Bestwise - SFK Joint Venture

Contract No. DE/2018/17 Enhancement of Deodourisation System at Stonecutters Island Sewage Treatment Works

Quarterly Environmental Monitoring and Audit Report June to August 2020

(Version 1.0)

Certified By

(Environmental Team Leader)

REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

WELLAB accepts no responsibility for changes made to this report by third parties

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Submission of 4th Quarterly EM&A Report for June to August 2020 (v1.0)

7 October 2020

By Post

Dear Sir,

We refer to the captioned Quarterly EM&A Report for June to August 2020 (v1.0) received on 5 October 2020 and confirm that we have no comment.

Yours faithfully

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ABBREVIATION AND ACRONYM

AL Levels Action and Limit Levels

DSD Drainage Services Department

E / ER Engineer/Engineer's Representative

EIA Environmental Impact Assessment

EM&A Environmental Monitoring and Audit

EMIS Environmental Mitigation Implementation Schedule

EP Environmental Permit

EPD Environmental Protection Department

ET Environmental Team

HVS High Volume Sampler

IEC Independent Environmental Checker

RE Resident Engineer

RH Relative Humidity

QA/QC Quality Assurance / Quality Control

SLM Sound Level Meter

WMP Waste Management Plan

SCISTW Stonecutters Island Sewage Treatment Works

HATS Stage 2A Harbour Area Treatment Scheme Stage 2A

BSJV Bestwise - SFK Joint Venture

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EXECUTIVE SUMMARY

Introduction

- 1. This is the 4th Quarterly Environmental Monitoring and Audit (EM&A) Report prepared by Wellab Limited for DSD Contract No. DE/2018/17 "Enhancement of Deodourisation System at SCISTW" (The Project) which documents the key information of EM&A and environmental monitoring works undertaken at the SCISTW under HATS Stage 2A Environmental Permit (Permit No. EP-322/2008/G).
- 2. The site activities undertaken in the reporting quarter included: June 2020:

DOU1

- Completion of pile head installation and laying of uPVC below pile cap and blinding layer
- Completion of pile cap on 10 June 2020

DOU1R

- Completion of pile cap
- Completion of plinth on 10 June 2020

DOU₂

- Drilling work of TAM grouting works at DOU2 with mobilization of two rigs completed
- Plate load test for DOU2 MCC room commenced
- Completion of TAM grouting work on 5 June 2020, site clearance for remobilization of piling rig for construction of remaining five piles

DOU4

- Completion of pile head installation, laying of uPVC ducts and blinding layer on 2 June 2020
- Delivery of OD315 HDPE pipes and fitting on 9 June 2020

DOU5

- Completion of pile load test on DOU5A-P5
- Completion of proof drilling work at DOU5B-P2
- Pile cap excavation at DOU5 PS
- Completion of pile head installation (12 nos.)
- Trial run of new kerb alignment at DOU5 on 8 June 2020

E&M

- Isolation Device for Effluent Drop Shaft
 - Smoke Test Completion (PST No. 52/54, 51/53, 47/49, 48/50)
 - Installation (PST No.47/49, 48/50, 51/53, 52/54, 9/11, 17/19, 22/24)
 - Concrete repairing
 - PST No. 13/15, 25/27, 29/31, 39/41, 14/16, 18/20, 44/46 (completed)
- Sealant Installation
 - PST25/27 PST52/54, FT5, FT6, MDC (completed)
- Deodourisation System of DOU1R
 - Transportation

- DOU System and FRP air duct
 - Fabrication
- MgO Impregnated Activated Carbon
 - 45.5 ton delivered on site
 - 5.1 ton used in SCISTW

July 2020:

DOU1R

Completion of plinth construction at DOU1

DOU1R

• Complete of bund wall for chemical compound of DOU1R

DOU₂

• Completed pile excavation of DOU2A-P1 on 29 July 2020, steel pile installation in progress. Drilling pile excavation of DOU2A-P5

DOU4

Construction of MCC room, plinth and bund wall complete on 29 July 2020

DOU5

• MCC Room construction at DOU5 PS in progress

<u>E&M</u>

- Isolation Device for Effluent Drop Shaft
 - •Smoke Test Completed (PST No. 52/54, 51/53, 47/49, 48/50)
 - •Installation (PST No.47/49, 48/50, 51/53, 52/54, 9/11, 17/19, 22/24)
 - •Concrete repairing
 - PST No. 13/15, 14/16, 18/20, 21/23, 25/27, 29/31, 35/37, 39/41, 40/42, 43/45, 44/46 (completed)
- Sealant Installation
 - PST8/10 PST52/54, FT5, FT6, MDC (completed)
- Deodourisation System of DOU1R
 - Transportation
- DOU System and FRP air duct
 - Fabrication
- MgO Impregnated Activated Carbon
 - •45.5 ton delivered on site
 - •5.1 ton used in SCISTW

August 2020:

DOU1

• Completion of plinth construction at DOU1

DOU1R

• Complete of bund wall for chemical compound of DOU1R

DOU₂

- Steel pile installation in progress.
- Drilling pile excavation of DOU2A-P5.

DOU₄

Construction of MCC room

DOU5

• MCC Room construction at DOU5 PS in progress

E&M

- Isolation Device for Effluent Drop Shaft
 - Installation (PST No.47/49, 48/50, 51/53, 52/54, 9/11, 17/19, 22/24)
- Deodourisation System of DOU1R
 - Transportation
- DOU System and FRP air duct
 - Fabrication
- MgO Impregnated Activated Carbon
 - 45.5 ton delivered on site
 - 5.1 ton used in SCISTW

Environmental Monitoring Works

- 3. The environmental monitoring works of the Project were conducted by the ET for Contract DC/2009/10, at the SCISTW under HATS 2A with the same Environmental Permit. All the environmental monitoring works were conducted in accordance with the EM&A Manual. The monitoring results were checked and reviewed. Site audits were conducted once per week. The implementation of the environmental mitigation measures, Event Action Plans and environmental complaint handling procedures were also checked.
- 4. Summary of the non-compliance of the reporting quarter is tabulated in **Table I**.

Table I Summary Table for Non-compliance Recorded in the Reporting Quarter

| Monitored | Monitoring Station Pa | Parameter | No. of Exceedance | | No. of Exceedance Due to the Project | | Action |
|------------|--------------------------|-----------|----------------------|----------------|---|----------------|--------|
| Ву | | | Action Level | Limit Level | Action Level | Limit Level | Taken |
| | AM6a | 1-hr TSP | 0 | 0 | 0 | 0 | N/A |
| | | 24-hr TSP | 0 | 0 | 0 | 0 | N/A |
| DC/2009/10 | NM5 | Noise | 0 | 0 | 0 | 0 | N/A |
| | NM6 | Noise | 0 | 0 | 0 | 0 | N/A |
| BC/2009/10 | AM7 | 1-hr TSP | 0 | 0 | 0 | 0 | N/A |
| | | 24-hr TSP | 0 | 0 | 0 | 0 | N/A |
| | AM8 | 1-hr TSP | 0 | 0 | 0 | 0 | N/A |
| | | 24-hr TSP | 0 | 0 | 0 | 0 | N/A |

1-hour TSP Monitoring

5. All 1-hour TSP monitoring was conducted as scheduled in the reporting quarter. No Action/Limit Level exceedance was recorded.

24-hour TSP Monitoring

6. All 24-hour TSP monitoring was conducted as scheduled in the reporting quarter. No Action/Limit Level exceedance was recorded.

Construction Noise

7. All construction noise monitoring was conducted as scheduled in the reporting quarter. No Action/Limit Level exceedance was recorded.

Environmental Licenses and Permits

8. Licenses/Permits granted to the Project include the Environmental Permit (EP); Billing account for Disposal of Construction Waste, Registered as Chemical Waste Producer and Construction Noise Permits.

Environmental Mitigation Implementation Schedule

9. According to the EIA Report Section 3.74, 4.56 and 13.44, air quality, noise and landscape and visual would be the key environmental issues and mitigation measures shall be implemented during the construction phase. Details of the implementation of mitigation measures are provided in the **Appendix G**.

Key Information in the Reporting Quarter

10. Summary of key information in the reporting quarter is tabulated in **Table II**.

Table II Summary Table for Key Information in the Reporting Quarter

| Event | | Event Details | Action | Status | Remark |
|--|--------|---|-----------------------------------|---------------|--------|
| Event | Number | Nature | Taken | Status | Kemark |
| Complaint received | 0 | | N/A | N/A | |
| Status of submissions covering the reporting quarter | 3 | Monthly EM&A Reports from May, June and July 2020 | Submitted to IEC for verification | No Comment | |
| Notifications of any summons & prosecutions received | 0 | | N/A | N/A | |

Summary of Complaints and Prosecutions

- 11. No environmental complaint and prosecution was received for the Project in the reporting quarter.
- 12. There were no environmental complaint and prosecution received since the commencement of the Project. The Complaint Log is presented in **Appendix H.**
- 13. The environmental concerns in the coming months are mainly on construction waste, chemical and general refuse storage; dust generated from the excavated dusty materials.

1. INTRODUCTION

Background

- 1.1 The Project 'Enhancement of Deodourisation System at SCISTW' under Contract No: DE/2018/17 mainly comprises the following major works:
 - Construction of foundation for enhanced deodourisation system;
 - Design, supply, installation, testing and commissioning of enhanced deodourisation systems and associated accessories;
 - Enhancement of isolation devices at chemically enhanced primary treatment (CEPT) tanks;
 - Modification of air ducts at CEPT tanks;
 - Enhancement of sealing performance of existing covers for CEPT tanks; and
 - Any associated works as necessary to complete the above items.
- 1.2 The general location plan of the Project is shown in **Figure 1**.
- 1.3 The Project is under Harbour Area Treatment Scheme (HATS) Stage 2A and is a designated project with Register No.: AEIAR-121/2008. The current works under the Project at SCISTW for HATS 2A are covered by the Environmental Permit (Permit No. EP-322/2008/G), which was issued on 9th May 2014 by the Environmental Protection Department (hereinafter called EPD) to the Drainage Services Department (hereinafter called the DSD) as the Permit Holder.
- 1.4 The environmental monitoring works in the Project were covered by the ET for the Contract: DC/2009/10.
- 1.5 Bestwise SFK Joint Venture (hereafter called the BSJV) was commissioned by the DSD to undertake the construction of the Contract No. DE/2018/17 "Enhancement of Deodourisation System at SCISTW". The date of commencement of construction of the Project is 9th July 2019.
- 1.6 Wellab Limited was commissioned by BSJV to undertake the Environmental Monitoring and Audit (EM&A) works for the project and was appointed as the Environmental Team (ET) of the Project under Condition 2.1 of the EP. The date of commencement of EM&A works is 2nd September 2019. The Project cover the environmental monitoring works at monitoring stations AM6a, AM7, AM8, NM5 and NM6.
- 1.7 This is the 4th quarterly EM&A report summarizing the EM&A works conducted for the Project in June to August 2020.

