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance;</li> <li>2. Submit proposals for remedial actions to IEC within 3 working days of notification;</li> <li>3. Implement the agreed proposals;</li> <li>4. Resubmit proposals if problem still not under control; and</li> <li>5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.</li> </ol>

# Appendix F

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Waste Flow Table

Waste Flow Table for Year 2022											
Monthly Ending	Total Quantity Generated	Actual Quantities of Inert C&D Materials Generated Monthly					Actual Quantities of Non-inert C&D Wastes Generated Monthly				
		Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse
	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
2022 Jan	243.88	Nil	Nil	Nil	215.24	Nil	17.46	0.04	Nil	Nil	11.14
2022 Feb	92.65	Nil	Nil	Nil	38.73	Nil	43.95	Nil	Nil	Nil	9.97
2022 Mar	398.96	Nil	Nil	Nil	312.08	Nil	76.31	Nil	Nil	Nil	10.57
2022 Apr											
2022 May											
2022 Jun											
2022 Jul											
2022 Aug											
2022 Sep											
2022 Oct											
2022 Nov											
2022 Dec											
<b>Total</b>	<b>735.49</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>566.05</b>	<b>0</b>	<b>137.72</b>	<b>0.04</b>	<b>0</b>	<b>0</b>	<b>31.68</b>

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 materials.

Sources/ reference of the waste flow data; From the Contractor

# Appendix G

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Implementation Status of

Environmental Mitigation Measures

**Construction of Yuen Long Effluent Polishing Plant Stage 1**

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status
<b>Air Quality Impact</b>			
Construction Phase			
3.6.1.6	Watering once per every two hours on active works areas to reduce dust emission.	All active works areas during construction phase	Implemented
3.8.1.1	<p>Dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation and good site practices listed below shall be carried out to further minimize construction dust impact:</p> <ul style="list-style-type: none"> <li>• Use of regular watering to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather.</li> <li>• Use of frequent watering for particularly dusty construction areas and areas close to ASRs.</li> <li>• Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines.</li> <li>• Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs.</li> <li>• Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations.</li> <li>• Establishment and use of vehicle wheel and body washing facilities at the exit points of the site.</li> <li>• Provision of wind shield and dust extraction units or similar dust mitigation measures at the loading area of barging point, and use of water sprinklers at the loading area where dust generation is likely during the loading process of loose material, particularly in dry seasons/ periods.</li> <li>• Provision of not less than 2.4m high hoarding from ground level along site boundary where adjoins a road, streets or other accessible to the public except for a site entrance or exit.</li> <li>• Imposition of speed controls for vehicles on site haul roads.</li> <li>• Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs.</li> </ul>	Construction Sites	<p>Implemented</p> <p>Implemented</p> <p>Implemented</p> <p>Implemented</p> <p>Implemented</p> <p>N/A</p> <p>Implemented</p> <p>N/A</p> <p>Implemented</p> <p>Implemented</p> <p>Implemented</p>

**Construction of Yuen Long Effluent Polishing Plant Stage 1**

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status
	<ul style="list-style-type: none"> <li>Instigation of an environmental monitoring and auditing program to monitor the construction process in order to enforce controls and modify method of work if dusty conditions arise.</li> </ul>		Implemented
<b>Noise Impact</b>			
Construction Phase			
4.8.1	<p>Movable noise barriers are recommended for hydraulic breakers mounted on excavators to be adopted during construction.</p> <p>Good site practices listed below and the noise control requirements stated in EPD's "Recommended Pollution Control Clauses for Construction Contracts" should be included in the Contract Specification for the Contractors to follow and should be implemented to further minimize the potential noise impacts during the construction phase of the Project.</p> <ul style="list-style-type: none"> <li>Quiet PME, such that those listed in EPD's Quality Powered Mechanical Equipment, should be considered for construction works to further minimize the potential construction noise impact.</li> <li>Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme.</li> <li>Silencers or mufflers on construction equipment should be utilised and should be properly maintained during the construction programme.</li> <li>Mobile plant, if any, should be sited as far away from noise sensitive receivers (NSRs) as possible.</li> <li>Machines and plant (such as trucks) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.</li> <li>Plant known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the nearby NSRs</li> <li>Material stockpiles and other structures should be effectively utilised, wherever practicable, in screening noise from on-site construction activities.</li> </ul>	Construction Sites	Partially Implemented N/A Implemented Implemented N/A N/A Implemented N/A N/A
<b>Water Quality Impact</b>			
Construction Phase			
5.8.1.2	Water used in ground boring and drilling for site investigation or rock / soil anchoring should as far as practicable be re-circulated after sedimentation. When there is a need for final disposal, the wastewater should be discharged into storm drains via silt removal facilities	Construction Sites / Construction Phase	Implemented

