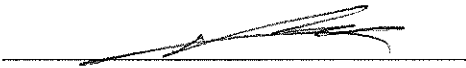


**Drainage Services Department**

**Agreement No. SPW 07/2019  
Shek Wu Hui Effluent Polishing  
Plant – Main Works Stage 1**

**Quarterly EM&A Summary Report  
December 2019 to March 2020**

(Version 1)

Certified By	
	(Environmental Team Leader: Mr. KS Lee)

REMARKS:

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

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

**CINOTECH CONSULTANTS LTD**  
Room 1710, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong  
Tel: (852) 2151 2083 Fax: (852) 3107 1388  
Email: info@cinotech.com.hk

Ref.: DSDSWHS1EM00\_0\_0051L.20

19 May 2020

By E-mail and Fax (3922 9797)

AECOM Asia Company Limited  
8/F., Grand Central Plaza, Tower 2,  
138 Shatin Rural Committee Road  
Sha Tin, New Territories, Hong Kong

Attention: Mr CHANG Ping Wah

Dear Mr CHANG,

**Re: Contract No. SPW 08/2019  
Independent Environmental Checker for  
Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1**

**Quarterly EM&A Summary Report for December 2019 to March 2020**

Reference is made to the Environmental Team's submission of Quarterly EM&A Summary Report for December 2019 to March 2020 (Version 1) certified by the ET Leader and provided to us via e-mail on 19 May 2020.

Please be informed that we write hereby to confirm that we have no adverse comments on the captioned submission.

Thank you for your attention. Please do not hesitate to contact us should you have any queries.

Yours sincerely,  
For and on behalf of  
Ramboll Hong Kong Limited



Ray Yan  
Independent Environmental Checker

c.c.

DSD  
Cinotech

Attn.: Ms Konica Cheung  
Attn.: Mr K. S. Lee

(By Fax: 3104 6420)  
(By Fax: 3107 1388)

Q:\Projects\DSDSWHS1EM00\02 Proj\_Mgt\02 Corr\DSDSWHS1EM00\_0\_0051L.20.docx

## TABLE OF CONTENTS

Page

<b>EXECUTIVE SUMMARY .....</b>	<b>1</b>
Introduction.....	1
Summary of Main Works Undertaken and Key Measures Implemented .....	1
Summary of Exceedances, Investigation and Follow-up.....	2
Complaint Handling, Prosecution and Public Engagement.....	3
Reporting Changes.....	3
Future Key Issues.....	4
<b>1 INTRODUCTION.....</b>	<b>5</b>
Background.....	5
Project Organizations.....	5
Construction Activities Undertaken During the Reporting Quarter .....	6
<b>2 ENVIRONMENTAL MONITORING AND AUDIT REQUIREMENTS.....</b>	<b>8</b>
Monitoring Parameters and Monitoring Locations.....	8
Environmental Quality Performance Limits (Action and Limit Levels).....	8
Monitoring Methodology.....	8
Implementation Status of Environmental Mitigation Measures .....	8
Site Audit Summary.....	8
Status of Waste Management.....	8
<b>3 MONITORING RESULTS.....</b>	<b>9</b>
Weather Conditions .....	9
Air Quality .....	9
Construction Noise.....	9
Ecology .....	9
Water Quality.....	9
Waste Management.....	9
Landscape and Visual .....	10
Influencing Factors on the Monitoring Results .....	10
<b>4 NON-COMPLIANCE (EXCEEDANCES) OF THE ENVIRONMENTAL QUALITY PERFORMANCE LIMITS (ACTION AND LIMIT LEVELS).....</b>	<b>11</b>
Summary of Exceedances .....	11
Review of the Reasons for and the Implications of Non-compliance .....	11
Summary of Complaint, Warning, Notification of Any Summons and Successful Prosecution .....	11
<b>5 COMMENTS, CONCLUSIONS AND RECOMMENDATIONS.....</b>	<b>13</b>
Review of Monitoring Methodology and the Practicality and Effectiveness of EM&A Programme.....	13
Review on Effectiveness of Mitigation Measures .....	13
Recommendations.....	14

## **LIST OF TABLES**

Table I	Summary Table for Major Site Activities in the Reporting Quarter
Table II	Non-compliance Record for the Project in the Reporting Quarter
Table III	Summary Table of Complaints, Summons, Prosecutions and Public Engagement Activities in the Reporting Quarter
Table IV	Summary Table for Site Activities in the Next Reporting Period
Table 1.1	Key Project Contacts
Table 1.2	Summary Table for Major Site Activities in the Reporting Quarter
Table 3.1	Major Dust Sources during the Monitoring in the Reporting Period
Table 3.2	Major Noise Sources during the Monitoring in the Reporting Period
Table 3.3	Observations during Ecological Monitoring in the Reporting Period
Table 4.1	Summary of Complaint in the Reporting Quarter

## **LIST OF FIGURES**

Figure 1.1	Layout Plan of the Project Site
Figure 1.2	Project Organisation for Environmental Monitoring and Audit
Figure 2	Locations of Air Quality Monitoring Stations
Figure 3	Locations of Construction Noise Monitoring Stations
Figure 4	Survey Location for Impact Ecological Monitoring

## **LIST OF APPENDICES**

Appendix A	Construction Programme
Appendix B	Monitoring Requirements
Appendix C	Action and Limit Levels
Appendix D	Environmental Mitigation Implementation Schedule (EMIS)
Appendix E	Site Audit Summary
Appendix F	Waste Flow Table
Appendix G	Graphical Presentations of Air Quality Monitoring Results (1-hour)
Appendix H	Graphical Presentations of Air Quality Monitoring Results (24-hour)
Appendix I	Graphical Presentations of Noise Monitoring Results
Appendix J	Summary of Ecological Monitoring Analysis
Appendix K	Summary of Exceedances
Appendix L	Summaries of Environmental Complaint, Warning, Summon and Notification of Successful Prosecution

## EXECUTIVE SUMMARY

### Introduction

1. This is the 1<sup>st</sup> Quarterly Environmental Monitoring and Audit (EM&A) Summary Report prepared by the Environmental Team, Cinotech Consultants Ltd., for Agreement No. SPW 07/2019 “Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1” (hereinafter called “the Project”). This report summarized the monitoring results and audits findings of the EM&A programme under the issued further EP No. FEP-02/474/2013 and in accordance with the Updated EM&A Manual conducted between December 2019 and March 2020, with the actual construction works commenced since 3<sup>rd</sup> January 2020.

### Summary of Main Works Undertaken and Key Measures Implemented

2. The construction activities undertaken in the reporting quarter were as follows:

**Table I Summary Table for Major Site Activities in the Reporting Quarter**

Contract No.	Contract Title	Site Activities
DC/2018/06	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Civil Works for Sludge Treatment Facilities and 132kV Primary Substation	<ul style="list-style-type: none"> <li>• Site clearance and preparation</li> <li>• Underground utility detection</li> <li>• H-piles installation</li> <li>• Sheet piling installation</li> <li>• Drainage diversion work</li> <li>• Demolition of existing structure</li> <li>• Tree felling works</li> <li>• Hoarding installation</li> <li>• Trial pit excavation for underground utility</li> <li>• Predrilling works</li> </ul>
DC/2018/07	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Civil Works for Sewage Treatment Facilities	<ul style="list-style-type: none"> <li>• Site daily cleaning tidy up and clearance</li> <li>• Pre-drilling works</li> <li>• Demolition works</li> <li>• Drainage and underground utilities</li> <li>• Sheet pile construction</li> <li>• Trial pit works</li> <li>• Underground utilities detection</li> </ul>
DE/2018/03	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities	No construction activities in the reporting quarter.
DE/2018/04	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - E&M Works for Sewage Treatment Facilities	No construction activities in the reporting quarter.

## 3. Implementation of the key mitigation measures during the reporting period are as follows:

*Air Quality*

- Water spraying on haul road was done to minimize dust generation.
- Stockpiles were covered by impervious sheets.
- The public road was kept free from dust and soil.

*Water Quality*

- Ponding water was pumped and collected in the sedimentation tank.
- Manholes were covered by impervious sheets to prevent muddy water flowing into the drainage system.
- Water from road washing should not fall into the drainage system.

*Waste Management*

- Waste pile was covered by impervious sheets.
- Unused waste and materials were removed to maintain the tidiness of the site.
- General refuse was removed to avoid waste accumulation.

**Summary of Exceedances, Investigation and Follow-up**

4. Since no actual construction works were carried out in December 2019, no air quality, construction noise and ecological monitoring were conducted. Thus, Action and Limit Level exceedances for air quality, construction noise and ecological monitoring were not applicable in December 2019.
5. Exceedance of Action/Limit levels between January and March 2020 and summary of the non-compliance in the reporting quarter for the Project is tabulated in **Table II**.

**Table II Non-compliance Record for the Project in the Reporting Quarter**

Parameter	No. of Exceedance		Investigation Result
	Action Level	Limit Level	
January 2020			
Air Quality (1-hour TSP)	0	0	N/A
Air Quality (24-hour TSP)	0	0	N/A
Noise	0	0	N/A
Ecology	1	0	Non-project related
February 2020			
Air Quality (1-hour TSP)	0	0	N/A
Air Quality (24-hour TSP)	0	0	N/A
Noise	0	0	N/A
Ecology	0	0	N/A
March 2020			
Air Quality (1-hour TSP)	0	0	N/A
Air Quality (24-hour TSP)	0	0	N/A
Noise	0	0	N/A
Ecology	1	0	Non-project related

6. No exceedance was recorded at any air quality monitoring station during the reporting period.
7. No exceedance was recorded at any noise monitoring station during the reporting period.

8. 2 Action Levels and no Limit Level were triggered for ecology monitoring during the reporting period.

### Complaint Handling, Prosecution and Public Engagement

9. Summary of complaint handling, prosecution and public engagement in the reporting quarter is tabulated in **Table III**.

**Table III Summary Table of Complaints, Summons, Prosecutions and Public Engagement Activities in the Reporting Quarter**

Event	Event Details		Follow-up/ Remedial Actions	Status/ Remarks
	Number	Brief Description		
Complaints Received	1	Muddy water was suspected to be discharged from the expansion site of SWHSTP to Shek Sheung River, manholes and foul drains nearby	<ul style="list-style-type: none"> <li>Employed suction truck and dump truck to clear the silt and mud at Shek Sheung River</li> <li>Arranged to repair the wastewater treatment system</li> <li>Installed additional sedimentation tanks and wastewater treatment system to increase the on-site treatment capacity</li> </ul>	Investigation undergoing
Notification of Summons and Prosecutions Received	0	-	-	-
Public Engagement Activities	0	-	-	-

### Reporting Changes

10. There were no reporting changes during the reporting quarter.

**Future Key Issues**

11. The key works or activities will be anticipated in the next reporting period are as follows:

**Table IV Summary Table for Site Activities in the Next Reporting Period**

<b>Contract No.</b>	<b>Contract Title</b>	<b>Site Activities</b>
DC/2018/06	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Civil Works for Sludge Treatment Facilities and 132kV Primary Substation	<ul style="list-style-type: none"> <li>• Underground utility detection</li> <li>• H-piles installation</li> <li>• Sheet piling installation</li> <li>• Drainage diversion work</li> </ul>
DC/2018/07	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Civil Works for Sewage Treatment Facilities	<ul style="list-style-type: none"> <li>• Site daily cleaning tidy up and clearance</li> <li>• Pre-drilling works</li> <li>• Demolition works</li> <li>• Drainage and underground utilities</li> <li>• Sheet pile construction</li> </ul>
DE/2018/03	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities	<ul style="list-style-type: none"> <li>• Site clearance and fencing work</li> </ul>
DE/2018/04	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - E&M Works for Sewage Treatment Facilities	<ul style="list-style-type: none"> <li>• Preparation work of E&amp;M installation at temporary filtrate lifting well and equalization tank</li> <li>• Preparation work of modification of existing emergency generator electrical works</li> </ul>



## 1 INTRODUCTION

### Background

- 1.1 The Further Expansion of Shek Wu Hui Effluent Polishing Plant (SWHEPP) is a designated Project (DP) under F.1 and F.2 of Part 1, Schedule 2 of Environmental Impact Assessment Ordinance (EIAO). The “North East New Territories New Development Areas” Environmental Impact Assessment (NENT NDAs EIA) Report (Registered No.: AEIAR-175/2013) covered the assessment for the Further Expansion of SWHSTW Phase 1A, 1B and 2, and the associated Environmental Monitoring and Audit (EM&A) Manual was approved on 18 October 2013.
- 1.2 The existing Shek Wu Hui Sewage Treatment Works (SWHSTW) is operated and maintained by the Drainage Services Department (DSD). It provides secondary level treatment to sewage collected from Sheung Shui, Fanling and adjacent areas, SWHSTW was completed in two stages and expanded progressively in the past year. In 2009, the expansion of SWHSTW was completed and its design capacity was 93,000m<sup>2</sup>/day at average dry weather flow (ADWF). After the Resource Allocation Exercise 2017, the existing SWHSTW is proposed to be upgraded from secondary to tertiary treatment level as the new SWHEPP at 3 stages: Main Works Stage 1, Stage 2 and Stage 3.
- 1.3 A Further Environmental Permit (EP) (Permit No. FEP-02/474/2013) was issued on 15 February 2018 to DSD as the Permit Holder to assume the responsibility for construction and operating the SWHEPP Project up to a capacity of 190,000m<sup>3</sup>/day. The updated Environmental Monitoring and Audit (EM&A) Manual was prepared in accordance with Condition 2.3 of the Further EP. The site layout plan for the Project is shown in **Figure 1.1**.
- 1.4 Cinotech Consultants Ltd. was designated as the Environmental Team (ET) to undertake the Environmental Monitoring and Audit (EM&A) works for the Project. The construction commencement of the Project was on 3<sup>rd</sup> January 2020. This is the 1<sup>st</sup> Quarterly EM&A Summary Report summarizing the EM&A works for the Project between December 2019 and March 2020, with the actual construction works commenced since 3<sup>rd</sup> January 2020.