Project Organizations

1.8 The contacts of the Project are shown in **Table 1.1** and the organization chart of ET for Contract is shown in **Figure 2**.

| Table 1.1 Key Project Contacts |
|--------------------------------|
|--------------------------------|

| Party | Role | Name | Position | Phone No. |
|--|-------------------------|--------------------|--------------------------------------|-----------|
| Ove Arup & Partners Hong | Project Management's | Mr. Edmund Chow | Senior Resident Engineer | 2370 4311 |
| Kong Ltd | Representative | Mr. Kevin Cheung | ER's Coordinator | 3925 6506 |
| Wellab | Environmental | Dr. Priscilla Choy | ET Leader | 2151 2089 |
| Wenab | Team | Mr. Howard Chan | Project Coordinator | 2151 2073 |
| Mott Independent Environmental Checker | | Dr. Anne Kerr | Independent Environmental Checker | 2828 5757 |
| Bestwise – | nt Contractor | Mr. Ken Chan | Site Agent | 2620 0070 |
| SFK Joint Venture | | Mr. Leo Leung | Environmental Officer | 2620 0070 |

Summary of EM&A Requirements

- 1.9 The EM&A programme requires construction phase monitoring for air quality and construction noise, landscape and visual and environmental site audit. The EM&A requirements for each parameter are described in the following sections, including:
 - All monitoring parameters;
 - Action and Limit levels for all environmental parameters;
 - Event Action Plans;
 - Environmental mitigation measures, as recommended in the project EIA study final report; and
 - Environmental requirements in contract documents.
- 1.10 The advice on the implementation status of environmental protection and pollution control/mitigation measures is summarized in **Section 4** of this report.
- 1.11 This report presents the monitoring results, observations, locations, equipment, period, for required monitoring parameter namely air quality, noise and audit works conducted for the Project for June to August 2020.

2. AIR QUALITY

Monitoring Requirements

2.1 1-hour and 24-hour TSP monitoring were conducted to monitor the air quality. **Appendix A** shows the established Action/Limit Levels for the environmental monitoring works.

Monitoring Locations

2.2 Three designated monitoring stations, AM6a, AM7 and AM8 were selected for impact dust monitoring for the Project. **Table 2.1** describes the air quality monitoring locations, which are also depicted in **Figure 1**.

Table 2.1 Locations for Air Quality Monitoring

| Monitoring Station | Monitored by Location of Measurement | | |
|--------------------|--------------------------------------|---|--|
| AM6a | | Works site boundary | |
| AM7 | DC/2009/10 | North West Kowloon Sewage Pumping Station | |
| AM8 | | Block A of Government Dockyard | |

Monitoring Parameters, Frequency and Duration

2.3 **Table 2.2** summarizes the monitoring parameters and frequencies of impact dust monitoring for the whole construction period. The air quality monitoring schedule for the reporting period could be referred in **Appendix C** in the monthly reports for the Contract DC/2009/10.

Table 2.2 Impact Dust Monitoring Parameters, Frequency and Duration

| Monitoring Station | Parameter | Period | Frequency |
|--------------------|-------------|---------------|-----------------------|
| All monitoring | 1-hour TSP | 0700-1900 hrs | 3 times/ every 6 days |
| locations | 24-hour TSP | 0000-2400 hrs | once in every 6 days |

Monitoring Methodology and QA/QC Procedure

- 2.4 The monitoring methodology and QA/QC procedures are presented in Section 2.5 2.15 of monthly report of Contract DC/2009/10.
- 2.5 The general weather conditions (i.e. sunny, cloudy or rainy) were recorded by the field staff's observation on the monitoring day.

Results and Observations

- 2.6 All 1-hour and 24-hour TSP monitoring was conducted as scheduled in the reporting quarter. No Action/Limit Level exceedance was recorded. Summary of exceedance is presented in **Appendix B**.
- 2.7 The graphical plots of the 1-hour and 24-hour TSP monitoring results are shown in **Appendix C**.
- 2.8 According to field observations during site inspection, the identified dust sources at the monitoring stations were mainly from loading of material, vehicles movement, dust generation from the excavated dusty materials and construction works of other Contract and this Contract in the site.

3. NOISE

Monitoring Requirements

3.1 Two noise monitoring stations, namely NM5 and NM6 was designated in the EM&A Manual for impact monitoring. **Appendix A** shows the established Action and Limit Levels for the environmental monitoring works.

Monitoring Locations

3.2 Noise monitoring was conducted at two designated monitoring stations as listed in **Table 3.1.**

Table 3.1 Location of Noise Monitoring Stations

| Monitoring Station | Monitored By | Location of Measurement |
|--------------------|--------------|--|
| NM5 | | Near FSD Diving Rescue and Training Centre |
| NM6 | DC/2009/10 | Customs' Marine Base (Block H of Government Dockyard) Rooftop |

Monitoring Parameters, Frequency and Duration

3.3 **Table 3.2** summarizes the monitoring parameters, frequency and total duration of monitoring. The noise monitoring schedule for the reporting period could be referred in **Appendix C** in the monthly reports for the Contract DC/2009/10.

Table 3.2 Noise Monitoring Parameters, Frequency and Duration

| Monitoring Stations | Parameter | Period | Frequency |
|------------------------|------------------------------------|-------------------------------|---|
| NM5 | L _{eq} (30 min.) dB(A) | 0700-1900 hrs. on weekdays | Weekly |
| NM6 | L _{eq} (5 min.) dB(A) | During restricted hours | Weekly Monitoring to be conducted during the construction works |

Monitoring Methodology and QA/QC Procedures

3.4 The monitoring methodology and QA/QC procedure could be referring to Section 3 of the monthly report for Contract DC/2009/10.

Results and Observations

- 3.5 The construction noise monitoring at the designated location was conducted by the ET of Contract DC/2009/10 as scheduled in the reporting quarter. The Graphical presentation of the noise monitoring result was shown in **Appendix D**.
- 3.6 No Action/Limit Level exceedance was recorded in the reporting quarter. Summary of exceedance is presented in **Appendix B.**
- 3.7 The major noise sources identified at the designated noise monitoring stations were generated by on-site vehicle movement and construction equipment from the Project, as well as construction activities from other and this Contract in Stonecutter Island STW.

4. ENVIRONMENTAL AUDIT

Site Audits

- 4.1 Site audits were carried out on a weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site.
- 4.2 13 environmental site audits were conducted by ET and 3 IEC site audits were conducted for the Project in reporting quarter. No non-compliance was observed during the site audits.
- 4.3 Site inspections were undertaken to ensure and check that the implementation and maintenance of landscape and visual mitigation measures are being properly carried out in the reporting quarter in accordance to section 14.1 of the EM&A Manual. No non-compliance was observed during the site inspections.

Review of Environmental Monitoring Procedures

4.4 The monitoring works were conducted by the monitoring teams of Contract DC/2009/10. The monitoring procedures have been reviewed monthly.

Status of Environmental Licensing and Permitting

4.5 All permits/licenses obtained for the Contract DC/2009/10 are summarized in **Table 4.1**.

 Table 4.1
 Summary of Environmental Licensing and Permit Status

| Reference | Valid | Period | Details | Status | |
|------------------------------------|---------------|---------------|--|--------|--|
| Number | From | To | Details | Status | |
| Water Dischar | ge License | | | | |
| WT00035198- 2019 | 15/1/2020 | 31/1/2025 | The application was approved on 15-1-2020. | Valid | |
| Registered Chemical Waste Producer | | | | | |
| WPN5213-269- B2565-01 | N/A | N/A | The application was approved on 14-8-2019. | Valid | |
| Billing Accoun | it for Dispos | al of Constru | iction Waste | | |
| CSW03680 | 6/8/2019 | N/A | The application was approved on 6-8-2019. | Valid | |
| Notification of | Works Und | er APCO | | | |
| 447348 | N/A | N/A | Notice form received by EPD on 17-7-2019. | N/A | |
| Construction Noise Permit | | | | | |
| GW- RW0092-20 | 27/03/2020 | 26/09/2020 | The application was approved on 13-3-2020 | Valid | |

Waste Management Status

4.6 The amount of Inert and Non Inert wastes generated by the construction activities of the Project in the reporting quarter is summarized in the waste flow table as shown in **Appendix E.**

Implementation Status of Environmental Mitigation Measures

- 4.7 Details of the implementation of mitigation measures are provided in the **Appendix G**.
- 4.8 During the weekly environmental site inspections in the reporting period, no non-conformance was identified. The observations of the site audit for the Projects are summarized in **Table 4.2a-c.**

Table 4.2a: Observations and Recommendations of Site Audits (June 2020)

| Parameters | Ref. Number | Observations | Follow Up Action |
|---------------------------|----------------|--|--|
| Water Quality | N/A | There was no observation in the reporting month. | N/A |
| | 200528-R01 | NRMM label should be displaced constantly. | The equipment was removed. |
| Air Quality 200624-R01 | | No NRMM label was observed on the excavator. Contractor was reminded to replace the label. | Item was remarked as 200702-R01. |
| | 200528-R02 | | Construction waste was disposed of properly. |
| Waste/ Chemical | 200604-R01 | Construction waste should be disposed of properly. | Item was remarked as 200611-R01. |
| Management | 200611-R01 | | Construction waste was disposed of properly. |
| | 200624-R02 | General refuse should be disposed of properly. | Item was remarked as 200702-R02. |
| Landscape and Visual | N/A | There was no observation in the reporting month. | N/A |
| Noise | N/A | There was no observation in the reporting month. | N/A |
| Permit/ Licenses | N/A | There was no observation in the reporting month. | N/A |

Table 4.2b: Observations and Recommendations of Site Audits (July 2020)

| Parameters | Ref. Number | Observations | Follow Up Action |
|--------------------|----------------|---|---|
| Water Quality | N/A | There was no observation in the reporting month. | N/A |
| | 200624-R01 | | Item was remarked as 200702-R01. |
| | 200702-R01 | | Item was remarked as 200709-R02. |
| | 200709-R02 | NRMM Label was not observed on the excavator at DOU-5 Contractor | Item was remarked as 200715-R02. |
| | 200715-R02 | was reminded to replace the label. | Item was remarked as 200723-R01. |
| Air | 200723-R01 | | Item was remarked as 200730-R01. |
| Quality | 200730-R01 | | Item was remarked as 200806-R01. |
| | 200709-R01 | NRMM Label was observed faded. | Item was remarked as 200715-R01. |
| | 200715-R01 | Contractor was reminded to replace the NRMM Label (DOU-2). | Contractor was replaced the NRMM Label. |
| | 200723-R02 | The excavated dusty materials should be covered by impervious materials to avoid dust generation. | The excavated dusty material was cleared. |
| | 200624-R02 | General refuse should be disposed | Item was remarked as 200702-R02. |
| Waste/ Chemical | 200702-R02 | of properly. | General refuse was disposed of properly. |
| Management | 200709-R03 | General refuse should be disposed of properly. (DOU-2) | General refuse was disposed of properly. |

| Landscape and Visual | N/A | There was no observation in the reporting month. | N/A |
|-------------------------|-----|--|-----|
| Noise | N/A | There was no observation in the reporting month. | N/A |
| Permit/ Licenses | N/A | There was no observation in the reporting month. | N/A |

Table 4.2c: Observations and Recommendations of Site Audits (August 2020)

| Parameters | Ref. Number | Observations | Follow Up Action |
|-------------------------|----------------|--|---|
| Water Quality | N/A | There was no observation in the reporting month. | N/A |
| | 200730-R01 | NRMM Label was not observed on the excavator at DOU-5 Contractor | Item was remarked as 200806-R01. |
| Air Quality | 200806-R01 | was reminded to replace the label. | The excavator was removed. |
| Quanty | 200827-R01 | Excavated dusty materials should be covered by impervious materials. | Follow-up action will be reported in the next reporting period. |
| Waste/ Chemical | 200806-R03 | General refuse should be disposed of properly. | General refuse was disposed of properly. |
| Management | 200813-R01 | Construction waste should be disposed of properly. | Construction waste was disposed of properly. |
| Landscape and Visual | N/A | There was no observation in the reporting month. | N/A |
| Noise | N/A | There was no observation in the reporting month. | N/A |
| Permit/ Licenses | N/A | There was no observation in the reporting month. | N/A |

Implementation Status of Event Action Plans

4.9 The Event Action Plans for air quality and noise are presented in **Appendix F.**

1-hr TSP

4.10 No Action/Limit Level exceedance was recorded in the reporting quarter.

24-hr TSP

4.11 No Action/Limit Level exceedance was recorded in the reporting quarter.

Construction Noise

4.12 No Action/Limit Level exceedance was recorded in the reporting quarter.

Landscape and Visual

4.13 No non-compliance was recorded in the reporting quarter.

Summary of Complaints and Prosecutions

- 4.14 No environmental complaint and prosecution was received for the Project in the reporting quarter.
- 4.15 There were no environmental complaint and prosecution received since the commencement of the Project. The Complaint Log is presented in **Appendix H**.