**Construction of Yuen Long Effluent Polishing Plant Stage 1**

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status
5.8.1.3	All vehicles and plant should be cleaned before they leave a construction site to minimise the deposition of earth, mud, debris on roads. A wheel washing bay should be provided at every site exit if practicable and wash-water should have sand and silt settled out or removed before discharging into storm drains. The section of construction road between the wheel washing bay and the public road should be paved with backfill to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains.	Construction Sites / Construction Phase	Implemented
5.8.1.4	Good site practices should be adopted to remove rubbish and litter from construction sites so as to prevent the rubbish and litter from spreading from the site area. It is recommended to clean the construction sites on a regular basis.	Construction Sites / Construction Phase	Implemented
5.8.1.5 – 5.8.1.6	The site practices outlined in ProPECC PN 1/94 “Construction Site Drainage” should be followed where applicable to minimise surface run-off and the chance of erosion. Surface run-off from construction sites should be discharged into storm drains via adequately designed sand / silt removal facilities such as sand traps, silt traps and sedimentation basins. Channels, earth bunds or sand bag barriers should be provided on site to properly direct stormwater to such silt removal facilities. Perimeter channels at site boundaries should be provided as necessary to intercept storm run-off from outside the site so that it will not wash across the site. Catchpits and perimeter channels should be constructed in advance of site formation works and earthworks.	Construction Sites / Construction Phase	Implemented
5.8.1.7	Silt removal facilities, channels and manholes should be maintained and the deposited silt and grit should be removed regularly (as well as at the onset of and after each rainstorm) to prevent overflows and localised flooding.	Construction Sites / Construction Phase	Implemented
5.8.1.8	Construction works should be programmed to minimise soil excavation in the wet season (i.e. April to September). If soil excavation cannot be avoided in these months or at any time of year when rainstorms are likely, temporarily exposed slope surfaces should be covered e.g. by tarpaulin, and temporary access roads should be protected by crushed stone or gravel, as excavation proceeds. Intercepting channels should be provided (e.g. along the crest / edge of excavation) to prevent storm run-off from washing across exposed soil surfaces.	Construction Sites / Construction Phase	N/A
5.8.1.9	Earthworks final surfaces should be well compacted and the subsequent permanent work or surface protection should be carried out immediately after the final surfaces are formed to prevent erosion	Construction Sites / Construction Phase	Partially Implemented

**Construction of Yuen Long Effluent Polishing Plant Stage 1**

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status
	caused by rainstorms. Appropriate drainage like intercepting channels should be provided where necessary		
5.8.1.10	Measures should be taken to minimise the ingress of rainwater into trenches. If excavation of trenches in the wet season is necessary, they should be dug and backfilled in short sections. Rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities.	Construction Sites / Construction Phase	N/A
5.8.1.11	Construction materials (e.g. aggregates, sand and fill material) on sites should be covered with tarpaulin or similar fabric during rainstorms	Construction Sites / Construction Phase	Implemented
5.8.1.12	Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers. Discharge of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system.	Construction Sites / Construction Phase	Partially Implemented
5.8.1.13	The practices outlined in Environment, Transport and Works Bureau (ETWB) TC (Works) No. 5/2005 "Protection of natural streams/rivers from adverse impacts arising from construction works" should also be adopted where applicable to minimise the water quality impacts upon any natural streams or surface water systems.	Construction Sites / Construction Phase	N/A
5.8.1.14	Sufficient chemical toilets should be provided in the works areas. A licensed waste collector should be deployed to clean the chemical toilets on a regular basis.	Construction Sites / Construction Phase	Implemented
5.8.1.15	Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the surrounding environment.	Construction Sites / Construction Phase	Implemented
5.8.1.16	Contractor must register as a chemical waste producer if chemical wastes would be produced from the construction activities. The WDO (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation, should be observed and complied with for control of chemical wastes.	Construction Sites / Construction Phase	Implemented