### Project Organizations

- 1.5 Different Parties with different levels of involvement in the project organization include:
  - Permit Holder/Project Proponent – Drainage Services Department (DSD)
  - Supervisor Representative – AECOM Asia Company Limited (AECOM)
  - Environmental Team (ET) – Cinotech Consultants Limited (Cinotech)
  - Independent Environmental Checker (IEC) – Ramboll Hong Kong Limited (Ramboll)
  - Contractors
    - Contract No.: DC/2018/06 - Kwan Lee - Chun Wo Joint Venture (KLCWJV)
    - Contract No.: DC/2018/07 - Kwan Lee - Chun Wo Joint Venture (KLCWJV)
    - Contract No.: DE/2018/03 - Jardine Engineering Corporation Limited (JEC)
    - Contract No.: DE/2018/04 - Bestwise Envirotech Limited (Bestwise)

1.6 The key contacts of the Project are shown in **Table 1.1**.

**Table 1.1 Key Project Contacts**

Party	Role	Contact Person	Phone No.
DSD	Permit Holder / Project Proponent	Ms. Konica Cheung	2594 7463
		Public Enquiry	3142 2256
AECOM	Supervisor Representative	Mr. Henry Tai	3792 0580
Cinotech	Environmental Team	Mr. KS Lee (ET Leader)	2151 2091
		Ms. Betty Choi	2151 2072
Ramboll	Independent Environmental Checker	Mr. Ray Yan	3465 2836
KLCWJV	Contractor (DC/2018/06)	Mr. Yip Yun Lam	9532 7174
KLCWJV	Contractor (DC/2018/07)	Mr. Karsten Kwong	9771 0059
JEC	Contractor (DE/2018/03)	Mr. Lau Kim Hung	2947 1125
Bestwise	Contractor (DE/2018/04)	Mr. Albus Cheung	9731 0831

1.7 The Organizational Structure for Environmental Management is shown in **Figure 1.2**.

### Construction Activities Undertaken During the Reporting Quarter

1.8 The construction programme is presented in **Appendix A**. The major site activities undertaken in the reporting quarter were:

**Table 1.2 Summary Table for Major Site Activities in the Reporting Quarter**

Contract No.	Contract Title	Site Activities
DC/2018/06	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Civil Works for Sludge Treatment Facilities and 132kV Primary Substation	<ul style="list-style-type: none"> <li>• Site clearance and preparation</li> <li>• Underground utility detection</li> <li>• H-piles installation</li> <li>• Sheet piling installation</li> <li>• Drainage diversion work</li> <li>• Demolition of existing structure</li> <li>• Tree felling works</li> <li>• Hoarding installation</li> <li>• Trial pit excavation for underground utility</li> <li>• Pre-drilling works</li> </ul>
DC/2018/07	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Civil Works for Sewage Treatment Facilities	<ul style="list-style-type: none"> <li>• Site daily cleaning tidy up and clearance</li> <li>• Pre-drilling works</li> <li>• Demolition works</li> <li>• Drainage and underground utilities</li> <li>• Sheet pile construction</li> <li>• Trial pit works</li> <li>• Underground utilities detection</li> </ul>

<b>Contract No.</b>	<b>Contract Title</b>	<b>Site Activities</b>
DE/2018/03	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities	No construction activities in the reporting quarter.
DE/2018/04	Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1 - E&M Works for Sewage Treatment Facilities	No construction activities in the reporting quarter.

## **2 ENVIRONMENTAL MONITORING AND AUDIT REQUIREMENTS**

### **Monitoring Parameters and Monitoring Locations**

- 2.1 The Updated EM&A Manual designates locations for the ET to monitor environmental impacts in terms of air quality, noise and ecology due to the Project. The Project area and monitoring locations are depicted in **Figures 2-4**. **Appendix B** gives details of monitoring requirements.

### **Environmental Quality Performance Limits (Action and Limit Levels)**

- 2.2 Should the environmental quality parameters exceed the Action/Limit Levels, the respective action plans would be implemented. The Action/Limit Levels for each environmental parameter are given in **Appendix C**.

### **Monitoring Methodology**

- 2.3 Monitoring works/equipment were conducted/calibrated regularly in accordance with the Updated EM&A Manual. Copies of calibration certificates are attached in the appendices of the corresponding Monthly EM&A Reports within the reporting period.

### **Implementation Status of Environmental Mitigation Measures**

- 2.4 The Contractor has implemented environmental mitigation measures and requirements as stated in the EIA Report, the Environmental Permit and Updated EM&A Manual. The implementation status of environmental mitigation measures (EMIS) is given in **Appendix D**.

### **Site Audit Summary**

- 2.5 Site audits were carried out on a weekly basis. During site inspections in the reporting period, no non-conformance was identified. The observations and recommendations made during the reporting period are summarized in **Appendix E**.

### **Status of Waste Management**

- 2.6 The amount of wastes generated by the major site activities of this Project is shown in **Appendix F**.

### **3 MONITORING RESULTS**

#### **Weather Conditions**

- 3.1 The weather conditions were generally sunny and cloudy during the monitoring sessions of the reporting period. The details of weather conditions for each individual monitoring session was presented in the corresponding Monthly EM&A Reports within the reporting period.

#### **Air Quality**

- 3.2 All 1-hour TSP monitoring was conducted as scheduled in the reporting quarter. No Action/Limit Level exceedance was recorded.
- 3.3 All 24-hour TSP monitoring was conducted as scheduled in the reporting quarter. No Action/Limit Level exceedance was recorded.
- 3.4 The graphical presentations of 1-hour and 24-hour TSP monitoring results are shown in **Appendix G** and **Appendix H** respectively.

#### **Construction Noise**

- 3.5 All construction noise monitoring was conducted as scheduled in the reporting period. No Action and Limit Level exceedance was recorded.
- 3.6 The graphical presentations of the noise monitoring results are shown in **Appendix I**.

#### **Ecology**

- 3.7 All ecological monitoring was conducted as scheduled in the reporting period. 2 Action Levels were triggered for ecological monitoring between January and March 2020. No Limit Level was triggered.
- 3.8 A summary of ecological monitoring analysis is shown in **Appendix J**.

#### **Water Quality**

- 3.9 According to the Updated EM&A Manual, no water monitoring is required before the commencement of outfall construction at Ng Tung River.
- 3.10 Site audits were carried out on a weekly basis to monitor and audit the timely implementation of water quality mitigation measures of this project. No non-compliance of water quality mitigation measures was observed in the reporting quarter.

#### **Waste Management**

- 3.11 Site audits were carried out on a weekly basis to monitor and audit to ensure that proper storage, transportation and disposal practices of waste materials generated during construction activities, such as construction and demolition (C&D) materials and general refuse are being implemented. Details of the amount of wastes generated by the major site activities is shown in **Appendix F**.

## Landscape and Visual

- 3.12 Site audits were carried out on a weekly basis to monitor and audit the timely implementation of landscape and visual mitigation measures of this project. No non-compliance of the landscape and visual mitigation measures was recorded in the reporting quarter.

## Influencing Factors on the Monitoring Results

- 3.13 During the reporting period, the major dust and noise sources identified at the designated monitoring stations are shown in **Tables 3.1 and 3.2**.

**Table 3.1 Major Dust Sources during the Monitoring in the Reporting Period**

Monitoring Stations	Major Dust Source
AM1 - Wai Loi Tsuen	Village House Renovation Works and Road Traffic at Sheung Shui Tung Hing Road
AM2 - Fu Tei Au	N/A
AM1a - Site Boundary of the Shek Wu Hui STW (East)	Vehicle Movement within SWHSTW
AM2a - Site Boundary of the Shek Wu Hui STW (North)	N/A

**Table 3.2 Major Noise Sources during the Monitoring in the Reporting Period**

Monitoring Stations	Major Noise Source
NM1 - Wai Loi Tsuen	Railway Noise, Village House Renovation Works and Road Traffic at Sheung Shui Tung Hing Road
NM2 - Fu Tei Au	N/A
NM3 - Man Kok Village	Road traffic at Po Wan Road

- 3.14 The observations identified during ecological monitoring at the designated monitoring stations are shown in **Table 3.3**.

**Table 3.3 Observations during Ecological Monitoring in the Reporting Period**

Location	Project Related	Non-Project Related
T1 (PC1, PC2)	Construction activities (breaking, excavation)	Fishing, remote boating, dogs, jaywalking, dump truck
T2 (PC3, PC4)	Construction activities (breaking, drilling, sheet-piling, excavation, vibration hammer and pre-boring)	Fishing, construction activities (breaking), jaywalking
PC5	Construction activities (sheet-piling), muddy water	Moving of shrubs
T3 (PC6, PC7)	Construction activities (vibration hammer)	Fishing, open burning outside works area, dogs, filming

#### **4 NON-COMPLIANCE (EXCEEDANCES) OF THE ENVIRONMENTAL QUALITY PERFORMANCE LIMITS (ACTION AND LIMIT LEVELS)**

##### **Summary of Exceedances**

- 4.1 Environmental monitoring works were performed in the reporting period and all monitoring results were checked and reviewed. A summary of exceedances is attached in **Appendix K**.
- 4.2 No Action/Limit Level exceedance was recorded at all 1-hour and 24-hour TSP monitoring stations in the reporting quarter.
- 4.3 No Action/Limit Level exceedance was recorded at all noise monitoring stations in the reporting quarter.
- 4.4 2 Action Levels were triggered and no Limit Level exceedance was recorded for ecological monitoring in the reporting quarter. As the decline in numbers of Chinese Pond Heron was considered non-project related, no remedial measure for the project is proposed.
- 4.5 No non-conformity for landscape and visual impact was recorded in the reporting quarter.

##### **Review of the Reasons for and the Implications of Non-compliance**

- 4.6 There was no non-compliance from the site audits in the reporting period. The observations and recommendations made in each individual site audit session were attached in the **Appendix E**.

##### **Summary of Complaint, Warning, Notification of Any Summons and Successful Prosecution**

- 4.7 1 environmental complaint regarding muddy water discharge near SWHEPP was received during the reporting quarter. Complaint investigation was carried out and the summary of the complaint is provided in **Table 4.1**.

**Table 4.1 Summary of Complaint in the Reporting Quarter**

Received Date	Date of Incident / Location	Summary	Follow-up/ Remedial Actions	Status/ Remarks
18 March 2020	Mid-February – March 2020 / Expansion Site of SWHSTP	Muddy water was suspected to be discharged from the expansion site of SWHSTP to Shek Sheung River, manholes and foul drains nearby	<ul style="list-style-type: none"> <li>• Employed suction truck and dump truck to clear the silt and mud at Shek Sheung River</li> <li>• Arranged to repair the wastewater treatment system</li> <li>• Installed additional sedimentation tanks and wastewater treatment system to increase the on-site treatment capacity</li> </ul>	Investigation undergoing

- 4.8 No warning, notifications of summons and environmental prosecution was received during the reporting quarter.
- 4.9 The summaries of environmental complaint, warning, summon and notification of successful prosecution for the Project is presented in **Appendix L**.



## 5 COMMENTS, CONCLUSIONS AND RECOMMENDATIONS

### **Review of Monitoring Methodology and the Practicality and Effectiveness of EM&A Programme**

- 5.1 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.

### **Review on Effectiveness of Mitigation Measures**

- 5.2 The mitigation measures recommended in the EIA report are considered effective in minimizing environmental impacts.
- 5.3 The Contractor has implemented the recommended mitigation measures except for those mitigation measures not applicable at this stage.
- 5.4 Environmental monitoring works were performed in the reporting quarter and all monitoring results were checked and reviewed.
- 5.5 The summary record of non-compliance (exceedances) of Action/Limit Level for environmental monitoring in the reporting quarter has been presented in **Table II** above and in **Appendix K**.
- 5.6 1 environmental complaint was received in the reporting quarter. The details were attached in the **Appendix L**.
- 5.7 No warning, notifications of summons and environmental prosecution was received in the reporting quarter. The details were attached in the **Appendix L**.
- 5.8 The effectiveness of environmental management is satisfactory given that the recommendations given in the site inspections performed in the reporting period are met.

**Recommendations**

5.9 According to the environmental audits performed in the reporting quarter, the following recommendations were made:

*Air Quality*

- Regular water spraying on haul road and dry surfaces should be applied to minimize dust generation.
- Stockpiles should be covered by impervious materials.
- The public road should keep free from dust and soil.

*Water Quality*

- Standing or ponding water should be removed as far as practicable.
- Muddy water should pump through the sedimentation tank.
- Untreated water from road washing should not fall into the manholes and drainage system.
- Muddy water should not be discharged directly into the surrounding rivers.
- No slurry should be disposed of at the existing Shek Wu Hui Sewage Treatment Works.

*Waste Management*

- Waste accumulation on-site should be prevented.

---

---

## FIGURES

---

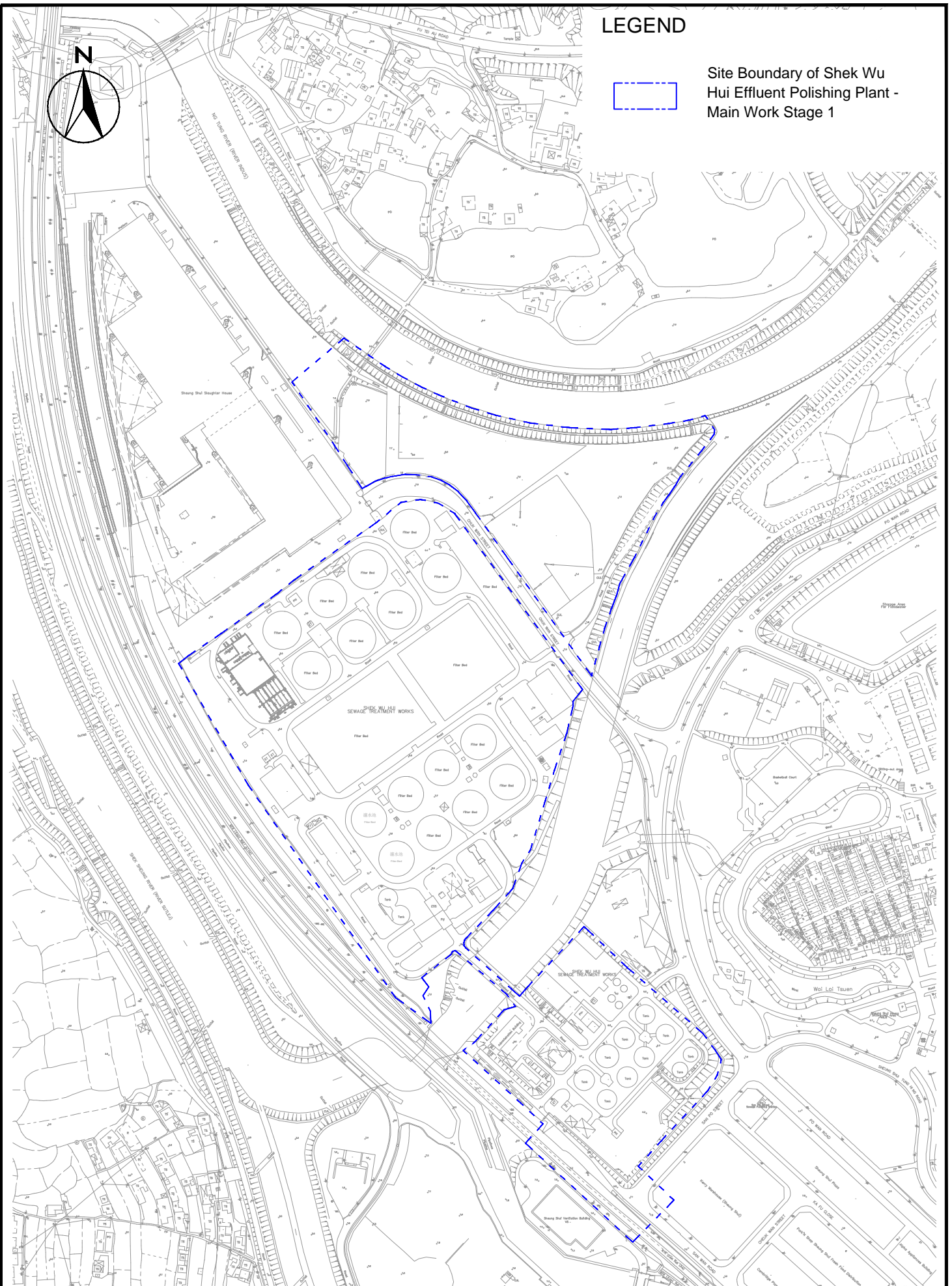
---



**LEGEND**



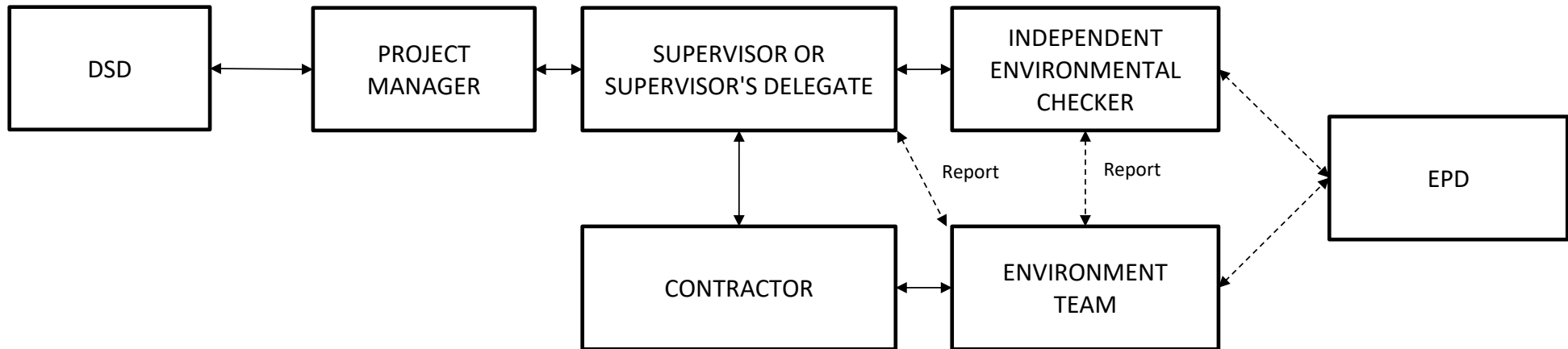
Site Boundary of Shek Wu Hui Effluent Polishing Plant - Main Work Stage 1