5. FUTURE KEY ISSUES

Key Issues for the Coming Months

- 5.1 Key environmental issues in the coming months include:
 - Storage of chemicals/fuel and chemical waste/waste oil on-site;
 - Leakage of oil from equipment;
 - Dust generation should be mitigated by adequate water spraying, especially in dry days;
 - Stockpile should be properly covered by tarpaulin or impervious materials to mitigate dust generation;
 - Noise from operation of equipment and machinery on-site.
 - Silty surface runoff generated from the site area: and
 - Silt and dust getting into the public area by the leaving site vehicles at the site exits without adequate wheel washing facilities.

Construction Program for the Coming Quarter

5.2 The tentative construction program is provided in **Appendix I.**

6. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

6.1 Environmental monitoring and audit works were performed in the reporting quarter and all monitoring results were checked and reviewed.

1-hour TSP Monitoring

6.2 All 1-hour TSP monitoring was conducted as scheduled in the reporting quarter. No Action/Limit Level exceedance was recorded.

24-hour TSP Monitoring

6.3 All 24-hour TSP monitoring was conducted as scheduled in the reporting quarter. No Action/Limit Level exceedance was recorded.

Construction Noise Monitoring

6.4 All construction noise monitoring was conducted as scheduled in the reporting quarter. No Action/Limit Level exceedance was recorded.

Environmental Audit

6.5 Environmental site audits were conducted as weekly basis in the reporting quarter. No non-compliance was recorded.

Complaint and Prosecution

6.6 No environmental complaint and prosecution was received in the reporting quarter.

Recommendations for the coming reporting period:

6.7 The following recommendations were made for the coming reporting period:

Air Quality

- To provide adequate water spray on site;
- To mitigate dust generation by adequate water spraying or covering by tarpaulin during dry days;
- To regularly maintain the machinery and vehicles on site;
- To follow up any exceedance caused by the construction works; and
- Non-Road Mobile Machinery (NRMM) labels must be demonstrated on the registered equipment for inspection.

Noise

- To inspect the noise sources inside the site;
- To follow up any exceedance caused by the construction works;
- To space out noisy equipment and position the equipment as far away as possible from

sensitive receivers:

- To provide temporary noise barriers for operations of noisy equipment near the noise sensitive receivers in an appropriate location.
- To provide adequate lubricant on mechanical equipments to reduce frictional noise; and
- To well maintain the mechanical equipments / machineries to avoid abnormal noise nuisance.

Water Quality

- To identify any discharge of wastewater from the construction site;
- To provide adequate temporary drainage system with adequate capacity;
- To provide adequate wastewater treatment facilities to treat the wastewater generated during construction works and heavy rain;
- To properly cover the stockpile and slope to prevent the generation of surface runoff; and
- To avoid water accumulation on site and carry out larviciding against mosquito breeding for stagnant water when mosquito larvae are observed.

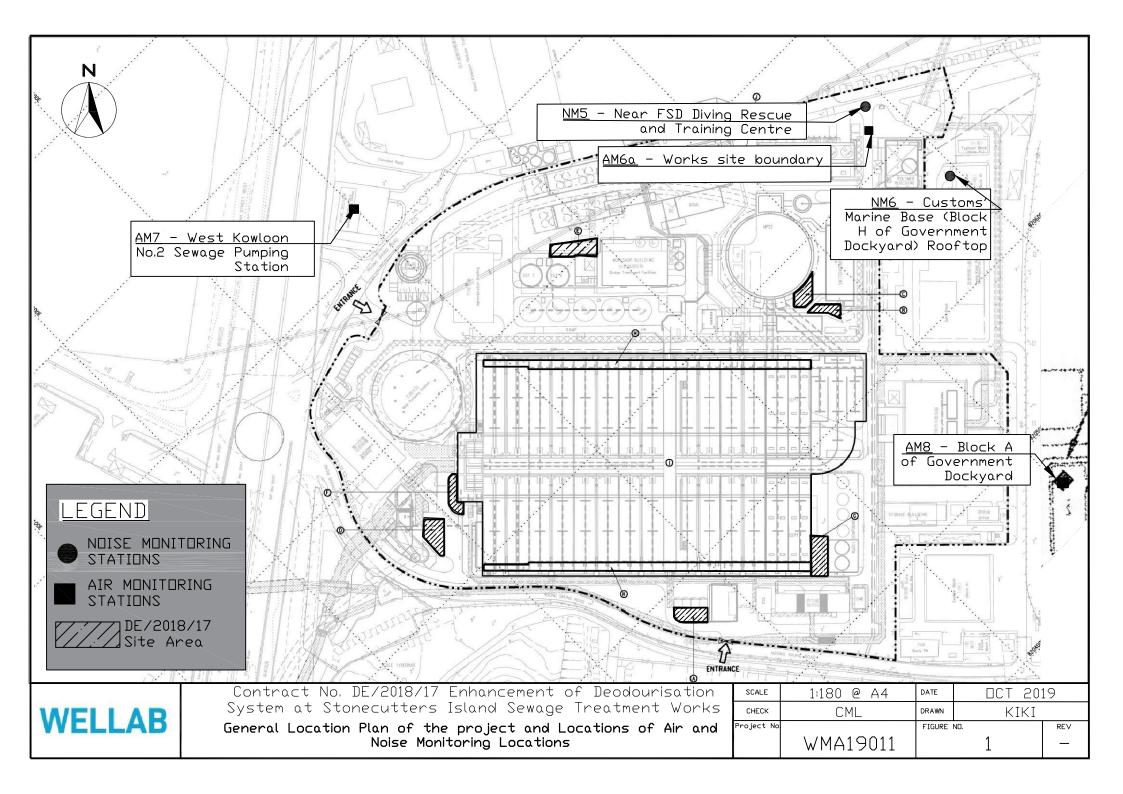
Waste/Chemical Management

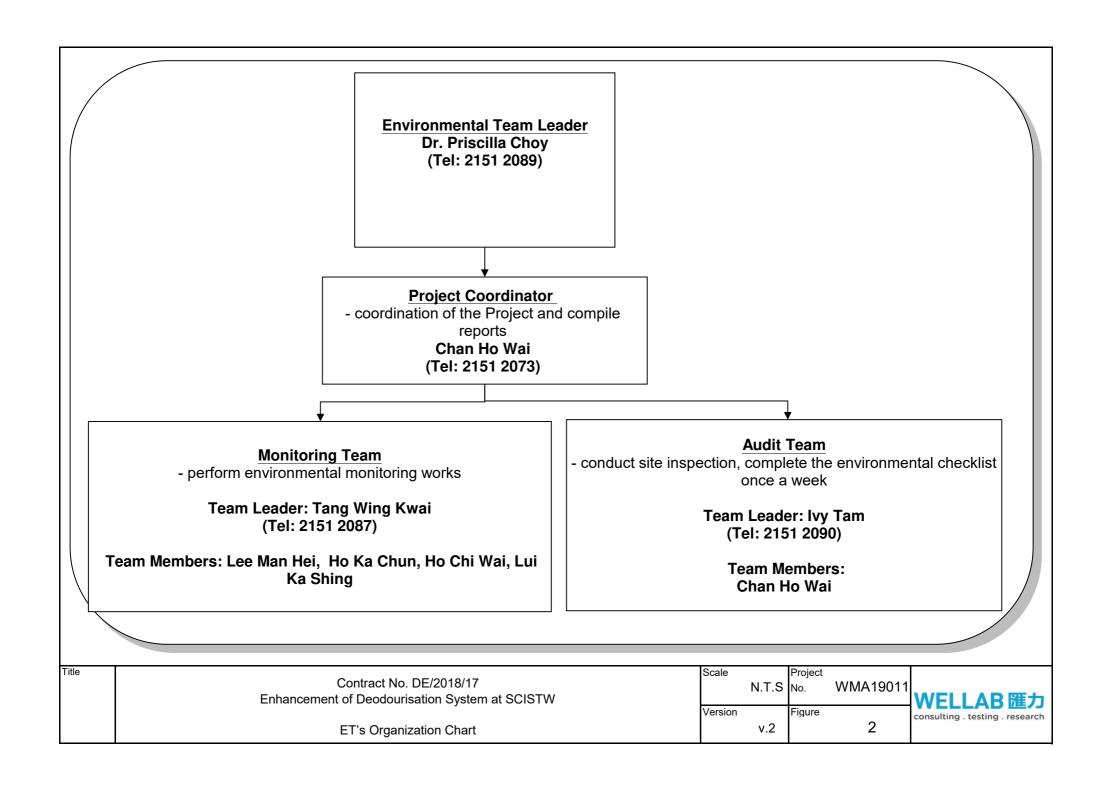
- To provide proper rubbish bins / skips for waste collection;
- To check for any accumulation of wasted materials or rubbish on site;
- To provide adequate chemical waste storage area on site;
- To avoid any discharge or accidental spillage of chemical waste or oil directly from the equipment; and
- To avoid improper handling or storage of oil drum on site.

Landscape and Visual

- To erect and maintain the protection fence around the retaining tree; and
- To avoid any heavy materials placed into tree protection zone.

FIGURES





APPENDIX A
ACTION AND LIMIT LEVELS FOR AIR
QUALITY AND NOISE QUALITY

Appendix A Action and Limit Levels

Table A-1 Action and Limit Levels for 1-Hour TSP and 24-Hour TSP

| Manitanina Stationa | Action Le | vel (μg/m³) | Limit Level (µg/m³) | | |
|---------------------|-----------|-------------|---------------------|---------|--|
| Monitoring Stations | 1-hour | 24-hour | 1-hour | 24-hour | |
| AM6a | 346 | 196 | 500 | 260 | |
| AM7 | 322 | 207 | 500 | 260 | |
| AM8 | 307 | 158 | 500 | 260 | |

Table A-2 Action and Limit Level for Construction Noise

| Monitoring Stations | Time Period | Action Level | Limit Level in dB(A) |
|------------------------|---|---|----------------------|
| | 0700-1900 hours on normal weekdays | When one documented complaint is received | 75 |
| NM5 NM6 | Evening Time of normal weekdays and General Holidays: All days during the evening (1900 to 2300 hours), and general holidays (including Sundays) during the daytime and evening (0700 to 2300 hours) | N/A | 70(1) |

Notes: If works are to be carried out during restricted hours, the conditions stipulated in the Construction Noise Permit (CNP) issued by the Noise Control Authority have to be followed.