**Construction of Yuen Long Effluent Polishing Plant Stage 1**

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status
5.8.1.17	Any service shop and maintenance facilities should be located on hard standings within a bunded area, and sumps and oil interceptors should be provided. Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges.	Construction Sites /Construction Phase	N/A
5.8.1.18	Disposal of chemical wastes should be carried out in compliance with the WDO. The Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes published under the WDO should be followed to avoid leakage or spillage of chemicals.	Construction Sites / Construction Phase	Partially Implemented
5.8.1.19	All the runoff and wastewater generated from the works areas should be treated so that it satisfies all the standards listed in the Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters (TM-DSS).	Construction Sites / Construction Phase	N/A
5.8.2.11	Chemical should be stored on site at bunded area and separate drainage system as appropriate should be provided to avoid any spilled chemicals from entering the storm drain in case of accidental spillage. Also, adequate tools for cleanup of spilled chemicals should be stored on site and appropriate training shall be provided to staffs to further prevent potential adverse water quality impacts from happening.	Project site / Design and Operation Phase	Implemented

**Waste Management Implication**
**Construction Phase**

6.6.1.3	<u>Good Site Practices</u> Recommendations for good site practices during the construction phase include:	Construction Sites	
	<ul style="list-style-type: none"> <li>• Nomination of approved personnel, such as a site manager, to be responsible for good site practices, and making arrangements for collection of all wastes generated at the site and effective disposal to an appropriate facility;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>• Training of site personnel in proper waste management and chemical waste handling procedures;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>• Provision of sufficient waste reception/ disposal points, of a suitable vermin-proof design that minimises windblown litter;</li> </ul>		N/A
	<ul style="list-style-type: none"> <li>• Arrangement for regular collection of waste for transport off-site and final disposal;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>• Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>• Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors;</li> </ul>		N/A

**Construction of Yuen Long Effluent Polishing Plant Stage 1**

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status
6.6.1.5	<ul style="list-style-type: none"> <li>• A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be proposed; and</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>• A WMP should be prepared and should be submitted to the Engineer for approval. One may make reference to ETWB TCW No. 19/2005 for details.</li> </ul>		Implemented
	<p>Waste Reduction Measures Recommendations to achieve waste reduction include:</p>	Construction Sites	
	<ul style="list-style-type: none"> <li>• Segregate and store different types of construction related waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>• Provide separate labelled bins to segregate recyclable waste such as aluminium cans from other general refuse generated by the work force, and to encourage collection by individual collectors;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>• Any unused chemicals or those with remaining functional capacity shall be recycled;</li> </ul>		N/A
	<ul style="list-style-type: none"> <li>• Maximising the use of reusable steel formwork to reduce the amount of C&amp;D material;</li> </ul>		N/A
	<ul style="list-style-type: none"> <li>• Prior to disposal of C&amp;D waste, it is recommended that wood, steel and other metals shall be separated for re-use and / or recycling to minimise the quantity of waste to be disposed of to landfill;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>• Adopt proper storage and site practices to minimise the potential for damage to, or contamination of, construction materials;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>• Plan the delivery and stock of construction materials carefully to minimise the amount of surplus waste generated;</li> </ul>		N/A
	<ul style="list-style-type: none"> <li>• Adopt pre-cast construction method instead of cast-in-situ method for construction of concrete structures as much as possible; and</li> </ul>		N/A
<ul style="list-style-type: none"> <li>• Minimise over ordering of concrete, mortars and cement grout by doing careful check before ordering.</li> </ul>	N/A		
6.6.1.7	<p><u>Storage of Waste</u> Recommendations to minimise the impacts include:</p>	Construction Sites	
	<ul style="list-style-type: none"> <li>• Waste, such as soil, should be handled and stored well to ensure secure containment, thus minimising the potential of pollution;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>• Maintain and clean storage areas routinely;</li> </ul>		Implemented