Agreement No. SPW07/2019  
 Shek Wu Hui Effluent Polishing Plant -  
 Main Works Stage 1

Site Layout

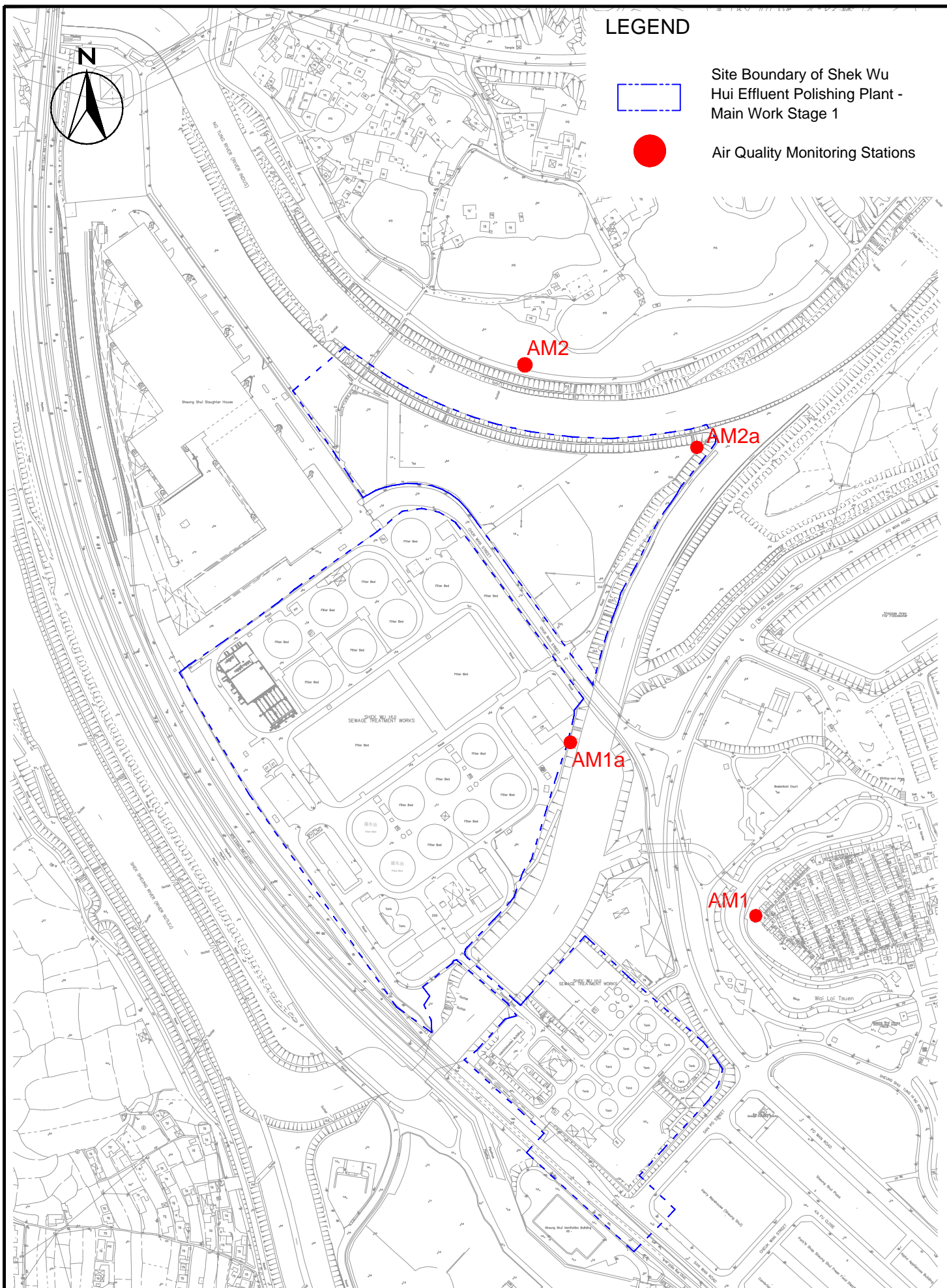
SCALE	1:4000@A4	DATE	OCT 2019
CHECK	JM	DRAWN	SY
JOB No.	MA19019	FIGURE NO.	1.1
		REV	-



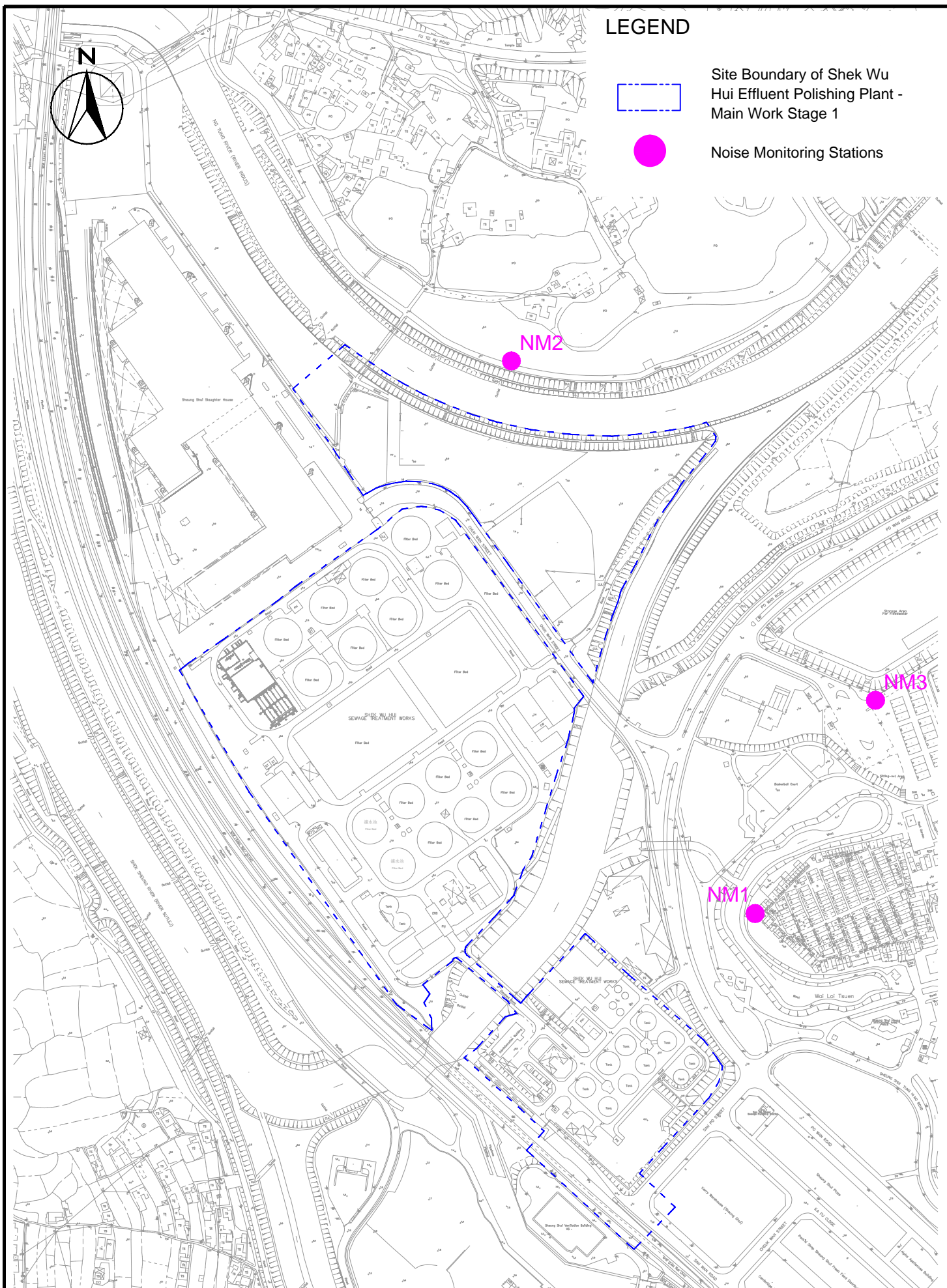
**CINOTECH**

Agreement No. SPW07/2019  
 Shek Wu Hui Effluent Polishing Plant- Main Works Stage 1  
**Project Organisation For Environmental Monitoring and Audit**

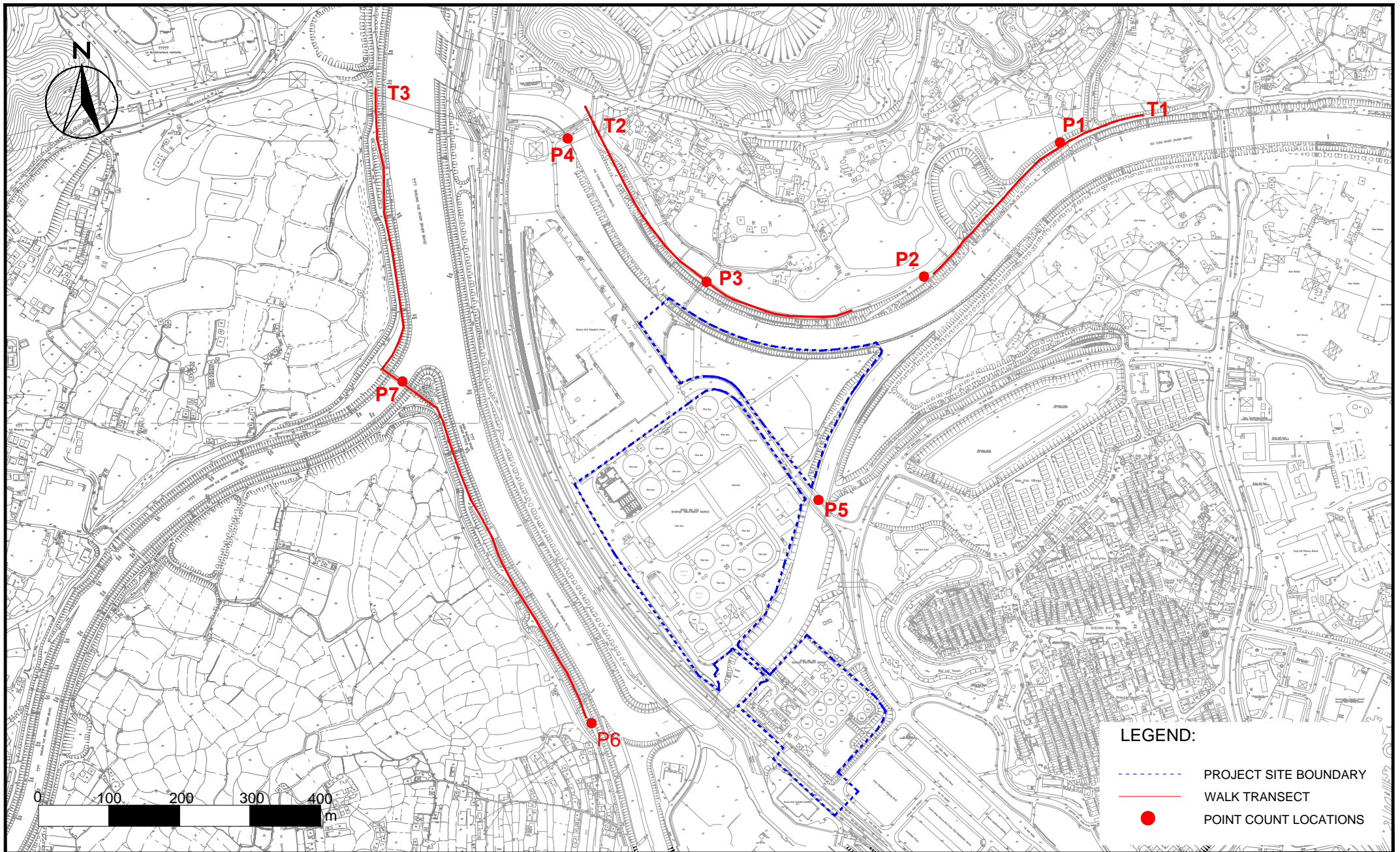
<b>SCALE</b>	N.T.S.	<b>DATE</b>	Sep 2019
<b>CHECK</b>	JM	<b>DRAWN</b>	SY
<b>JOB NO.</b>	MA19019	<b>FIGURE NO.</b>	1.2



SCALE	1:4000@A4	DATE	OCT 2019	
CHECK	JM	DRAWN	SY	
JOB No.	MA19019	FIGURE NO.	2	REV -



SCALE	1:4000@A4	DATE	OCT 2019
CHECK	JM	DRAWN	SY
JOB No.	MA19019	FIGURE NO.	3
		REV	-



**LEGEND:**

- - - - - PROJECT SITE BOUNDARY
- WALK TRANSECT
- POINT COUNT LOCATIONS



Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1  
Survey Location for Impact Ecological Monitoring