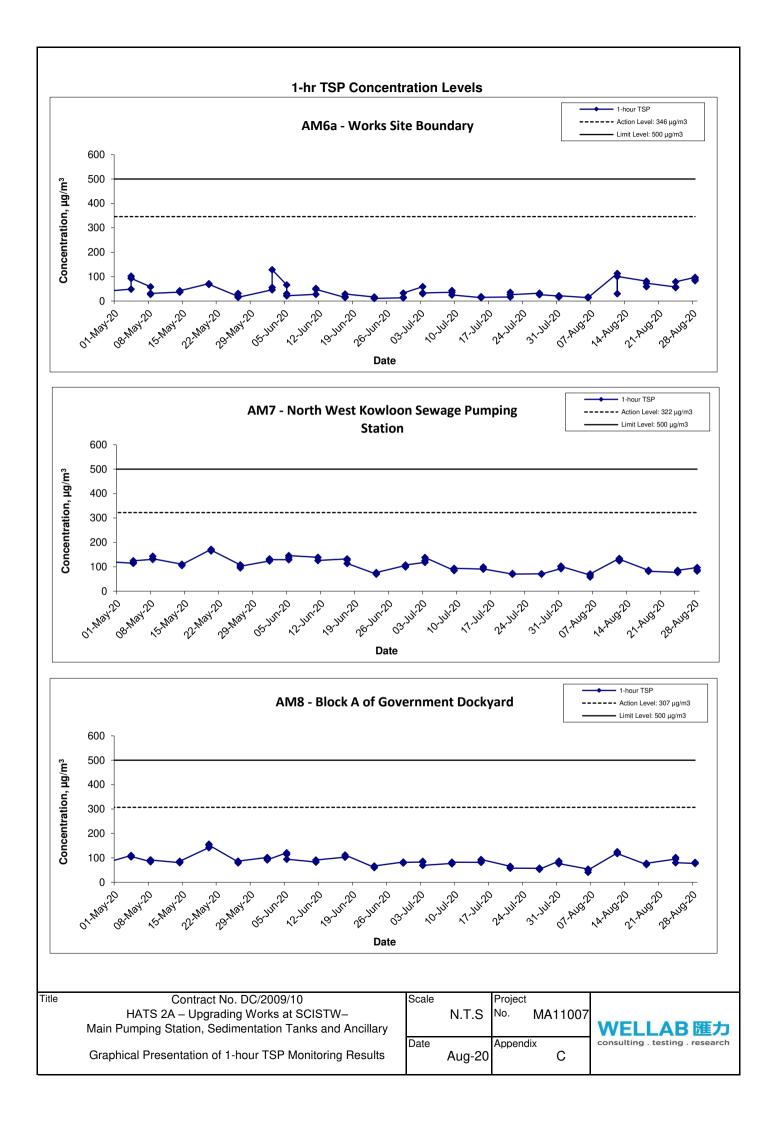
APPENDIX B SUMMARY OF EXCEEDANCE

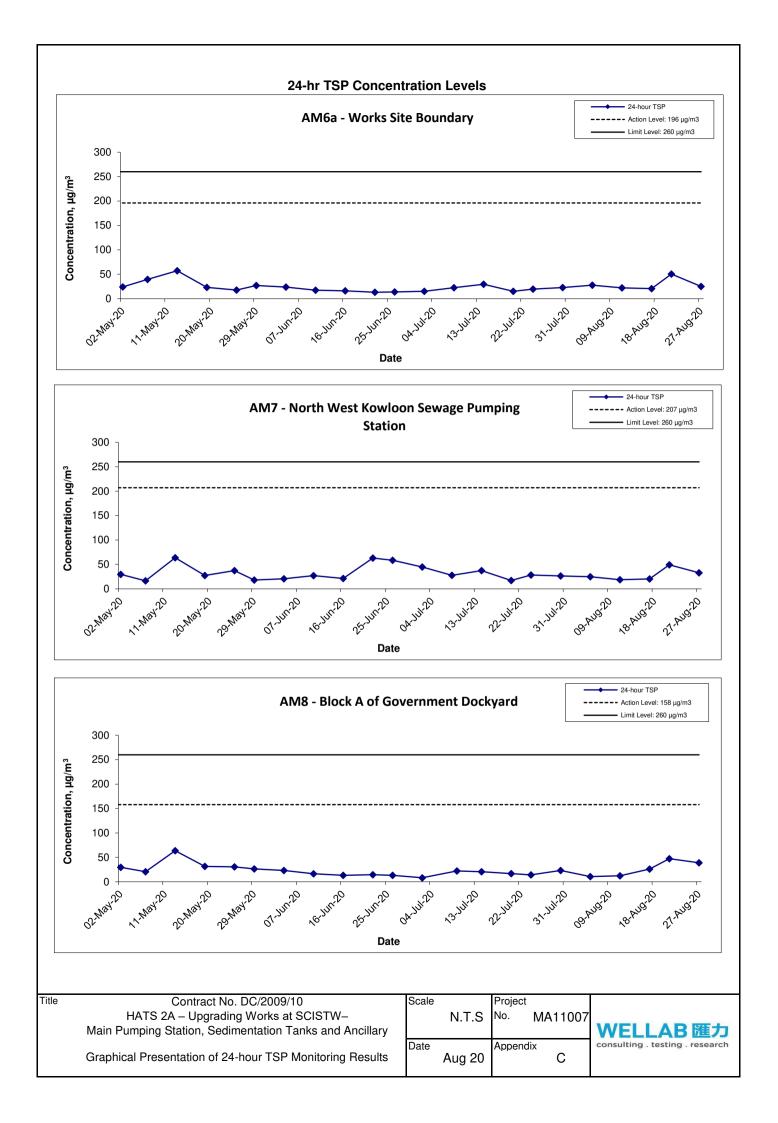
APPENDIX B – SUMMARY OF EXCEEDANCE

Reporting Quarter: June to August 2020

- a) Exceedance Report for 1-hr TSP (NIL)
- b) Exceedance Report for 24-hr TSP (NIL)
- c) Exceedance Report for Construction Noise (NIL)

APPENDIX C 1-HOUR AND 24-HOUR TSP GRAPHICAL PRESENTATION

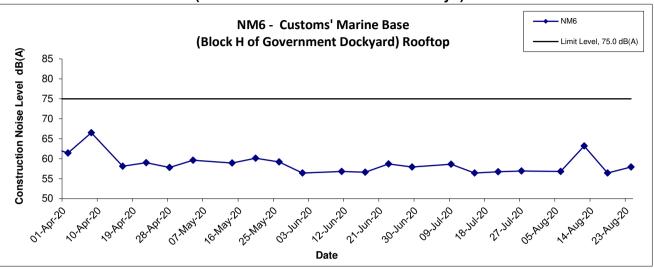


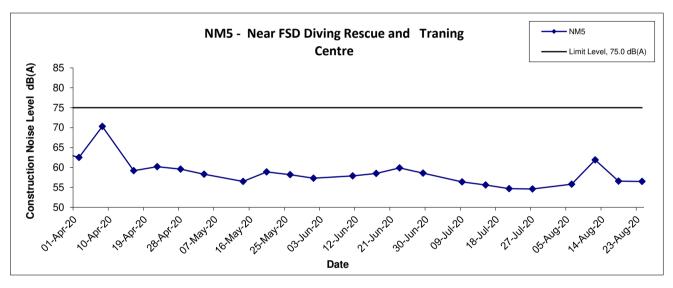


APPENDIX D NOISE MONITORING GRAPHICAL PRESENTATIONS

Noise Levels

(0700-1900 hrs on Normal Weekdays)





| Contract No. DC/2009/10 HATS 2A – Upgrading Works at SCISTW– Main Pumping Station, Sedimentation Tanks and Ancillary | Scale N.T.S | Project No. MA11007 | WELLAB匯力 |
|--|----------------|------------------------|---------------------------------|
| Graphical Presentation of Noise Monitoring Result | Date Aug 20 | Appendix D | consulting . testing . research |

Title

APPENDIX E SUMMARY OF AMOUNT OF WASTE GENERATED

| Name of Department: | DSD | | C | ontract No. : | DE/2018/17 |
|---------------------|-----|------------------------------------|------|---------------|------------|
| | Mo | nthly Summary Waste Flow Table for | 2020 | (vear) | |

| | | Actual Quantities of | inert C&D Mate | erials Generated | d Monthly | | Actu | al Quantities of C | C&D Materials | Generated M | onthly |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------|--------------------|---------------|-------------|--------------------------|
| Month | Total Quantity | Hard Rock and Large | Reused in the | Reused in | Disposed as | Imported | Metals | Paper/ | Plastics | Chemical | Other, e.g. |
| William | Generated | Broken Concrete | Contract | other Projects | Public Fill | Fill | | cardboard | (see Note 3) | Waste | general refuse |
| | (In '000m ³) | (In '000kg) | (In '000kg) | (In '000kg) | (In '000kg) | (In '000m ³) |
| Jan | 0.209 | 0.016 | 0.000 | 0.000 | 0.209 | 0.000 | 0.000 | 0.284 | 0.000 | 0.000 | 0.001 |
| Feb | 0.210 | 0.045 | 0.000 | 0.000 | 0.210 | 0.000 | 0.000 | 0.583 | 0.000 | 0.000 | 0.001 |
| Mar | 0.436 | 0.025 | 0.000 | 0.000 | 0.436 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.003 |
| Apr | 0.431 | 0.098 | 0.000 | 0.000 | 0.431 | 0.000 | 0.000 | 0.576 | 0.000 | 0.000 | 0.000 |
| May | 0.314 | 0.000 | 0.000 | 0.000 | 0.314 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.010 |
| June | 0.098 | 0.000 | 0.000 | 0.000 | 0.098 | 0.000 | 0.000 | 0.656 | 0.000 | 0.000 | 0.007 |
| Sub-total | 1.699 | 0.184 | 0.000 | 0.000 | 1.699 | 0.000 | 0.000 | 2.099 | 0.000 | 0.000 | 0.022 |
| July | 0.098 | 0.000 | 0.000 | 0.000 | 0.098 | 0.000 | 0.730 | 0.000 | 0.000 | 0.000 | 0.007 |
| Aug | 0.206 | 0.000 | 0.000 | 0.000 | 0.206 | 0.000 | 0.000 | 0.639 | 0.000 | 0.000 | 0.002 |
| Sep | | | | | | | | | | | |
| Oct | | | | | | | | | | | |
| Nov | | | | | | | | | | | |
| Dec | | | | | | | | | | | |
| Total | 2.004 | 0.184 | 0.000 | 0.000 | 2.004 | 0.000 | 0.730 | 2.738 | 0.000 | 0.000 | 0.030 |
| Total since commence ment of project | | 0.399 | 0.000 | 0.000 | 2.509 | 0.000 | 12.260 | 4.326 | 0.000 | 0.000 | 0.032 |

Notes:

- (1) The performance targets are given in PS Clause 25.37(14).
- (2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
- (3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material
- (4) The conversion factor for tonne to m³ for inert C&D materials is 1.9 tonne/m³.
- (5) The conversion factor for tonne to m³ for general refuse is 1.8 tonne/m³.