**Construction of Yuen Long Effluent Polishing Plant Stage 1**

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status
	<ul style="list-style-type: none"> <li>• Stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away; and</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>• Different locations should be designated to stockpile each material to enhance reuse.</li> </ul>		Implemented
6.6.1.8	<p><u>Collection of Waste</u>Licensed waste haulers should be employed for the collection and transportation of waste generated. The following measures should be enforced to minimise the potential adverse impacts:</p> <ul style="list-style-type: none"> <li>• Remove waste in timely manner;</li> <li>• Waste collectors should only collect wastes prescribed by their permits;</li> <li>• Impacts during transportation, such as dust and odour, should be mitigated by the use of covered trucks or in enclosed containers;</li> <li>• Obtain relevant waste disposal permits from the appropriate authorities, in accordance with the WDO (Cap. 354), Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 345) and the Land (Miscellaneous Provisions) Ordinance (Cap. 28);</li> <li>• Waste should be disposed of at licensed waste disposal facilities; and</li> <li>• Maintain records of quantities of waste generated, recycled and disposed.</li> </ul>	Construction Sites	<p>Implemented</p> <p>Implemented</p> <p>Implemented</p> <p>Implemented</p> <p>Implemented</p> <p>Implemented</p>
6.6.1.10	<p><u>Transportation of Waste</u></p> <p>In order to monitor the disposal of C&amp;D materials at PFRFs and landfills and to control fly-tipping, a trip-ticket system should be established in accordance with DEVB TCW No. 6/2010. A recording system for the amount of waste generated, recycled and disposed, including the disposal sites, should also be set up. Warning signs should be put up to remind the designated disposal sites. CCTV should be installed at the vehicular entrance and exit of the site as additional measures to prevent fly-tipping.</p>	Transportation Route of Waste / Construction Phase	N/A

**Construction of Yuen Long Effluent Polishing Plant Stage 1**

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status
6.6.1.12	<p><u>Construction and Demolition Material</u>            Careful design, planning together with good site management can reduce over-ordering and generation of C&amp;D materials such as concrete, mortar and cement grouts. Formwork should be designed to maximize the use of standard wooden panels, so that high reuse levels can be achieved. Alternatives such as steel formwork or plastic facing should be considered to increase the potential for reuse</p>	Construction Sites	N/A
6.6.1.13	<p>The excavated material arising from site formation and foundation works should be reused on-site as backfilling material and for landscaping works as far as practicable. Other mitigation requirements are listed below:</p> <ul style="list-style-type: none"> <li>• A WMP, which becomes part of the EMP, should be prepared in accordance with ETWB TCW No.19/2005;</li> <li>• A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be adopted for easy tracking; and</li> <li>• In order to monitor the disposal of C&amp;D materials at public filling facilities and landfills and to control fly-tipping, a trip-ticket system should be adopted (refer to DEVB TCW 06/2010).</li> </ul>	Construction Sites	<p>Implemented</p> <p>N/A</p> <p>Implemented</p>
6.6.1.14	<p>It is recommended that specific areas should be provided by the Contractors for sorting and to provide temporary storage areas (if required) for the sorted materials. Control measures for temporary stockpiles on-site should be taken in order to minimise the noise, generation of dust and pollution of water. These measures include:</p> <ul style="list-style-type: none"> <li>• Surface of stockpiled soil should be regularly wetted with water especially during dry season;</li> <li>• Disturbance of stockpile soil should be minimised;</li> <li>• Stockpiled soil should be properly covered with tarpaulin especially when heavy storms are predicted; and</li> <li>• Stockpiling areas should be enclosed where space is available.</li> </ul>	Construction Sites	<p>Implemented</p> <p>Implemented</p> <p>Implemented</p> <p>Implemented</p>

**Construction of Yuen Long Effluent Polishing Plant Stage 1**

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status
6.6.1.15	The Contactor should prepare and implement an EMP in accordance with ETWB TCW No.19/2005, which describes the arrangements for avoidance, reuse, recovery, recycling, storage, collection, treatment and disposal of different categories of waste to be generated from construction activities. Such a management plan should incorporate site-specific factors, such as the designation of areas for segregation and temporary storage of reusable and recyclable materials. The EMP should be submitted to the Engineer for approval. The Contractor should implement waste management practices in the EMP throughout the construction stage of the Project. The EMP should be reviewed regularly and updated by the Contractor, preferably on a monthly basis.	Construction Sites	Implemented
6.6.1.16	The Contractor would be responsible for devising a system to work for on-site sorting of C&D materials and promptly removing all sorted and process materials arising from the construction activities to minimise temporary stockpiling on-site. The system should be included in the EMP identifying the source of generation, estimated quantity, arrangement for on-site sorting, collection, temporary storage areas and frequency of collection by recycling Contractors or frequency of removal off-site.	Construction Sites	Implemented
6.6.1.17 – 6.6.1.18	The sediment should be excavated, handled, transported and disposed of in a manner that would minimise adverse environmental impacts. To minimise sediment disposal, it is proposed to reuse the Type 1 sediment generated (e.g. as backfilling materials) as far as possible. Requirements of the Air Pollution Control (Construction Dust) Regulation, where relevant, shall be adhered to during excavation, transportation and disposal of the sediment.	Construction Sites	N/A
6.6.1.19	Workers shall, if necessary, wear appropriate personal protective equipments (PPE) when handling contaminated sediments. Adequate washing and cleaning facilities shall also be provided on site.	Construction Sites	N/A
6.6.1.20	For off-site disposal, the basic requirements and procedures specified under ETWB TC(W) No. 34/2002 shall be followed.	Transportation Route of Waste / Construction Phase	N/A
6.6.1.24	Stockpiling of contaminated sediments should be avoided as far as possible. If temporary stockpiling of contaminated sediments is necessary, the excavated sediment should be covered by tarpaulin and the area should be placed within earth bunds or sand bags to prevent leachate from entering the ground, nearby drains and surrounding water bodies. The stockpiles should be completely paved or covered by linings in order to avoid contamination to underlying soil or groundwater. Separate and clearly defined areas should be provided for stockpiling of contaminated and uncontaminated materials. Leachate, if any, should be collected and discharged according to the Water Pollution Control Ordinance (WPCO).	Construction Sites	N/A