SCALE	1:7000 @ A4	DATE	Jan 2020
CHECK	BC	DRAWN	JM
JOB No.	MA19019	FIGURE NO.	4
		REV	-



---

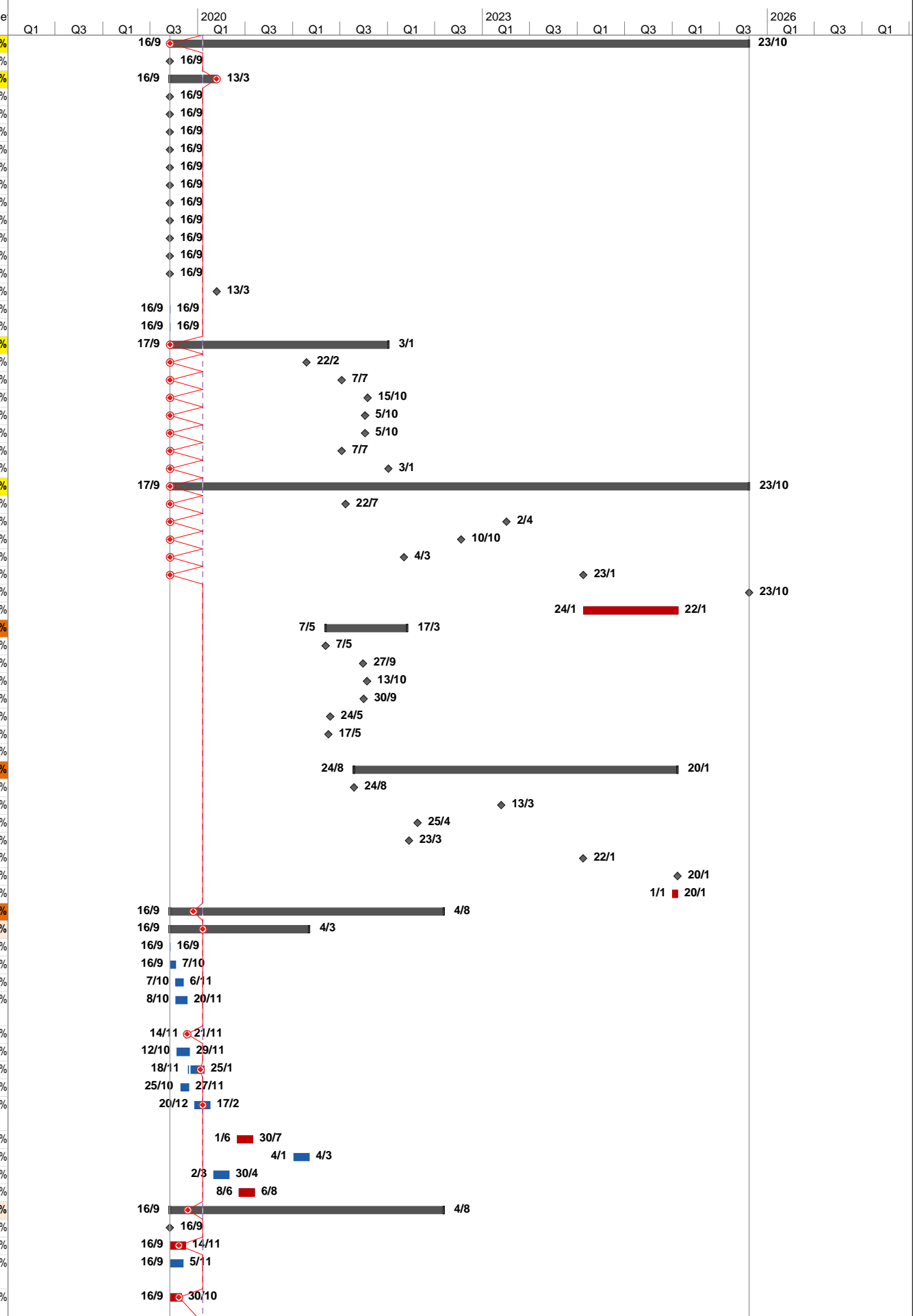
---

**APPENDIX A**  
**CONSTRUCTION PROGRAMME**

---

---

ID	KD	Task Name	Duration	Start	Finish	Actual Start	Actual Finish	Total Slack	Predecessors	Successors	% Complete
1		<b>Contract Dates</b>	<b>2229.2 days</b>	<b>Mon 16/9/19</b>	<b>Thu 23/10/25</b>	<b>Mon 16/9/19</b>	<b>NA</b>	<b>0 days</b>			<b>0%</b>
2		Starting Date	0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	4,5FS+180 days,6,7,8,9,11,12,1		100%
3		<b>Access Date (cal. day)</b>	<b>180 days</b>	<b>Mon 16/9/19</b>	<b>Fri 13/3/20</b>	<b>Mon 16/9/19</b>	<b>NA</b>	<b>0 days</b>			<b>99%</b>
4		Portion A-1	0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2		100%
5		Portion A-2	0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2FS+180 days		100%
6		Portion C-1A	0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2		100%
7		Portion C-1B	0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2		100%
8		Portion C-2A	0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2		100%
9		Portion C-2B	0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2		100%
10		Portion C-2C	0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2		100%
11		Portion C-2D	0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2		100%
12		Portion C-3	0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2		100%
13		Portion C-4	0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2		100%
14		Portion C-5	0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2		100%
15		Portion C-6	0 days	Fri 13/3/20	Fri 13/3/20	NA	NA	0 days	2FS+180 days	311,303	0%
16		Works Area WA1	1 day	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2		100%
17		Works Area WA2-A	1 day	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2		100%
18		<b>Key Date (cal. day)</b>	<b>840 days</b>	<b>Tue 17/9/19</b>	<b>Mon 3/1/22</b>	<b>NA</b>	<b>NA</b>	<b>0 days</b>			<b>0%</b>
19		KD1A (525 days after starting date)	525 days	Tue 17/9/19	Mon 22/2/21	NA	NA	0 days			0%
20		KD2A (660 days after starting date)	660 days	Tue 17/9/19	Wed 7/7/21	NA	NA	0 days			0%
21		KD3A (760 days after starting date)	760 days	Tue 17/9/19	Fri 15/10/21	NA	NA	0 days			0%
22		KD3B (750 days after starting date)	750 days	Tue 17/9/19	Tue 5/10/21	NA	NA	0 days			0%
23		KD3C (750 days after starting date)	750 days	Tue 17/9/19	Tue 5/10/21	NA	NA	0 days			0%
24		KD3D (660 days after starting date)	660 days	Tue 17/9/19	Wed 7/7/21	NA	NA	0 days			0%
25		KD3E (840 days after starting date)	840 days	Tue 17/9/19	Mon 3/1/22	NA	NA	0 days			0%
26		<b>Completion Date (cal. day)</b>	<b>2228.2 days</b>	<b>Tue 17/9/19</b>	<b>Thu 23/10/25</b>	<b>NA</b>	<b>NA</b>	<b>0 days</b>			<b>0%</b>
27		Section 1 of Works (675 days after starting date)	675 days	Tue 17/9/19	Thu 22/7/21	NA	NA	0 days			0%
28		Section 2 of Works (1,295 days after starting date)	1294 days	Tue 17/9/19	Sun 2/4/23	NA	NA	0 days			0%
29		Section 3 of Works (1,120 days after starting date)	1120 days	Tue 17/9/19	Mon 10/10/22	NA	NA	0 days			0%
30		Section 4 of Works (900 days after starting date)	900 days	Tue 17/9/19	Fri 4/3/22	NA	NA	0 days			0%
31		Section 5 of Works (1,590 days after starting date)	1590 days	Tue 17/9/19	Tue 23/1/24	NA	NA	0 days	32,33		0%
32		Defect Liability Period	365 days	Wed 24/1/24	Thu 23/10/25	NA	NA	0 days	31		0%
33		Soft Landscape Establishment Works	365 days	Wed 24/1/24	Wed 22/1/25	NA	NA	0 days	31		0%
34	*	<b>Planned Completion - Key Date (cal. day)</b>	<b>314 days</b>	<b>Fri 7/5/21</b>	<b>Thu 17/3/22</b>	<b>NA</b>	<b>NA</b>	<b>-74.8 days</b>			<b>0%</b>
35	KD1A	KD1A (525 days after starting date)	0 days	Fri 7/5/21	Fri 7/5/21	NA	NA	-74.8 days	140FF,138FF,330,		0%
36	KD2A	KD2A (660 days after starting date)	0 days	Mon 27/9/21	Mon 27/9/21	NA	NA	-83 days	366FF		0%
37	KD3A	KD3A (760 days after starting date)	0 days	Wed 13/10/21	Wed 13/10/21	NA	NA	0 days	180FF,181FF		0%
38	KD3B	KD3B (750 days after starting date)	0 days	Thu 30/9/21	Thu 30/9/21	NA	NA	4 days	198FF,199FF		0%
39	KD3C	KD3C (750 days after starting date)	0 days	Mon 24/5/21	Mon 24/5/21	NA	NA	133 days	210FF,211FF		0%
40	KD3D	KD3D (660 days after starting date)	0 days	Mon 17/5/21	Mon 17/5/21	NA	NA	50 days	236FF,237FF		0%
41	KD3E	KD3E (840 days after starting date)	0 days	Thu 17/3/22	Thu 17/3/22	NA	NA	-73.8 days	253FF,248FF,284F		0%
42	*	<b>Planned Completion - Section of the Works (cal. day)</b>	<b>1245.2 days</b>	<b>Tue 24/8/21</b>	<b>Mon 20/1/25</b>	<b>NA</b>	<b>NA</b>	<b>-33.8 days</b>			<b>0%</b>
43	SW1	Section 1 of Works (675 days after starting date)	0 days	Tue 24/8/21	Tue 24/8/21	NA	NA	-33.8 days	142FF,309FF,141F		0%
44	SW2	Section 2 of Works (1,295 days after starting date)	0 days	Mon 13/3/23	Mon 13/3/23	NA	NA	20 days	371FF,368FF,370F		0%
45	SW3	Section 3 of Works (1,120 days after starting date)	0 days	Mon 25/4/22	Mon 25/4/22	NA	NA	167 days	212FF,213FF,238F		0%
46	SW4	Section 4 of Works (900 days after starting date)	0 days	Wed 23/3/22	Wed 23/3/22	NA	NA	-20 days	269FF,273FF,304F		0%
47	SW5	Section 5 of Works (1,590 days after starting date)	0 days	Mon 22/1/24	Mon 22/1/24	NA	NA	0 days	341FF,339FF,340F		0%
48		Defect Liability Period	0 days	Mon 20/1/25	Mon 20/1/25	NA	NA	0 days	343FF		0%
49		Soft Landscape Establishment Works	20 days	Wed 1/1/25	Mon 20/1/25	NA	NA	0 days	343FF		0%
50		<b>Submissions (cal. day)</b>	<b>1054 days</b>	<b>Mon 16/9/19</b>	<b>Thu 4/8/22</b>	<b>Mon 16/9/19</b>	<b>NA</b>	<b>20 days</b>			<b>62%</b>
51		<b>Subletting Package</b>	<b>536 days</b>	<b>Mon 16/9/19</b>	<b>Thu 4/3/21</b>	<b>Mon 16/9/19</b>	<b>NA</b>	<b>63.8 days</b>			<b>52%</b>
52		Prepare & Submit Subletting Procedures	1 day	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2	53	100%
53		PM Review & Accept Subletting Procedures	21 days	Mon 16/9/19	Mon 7/10/19	Mon 16/9/19	Mon 7/10/19	0 days	52	55,57,54,56	100%
54		Subletting for Preliminary Works (Instrumentation Monitoring etc.)	30 days	Mon 7/10/19	Wed 6/11/19	Mon 7/10/19	Wed 6/11/19	0 days	53	311	100%
55		Subletting for Drainage Diversion Works for UV System no.1& Effluent Pumping Station No.1	44 days	Tue 8/10/19	Wed 20/11/19	Tue 8/10/19	Wed 20/11/19	0 days	53	308	100%
56		Subletting for the Temporary Site accommodation (On hold)	8 days	Thu 14/11/19	Thu 21/11/19	Thu 14/11/19	NA	32 days	53	111	99%
57		Subletting for Pre-drilling Works	49 days	Sat 12/10/19	Fri 29/11/19	Sat 12/10/19	Fri 29/11/19	0 days	53	58SS+15 days,59SS+15 days,1	100%
58		Subletting for Pre-bored Socketed Steel H-Pile	45 days	Mon 18/11/19	Sat 25/1/20	Mon 18/11/19	NA	7.25 days	57SS+15 days	355,150,191,207,220,230,245,1	90%
59		Subletting for Contractor's Designer for Temporary Works	32 days	Fri 25/10/19	Wed 27/11/19	Fri 25/10/19	Wed 27/11/19	0 days	57SS+15 days	61,60,74,62,63,64	100%
60		Subletting for ELS Works	60 days	Fri 20/12/19	Mon 17/2/20	Fri 20/12/19	NA	105 days	59	127,154,160,166,172,179,193,2	80%
61		Subletting for R.C Works	60 days	Mon 1/6/20	Thu 30/7/20	NA	NA	-4 days	59	128,194,210,223,359,272,252,2	0%
62		Subletting for ABWS & BS Works	60 days	Mon 4/1/21	Thu 4/3/21	NA	NA	63.8 days	59	142,184,201,213,224,239,254,2	0%
63		Subletting for Pipeworks, Utilities, and Roadworks	60 days	Mon 2/3/20	Thu 30/4/20	NA	NA	227 days	59	336,333,334,335,332	0%
64		Subletting for Hard Landscape, Soft Landscape, and others	60 days	Mon 8/6/20	Thu 6/8/20	NA	NA	0 days	59	339,340,341,343	0%
65		<b>Statutory Submission, Submission &amp; Approval</b>	<b>1054 days</b>	<b>Mon 16/9/19</b>	<b>Thu 4/8/22</b>	<b>Mon 16/9/19</b>	<b>NA</b>	<b>20 days</b>			<b>82%</b>
66		Prepare and Submit Subcontractor Management Plan (SMP)	0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	0 days	2		100%
67		Prepare and Submit Interface Management Plan	60 days	Mon 16/9/19	Thu 14/11/19	Mon 16/9/19	NA	0 days	2		58%
68		Prepare TTA Plan, submit & approve for footpath for Stage 1 - Drainage Diversion	51 days	Mon 16/9/19	Tue 5/11/19	Mon 16/9/19	Tue 5/11/19	0 days	2	308,70	100%
69		Prepare TTA Plan, submit & approve for carriageway at Chuk Wan Road for CLP 13kV substation	45 days	Mon 16/9/19	Wed 30/10/19	Mon 16/9/19	NA	0 days	2		78%