APPENDIX F EVENT ACTION PLANS

APPENDIX F – Event / Action Plans

Table F-1 Event / Action Plan For Air Quality

| | ACTION | | | | | | |
|---|--|--|--|--|--|--|--|
| EVENT | ET | IEC | ER | CONTRACTOR | | | |
| ACTION LEVEL | | | | | | | |
| 1. Exceedance for one sample | 1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC and ER; | Check monitoring data submitted by ET; Check Contractor's working method. | 1. Notify Contractor. | Rectify any unacceptable practice; Amend working methods if appropriate. | | | |
| | 3. Repeat measurement to confirm finding;4. Increase monitoring frequency to daily. | | | | | | |
| 2. Exceedance for two or more consecutive samples | Identify source; Inform IEC and ER; Advise the ER on the effectiveness of the proposed remedial measures; Repeat measurements to confirm findings; Increase monitoring frequency to daily; Discuss with IEC and Contractor on remedial actions required; If exceedance continues, arrange meeting with IEC and ER; If exceedance stops, cease additional monitoring | Check monitoring data submitted by ET; Check Contractor's working method; Discuss with ET and Contractor on possible remedial measures; Advise the ET on the effectiveness of the proposed remedial measures; Supervise Implementation of remedial measures. | Confirm receipt of notification of failurein writing; Notify Contractor; Ensure remedial measures properly implemented | Submit proposals for remedial to ER within 3 working days of notification; Implement the agreed proposals; Amend proposal if appropriate | | | |

| | ACTION | | | | | | |
|-------------------|---------------------------------------|-----------------------------------|--------------------------------|------------------------------|--|--|--|
| EVENT | ET | IEC | ER | CONTRACTOR | | | |
| LIMIT LEVEL | | | | | | | |
| 1. Exceedance for | 1. Identify source, investigate the | 1. Check monitoring data | 1. Confirm receipt of | 1. Take immediate action to | | | |
| one sample | causes of exceedance and propose | submitted by ET; | notification of failure in | avoid further exceedance; | | | |
| | remedial measures; | 2. Check Contractor's working | writing; | 2. Submit proposals for | | | |
| | 2. Inform ER, Contractor and EPD; | method; | 2. Notify Contractor; | remedial actions to IEC | | | |
| | 3. Repeat measurement to confirm | 3. Discuss with ET and Contractor | 3. Ensure remedial measures | within 3 working days of | | | |
| | finding; | on possible remedial measures; | properly implemented | notification; | | | |
| | 4. Increase monitoring frequency to | 4. Advise the ER on the | | 3. Implement the agreed | | | |
| | daily; | effectiveness of the proposed | | proposals; | | | |
| | 5. Assess effectiveness of | remedial measures; | | 4. Amend proposal if | | | |
| | Contractor's remedial actions and | 5. Supervise implementation of | | appropriate | | | |
| | keep IEC, EPD and ER informed of | remedial measures | | | | | |
| | the results. | | | | | | |
| | | | | | | | |
| 2. Exceedance for | 1. Notify IEC, ER, Contractor and | 1. Check monitoring data | 1. Confirm receipt of | 1. Take immediate action to | | | |
| two or more | EPD; | submitted by ET; | notification of failure in | avoid further exceedance; | | | |
| consecutive | 2. Identify source; | 2. Check Contractor's working | writing; | 2. Submit proposals for | | | |
| samples | 3. Repeat measurement to confirm | method; | 2. Notify Contractor; | remedial actions | | | |
| | findings; | 3. Discuss amongst ER, ET, and | 3. In consolidation with the | to IEC within 3 working days | | | |
| | 4. Increase monitoring frequency to | Contractor on the potential | IEC, agree with the Contractor | of notification; | | | |
| | daily; | remedial actions; | on the remedial measures to | 3. Implement the agreed | | | |
| | 5. Carry out analysis of Contractor's | 4. Review Contractor's remedial | be implemented; | proposals; | | | |
| | working procedures to determine | actions whenever necessary to | 4. Ensure remedial measures | 4. Resubmit proposals if | | | |
| | possible mitigation to be | assure their effectiveness and | properly implemented; | problem still not under | | | |

| | ACTION | | | | | | | | | | | |
|-------|------------------------------------|------------------------------------|---------------------------------|---------------------------------|--|--|--|--|--|--|--|--|
| EVENT | ET | IEC | ER | CONTRACTOR | | | | | | | | |
| | implemented; | advise the ER accordingly; | 5. If exceedance continues, | control; | | | | | | | | |
| | 6. Arrange meeting with IEC and | 5. Supervise the implementation of | consider what portion of the | 5. Stop the relevant portion of | | | | | | | | |
| | ER to discuss the remedial actions | remedial measures. | work is responsible and | works as determined by the | | | | | | | | |
| | to be taken; | | instruct the Contractor to stop | ER until the exceedance is | | | | | | | | |
| | 7. Assess effectiveness of | | that portion of work until the | abated | | | | | | | | |
| | Contractor's remedial actions and | | exceedance is abated. | | | | | | | | | |
| | keep IEC, EPD and ER informed of | | | | | | | | | | | |
| | the results; | | | | | | | | | | | |
| | 8. If exceedance stops, cease | | | | | | | | | | | |
| | additional monitoring | | | | | | | | | | | |

Table F-2 Event / Action Plan For Construction Noise

| | ACTION | | | | | | | | | | | |
|--------------|---|--------------------------------|-------------------------------------|--------------------------------|--|--|--|--|--|--|--|--|
| EVENT | ET | IEC | ER | CONTRACTOR | | | | | | | | |
| Action Level | 1. Notify ER, IEC and Contractor; | 1. Review the investigation | 1. Confirm receipt of | 1. Submit noise mitigation | | | | | | | | |
| being | 2. Carry out investigation; | results submitted by the ET; | notification of failure in writing; | proposals to IEC and ER; | | | | | | | | |
| exceeded | 3. Report the results of investigation to | 2. Review the proposed | 2. Notify Contractor; | 2. Implement noise mitigation | | | | | | | | |
| checeded | the IEC, ER and Contractor; | remedial measures by the | 3. In consolidation with the IEC, | proposals | | | | | | | | |
| | 4. Discuss with the IEC and | Contractor and advise the ER | agree with the Contractor on the | | | | | | | | | |
| | Contractor on remedial measures | accordingly; | remedial measures to be | | | | | | | | | |
| | required; | 3. Advise the ER on the | implemented; | | | | | | | | | |
| | 5. Increase monitoring frequency to | effectiveness of the proposed | 4. Supervise the implementation of | | | | | | | | | |
| | check mitigation effectiveness | remedial measures | remedial measures | | | | | | | | | |
| Limit Level | 1. Inform IEC, ER, Contractor and | 1. Discuss amongst ER, ET, | 1. Confirm receipt of | 1. Take immediate action to | | | | | | | | |
| being | EPD; | and | notification of failure in writing; | avoid further exceedance; | | | | | | | | |
| exceeded | 2. Repeat measurements to confirm | Contractor on the potential | 2. Notify Contractor; | 2. Submit proposals for | | | | | | | | |
| checeded | findings; | remedial actions; | 3. In consolidation with the | remedial actions to IEC | | | | | | | | |
| | 3. Increase monitoring frequency; | 2. Review Contractor's | IEC, agree with the Contractor on | and ER within 3 working | | | | | | | | |
| | 4. Identify source and investigate the | remedial | the remedial measures to be | days of notification; | | | | | | | | |
| | cause of exceedance; | actions whenever necessary | implemented; | 3. Implement the agreed | | | | | | | | |
| | 5. Carry out analysis of Contractor's | to assure their effectiveness | 4. Supervise the implementation of | proposals; | | | | | | | | |
| | working procedures; | and advise the ER accordingly. | remedial measures; | 4. Submit further proposal if | | | | | | | | |
| | 6. Discuss with the IEC, Contractor | | 5. If exceedance continues, | problem still not under | | | | | | | | |
| | and ER on remedial measures | | consider stopping the Contractor to | control; | | | | | | | | |
| | required; | | continue working on that portion of | 5. Stop the relevant portion | | | | | | | | |
| | 7. Assess effectiveness of Contractor's | | work which causes the exceedance | of works as instructed by | | | | | | | | |
| | remedial actions and keep IEC, EPD | | until the exceedance is abated | the ER until the exceedance is | | | | | | | | |
| | and ER informed of the results; | | | abated | | | | | | | | |
| | 8. If exceedance stops, cease | | | | | | | | | | | |
| | additional monitoring | | | | | | | | | | | |

APPENDIX G ENVIRONMENTAL MITIGATION IMPLEMENTATION SCHEDULE (EMIS)

APPENDIX G IMPLEMENTATION SCHEDULE OF ENVIRONMENTAL MITIGATION MEASURES (EMIS)

| EIA | Recommended Mitigation Measures | Location of the measure | Implementation Status |
|------|--|-------------------------|-----------------------|
| Ref. | | | |
| | | | |
| A | Air Quality | | |
| 3.74 | Skip hoist for material transport should be totally enclosed by impervious sheeting. | All construction sites | ۸ |
| | Vehicle washing facilities should be provided at every vehicle exit point. | | ۸ |
| | The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcore. | | ۸ |
| | Where a site boundary adjoins a road, streets or other areas accessible to the public, hoarding of not less than 2.4 m high from ground level should be provided along the entire length except for a site entrance or exit. | N/A | |
| | Use of regular watering, with complete coverage, to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather. | | ۸ |
| | 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. | | ۸ |
| | Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs. | | * |
| | Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations. | | ۸ |
| | Imposition of speed controls for vehicles on unpaved site roads. Ten kilometers per hour is the recommended limit. | | ۸ |
| | Every stock of more than 20 bags of cement should be covered entirely by impervious sheeting placed in an area sheltered on the top and the 3 sides. | | ۸ |
| | Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites. | | ۸ |
| 3.74 | 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. | All construction sites | ۸ |

| EIA | Recommended Mitigation Measures | Location of the measure | Implementation Status |
|-------------------|---|-------------------------|-----------------------|
| Ref. | | | |
| | | | |
| В | Airborne Noise | | |
| 4.56- | Use of quiet PME, movable barriers and acoustic mats. | All construction sites | ٨ |
| 4.61 | | | |
| 4.67 | Only well-maintained plant shall be operated on-site and plant shall be serviced regularly during the construction program. | | ۸ |
| | Silencers or mufflers on construction equipment shall be utilized and shall be properly maintained during the construction program. | | ۸ |
| | Mobile plant, if any, shall be sited as far away from NSRs as possible. | | ٨ |
| | Machines and plant (such as trucks) that may be in intermittent use shall be shut down between works periods or shall be throttled down to a minimum. | | ۸ |
| 4.67 | Plant known to emit noise strongly in one direction shall, wherever possible, be orientated so that the noise is directed away from the nearby NSRs. | | ۸ |
| | Material stockpiles and other structures shall be effectively utilized, wherever practicable, in screening noise from on-site construction activities. | | ۸ |
| С | Water Quality | | |
| 6.349 to 6.375 | Construction Site Runoff and General Construction Activities The mitigation measures as outlined in the ProPECC PN 1/94 Construction Site Drainage should be adopted where applicable. | All construction sites | ۸ |
| 6.376 | Effluent Discharge There is a need to apply to EPD for a discharge licence for discharge of effluent from the construction site under the WPCO. The discharge quality must meet the requirements specified in the discharge licence. If monitoring of the treated effluent quality from the works areas is required during the construction phase of the Project, the monitoring should be carried out in accordance with the WPCO license which is under the ambit of regional office (RO) of EPD. Minimum distances of 100 m should be maintained between the discharge points of construction site effluent and the existing saltwater intakes. Accidental Spillage of Chemicals | | ^ |
| 0.077 | Contractor must register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) | | |