**Construction of Yuen Long Effluent Polishing Plant Stage 1**

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status
6.6.1.25	In order to minimise the potential odour / dust emissions during excavation and transportation of the sediment, the excavated sediments shall be wetted during excavation / material handling and shall be properly covered when placed on trucks or barges. Loading of the excavated sediment to the barge shall be controlled to avoid splashing and overflowing of the sediment slurry to the surrounding water.	Construction sites & transportation route of waste / Construction phase	N/A
6.6.1.26	The barge transporting the sediments to the designated disposal sites shall be equipped with tight fitting seals to prevent leakage and shall not be filled to a level that would cause overflow of materials or laden water during loading or transportation. In addition, monitoring of the barge loading shall be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels shall be equipped with automatic self-monitoring devices as specified by the DEP.	Transportation route of waste / Construction phase	N/A
6.6.1.27	Suitable containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor shall employ a licensed collector to transport and dispose of the chemical wastes, to the licensed CWTC, or other licensed facilities, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.	Construction and Operation Phases	N/A
6.6.1.28	It is recommended to place clearly labelled recycling bins at designated locations with convenient access. Other general refuse should be separated from chemical and industrial waste by providing separated bins or skips for storage to maximise the recyclable volume. A reputable licensed waste collector should be employed to remove general refuse on a daily basis to minimise odour, pest and litter impacts.	Construction and Operation Phases	Implemented
6.6.1.29	Should buildings are found with potential ACM, sufficient and reasonable lead time shall be allowed for preparation, vetting and implementation of Asbestos Investigation Report and Asbestos Abatement Plan in accordance with Air Pollution Control Ordinance before commencement of any demolition or site clearance work.	Demolition	N/A
<b>Land Contamination</b>			

**Construction of Yuen Long Effluent Polishing Plant Stage 1**

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status
7.8.1.2 - 7.8.1.3;7.8.2.1	<p>Prior to the commencement of the SI works, a review of the Contamination Assessment Plan (CAP) should be conducted to confirm whether the proposed SI works (e.g. sampling locations, testing parameters etc.) are still valid. Supplementary CAP(s), presenting findings of the review, the latest site conditions and updated sampling strategy and testing protocol, should be submitted to EPD for endorsement. The SI works should be carried out according to EPD's agreed supplementary CAP(s). SI works should be carried out according to the supplementary CAP endorsed by EPD. Following completion of SI works and receipt of laboratory test results, Contamination Assessment Report(s) ((CAR)(s)) should be prepared to present the findings of the SI works and to discuss the presence, nature and extent of contamination. If contamination is identified, Remedial Action Plan(s) ((RAP)(s)) which provides details of the remedial actions for the identified contaminated soil and / or groundwater should be endorsed by EPD. The possible remediation methods are detailed in Section 5.2 of the CAP provided in Appendix 7.1 of the EIA Report. Remediation action, if necessary, will be carried out according to EPD endorsed RAP(s) and Remediation Report(s) (RR(s)) will be submitted after completion of the remediation action. The RR(s) should be endorsed by EPD prior to the commencement of construction works at the respective identified contaminated areas (if any).</p>	Existing YLSTW /Construction Phase (after decommissioning of the concerned facilities / areas but prior to the construction works at the concerned facilities / areas)	Implemented
7.8.3.1	<p>The mitigation measures will be recommended in the RAP and would typically include the following:</p> <ul style="list-style-type: none"> <li>• Excavation profiles must be properly designed and executed with attention to the relevant requirements for environment, health and safety;</li> <li>• Excavation shall be carried out during dry season as far as possible to minimise contaminated runoff from contaminated soils; Supply of suitable clean backfill material (or treated soil) after excavation;</li> <li>• Stockpiling site(s) shall be lined with impermeable sheeting and bunded. Stockpiles shall be fully covered by impermeable sheeting to reduce dust emission. If this is not practicable due to frequent usage, regular watering shall be applied. However, watering shall be avoided on stockpiles of contaminated soil to minimise contaminated runoff.</li> <li>• Vehicles containing any excavated materials shall be suitably covered to limit potential dust emissions or contaminated wastewater run-off, and truck bodies and tailgates shall be sealed to prevent any discharge during transport or during wet conditions;</li> <li>• Speed control for the trucks carrying contaminated materials shall be enforced;</li> </ul>	Project Site / Construction Phase	<p>Implemented</p> <p>N/A</p> <p>Implemented</p> <p>N/A</p> <p>N/A</p>