Task  Milestone  Summary  Critical 









ID	KD	Task Name	Duration	Start	Finish	Actual Start	Actual Finish	Total Slack	Predecessors	Successors	% Complete	Gantt Chart																					
												Q1	Q3	Q1	Q3	2020	Q1	Q3	Q1	Q3	Q1	Q3	2023	Q1	Q3	Q1	Q3	Q1	Q3	2026	Q1	Q3	Q1
348		Additional tree felling works (NCE no. xx)	4 days	Fri 20/12/19	Mon 23/12/19	Fri 20/12/19	Mon 23/12/19	0 days	347	350,349	100%	[Gantt bars for ID 348]																					
349		Trial Pit Excavation & UU Detection Works	10 days	Mon 2/12/19	Thu 12/12/19	Mon 2/12/19	Thu 12/12/19	0 days	348	351	100%	[Gantt bars for ID 349]																					
350		Additional demolition of existing warehouse structures (NCE no. xx)	27 days	Wed 27/11/19	Tue 31/12/19	Wed 27/11/19	Tue 31/12/19	0 days	72,348	353,351	100%	[Gantt bars for ID 350]																					
351		Predrilling Works (11no., 1rig, 4days/drillhole/rig)	10 days	Sat 4/1/20	Thu 16/1/20	Sat 4/1/20	Thu 16/1/20	0 days	57,350,349	352	100%	[Gantt bars for ID 351]																					
352		Installation of Monitoring Points	5 days	Thu 16/1/20	Wed 22/1/20	Thu 16/1/20	NA	16 days	351	354	70%	[Gantt bars for ID 352]																					
353		Demolition of Existing Boundary Wall for Temporary Access	25 days	Thu 2/1/20	Mon 3/2/20	NA	NA	9 days	72,350	354	0%	[Gantt bars for ID 353]																					
354		Setting up plant for pre-bored socketed H-pile installation	5 days	Tue 4/2/20	Sat 8/2/20	NA	NA	9 days	352,353	355	0%	[Gantt bars for ID 354]																					
355		Pre-bored Socketed H-Pile Installation (41 Nos, 2 Rig, 3days/rig/pile)	62 days	Mon 10/2/20	Sat 25/4/20	NA	NA	9 days	58,354	356	0%	[Gantt bars for ID 355]																					
356		Pile Load Test	25 days	Sun 26/4/20	Wed 20/5/20	NA	NA	13 days	355	357	0%	[Gantt bars for ID 356]																					
357		Additional Sheetpile Installation (NCE no.xx)	25 days	Thu 21/5/20	Thu 18/6/20	NA	NA	11 days	356	358	0%	[Gantt bars for ID 357]																					
358		ELS Works (incl. Strut (3-layers) Installation & Excavation (NCE no.xx))	45 days	Fri 19/6/20	Wed 12/8/20	NA	NA	11 days	357	359	0%	[Gantt bars for ID 358]																					
359		R.C. Structure (880 sq.m)	194 days	Thu 19/11/20	Sat 17/7/21	NA	NA	-70 days	87,88,89,90,61,376		0%	[Gantt bars for ID 359]																					
360		Basement	60 days	Thu 19/11/20	Sat 30/1/21	NA	NA	-70 days		361	0%	[Gantt bars for ID 360]																					
361		Ground Floor	60 days	Mon 1/2/21	Sat 17/4/21	NA	NA	-70 days	360	362	0%	[Gantt bars for ID 361]																					
362		First Floor	44 days	Mon 19/4/21	Thu 10/6/21	NA	NA	-70 days	361	363	0%	[Gantt bars for ID 362]																					
363		Roof Floor (461sq.m)	30 days	Fri 11/6/21	Sat 17/7/21	NA	NA	-70 days	362	364,366	0%	[Gantt bars for ID 363]																					
364		ABWF Works & BS Works	60 days	Mon 19/7/21	Mon 27/9/21	NA	NA	0 days	363,91,62	365SS	0%	[Gantt bars for ID 364]																					
365		Installation of telephone line/ direct link for FSD Inspection	60 days	Mon 19/7/21	Mon 27/9/21	NA	NA	0 days	364SS		0%	[Gantt bars for ID 365]																					
366	KD2A	Architectural Works	60 days	Mon 19/7/21	Mon 27/9/21	NA	NA	-70 days	363	367,36FF	0%	[Gantt bars for ID 366]																					
367		Handover to CLP for Electrical System Installation	30 days	Tue 28/9/21	Wed 27/10/21	NA	NA	301 days	366	368,370,371,369	0%	[Gantt bars for ID 367]																					
368		E&M Installation, Testing & Commissioning by CLP	180 days	Thu 28/10/21	Mon 25/4/22	NA	NA	342 days	367	44FF	0%	[Gantt bars for ID 368]																					
369		Testing & Commissioning of the E&M Works	90 days	Thu 28/10/21	Tue 25/1/22	NA	NA	432 days	367	44FF	0%	[Gantt bars for ID 369]																					
370		ABWF Works - External Finishing & BS Works	90 days	Thu 28/10/21	Wed 16/2/22	NA	NA	334 days	367,91,62	44FF	0%	[Gantt bars for ID 370]																					
371	SW2	Building Services Installation Works (incl. Fire Services, Plumbing, Drainage, etc.) & FS Inspection	180 days	Fri 5/8/22	Mon 13/3/23	NA	NA	17 days	367,77	44FF	0%	[Gantt bars for ID 371]																					
372		External Works	302 days	Thu 9/4/20	Sat 17/4/21	NA	NA	-70 days			0%	[Gantt bars for ID 372]																					
373		Road Widening Works	152 days	Thu 9/4/20	Tue 13/10/20	NA	NA	-70 days	70FS+60 days		0%	[Gantt bars for ID 373]																					
374		Drainage Works	76 days	Thu 9/4/20	Tue 14/7/20	NA	NA	-70 days	70FS+60 days	375	0%	[Gantt bars for ID 374]																					
375		Road Works	76 days	Wed 15/7/20	Tue 13/10/20	NA	NA	-70 days	374	376	0%	[Gantt bars for ID 375]																					
376		Temporary Site Access	30 days	Wed 14/10/20	Wed 18/11/20	NA	NA	-70 days	375	377,359	0%	[Gantt bars for ID 376]																					
377	SW2	Construction of New Boundary Wall	120 days	Thu 19/11/20	Sat 17/4/21	NA	NA	582 days	376	44FF	0%	[Gantt bars for ID 377]																					









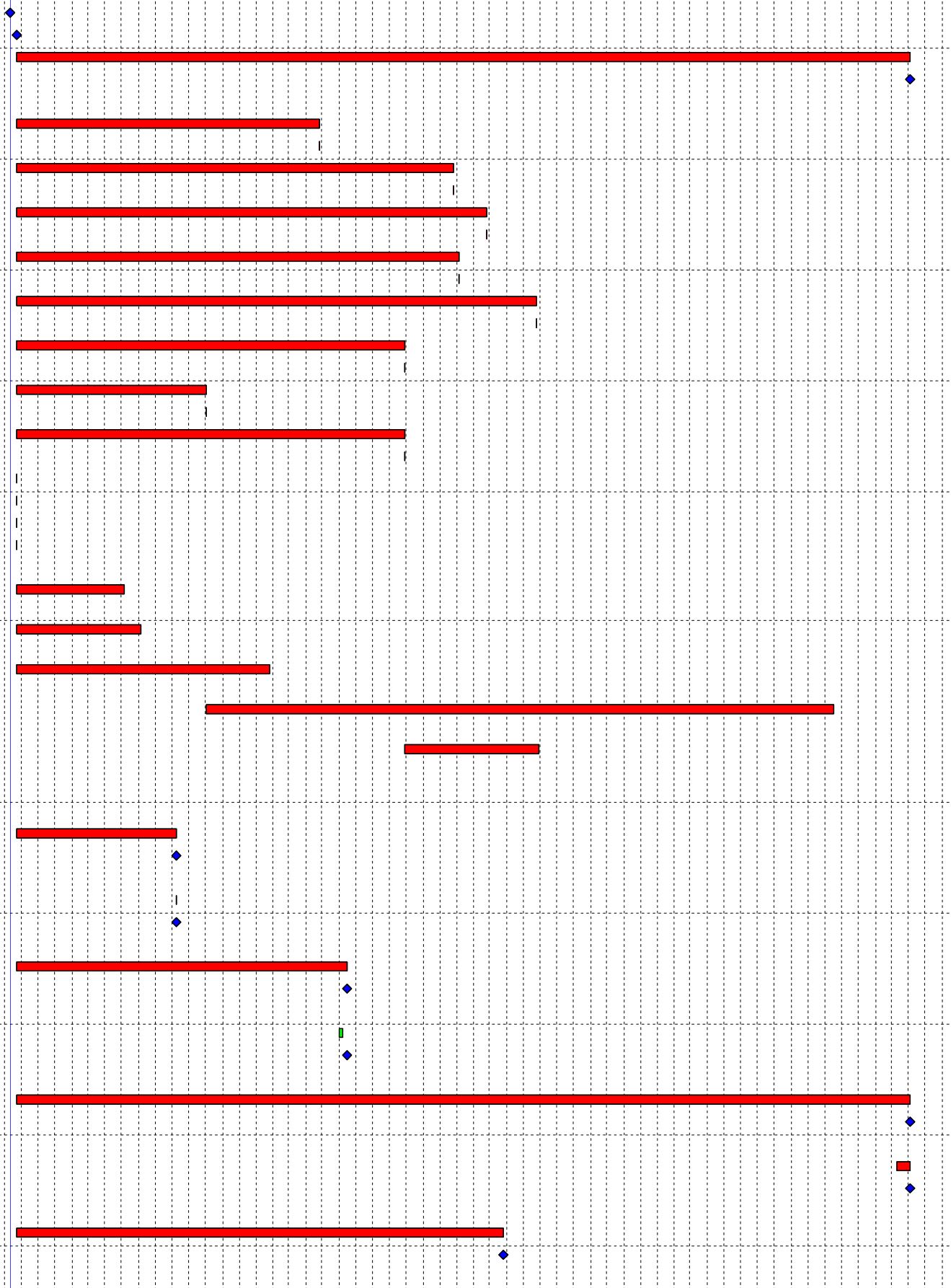


Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	2020				2021				2022				2023				2024																																																	
								J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D

### SWH - Main Works Stage 1 Sidestream Treatment Facilities & E&M Works for Sludge Treatment Facilities

Contract Data							
Starting Date & Completion Date							
AS000010	Contract Date (LOA)	0	11-Oct-19		11-Oct-19		0
AS000020	Starting Date	0	23-Oct-19		23-Oct-19		0
AS000110	Whole Contract Period	1625	24-Oct-19	04-Apr-24	24-Oct-19	04-Apr-24	0
AS000220	Completion Date for the whole of the Works	0		04-Apr-24		04-Apr-24	0
Access Date							
AS001100	Portion C-1A (within 480 to 550 days from starting date)	550	24-Oct-19	25-Apr-21	24-Oct-19	25-Apr-21	0
AS001120	Planned Access Date for Portion C-1A	1	25-Apr-21	25-Apr-21	25-Apr-21	25-Apr-21	0
AS001200	Portion C-2A (within 705 to 795 days from starting date)	795	24-Oct-19	26-Dec-21	24-Oct-19	26-Dec-21	0
AS001220	Planned Access Date for Portion C-2A	1	26-Dec-21	26-Dec-21	26-Dec-21	26-Dec-21	0
AS001300	Portion C-2B (within 765 to 855 days from starting date)	855	24-Oct-19	24-Feb-22	24-Oct-19	24-Feb-22	0
AS001320	Planned Access Date for Portion C-2B	1	24-Feb-22	24-Feb-22	24-Feb-22	24-Feb-22	0
AS001400	Portion C-2C (within 715 to 805 days from starting date)	805	24-Oct-19	05-Jan-22	24-Oct-19	05-Jan-22	0
AS001420	Planned Access Date for Portion C2-C	1	05-Jan-22	05-Jan-22	05-Jan-22	05-Jan-22	0
AS001500	Portion C-2D (within 825 to 945 days from starting date)	945	24-Oct-19	25-May-22	24-Oct-19	25-May-22	0
AS001520	Planned Access Date for Portion C-2D	1	25-May-22	25-May-22	25-May-22	25-May-22	0
AS001600	Portion C-3 (within 615 to 705 days from starting date)	705	24-Oct-19	27-Sep-21	24-Oct-19	27-Sep-21	0
AS001620	Planned Access Date for Portion C-3	1	27-Sep-21	27-Sep-21	27-Sep-21	27-Sep-21	0
AS001700	Portion B-1 (within 285 to 345 days from starting date)	345	24-Oct-19	02-Oct-20	24-Oct-19	02-Oct-20	0
AS001720	Planned Access Date for Portion B-1	1	02-Oct-20	02-Oct-20	02-Oct-20	02-Oct-20	0
AS001800	Portion B-2 (within 615 to 705 days from starting date)	705	24-Oct-19	27-Sep-21	24-Oct-19	27-Sep-21	0
AS001820	Planned Access Date for Portion B-2	1	27-Sep-21	27-Sep-21	27-Sep-21	27-Sep-21	0
AS001900	Works Area WA1-B (starting date)	1	23-Oct-19	23-Oct-19	23-Oct-19	23-Oct-19	0
AS001910	Planned Access Date for Works Area WA1-B	1	23-Oct-19	23-Oct-19	23-Oct-19	23-Oct-19	0
AS001920	Works Area WA3 (starting date)	1	23-Oct-19	23-Oct-19	23-Oct-19	23-Oct-19	0
AS001930	Planned Access Date for Works Area WA3	1	23-Oct-19	23-Oct-19	23-Oct-19	23-Oct-19	0
Key Dates							
AS002010	KD1A Submission of Civil Requirement Dwgs, Elec. Schematic Dwgs of UV System No.1 and Effluent Pumping Station No.1	195	24-Oct-19	05-May-20	24-Oct-19	05-May-20	0
AS002020	KD2A Submission of Civil Requirement Dwgs, Elec. Schematic Dwgs of SD Bldg, SD & DC, CHP Bldg, Workshop No.2, etc.	225	24-Oct-19	04-Jun-20	24-Oct-19	04-Jun-20	0
AS002040	KD2B Submission of Remaining Civil Requirement Dwgs, Elec. Schematic Dwgs of SD Bldg, SD & DC, CHP Bldg, etc.	460	24-Oct-19	25-Jan-21	24-Oct-19	25-Jan-21	0
AS002050	KD3A Completion of Phase 1 Commissioning of Sidestream Treatment Facilities (1140d after Portion B-1 Access)	1140	03-Oct-20	16-Nov-23	03-Oct-20	16-Nov-23	0
AS002060	KD5A - Completion of the BS Fittings Installation at CLP Sub-Station at Workshop No. 2 (245d after Portion C-3 Access)	245	28-Sep-21	30-May-22	28-Sep-21	30-May-22	0
Completion Date							
Section 1 - Complete All Design at UV System No.1 & EP Station No. 1							
AS003100	Contract Duration of Section 1	290	24-Oct-19	08-Aug-20	24-Oct-19	08-Aug-20	0
AS003110	Completion date - Section 1 (290 days from starting date)	0		08-Aug-20		08-Aug-20	0
Time Risk Allowance and Planned Completion							
AS003105	Time Risk Allowance for Section 1	0	09-Aug-20	09-Aug-20	08-Aug-20	08-Aug-20	0
AS003130	Planned Completion for Section 1	0		09-Aug-20		08-Aug-20	0
Section 2 - Complete All Designs (exclude Sec. 1 & 3)							
AS003200	Contract Duration of Section 2	600	24-Oct-19	14-Jun-21	24-Oct-19	14-Jun-21	0
AS003210	Completion date - Section 2 (600 days from starting date)	0		14-Jun-21		14-Jun-21	0
Time Risk Allowance and Planned Completion							
AS003220	Time Risk Allowance for Section 2	7	31-May-21	06-Jun-21	08-Jun-21	14-Jun-21	8
AS003230	Planned Completion for Section 2	0		14-Jun-21		14-Jun-21	0
Section 3 - Complete Design, Construction & T&C for Sidestream Facilities							
AS003300	Contract Duration of Section 3	1625	24-Oct-19	04-Apr-24	24-Oct-19	04-Apr-24	0
AS003310	Completion date - Section 3 (1625 days from starting date)	0		04-Apr-24		04-Apr-24	0
Time Risk Allowance and Planned Completion							
AS003320	Time Risk Allowance for Section 3	26	10-Mar-24	04-Apr-24	10-Mar-24	04-Apr-24	0
AS003330	Planned Completion for Section 3	0		04-Apr-24		04-Apr-24	0
Section 4 - Complete Construction & T&C for UV System No.1 & EP Station No. 1							
AS003400	Contract Duration of Section 4	885	24-Oct-19	26-Mar-22	24-Oct-19	26-Mar-22	0
AS003410	Completion date - Section 4 (885 days from starting date)	0		26-Mar-22		26-Mar-22	0
Time Risk Allowance and Planned Completion							

Remarks: The Defect Date is 4 Apr 2025 (365 days after Completion of the whole of the works).