| EIA | Recommended Mitigation Measures | Location of the measure | Implementation Status |
|-------|--|-------------------------|-----------------------|
| Ref. | | | |
| | | | |
| | Regulation should be observed and complied with for control of chemical wastes. | | |
| 6.378 | 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. | | ۸ |
| 6.379 | Disposal of chemical wastes should be carried out in compliance with the Waste Disposal Ordinance. The Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes published under the Waste Disposal Ordinance details the requirements to deal with chemical wastes. General requirements are given as follows: Suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport. Chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents. Storage area should be selected at a safe location on site and adequate space should be allocated to the storage area. | | ٨ |
| 6.380 | Construction Works in Close Proximity of Storm Drains or Seafront: | All construction sites | ٨ |
| | To minimize the potential water quality impacts from the construction works located at or near any watercourse, the practices outlined below should be adopted where applicable. The use of less or smaller construction plants may be specified to reduce the disturbance to the storm water courses or marine environment. Temporary storage of materials (e.g. equipment, filling materials, chemicals and fuel) and temporary stockpile of construction materials should be located well away from any water courses during carrying out of the construction works. Stockpiling of construction materials and dusty materials should be covered and located away from any water courses. Construction debris and spoil should be covered up and/or disposed of as soon as possible to avoid being washed into the nearby water receivers. Construction activities, which generate large amount of wastewater, should be carried out in a distance away from the waterfront, where practicable. Proper shoring may need to be erected in order to prevent soil/mud from slipping into the storm culvert or sea. | | |

| EIA | Recommended Mitigation Measures | Location of the measure | Implementation Status |
|-------|--|-------------------------|-----------------------|
| Ref. | | | |
| | | | |
| D | Waste Management | | |
| 9.107 | Reusable steel or concrete panel shutters, fencing and hoarding and signboard should be used as a preferred alternative to items made of wood, to minimize wastage of wood. Attention should be paid to WBTC No. 19/2001 - Metallic Site Hoardings and Signboards to reduce the amount of timber used on construction sites. Metallic alternatives to timber are readily available and should be used rather than new timber. Precast concrete units should be adopted wherever feasible to minimize the use of timber formwork. | All construction sites | ۸ |
| 9.109 | All waste materials should be segregated into categories covering: • excavated materials suitable for reuse on-site; • excavated materials suitable for public filling facilities; • remaining C&D waste for landfill; • chemical waste; and • general refuse for landfill. | All construction sites | * |
| 9.113 | Sort C&D waste from demolition of existing facilities to recover recyclable portions such as metals. | | ۸ |
| | Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal. | | ^ |
| | Encourage collection of aluminum cans, PET bottles and paper by providing separate labeled bins to enable these wastes to be segregated from other general refuse generated by the work force. | | ۸ |
| | Any unused chemicals or those with remaining functional capacity shall be recycled. | | ۸ |
| | Proper storage and site practices to minimize the potential for damage or contamination of construction materials. | | * |
| 9.115 | Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site. | | ۸ |
| | Training of site personnel in proper waste management and chemical waste handling procedures. | | ۸ |
| 9.115 | Develop and provide toolbox talk for on-site sorting of C&D materials to enhance worker's awareness in handling, sorting, reuse and recycling of C&D materials. | | ۸ |
| | Provision of sufficient waste disposal points and regular collection of waste. | | ۸ |
| | Regular cleaning and maintenance programme for drainage systems, sumps and oil | | ۸ |

| EIA | Recommended Mitigation Measures | Location of the measure | Implementation Status |
|-------|--|-------------------------|-----------------------|
| Ref. | | | |
| | | | |
| | interceptors. | | |
| 9.125 | Bentonite slurries used in diaphragm wall construction should be reconditioned and reused wherever practicable. The disposal of residual used bentonite slurry should follow the good practice guidelines stated in ProPECC PN 1/94 "Construction Site Drainage". | All construction sites | ۸ |
| 9.131 | Adequate number of portable toilets at temporary works areas or the PTWs to ensure that sewage from site staff would be properly collected. | | ۸ |
| 9.133 | General refuse should be stored in enclosed bins, skips or compaction units separating from C&D material and disposed of at designated landfill. | | * |
| 9.135 | The recyclable component of the municipal waste generated by the workforce, such as aluminum cans, paper and cleansed plastic containers should be separated from other waste. Provision and collection of recycling bins for different types of recyclable waste should be set up by the Contractor. The Contractor should also be responsible for arranging recycling companies to collect these materials. | | ۸ |
| 9.137 | If chemical wastes are produced at the construction site, the Contractor would be required to register with the EPD as a chemical waste producer and to follow the guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor shall use a licensed collector to transport and dispose of the chemical wastes, to either the approved Chemical Waste Treatment Centre, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation. | | ۸ |
| 9.142 | Prior to excavation of the marine deposit layer, the deposit should be tested in accordance with the ETWB TC(W) No. 34/2002 and the results should be presented in a Preliminary Sediment Quality Report. The marine deposit should be disposed of at the disposal site designated by the Marine Fill Committee (MFC) or Director of Environmental Protection (DEP) depending on the test results. | | N/A |

| EIA | Recommended Mitigation Measures | Location of the measure | Implementation Status | | |
|---------------|--|--|-----------------------|--|--|
| Ref. | | | | | |
| | | | | | |
| E | Terrestrial Ecology | | | | |
| 10.94 | To implement effective noise mitigation measures as recommended in Section 4 of EIA. | All construction sites | N/A | | |
| 10.95 | Dust control practices such as regular watering, complete coverage of any aggregate or dusty material storage piles, and re-schedule of dusty activities during high-wind conditions as well as other measures recommended in Section 3 of EIA, should be implemented. | | ۸ | | |
| 10.96 | Fences/hoardings should be erected and installed along the boundary of the works areas. | | ٨ | | |
| 10.97 | Standard good site practices as suggested in Section 10 of EIA should be implemented. | | N/A | | |
| 10.98 | Provision of proper drainage system and runoff control measures such as use of sand/silt traps, oil/grease separators, sedimentation tanks, etc. | | ۸ | | |
| F | Landscape and Visual | | | | |
| Table 13.7 | Topsoil, where identified, should be stripped and stored for re-use in the construction of the soft landscape works, where practical. | All construction sites | ۸ | | |
| | Existing trees to be retained on site should be carefully protected during construction. | | ٨ | | |
| | Trees unavoidably affected by the works should be transplanted where practical. | | ٨ | | |
| | Compensatory tree planting should be provided to compensate for felled trees. | | ٨ | | |
| | Control of night-time lighting. | | ۸ | | |
| Table | Erection of decorative screen hoarding compatible with the surrounding setting. | All construction sites | N/A | | |
| 13.7 | | | | | |
| G | Marine Ecology | | | | |
| 11.137 | To minimize the potential indirect impacts on water quality from construction site runoff and various construction activities, the practices outlined in ProPECC PN 1/94 Construction Site Drainage should be adopted. | All construction sites | ۸ | | |
| Н | Hazard to Life | | | | |
| 14A.201 | Limiting use of cranes in terms of locations, lifting height, swing angle and setting up safety zone. | Exact location will be determined on construction site by the engineer | ۸ | | |

| Remarks: | ^ Compliance of mitigation measure; | | | | | | |
|----------|---|--|--|--|--|--|--|
| | N/A Not Applicable; | | | | | | |
| | * Recommendation was made during site audit but | | | | | | |
| | improved/rectified by the contractor. | | | | | | |
| | # Recommendation was made during site audit and to be | | | | | | |
| | improved / rectified by the contractor. | | | | | | |
| | X Non-compliance of mitigation measure; | | | | | | |
| | Non-compliance but rectified by the contractor; | | | | | | |