**Construction of Yuen Long Effluent Polishing Plant Stage 1**

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status
	<ul style="list-style-type: none"> <li>• Vehicle wheel and body washing facilities at the site's exist points shall be established and used; and</li> <li>• Pollution control measures for air emissions (e.g. from biopile blower and handling of cement), noise emissions (e.g. from blower or earthmoving equipment), and water discharges (e.g. runoff control from treatment facility) shall be implemented and complied with relevant regulations and guidelines.</li> </ul>		N/A
			N/A
<b>Ecological Impact (Terrestrial and Aquatic)</b>			
<b>Construction Phase</b>			
8.10.2.1	<u>Avoidance of Recognised Site of Conservation Importance</u> Construction works are designed to be confined to the boundary of the existing YLSTW that direct impacts on all other sites of conservation importance within the assessment area, including the Ramsar Site, Priority Site, WCA, WBA, SSSI and CA would be avoided.	Project site / Construction Phase	Implemented
8.10.2.3 – 8.10.2.4	<u>Avoidance of Demolition Works Using Breakers Mounted on Excavators and Percussive Piling during Dry Season</u> In order to minimise the construction noise disturbance on overwintering waterbirds, the noisy construction works, i.e. all percussive piling works and demolition using breakers mounted on excavators, would therefore be scheduled outside the dry season (i.e. November to March, which is the peak overwintering period of waterbirds).	Construction sites / Construction Phase	Implemented
8.10.2.5	<u>Restriction of Construction Hours</u> No construction activities with the use of PME should be conducted within 100m from any night roost confirmed by the pre-construction survey after 18:00 during wet season and 17:30 during dry season to avoid disturbance to the nearby ardeids night roosts.	Construction sites / Construction Phase	Implemented
8.10.3.2 – 8.10.3.3	<u>Minimising Construction Noise Disturbance Impacts through Consideration of Alternative Construction Methods</u> Demolition using concrete crusher is quieter than demolition using breaker that its construction noise level is comparable to other general construction activities and concrete crusher would be used for demolition works to be undertaken during dry season months. The quieter foundation methods, including bored piling, raft foundation and shallow foundation, would be adopted as far as possible.	Construction sites / Construction Phase	Implemented



**Construction of Yuen Long Effluent Polishing Plant Stage 1**

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status
8.10.3.4 – 8.10.3.5	<p><u>Minimising Construction Noise Disturbance Impacts Through Careful Phasing of Construction Activities</u>                      Percussive piling works and demolition using breakers mounted on excavators would typically be completed over two wet seasons and not be undertaken in the same construction zone at the same time to localise the construction disturbance and to reduce the duration of high level of disturbances on sensitive wetland habitats and associated waterbirds nearby each construction zone.</p> <p>Facilities in the eastern side of the Project site (i.e. Phase 1A and Phase 1B) are scheduled to be developed first that the new structures could screen the works in the middle and western parts of the site in later stage of the construction phase after the structures in Phase 1A and Phase 1B are completed, hence minimising the construction noise and human disturbance on sensitive wetland habitats adjacent to the Project site in Shan Pui River, including the confluence of Shan Pui River and Kam Tin River and ardeid night roost to the immediate east of the Project site.</p>	Project site / Construction Phase	Implemented
8.10.3.6 – 8.10.3.8	<p><u>Minimising Construction Noise Disturbance Impacts through Use of Noise Barriers</u>                      Noise barriers with absorptive materials of about 4m high will be erected along the northern, eastern and western sides of the site, throughout the construction phase to screen the construction noise and human disturbance to the waterbirds foraging in ponds in Fung Lok Wai and Shan Pui River during construction phase.</p> <p>Adequate noise barriers should also be provided for demolition works using breakers mounted on excavators and percussive piling works, to further minimise the construction noise disturbance from these construction activities. Movable noise barriers should be provided to breaker mounted on excavator used for demolition works as discussed in Section 4.8 and acoustic mat should be provided to the piling plants around the rig.</p> <p>The contractor should provide enclosure for construction equipment, especially static plants, as appropriate to minimise the noise disturbance as far as practicable.</p>	Construction sites / Construction Phase	Implemented