- Remaining Work
- Critical Activity
- ◆ Milestone
- █ Actual Progress

**Contract No. DE/2018/03**  
**Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1**  
**Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities**  
**Master Programme**

Date	Revision	Checked	Approved
24-Oct-19	Rev. 0	AI	KM
10-Feb-20	Rev. 1	AI	KM





Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	2020					2021					2022					2023					2024																																					
								J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A

### Section 2 - Complete All Designs (exclude Sec. 1 & 3)

#### Major Plant & Materials Procurement

AS023100	Procurement & PO for Sludge Screening System (S2)	150	19-May-20	15-Oct-20	27-May-20	23-Oct-20	8
AS023120	Procurement & PO for Sludge Thickening System (S3)	180	21-Nov-19	18-May-20	14-Apr-20	10-Oct-20	145
AS023140	Procurement & PO for Sludge Digestion System (S5)	150	19-Feb-20	17-Jul-20	27-Feb-20	25-Jul-20	8
AS023160	Procurement & PO for Sludge Dewatering System (S6)	180	21-Nov-19	18-May-20	14-Apr-20	10-Oct-20	145
AS023180	Procurement & PO for THP System (S4)	180	21-Nov-19	18-May-20	29-Nov-19	26-May-20	8
AS023190a	Procurement & PO for Biogas Holding Tanks(S7)	180	21-Nov-19	18-May-20	13-Mar-20	08-Sep-20	113
AS023200	Procurement & PO for Biogas Booster and Transfer Pumps (S7)	150	18-Jul-20	14-Dec-20	10-Aug-20	06-Jan-21	23
AS023210	Procurement & PO for H2S Removal System (S7)	150	18-Jul-20	14-Dec-20	10-Aug-20	06-Jan-21	23
AS023220	Procurement & PO for CHP System (S8)	180	21-Nov-19	18-May-20	15-Dec-19	11-Jun-20	24
AS023240	Procurement & PO for Waste Gas Burning System (S9)	150	18-Jul-20	14-Dec-20	27-Jul-20	23-Dec-20	9
AS023260	Procurement & PO for Plant Service Water System (S12)	150	19-May-20	15-Oct-20	28-May-20	24-Oct-20	9
AS023270	Procurement & PO for Reclaimed Water Utilisation (S13)	150	19-May-20	15-Oct-20	18-Jun-20	14-Nov-20	30
AS023280	Procurement & PO for SAS Pumping System (S14)	150	19-May-20	15-Oct-20	12-Jun-20	08-Nov-20	24
AS023300	Procurement & PO for Transformers (S17)	150	19-Feb-20	17-Jul-20	06-Aug-20	02-Jan-21	169
AS023320	Procurement & PO for 11 kV Switchboard (S17)	150	19-Feb-20	17-Jul-20	06-Aug-20	02-Jan-21	169
AS023340	Procurement & PO for 380V Switchboard (S17)	120	20-Nov-20	19-Mar-21	03-Jan-21	02-May-21	44
AS023380	Procurement & PO for Control & Monitoring System (S18)	150	18-Jul-20	14-Dec-20	09-Jan-21	07-Jun-21	175
AS023400	Procurement & PO for Lifting Appliances (S19)	150	19-May-20	15-Oct-20	19-Jun-20	15-Nov-20	31
AS023420	Procurement & PO for DO System (S21)	150	18-Jul-20	14-Dec-20	09-Jan-21	07-Jun-21	175
AS023440	Procurement & PO for Stoplog (S21)	90	19-Apr-20	17-Jul-20	04-Mar-21	01-Jun-21	319
AS023460	Procurement & PO for Penstock (S21)	90	19-Apr-20	17-Jul-20	04-Mar-21	01-Jun-21	319
AS023480	Procurement & PO for Sewage Pump (S21)	120	19-May-20	15-Sep-20	08-Feb-21	07-Jun-21	265
AS023500	Procurement & PO for Process Water Pump (S21)	120	19-May-20	15-Sep-20	28-Nov-20	27-Mar-21	193
AS023520	Procurement & PO for External Sludge Transfer Pump (S21)	120	19-May-20	15-Sep-20	08-Feb-21	07-Jun-21	265
AS023540	Procurement & PO for THP Cooling Pump (S21)	150	19-May-20	15-Oct-20	09-Jan-21	07-Jun-21	235
AS023560	Procurement & PO for Ferric Chloride Storage Tank (S21)	120	18-Jul-20	14-Nov-20	08-Feb-21	07-Jun-21	205
AS023580	Procurement & PO for Ferric Chloride Dosing Pump (S21)	120	19-May-20	15-Sep-20	08-Feb-21	07-Jun-21	265
AS023600	Procurement & PO for Temporary Primary Sludge Pump (S21)	150	19-May-20	15-Oct-20	09-Jan-21	07-Jun-21	235

#### Design & Submission

##### General Arrangement Drawings

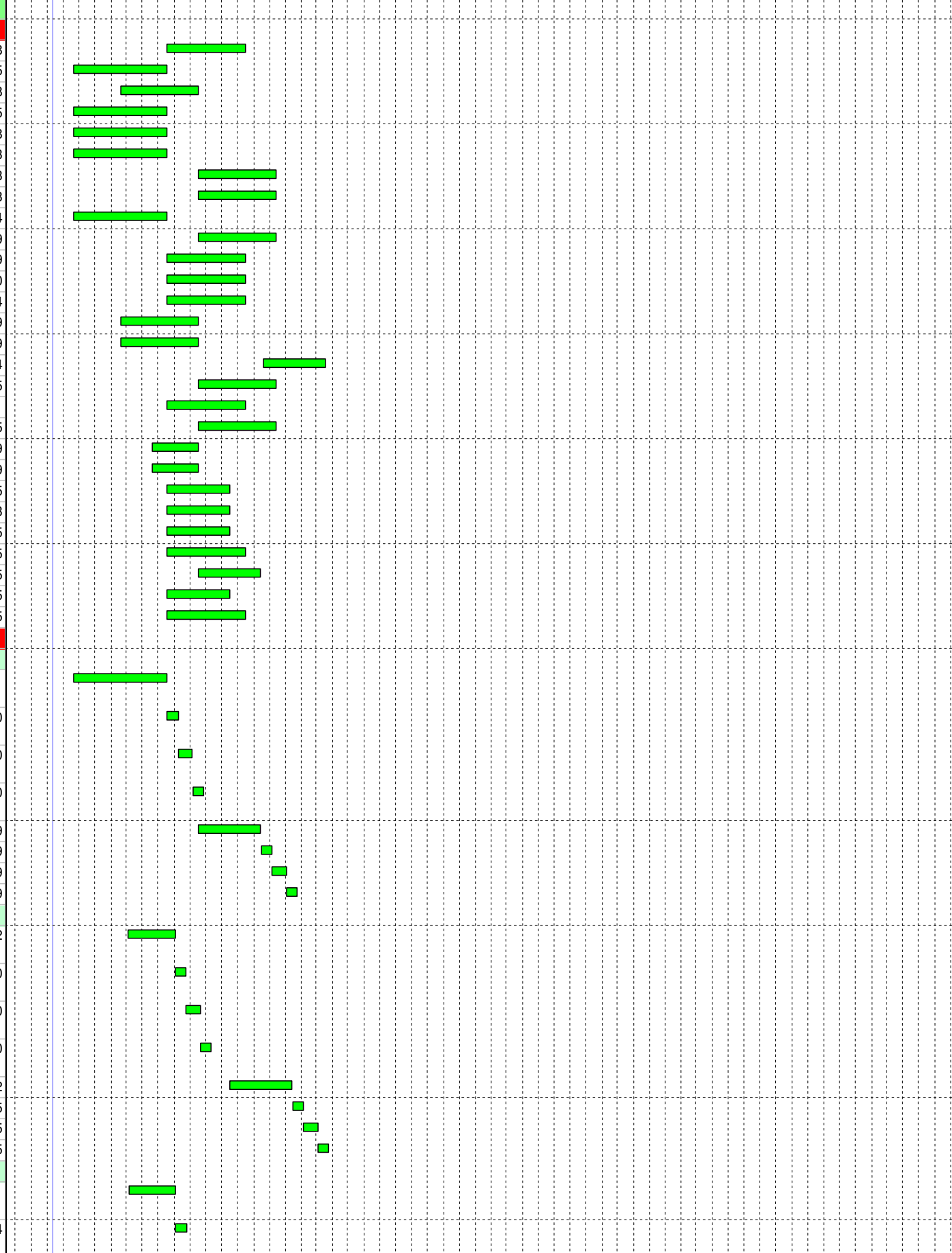
AS020100	Prepare & Submit GeneralArrangement Drawings (from formation level up to +8mPD)	180	21-Nov-19	18-May-20	22-Nov-19	19-May-20	1
AS020110	Review & Comment on GeneralArrangement Drawings by PM (from formation level up to +8mPD)	21	19-May-20	08-Jun-20	08-Jun-20	28-Jun-20	20
AS020120	Revise & Re-submit General Arrangement Drawings (from formation level up to +8mPD)	28	09-Jun-20	06-Jul-20	29-Jun-20	26-Jul-20	20
AS020130	Review & Accept of General Arrangement Drawings by PM (from formation level up to +8mPD)	21	07-Jul-20	27-Jul-20	24-Nov-20	14-Dec-20	140
AS020140a	Prepare & Submit General Arrangement Drawings (remaining)	120	18-Jul-20	14-Nov-20	27-Jul-20	23-Nov-20	9
AS020150a	Review & Comment on General Arrangement Drawings by PM (remaining)	21	15-Nov-20	05-Dec-20	24-Nov-20	14-Dec-20	9
AS020160a	Revise & Re-submit General Arrangement Drawings (remaining)	28	06-Dec-20	02-Jan-21	15-Dec-20	11-Jan-21	9
AS020170a	Review & Accept of General Arrangement Drawings by PM (remaining)	21	03-Jan-21	23-Jan-21	12-Jan-21	01-Feb-21	9

##### Civil & Dimensional / Tolerance Requirement Drawings

AS020200	Prepare & Submit Civil Requirement Drawings (from formation level up to +8mPD) -KD2A	90	05-Mar-20	02-Jun-20	07-Mar-20	04-Jun-20	2
AS020210	Review & Comment on Civil Requirement Drawings by PM (from formation level up to +8mPD)	21	03-Jun-20	23-Jun-20	30-Mar-21	19-Apr-21	300
AS020220	Revise & Re-submit Civil Requirement Drawings (from formation level up to +8mPD)	28	24-Jun-20	21-Jul-20	20-Apr-21	17-May-21	300
AS020230	Review & Accept of Civil Requirement Drawings by PM (from formation level up to +8mPD)	21	22-Jul-20	11-Aug-20	18-May-21	07-Jun-21	300
AS020300	Prepare & Submit Civil Requirement Drawings (remaining) -KD2B	120	16-Sep-20	13-Jan-21	28-Sep-20	25-Jan-21	12
AS020310	Review & Comment on Civil Requirement Drawings by PM (remaining)	21	14-Jan-21	03-Feb-21	30-Mar-21	19-Apr-21	75
AS020320	Revise & Re-submit Civil Requirement Drawings (remaining)	28	04-Feb-21	03-Mar-21	20-Apr-21	17-May-21	75
AS020330	Review & Accept of Civil Requirement Drawings by PM (remaining)	21	04-Mar-21	24-Mar-21	18-May-21	07-Jun-21	75

##### Electrical Schematic Drawings

AS021200	Prepare & Elec. Schematic Drawings (from formation level up to +8mPD) -KD2A	90	06-Mar-20	03-Jun-20	07-Mar-20	04-Jun-20	1
AS021210	Review & Comment on Elec. Schematic Drawings by PM (from formation level up to +8mPD)	21	04-Jun-20	24-Jun-20	18-Jul-20	07-Aug-20	44



File Name: DE/2018/03 R1-3  
Layout: DE1803 (R1) - WBS  
TASK filter: All Activities

- Remaining Work
- Critical Activity
- ◆ Milestone
- Actual Progress

**Contract No. DE/2018/03**  
**Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1**  
**Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities**  
**Master Programme**