APPENDIX H COMPLAINT LOG

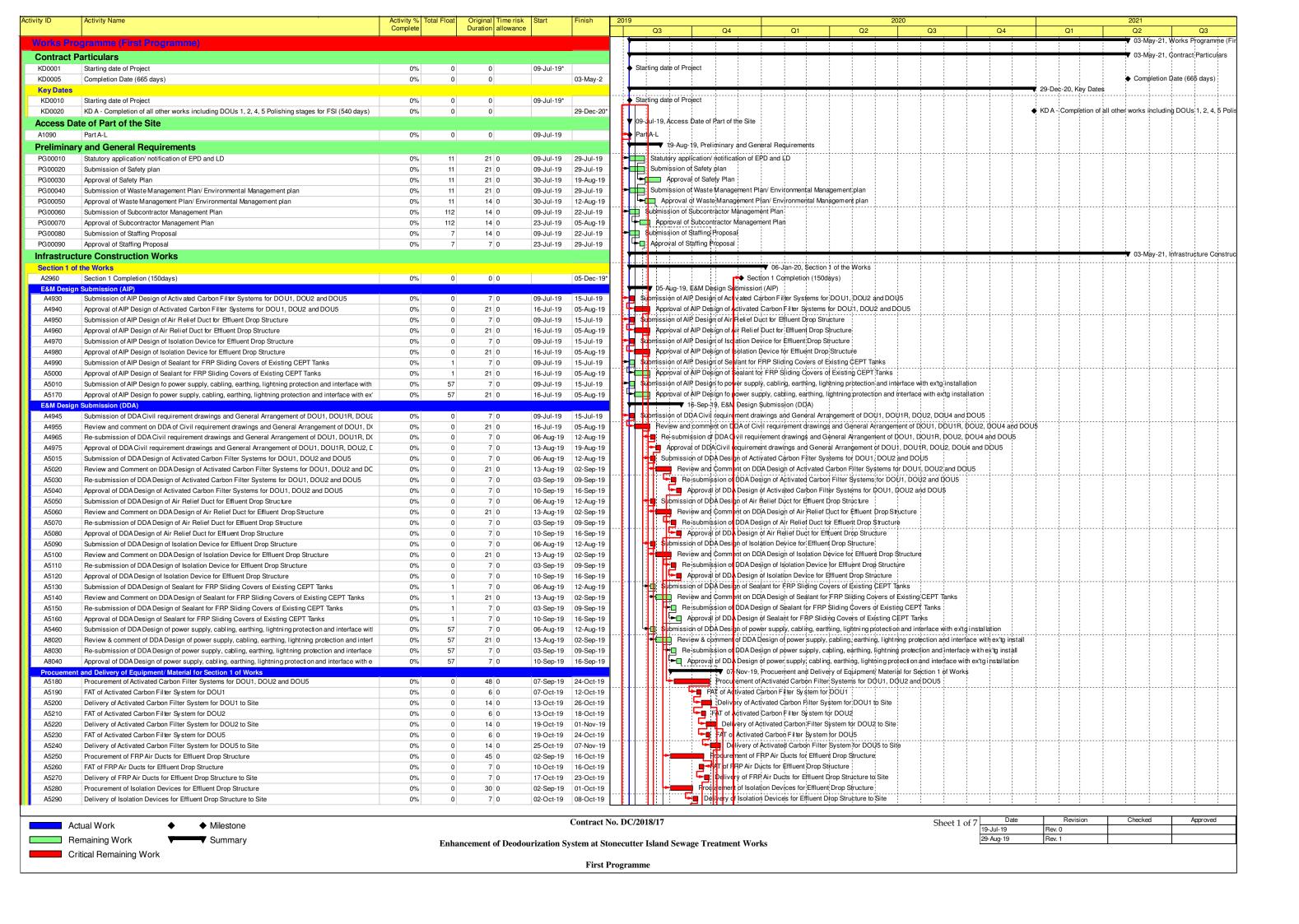
APPENDIX H – COMPLAINT LOG

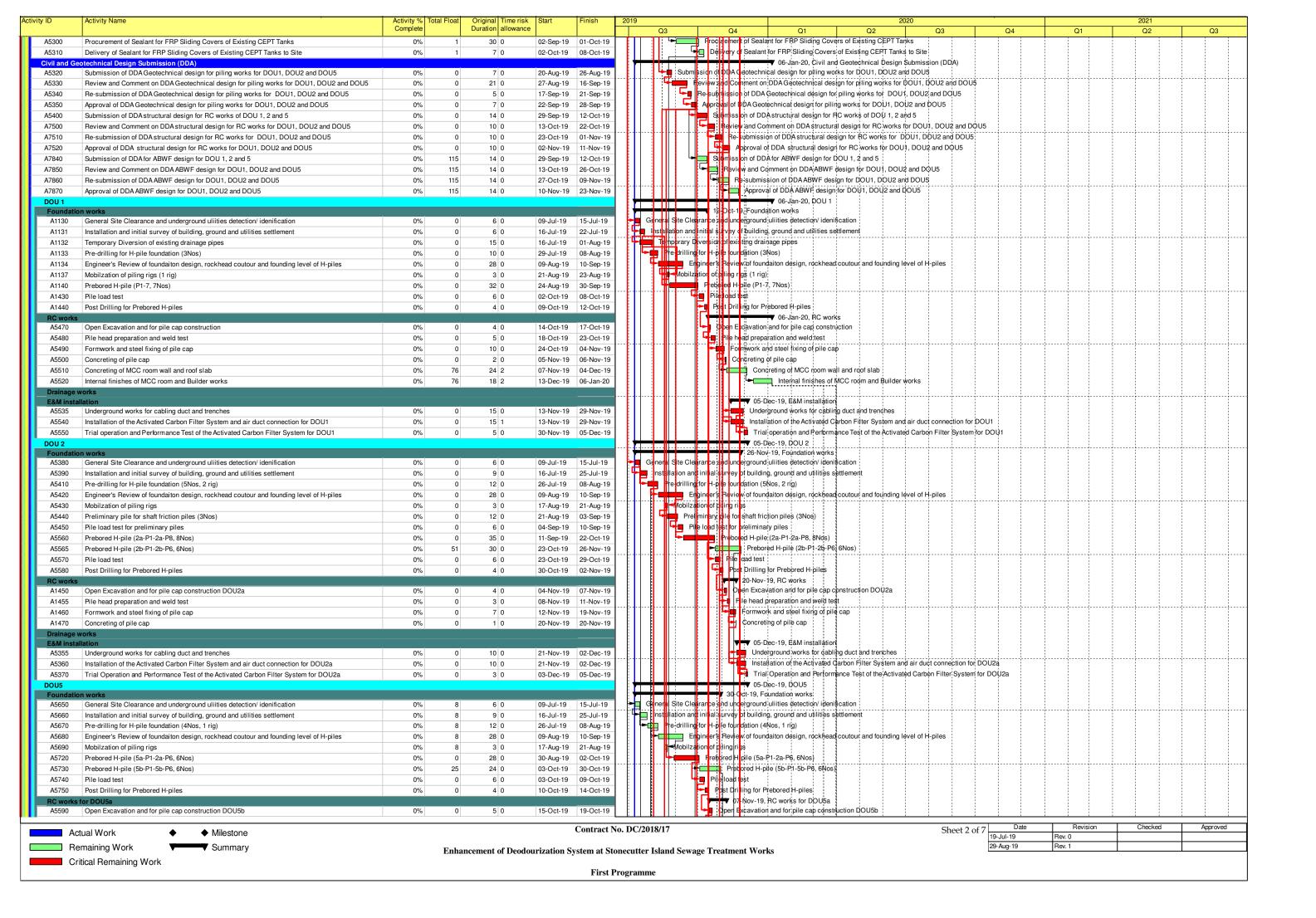
Reporting Quarter: June to August 2020

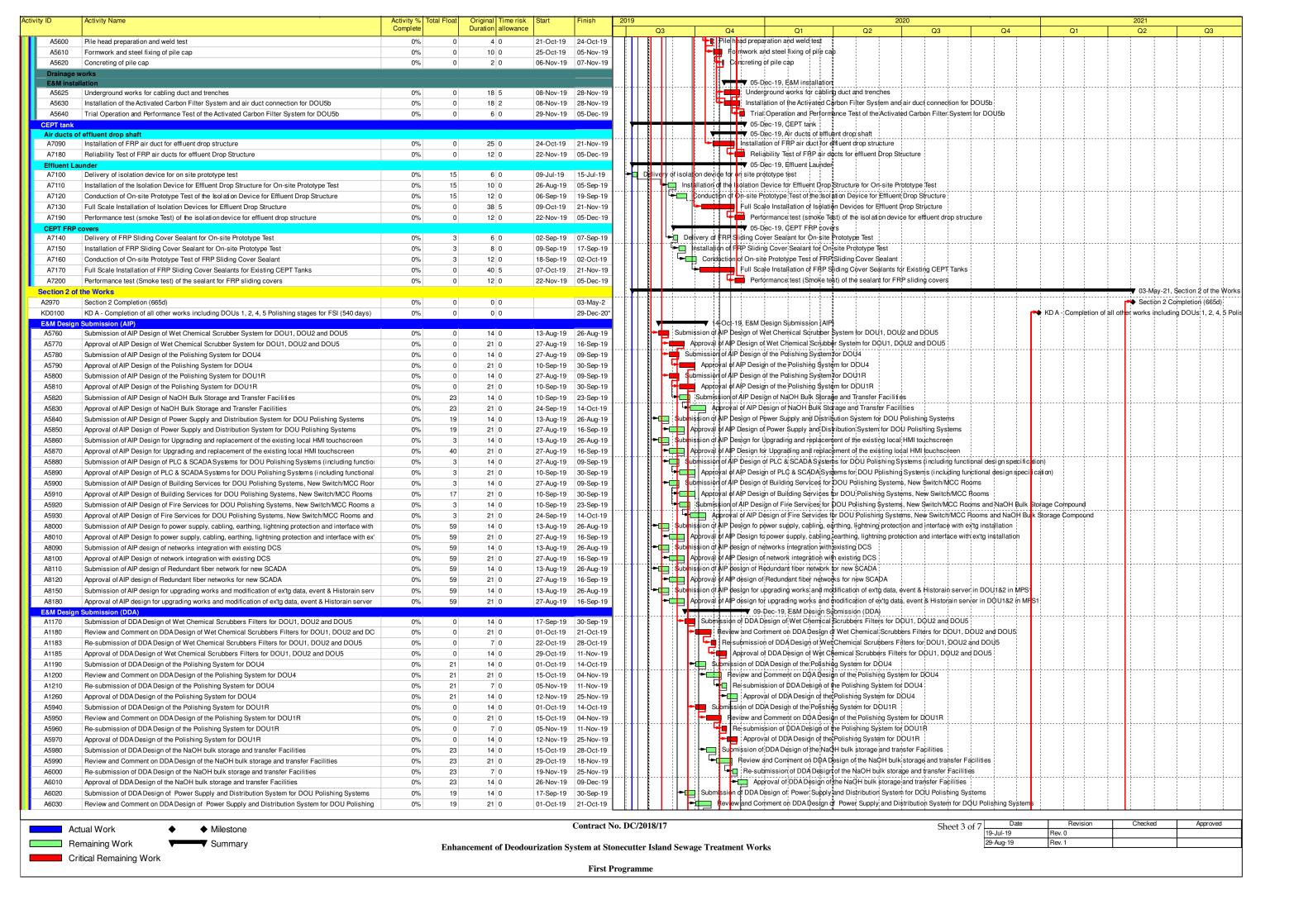
| Log Ref. | Location | Received Date | Investigation/Mitigation Action | Status | |
|----------|----------|------------------|---------------------------------|--------|------|
| N.A. | N.A. | N.A. | N.A. | N.A. | N.A. |

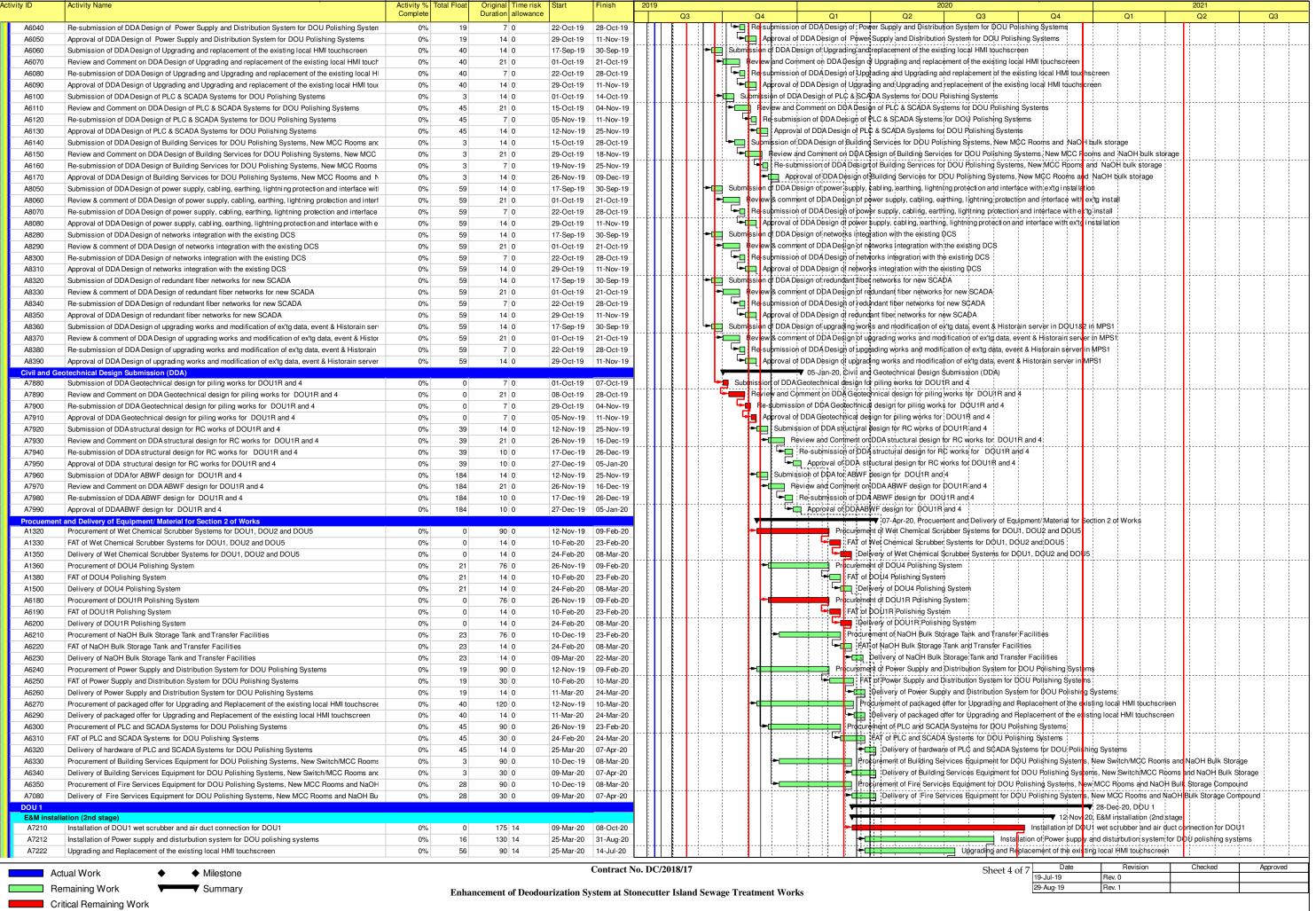
Remarks: No environmental complaint was received in the reporting quarter.