**Construction of Yuen Long Effluent Polishing Plant Stage 1**

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status
8.10.3.9	<u>Use of Quality Powered Mechanical Equipment</u> The contractor should source QPMEs for construction as far as practicable to further minimise the overall construction noise and other disturbance to the nearby wetland habitats and associated waterbirds to the maximum practical extent.	Construction sites / Construction Phase	Implemented
<b>Ecology &amp; Fisheries Impact</b>			
8.12.1.4, 9.7	Groundwater observation wells and recharge wells will be provided at the northern and western side of the site. Groundwater table will be closely monitored at the observation well. In case of any unlikely events of abnormal drawdown of groundwater table near the excavation area, groundwater dewatering will stop and water will be pumped into the recharge wells to recover the normal groundwater table as necessary.	Construction Phase	N/A
<b>Fisheries Impact</b>			
9.7	The implementation of good site practices during construction could minimise the potential water quality impacts from the land-based construction works. Mitigation measures recommended in the Water Quality Impact Assessment (Section 5) for controlling water quality impact would also serve to protect fisheries resources and activities from indirect impacts.	Construction and Operation Phase	N/A
<b>Landscape and Visual Impact</b>			
Table 10.11	<u>Preservation of Existing Vegetation (CM1)</u> All the existing Trees to be retained and not to be affected by the Project shall be carefully protected during construction accordance with DEVB TCW No. 7/2015 - Tree Preservation and the latest Guidelines on Tree Preservation during Development issued by GLTM Section of DevB. Any existing vegetation in landscaped areas and natural terrain not to be affected by the Project shall be carefully preserved.	Project site / Construction Phase	Implemented
Table 10.11	<u>Transplanting of Affected Trees (CM2)</u> Trees unavoidably affected by the works shall be transplanted as far as possible in accordance with DEVB TCW No. 7/2015 - Tree Preservation and the latest Guidelines on Tree Transplanting issued by GLTM Section of DevB.	Project site / Construction Phase	Implemented

**Construction of Yuen Long Effluent Polishing Plant Stage 1**

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status
Table 10.11	<p><u>Compensatory Tree Planting (CM3)</u> Any trees to be felled under the Project shall be compensated in accordance with DEVB TCW No. 7/2015 - Tree Preservation. For trees to be compensated on slopes, the guidelines for tree planting stipulated in GEO Publication No. 1/2011 will be followed.</p>	Project site / Construction Phase	N/A
Table 10.11	<p><u>Control of Night-time Lighting Glare (CM4)</u> All the night time lighting shall be avoided except for safety purpose. No light glare shall illuminate directly outside the site.</p>	Project site / Construction Phase	Implemented
Table 10.11	<p><u>Erection of Decorative Screen Hoarding (CM5)</u> Site hoardings, if any, shall be painted in dull green colour</p>	Project site / Construction Phase	Implemented
Table 10.11	<p><u>Management of Construction Activities and Facilities (CM6)</u> Construction activities shall be well scheduled and avoid powered mechanical equipment's operating simultaneously. All stockpiling areas and idled area shall be covered by tarpaulin sheet or hydroseeded as far as possible.</p>	Project site / Construction Phase	Implemented
<b>Hazard to Life</b>			
<b>Construction Phase</b>			
11.5.6.9-11.5.6.12	<ul style="list-style-type: none"> <li>• Implementation of those major construction works and movement of plants and vehicles would be stringently controlled to have a setback of at least 15m clear distance, or physical barrier with an empty digester / gas holder from the digesters / gas holders in operation;</li> <li>• For those construction works to be carried out in close proximity to the 15m zone from digesters / gas holders in operation, the height of plants for those major construction shall be limited to 15m such that the plants would not damage digesters /gas holders in such incident as plant collapse or overturning;</li> <li>• Whenever practicable, the construction sequence shall be arranged with empty unit(s) for separating the major construction works from these digesters / gas holders in use; and</li> </ul>	Project site / Construction Phase	<p>N/A</p> <hr/> <p>N/A</p> <hr/> <p>N/A</p>