Date	Revision	Checked	Approved
24-Oct-19	Rev. 0	AI	KM
10-Feb-20	Rev. 1	AI	KM







Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Gantt Chart (2019-2024)																																																			
AS192310	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	14-Jan-21	03-Feb-21	14-Feb-21	06-Mar-21	31	[Gantt bars for AS192310]																																																			
AS192320	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	21	04-Feb-21	24-Feb-21	07-Mar-21	27-Mar-21	31	[Gantt bars for AS192320]																																																			
AS192330	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	21	25-Feb-21	17-Mar-21	28-Mar-21	17-Apr-21	31	[Gantt bars for AS192330]																																																			
<b>Building Services</b>																																																											
AS201100	Submit & Accept BS Works Design & Dwgs for Sludge Dewatering Building	150	30-Dec-20	28-May-21	09-Jan-21	07-Jun-21	10	[Gantt bars for AS201100]																																																			
AS201200	Submit & Accept BS Works Design & Dwgs for CHP Building	150	15-Nov-20	13-Apr-21	09-Jan-21	07-Jun-21	55	[Gantt bars for AS201200]																																																			
AS201300	Submit & Accept BS Works Design & Dwgs for Sludge Digester & Distribution Chamber	150	21-Dec-20	19-May-21	09-Jan-21	07-Jun-21	19	[Gantt bars for AS201300]																																																			
AS201500	Submit & Accept BS Works Design & Dwgs for Workshop No. 2	150	03-Jul-20	29-Nov-20	12-Aug-20	08-Jan-21	40	[Gantt bars for AS201500]																																																			
AS201700	Submit & Accept BS Works Design & Dwgs for Other Facilities	150	30-Nov-20	28-Apr-21	09-Jan-21	07-Jun-21	40	[Gantt bars for AS201700]																																																			
AS201800	Submit & Accept BS Works Design & Dwgs for FS Installation	180	03-Jul-20	29-Dec-20	09-Sep-20	07-Mar-21	68	[Gantt bars for AS201800]																																																			
AS201900	Submit & Accept BS Works Design & Dwgs for Outdoor Lighting Installation	90	29-Jan-21	28-Apr-21	10-Mar-21	07-Jun-21	40	[Gantt bars for AS201900]																																																			
<b>Miscellaneous</b>																																																											
AS211100	Submit & Accept Design & Dwgs for DO System	180	15-Dec-20	12-Jun-21	14-Aug-21	09-Feb-22	242	[Gantt bars for AS211100]																																																			
AS211200	Submit & Accept Design & Dwgs for Sewage Pumping Station	120	31-Oct-20	27-Feb-21	11-Jul-21	07-Nov-21	253	[Gantt bars for AS211200]																																																			
AS211300	Submit & Accept Design & Dwgs for Process Water Pumping System	90	16-Sep-20	14-Dec-20	28-Mar-21	25-Jun-21	193	[Gantt bars for AS211300]																																																			
AS211400	Submit & Accept Design & Dwgs for External Sludge Transfer Pumping System	90	15-Nov-20	12-Feb-21	08-Dec-21	07-Mar-22	388	[Gantt bars for AS211400]																																																			
AS211500	Submit & Accept Design & Dwgs for THP Cooling Water Pumping Station	90	15-Nov-20	12-Feb-21	08-Dec-21	07-Mar-22	388	[Gantt bars for AS211500]																																																			
AS211600	Submit & Accept Design & Dwgs for Ferric Chloride Dosing System	120	15-Nov-20	14-Mar-21	09-Sep-21	06-Jan-22	298	[Gantt bars for AS211600]																																																			
AS211700	Submit & Accept Design & Dwgs for Temporary Primary Sludge Pumping Facility	90	15-Dec-20	14-Mar-21	08-Dec-21	07-Mar-22	358	[Gantt bars for AS211700]																																																			
AS211800	Submit & Accept Design & Dwgs for Gas Detection System	180	30-Nov-20	28-May-21	10-Dec-20	07-Jun-21	10	[Gantt bars for AS211800]																																																			
AS211900	Submit & Accept Design & Dwgs for CCTV System	180	30-Nov-20	28-May-21	10-Dec-20	07-Jun-21	10	[Gantt bars for AS211900]																																																			
<b>Section 3 - Complete Design, Construction &amp; T&amp;C for Sidestream Facilities</b>																																																											
<b>Major Subcontractor / Supplier Procurement</b>																																																											
AS160020	Procurement & PO for Deammonification Sidestream Treatment Facilities	180	21-Nov-19	18-May-20	22-Nov-19	19-May-20	1	[Gantt bars for AS160020]																																																			
<b>Design &amp; Submission</b>																																																											
<b>Civil Works Design</b>																																																											
AS160100	Prepare & Submit General Layout Plan	60	19-May-20	17-Jul-20	20-May-20	18-Jul-20	1	[Gantt bars for AS160100]																																																			
AS160110	Review & Comment on General Layout Plan by PM	21	18-Jul-20	07-Aug-20	19-Jul-20	08-Aug-20	1	[Gantt bars for AS160110]																																																			
AS160120	Revise & Re-submit General Layout Plan	28	08-Aug-20	04-Sep-20	09-Aug-20	05-Sep-20	1	[Gantt bars for AS160120]																																																			
AS160130	Review & Accept of General Layout Plan by PM	21	05-Sep-20	25-Sep-20	15-Mar-24	04-Apr-24	1287	[Gantt bars for AS160130]																																																			
AS160200	Prepare & Submit Architectural Design / Drawings	90	18-Jun-20	15-Sep-20	28-Jun-20	25-Sep-20	10	[Gantt bars for AS160200]																																																			
AS160210	Review & Comment on Architectural Design / Drawings by PM	21	16-Sep-20	06-Oct-20	26-Sep-20	16-Oct-20	10	[Gantt bars for AS160210]																																																			
AS160220	Revise & Re-submit Architectural Design / Drawings	28	07-Oct-20	03-Nov-20	23-Oct-20	19-Nov-20	16	[Gantt bars for AS160220]																																																			
AS160230	Review & Accept of Architectural Design / Drawings by PM	21	04-Nov-20	24-Nov-20	20-Nov-20	10-Dec-20	16	[Gantt bars for AS160230]																																																			
AS160300	Prepare & Submit Foundation Design / Drawings	60	21-Aug-20	19-Oct-20	22-Aug-20	20-Oct-20	1	[Gantt bars for AS160300]																																																			
AS160310	Review & Comment on Foundation Design / Drawings by PM	21	20-Oct-20	09-Nov-20	21-Oct-20	10-Nov-20	1	[Gantt bars for AS160310]																																																			
AS160320	Revise & Re-submit Foundation Design / Drawings	28	10-Nov-20	07-Dec-20	11-Nov-20	08-Dec-20	1	[Gantt bars for AS160320]																																																			
AS160330	Review & Accept of Foundation Design / Drawings by PM	21	08-Dec-20	28-Dec-20	09-Dec-20	29-Dec-20	1	[Gantt bars for AS160330]																																																			
AS160400	Prepare & Submit Structural & Civil Design / Drawings	90	07-Oct-20	04-Jan-21	20-Nov-20	17-Feb-21	44	[Gantt bars for AS160400]																																																			
AS160410	Review & Comment on Structural & Civil Design / Drawings by PM	21	05-Jan-21	25-Jan-21	18-Feb-21	10-Mar-21	44	[Gantt bars for AS160410]																																																			
AS160420	Revise & Re-submit Structural & Civil Design / Drawings	28	26-Jan-21	22-Feb-21	11-Mar-21	07-Apr-21	44	[Gantt bars for AS160420]																																																			
AS160430	Review & Accept of Structural & Civil Design / Drawings by PM	21	23-Feb-21	15-Mar-21	08-Apr-21	28-Apr-21	44	[Gantt bars for AS160430]																																																			
AS160500	Prepare & Submit Builder's Works Drawings	90	04-Nov-20	01-Feb-21	20-Nov-20	17-Feb-21	16	[Gantt bars for AS160500]																																																			
AS160510	Review & Comment on Builder's Works Drawings by PM	21	02-Feb-21	22-Feb-21	18-Feb-21	10-Mar-21	16	[Gantt bars for AS160510]																																																			
AS160520	Revise & Re-submit Builder's Works Drawings	28	23-Feb-21	22-Mar-21	11-Mar-21	07-Apr-21	16	[Gantt bars for AS160520]																																																			
AS160530	Review & Accept of Builder's Works Drawings by PM	21	23-Mar-21	12-Apr-21	08-Apr-21	28-Apr-21	16	[Gantt bars for AS160530]																																																			
<b>E&amp;M Design</b>																																																											
AS151100	Prepare & Submit General Arrangement Drawings	60	19-May-20	17-Jul-20	24-May-20	22-Jul-20	5	[Gantt bars for AS151100]																																																			
AS151110	Review & Comment on General Arrangement Drawings by PM	21	18-Jul-20	07-Aug-20	11-Sep-20	01-Oct-20	55	[Gantt bars for AS151110]																																																			
AS151120	Revise & Re-submit General Arrangement Drawings	28	08-Aug-20	04-Sep-20	02-Oct-20	29-Oct-20	55	[Gantt bars for AS151120]																																																			
AS151130	Review & Accept of General Arrangement Drawings by PM	21	05-Sep-20	25-Sep-20	30-Oct-20	19-Nov-20	55	[Gantt bars for AS151130]																																																			
AS152100	Prepare & Submit Civil Requirement Drawings	60	18-Jun-20	16-Aug-20	23-Jun-20	21-Aug-20	5	[Gantt bars for AS152100]																																																			
AS152110	Review & Comment on Civil Requirement Drawings by PM	21	17-Aug-20	06-Sep-20	30-Sep-20	20-Oct-20	44	[Gantt bars for AS152110]																																																			
AS152120	Revise & Re-submit Civil Requirement Drawings	28	07-Sep-20	04-Oct-20	21-Oct-20	17-Nov-20	44	[Gantt bars for AS152120]																																																			
AS152130	Review & Accept of Civil Requirement Drawings by PM	21	05-Oct-20	25-Oct-20	18-Nov-20	08-Dec-20	44	[Gantt bars for AS152130]																																																			
AS152200	Prepare & Submit Ele. Schematic Dwgs, Wiring Dwgs, Cable Schedule & Design Cal.	180	18-Jul-20	13-Jan-21	21-Sep-20	19-Mar-21	65	[Gantt bars for AS152200]																																																			
AS152210	Review & Comment on Ele. Schematic Dwgs, Wiring Dwgs, Cable Schedule & Design Cal.	21	14-Jan-21	03-Feb-21	14-Apr-22	04-May-22	455	[Gantt bars for AS152210]																																																			

Remaining Work  
 Critical Activity  
 Milestone  
 Actual Progress

**Contract No. DE/2018/03**  
**Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1**  
**Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities**  
**Master Programme**

Date	Revision	Checked	Approved
24-Oct-19	Rev. 0	AI	KM
10-Feb-20	Rev. 1	AI	KM





Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Gantt Chart																																																											
								2020												2021												2022												2023												2024											
								J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J
AS501460	Delivery of 11kV Transformers (S17)	60	05-Dec-21	02-Feb-22	12-Oct-22	10-Dec-22	311	[Gantt bars for AS501460]																																																											
AS501480	Fabrication of 380V Transformers (S17)	300	08-Feb-21	04-Dec-21	29-Nov-21	24-Sep-22	294	[Gantt bars for AS501480]																																																											
AS501500	FAT for 380V Transformers (S17)	14	21-Nov-21	04-Dec-21	11-Sep-22	24-Sep-22	294	[Gantt bars for AS501500]																																																											
AS501520	Delivery of 380V Transformers (S17)	60	05-Dec-21	02-Feb-22	25-Sep-22	23-Nov-22	294	[Gantt bars for AS501520]																																																											
AS501540	Fabrication of 11 kV Switchboard (S17)	300	08-Feb-21	04-Dec-21	04-Oct-21	30-Jul-22	238	[Gantt bars for AS501540]																																																											
AS501560	FAT for 11 kV Switchboard (S17)	14	21-Nov-21	04-Dec-21	17-Jul-22	30-Jul-22	238	[Gantt bars for AS501560]																																																											
AS501580	Delivery of 11 kV Switchboard (S17)	60	05-Dec-21	02-Feb-22	31-Jul-22	28-Sep-22	238	[Gantt bars for AS501580]																																																											
AS501600	Fabrication of 380V Switchboard (S17)	300	20-Mar-21	13-Jan-22	02-Jul-21	27-Apr-22	104	[Gantt bars for AS501600]																																																											
AS501620	FAT for 380V Switchboard (S17)	14	31-Dec-21	13-Jan-22	14-Apr-22	27-Apr-22	104	[Gantt bars for AS501620]																																																											
AS501640	Delivery of 380V Switchboard (S17)	60	14-Jan-22	14-Mar-22	28-Apr-22	26-Jun-22	104	[Gantt bars for AS501640]																																																											
AS501660	Fabrication & Delivery of Pipeworks & Associated Valves	300	24-May-21	19-Mar-22	02-Jun-21	28-Mar-22	9	[Gantt bars for AS501660]																																																											
AS501680	Fabrication of Control & Monitoring System (S18)	300	25-Mar-21	18-Jan-22	19-Dec-21	14-Oct-22	269	[Gantt bars for AS501680]																																																											
AS501700	FAT fro SCADA System (S18)	30	19-Jan-22	17-Feb-22	15-Oct-22	13-Nov-22	269	[Gantt bars for AS501700]																																																											
AS501720	Delivery of SCADA System (S18)	30	18-Feb-22	19-Mar-22	14-Nov-22	13-Dec-22	269	[Gantt bars for AS501720]																																																											
AS501740	Fabrication & Delivery of Lifting Appliances (S19)	270	18-Mar-21	12-Dec-21	18-Apr-21	12-Jan-22	31	[Gantt bars for AS501740]																																																											
AS501760	Fabrication & Delivery of Reclaimed Water Utilisation (S13)	300	24-May-21	19-Mar-22	24-Oct-21	19-Aug-22	153	[Gantt bars for AS501760]																																																											
AS501780	Fabrication & Delivery of H2S Removal System (S7)	300	31-May-21	26-Mar-22	07-Dec-21	02-Oct-22	190	[Gantt bars for AS501780]																																																											
AS501800	Fabrication & Delivery of DO System (S21)	300	13-Jun-21	08-Apr-22	10-Feb-22	06-Dec-22	242	[Gantt bars for AS501800]																																																											
AS501820	Fabrication & Delivery of Stoplog (S21)	300	18-Jul-20	13-May-21	02-Jun-21	28-Mar-22	319	[Gantt bars for AS501820]																																																											
AS501840	Fabrication & Delivery of Penstock (S21)	300	18-Jul-20	13-May-21	02-Jun-21	28-Mar-22	319	[Gantt bars for AS501840]																																																											
AS501860	Fabrication & Delivery of Sewage Pump (S21)	360	28-Feb-21	22-Feb-22	08-Nov-21	02-Nov-22	253	[Gantt bars for AS501860]																																																											
AS501880	Fabrication & Delivery of Process Water Pump (S21)	300	15-Dec-20	10-Oct-21	26-Jun-21	21-Apr-22	193	[Gantt bars for AS501880]																																																											
AS501900	Fabrication & Delivery of External Sludge Transfer Pump (S21)	360	13-Feb-21	07-Feb-22	12-Mar-22	06-Mar-23	392	[Gantt bars for AS501900]																																																											
AS501920	Fabrication & Delivery of THP Cooling Pump (S21)	360	13-Feb-21	07-Feb-22	08-Mar-22	02-Mar-23	388	[Gantt bars for AS501920]																																																											
AS501940	Fabrication & Delivery of Ferric Chloride Storage Tank (S21)	360	15-Mar-21	09-Mar-22	07-Jan-22	01-Jan-23	298	[Gantt bars for AS501940]																																																											
AS501960	Fabrication & Delivery of Ferric Chloride Dosing Pump (S21)	360	15-Mar-21	09-Mar-22	06-Feb-22	31-Jan-23	328	[Gantt bars for AS501960]																																																											
AS501980	Fabrication & Delivery of Temporary Primary Sludge Pump (S21)	360	15-Mar-21	09-Mar-22	08-Mar-22	02-Mar-23	358	[Gantt bars for AS501980]																																																											
AS510060	Fabrication & Delivery of Elec. Materials	180	23-Jun-21	19-Dec-21	02-Jul-21	28-Dec-21	9	[Gantt bars for AS510060]																																																											
AS510080	Fabrication & Delivery of Gas Detection System	300	28-Jul-21	23-May-22	03-Apr-22	27-Jan-23	249	[Gantt bars for AS510080]																																																											
<b>Sludge Dewatering Building</b>																																																																			
AS502100	Mobilisation	15	27-Dec-21	10-Jan-22	29-Dec-21	12-Jan-22	2	[Gantt bars for AS502100]																																																											
<b>Sludge Dewatering (SDe)</b>																																																																			
AS502120	E&M Installation of Process Water Pump (S21)	60	11-Jan-22	11-Mar-22	22-Apr-22	20-Jun-22	101	[Gantt bars for AS502120]																																																											
AS502140	E&M Installation of EOT Crane LA-01-02	75	11-Jan-22	26-Mar-22	13-Jan-22	28-Mar-22	2	[Gantt bars for AS502140]																																																											
AS502150	E&M Installation of Monorail LA-01-04	60	10-Jun-22	08-Aug-22	17-Jul-22	14-Sep-22	37	[Gantt bars for AS502150]																																																											
AS502160	E&M Installation of Sludge Dewatering System (S6)	180	27-Mar-22	22-Sep-22	29-Mar-22	24-Sep-22	2	[Gantt bars for AS502160]																																																											
<b>Sludge Screening (SSc)</b>																																																																			
AS502180	E&M Installation of Monorail LA-01-01	60	09-Aug-22	07-Oct-22	15-Sep-22	13-Nov-22	37	[Gantt bars for AS502180]																																																											
AS502200	E&M Installation of Sludge Screening System (S2)	135	12-Nov-22	26-Mar-23	14-Nov-22	28-Mar-23	2	[Gantt bars for AS502200]																																																											
AS502220	E&M Installation of External Sludge Transfer Pump (S21)	30	25-Feb-23	26-Mar-23	07-Mar-23	05-Apr-23	10	[Gantt bars for AS502220]																																																											
<b>Sludge Thickening (STh)</b>																																																																			
AS502260	E&M Installation of EOT Crane LA-01-03	90	12-Mar-22	09-Jun-22	19-Mar-22	16-Jun-22	7	[Gantt bars for AS502260]																																																											
AS502280	E&M Installation of Sludge Thickening System (S3)	180	15-Jun-22	11-Dec-22	17-Jun-22	13-Dec-22	2	[Gantt bars for AS502280]																																																											
<b>Building Services</b>																																																																			
AS502300	FS Installation - Conduits, Trunking, & Pipeworks	120	24-May-22	20-Sep-22	26-Feb-23	25-Jun-23	278	[Gantt bars for AS502300]																																																											
AS502320	FS Installation - Cable Laying, Termination, Associated Fitting & Field Devices	120	10-May-23	06-Sep-23	26-Jun-23	23-Oct-23	47	[Gantt bars for AS502320]																																																											
AS502340	BS Fitting Installation - Conduits, Trunking, & Ductworks	120	07-Sep-22	04-Jan-23	15-Oct-22	11-Feb-23	38	[Gantt bars for AS502340]																																																											
AS502360	BS Fitting Installation - Cable Laying, Termination, Associated Fitting & Field Devices	120	09-Feb-23	08-Jun-23	12-Feb-23	11-Jun-23	3	[Gantt bars for AS502360]																																																											
AS502380	Installation of Control & Monitoring System	120	12-Dec-22	10-Apr-23	14-Dec-22	12-Apr-23	2	[Gantt bars for AS502380]																																																											
AS502400	Installation of CCTV System	120	12-Dec-22	10-Apr-23	14-Dec-22	12-Apr-23	2	[Gantt bars for AS502400]																																																											
AS502410	Installation of Gas Detection System	60	10-Apr-23	08-Jun-23	13-Apr-23	11-Jun-23	3	[Gantt bars for AS502410]																																																											
<b>Tx Rm</b>																																																																			
AS502420	BS Fitting Intallation	90	27-Mar-22	24-Jun-22	26-Aug-22	23-Nov-22	152	[Gantt bars for AS502420]																																																											
AS502440	E&M Installation of 380V Transformers (S17)	90	15-Sep-22	13-Dec-22	24-Nov-22	21-Feb-23	70	[Gantt bars for AS502440]																																																											
<b>LV Switchroom</b>																																																																			
AS502460	BS Fitting Intallation	75	11-Jan-22	26-Mar-22	28-Apr-22	11-Jul-22	107	[Gantt bars for AS502460]																																																											
AS502480	E&M Installation of LVSB at G/F (S17)	90	15-Mar-22	12-Jun-22	27-Jun-22	24-Sep-22	104	[Gantt bars for AS502480]																																																											
AS502500	E&M Installation of LVSB at 1/F (S17)	90	14-May-22	11-Aug-22	26-Aug-22	23-Nov-22	104	[Gantt bars for AS502500]																																																											
AS502520	Ready for Energisation	5	14-Dec-22	18-Dec-22	22-Feb-23	26-Feb-23	70	[Gantt bars for AS502520]																																																											
<b>Tx Rm &amp; LV Switchroom (for UV)</b>																																																																			



■ Remaining Work  
■ Critical Activity  
◆ Milestone  
■ Actual Progress

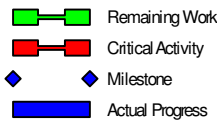
**Contract No. DE/2018/03**  
**Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1**  
**Sidestream Treatment Facilities and E&M Works for Sluge Treatment Faciliteis**  
**Master Programme**

Date	Revision	Checked	Approved
24-Oct-19	Rev. 0	AI	KM
10-Feb-20	Rev. 1	AI	KM

Activity ID, Activity Name, Original Duration, Early Start, Early Finish, Late Start, Late Finish, Total Float. Includes activities like AS105120, AS503100, AS503300, AS504000, AS504200, AS504500.