APPENDIX I CONSTRUCTION PROGRAMME

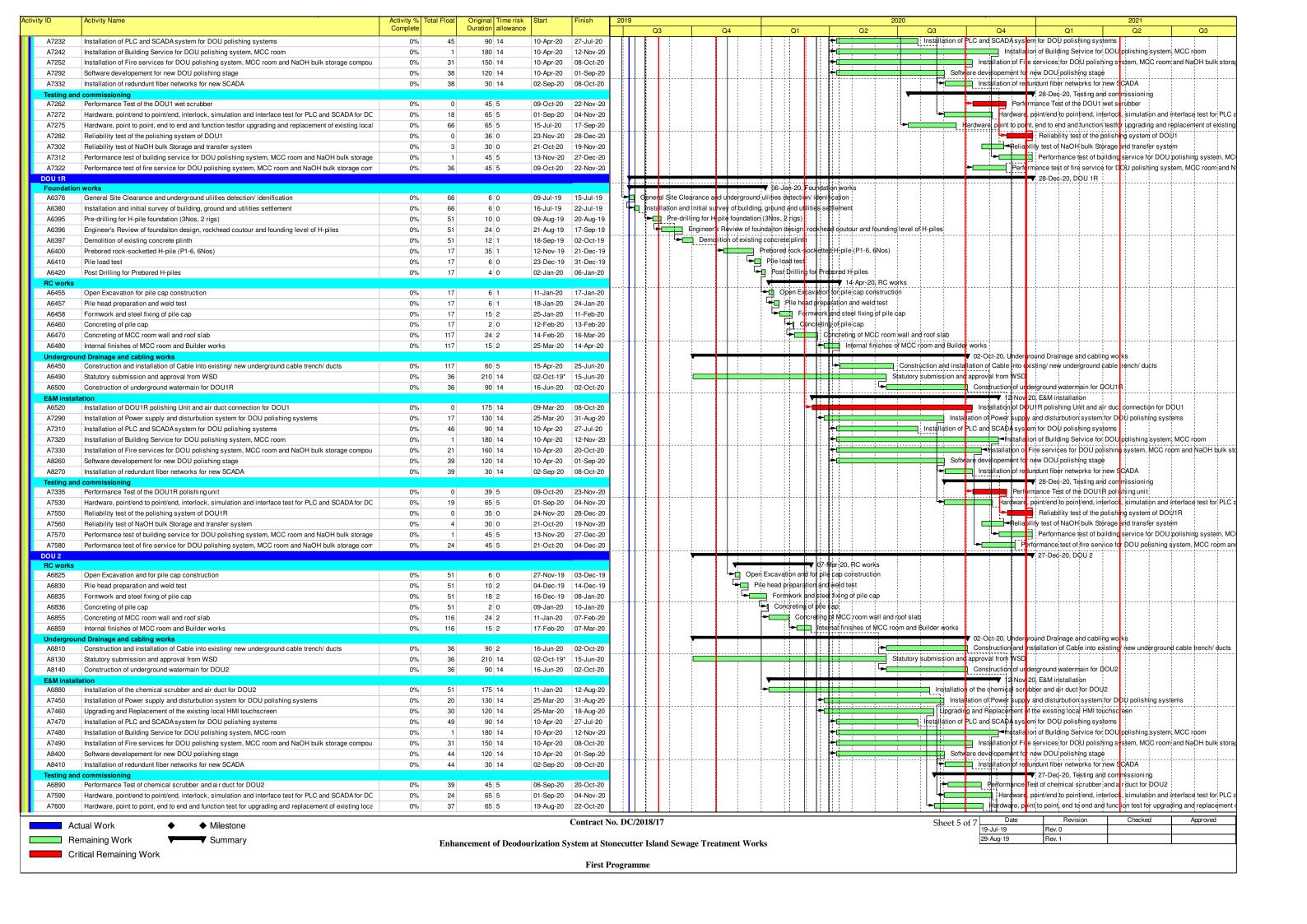


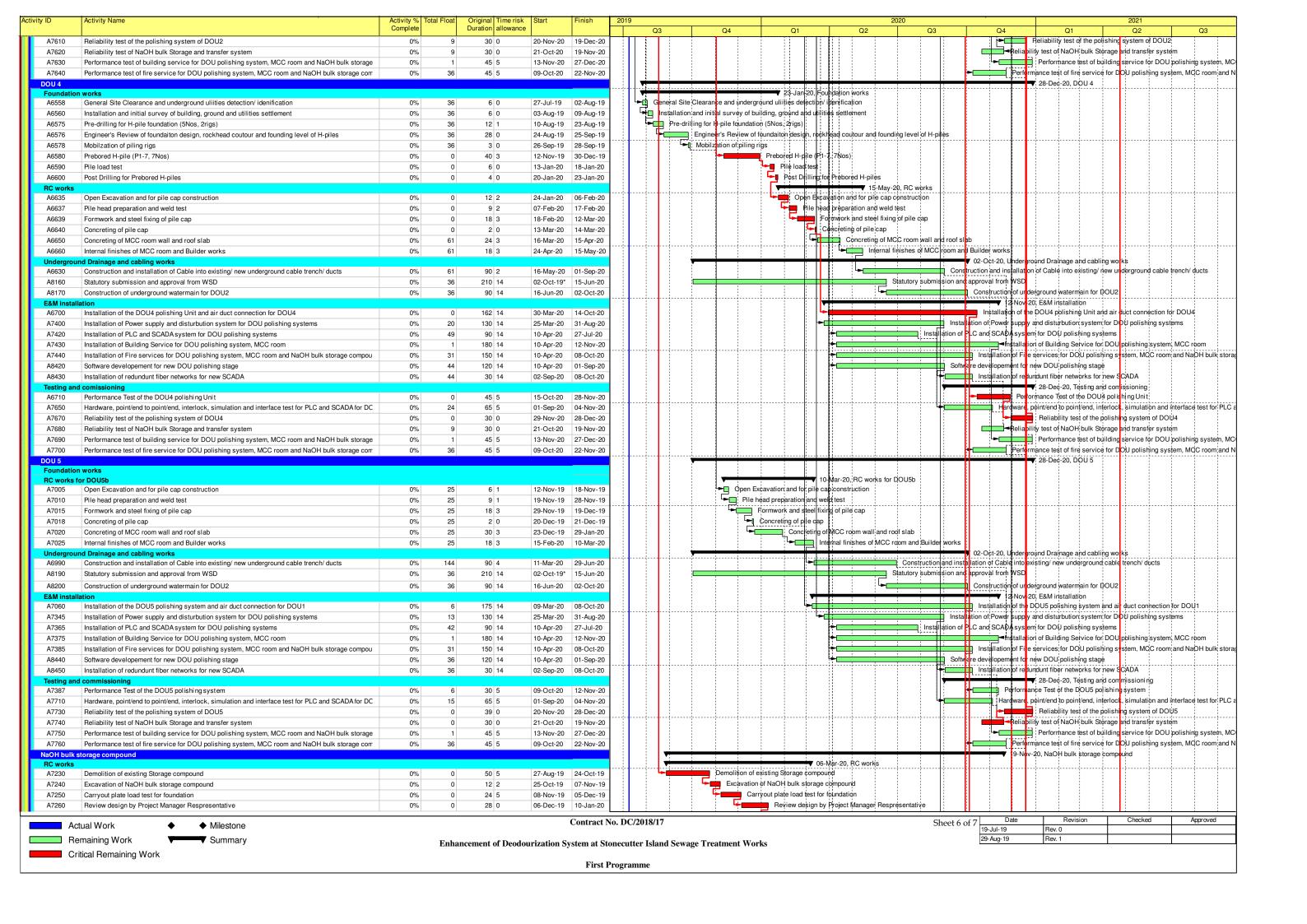






First Programme





| Activity ID | Activity Name | Activity % | Total Float | Original Time risk | | Finish | 20 | 019 | | | 20 | 020 | • | 2021 | | |
|--------------|--|------------|-------------|--------------------|------------|-----------|-----|-----|----|----|------------------------|------------|--|-----------------------------|---------------------|------------------------------|
| | | Complete | | Duration allowance | е | | | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 |
| A7270 | RC works for NaOH bulk storage compound | 0% | 0 | 45 5 | 11-Jan-20 | 06-Mar-20 | | | | RC | works for NaOH bulk st | : • : • :: | | | | |
| E&M instal | ation | | | | | | 1 | | | | V | 0.5 | 5-Sep-20, Ë&M ins <mark>t</mark> allatio | | | |
| A7280 | Installation NaOH storage tanks and associated transfer pump | 0% | 0 | 120 20 | 15-Apr-20 | 05-Sep-20 | | | | | - | In | nstallation NaOH storage | tanks and associated trans | er pump | |
| Testing an | 1 Commissioning | | | | | | | | | | | - | | -20, Testing and Commissi | ٠, ١ | |
| A7390 | Performance test of the NaOH bulk storage compound and transfer system | 0% | 0 | 75 15 | 06-Sep-20 | 19-Nov-20 | | | | | | | Perforn | nance test of the NaOH bull | storage compou | ınd and transfer system |
| Statutary In | spection by FSD | | | | | | | | | | | İ | | <u> </u> | | 21, Statutary Inspection by |
| A7770 | Submission of Application for FS inspection ot FSD | 0% | 0 | 21 0 | 29-Dec-20 | 18-Jan-21 | | | | | | | | Submission of Appl | cation for FS ins | pection ot FSD |
| A7780 | FS inspection by FSD | 0% | 0 | 14 2 | 19-Jan-21 | 01-Feb-21 | | | | | | | | FS inspection t | y FSD | |
| A7790 | System/ Defect rectification | 0% | 0 | 40 5 | 02-Feb-21 | 13-Mar-21 | | | | | | | | Syste | m/ Defect rectific | cation |
| A7800 | Submission of application for FS reinspection to FSD | 0% | 0 | 21 0 | 14-Mar-21 | 03-Apr-21 | 1 : | | | | | | | - | Submission of a | oplication for FS reinspecti |
| A7810 | FS re-inspection by FSD | 0% | 0 | 14 2 | 04-Apr-21 | 17-Apr-21 | | | | | | | | i i 🖡 | FS re-inspec | tion by FSD |
| A7820 | Issue FS certificates | 0% | 0 | 15 2 | 18-Apr-21 | 02-May-21 | 1 | | | | | | | | Issue FS | certificates |
| A7830 | Works completion for Handover | 0% | 0 | 1 0 | 03-May-21 | 03-May-21 | | | | | | | | | Works c | ompletion for Handover |
| Handover o | E&M equipment | | | , | | | | | | | | | | • | 03-May-2 | 21, Handover of E&M equir |
| A8210 | Submission of O&M manual, Training manual and spare part list | 0% | 0 | 30 | 30-Dec-20* | 28-Jan-21 | | | | | | | | Submission of C | &M manual, Traii | ning manual and spare par |
| A8220 | Submission of final version of training manual | 0% | 0 | 30 | 29-Jan-21 | 27-Feb-21 | 1 | | | | | | | Submiss | on of final version | on of training manual |
| A8230 | O&M training to DSD/ST2 | 0% | 0 | 14 | 28-Feb-21 | 13-Mar-21 | | | | | | [] | | - ■ O&M | tra ning to D\$D/\$ | ST2 |
| A8240 | Handover spare parts | 0% | 0 | 30 | 14-Mar-21 | 12-Apr-21 | 1 | | | | | | | - | Handover spa | re parts |
| A8250 | Handover of Final version of O&M manual | 0% | 0 | 21 | 13-Apr-21 | 03-May-21 | | | | | | | | | Handove | r of Final version of O&M |

Contract No. DC/2018/17

Sheet 7 of 7 Date 19-Jul-19 29-Aug-19

Enhancement of Deodourization System at Stonecutter Island Sewage Treatment Works