**Construction of Yuen Long Effluent Polishing Plant Stage 1**

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status
	<ul style="list-style-type: none"> <li>Physical barriers such as concrete blocks shall be set up at the 15m zone in order to avoid those construction plants or vehicles from colliding to the digester / gas holder units in use.</li> </ul>		N/A
11.5.8	<ul style="list-style-type: none"> <li>Method statements and risk assessments shall be prepared and safety control measures shall be in place before commencement of work</li> </ul>	Project site / Construction Phase	Implemented
	<ul style="list-style-type: none"> <li>All work procedures shall be complied with the operating plant procedures or guidelines and regulatory requirements;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Work permit system, on-site pre-work risk assessment and emergency response procedure shall be in place before commencement of work;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>All construction workers shall equip with appropriate personal protective equipment (PPE) when working at the Project Site;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Safety training and briefings shall be provided to all construction workers;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Regular site safety inspections shall be conducted during the construction phase of the Project;</li> </ul>		Implemented
11.9.1.2	<ul style="list-style-type: none"> <li>Ensure speed limit enforcement is specified in the contractor's method statement to limit the speed of construction vehicles onsite;</li> </ul>	Project site / ConstructionPhase	Implemented
	<ul style="list-style-type: none"> <li>Conduct speed checks to ensure enforcement of speed limits and to ensure adequate site access control;</li> </ul>		N/A
	<ul style="list-style-type: none"> <li>A lifting plan, with detailed risk assessment, should be prepared and endorsed for heavy lifting of large equipment;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Vehicle crash barriers should be provided between the construction site and the operating biogas facilities;</li> </ul>		N/A
	<ul style="list-style-type: none"> <li>Ensure that a hazardous are classification study is conducted and hazardous area maps are updated before the start of the construction activities to ensure ignition sources are controlled during both construction and operation phases;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Ensure work permit system for hot work activities within the Project Site is specified in the contractor's method statement to minimize and control the ignition sources during the construction phase;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Ensure effective communication system / protocol is in place between the contractors and the operation staff;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Ensure the Project Construction Emergency Response Plan is integrated with the Emergency Response Plan for the YLEPP during construction phase. The plan should address stop work instructions to be promptly communicated to all construction workers performing hot works in case a confirmed biogas detection at the Project Site;</li> </ul>		N/A

**Construction of Yuen Long Effluent Polishing Plant Stage 1**

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status
	• Ensure that the construction activities do not impede the functions of fire and gas detection system, fire protection system, muster areas, fire-fighting vehicle access and escape routes;		N/A
	• Ensure a Job Safety Analysis is conducted for construction activities of the Project during the construction phase, to identify and analyze hazards associated with the construction activities (e.g. lifting operations by cranes) onto the operating biogas facilities.		Implemented
	Potential risks of the construction activities shall be assessed, and risk precautionary measures shall be implemented in Contractor's works procedures.		Implemented

Note:

Implementation status: Implemented / Partially Implemented / Not Implemented / Not Applicable (N/A)

Sources / reference of the Implementation Status: Appendix B of EIA Report, AEIAR-220/2019

# Appendix H

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Cumulative statistics on Environmental Complaints,  
Notifications of Summons and Successful Prosecutions

### Environmental Complaints Log

Reference No.	Date of Complaint Received	Received From	Received By	Nature of Complaint	Date of Investigation	Outcome	Date of Reply

### Cumulative Statistics on Complaints

Environmental Parameters	Cumulative No. Brought Forward	No. of Complaints This Month	Cumulative Project-to-Date
Air	0	0	0
Noise	0	0	0
Water	0	0	0
Waste	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>

### Cumulative Statistics on Notification of Summons and Successful Prosecutions

Environmental Parameters	Cumulative No. Brought Forward	No. of Notification of Summons and Prosecutions This Month	Cumulative Project-to-Date
Air	0	0	0
Noise	0	0	0
Water	0	0	0
Waste	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>