File Name: DE/2018/03 R1-3
Layout: DE1803 (R1) - WBS
TASK filter: All Activities



Contract No. DE/2018/03
Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities Master Programme

Table with 4 columns: Date, Revision, Checked, Approved. Contains revision history entries.



















Main project schedule table with columns: ID, WBS, Task Name, Duration, Start, Finish, Early Start, Early Finish, Late Start, Late Finish, Free Slack, Predecessors, Successors. Includes a Gantt chart on the right showing task timelines from Half 1, 2020 to Half 1, 2024.











---

---

**APPENDIX B**  
**MONITORING REQUIREMENTS**

---

---

**Agreement No. SPW 07/2019**

**Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1**

**Appendix B - Environmental Impact Monitoring Requirements**

**Table B-1 Air Quality Monitoring**

Type of Monitoring	Parameter	Frequency	Location	Measurement Conditions
Air Quality	1-hour TSP	3 times/day, once every 6 days	<ul style="list-style-type: none"><li>• AM1 – Wai Loi Tsuen</li><li>• AM2 – Fu Tei Au</li></ul>	<ul style="list-style-type: none"><li>• AM1 – Ground Level</li><li>• AM2 – Ground Level</li></ul>
	24-hour TSP	Once every 6 days	<ul style="list-style-type: none"><li>• AM1a – Site Boundary of the Shek Wu Hui STW (East)</li><li>• AM2a – Site Boundary of the Shek Wu Hui STW (North)</li></ul>	<ul style="list-style-type: none"><li>• AM1a – Ground Level</li><li>• AM2a – Ground Level</li></ul>

**Agreement No. SPW 07/2019**

**Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1**

**Appendix B - Environmental Impact Monitoring Requirements**

**Table B-2 Noise Monitoring**

<b>Type of Monitoring</b>	<b>Parameter</b>	<b>Frequency</b>	<b>Location</b>	<b>Measurement Conditions</b>
Construction Noise	L <sub>eq</sub> , L <sub>90</sub> & L <sub>10</sub> at 30 minute intervals during (0700 to 1900 on normal weekdays)	Once per week	<ul style="list-style-type: none"><li>• NM1 – Wai Loi Tsuen</li><li>• NM2 – Fu Tei Au</li><li>• NM3 – Man Kok Village</li></ul>	<ul style="list-style-type: none"><li>• NM1 – Ground Level – Free Field</li><li>• NM2 – Ground Level – Free Field</li><li>• NM3 – Ground Level – Free Field</li></ul>

**Agreement No. SPW 07/2019**

**Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1**

**Appendix B - Environmental Impact Monitoring Requirements**

**Table B3 Ecological Monitoring**

Type of Monitoring	Methodology	Location	Descriptions	Influenced by Tidal Action
Ecology	Weekly transect at both high and low tides to identify and enumerate all bird species utilizing the river channels and identify any sources of actual or potential disturbance to birds due to construction activities throughout the construction period.	<ul style="list-style-type: none"> <li>• Transect T1</li> <li>• Point Count Location P1</li> <li>• Point Count Location P2</li> </ul>	Along Ng Tung River	No
		<ul style="list-style-type: none"> <li>• Transect T2</li> <li>• Point Count Location P3</li> <li>• Point Count Location P4</li> </ul>		Yes
		<ul style="list-style-type: none"> <li>• Point Count Location P5</li> </ul>	At Shek Sheung River (Low –flow Channel)	No
		<ul style="list-style-type: none"> <li>• Transect T3</li> </ul>	Along Shek Sheung River & Sheung Yue River	Yes
		<ul style="list-style-type: none"> <li>• Point Count Location P6</li> </ul>	At Shek Sheung River	Yes
		<ul style="list-style-type: none"> <li>• Point Count Location P7</li> </ul>	At Interscetion between Sheung Yue River and Shek Sheung River	Yes

---

---

**APPENDIX C  
ACTION AND LIMIT LEVELS**

---

---



## Appendix C - Action and Limit Levels

**Table C-1 Action and Limit Levels for 1-hour TSP**

Location	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
AM1	320	500
AM2	322	

**Table C-2 Action and Limit Levels for 24-hour TSP**

Location	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
AM1a	189	260
AM2a	187	

**Table C-3 Action and Limit Levels for Noise during Construction Period**

Time Period	Action Level	Limit Level
0700-1900 hrs on normal weekdays	When one documented complaint is received	75 dB(A) <sup>(1)</sup>

Note:

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

**Table C-4 Action and Limit Levels of Disturbance to Waterbirds using Ng Tung, Sheung Yue and Shek Sheung Rivers during Construction Phase**

Action Level	Limit Level
Decline in numbers of all waterbird species relative to numbers during Baseline Monitoring such that the Action Level response is triggered.	Decline in numbers of all waterbird species relative to numbers during baseline monitoring such that the limit level response is triggered.
Decline in numbers of any one waterbird species occurring in significant numbers* during Baseline Monitoring such that the Action Level response is triggered.	Decline in numbers of any one waterbird species occurring in significant numbers* during Baseline Monitoring such that the Limit Level response is triggered.

Note: Whether numbers are significant depend on species and season after collection and evaluation of baseline survey data.

---

---

**APPENDIX D  
ENVIRONMENTAL MITIGATION  
IMPLEMENTATION SCHEDULE (EMIS)**

---

---

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Status
<b>Air Quality Impact</b>							
S2.3.1.3	<p>Dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation and good site practices:</p> <p>Any excavated or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading;</p> <p>Any dusty material remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads;</p> <p>A stockpile of dusty material should not be extended beyond the pedestrian barriers, fencing or traffic cones;</p> <p>The load of dusty materials on a vehicle leaving a construction site should be covered entirely by impervious sheeting to ensure that the dusty materials do not leak from the vehicle;</p> <p>Where practicable, vehicle washing facilities with high pressure water jet should be provided at every discernible or designated vehicle exit point. The area where vehicle washing takes place and the road section between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores;</p> <p>When there are open excavation and reinstatement works, hoarding of not less than 2.4m high should be provided as far as practicable along the site boundary with provision for public crossing. Good site practice shall also be adopted by the Contractor to ensure the conditions of the hoardings are properly maintained throughout the construction period.</p> <p>The portion of any road leading only to construction site that is within 30m of a vehicle entrance or exit should be kept clear of dusty materials;</p>	To minimize the dust impact	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	Air Pollution Control Ordinance (APCO) and Air Pollution Control (Construction Dust) Regulation	<p>^</p> <p>*</p> <p>*</p> <p>^</p> <p>*</p> <p>^</p> <p>^</p> <p>*</p>

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Status
S2.3.1.3	Surfaces where any pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operation takes place should be sprayed with water or a dust suppression chemical continuously;	To minimize the dust impact	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	Air Pollution Control Ordinance (APCO) and Air Pollution Control (Construction Dust) Regulation	^
	Any area that involves demolition activities should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet;						^
	Where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the ground floor level of the building, or a canopy should be provided from the first floor level up to the highest level of the scaffolding;						N/A
	Any skip hoist for material transport should be totally enclosed by impervious sheeting;						N/A
	Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides;						*
	Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an audible high level alarm which is interlocked with the material filling line and no overfilling is allowed;						*
	Loading, unloading, transfer, handling or storage of bulk cement or dry PFA should be carried out in a totally enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system; and						*
	Exposed earth should be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shortcrete or other suitable surface stabiliser within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies						^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Status
<b>Noise Impact</b>							
S3.2.1.1	Use of movable barrier, enclosure, acoustic mat and quiet plant. Use of wooden frames barrier with a small-cantilevered upper portion of superficial density not less than 14kg/m <sup>2</sup> on a skid footing with 25mm thick internal sound absorptive lining.	To minimize construction noise impact arising from the Project at the affected noise sensitive receivers (NSRs)	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	EIAO-TM, Noise Control Ordinance (NCO)	N/A
S3.2.1.2	<p>Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction program.</p> <p>Silencers or mufflers on construction equipment should be utilized and should be properly maintained during the construction program.</p> <p>Mobile plant, if any, should be sited as far away from NSRs as possible.</p> <p>Machines and plant (such as trucks) that may be in intermittent use should be shut down between works periods or should be throttled down to a minimum.</p> <p>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.</p> <p>Material stockpiles and other structures should be effectively utilized, wherever practicable, in screening noise from on-site construction activities.</p>	To minimize construction noise impact arising from the Project at the affected NSRs	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	EIAO-TM, NCO	<p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>N/A</p>

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Status
<b>Ecological Impact</b>							
S4.2.1.1	Solid dull green noise/visual barriers of at least 2m high shall be erected and maintained between active works area and all areas of ecological importance.	Minimize noise and human disturbances during construction phase.	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	EIAO-TM	^
S4.2.1.2	Avoid unnecessary lighting.	Minimize mortality impacts on birds.	Design / Contractor/ Plant Operator	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	EIAO-TM	^
S4.2.1.3	Good construction site practice to minimise dust generation should be followed on all construction sites. Measures to avoid, minimise and mitigate impacts on air quality are detailed in this schedule	Minimize dust generation from construction sites.	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	EIAO-TM	^
S4.2.1.4	Temporary sewerage and drainage to be designed and installed to collect wastewater and prevent it from entering water bodies;	Avoid, minimise and mitigate impact on water quality	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	EIAO-TM	#
	Proper locations well away from nearby water bodies should be used for temporary storage of materials (i.e. equipment, filling materials, chemicals and fuel) and temporary stockpiles of construction debris and spoil, and these should be identified before commencement of works;						^
	To prevent muddy water entering nearby water bodies, work sites close to nearby water bodies should be isolated, using such items as sandbags or silt curtains with lead edge at bottom and properly supported props. Other protective measures should also be taken to ensure that no pollution or siltation occurs to the water gathering grounds of the work sites;						*
	Construction debris and spoil should be covered and/or properly disposed of as soon as possible to avoid these being washed into nearby water bodies;						^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Status
S4.2.1.4	Proper locations for discharge outlets of temporary wastewater treatment facilities well away from sensitive receivers should be identified;	Avoid, minimise and mitigate impact on water quality	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	EIAO-TM	^
	Adequate lateral support should be erected where necessary in order to prevent soil/mud from slipping into water bodies;						^
	Site boundaries should be clearly marked and any works beyond the boundary strictly prohibited;						^
	Regular water monitoring and site audit should be carried out at adequate points along any watercourses where construction works are underway upstream within their catchments and also on the Ng Tung, Sheung Yue and Shek Sheung Rivers. If the monitoring and audit results show that pollution occurs, adequate measures including temporarily cessation of works should be considered;						*
	Excavation profiles should be properly designed and executed with attention to the relevant requirements for environment, health and safety;						^
	Where soil to be excavated is situated beneath the groundwater table, it may be necessary to lower the groundwater table by installing well points or similar means;						N/A
	Stockpiling sites should be lined with impermeable sheeting and banded. Stockpiles should be properly covered by impermeable sheeting to reduce dust emission during dry season or contaminated run-off during rainy season. Watering should be avoided on stockpiles of contaminated soil to minimize contaminated runoff and construction materials should be properly covered and located away from nearby water bodies; and						*
	Supply of suitable clean backfill material after excavation, if required.						N/A
	Vehicles containing any excavated materials should be suitably covered to limit potential dust emissions or contaminated run-off, and truck bodies and tailgates should be sealed to prevent discharge during transport or during wet season;						^
	Speed control for the trucks carrying contaminated materials should be enforced;						^
	Vehicle wheel washing facilities at construction sites' exit points should be established and used, where necessary						^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Status
<b>Water Quality Impact</b>							
S5.2.2.1	Construction Site Runoff Practices and measures provided in the Practice Note for Professional Persons on Construction Site Drainage, (PROPECC PN1/94) should be followed where applicable.	Control construction runoff	Contractors	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	EIAO-TM, WPCO, EIAO	^
S5.2.2.2 – S5.2.2.3	<p>Portable chemical toilets and sewage holding tanks should be provided for handling the construction sewage generated by the workforce. A licensed Contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance.</p> <p>Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment during the construction phase of the Project. Regular environmental audit on construction site should be conducted in order to provide an effective control of any malpractices and achieve continual improvement of environmental performance on site. It is anticipated that sewage generation during the construction phase of the Project would not cause water quality impact after undertaking all required measures</p>	Handling of site sewage	Contractors	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	EIAO-TM, WPCO, EIAO	^



EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Status
<b>Waste Management</b>							
S6.2.2.1	<p>Nomination of an approved person, such as a site manager, to be responsible for the implementation of good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site;</p> <p>Training of site personnel in site cleanliness, appropriate waste management procedures and concepts of waste reduction, reuse and recycling;</p> <p>Provision of sufficient waste disposal points and regular collection for disposal;</p> <p>Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers;</p> <p>Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors;</p> <p>An Environmental Management Plan (EMP) should be prepared by the contractor and submitted to the Supervisor for approval.</p>	Minimize waste generation during construction	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	Waste Disposal Ordinance (WDO)	<p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>N/A</p>
S6.2.3.1	<p>Segregate and store different types of waste in different containers, skip or stockpiles to enhance reuse or recycling of materials and their proper disposal;</p> <p>Proper storage and site practices to minimize the potential for damage and contamination of construction materials;</p> <p>Plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste;</p> <p>Sort out demolition debris and excavated materials from demolition works to recover reusable/recyclable portions (i.e. soil, broken concrete, metal etc.); and</p> <p>Provide training to workers on the importance of appropriate waste management procedures, including waste reduction, reuse and recycling.</p>	Reduce waste generation	Contractor	Work Sites	Prior to the commencement of construction of Main Works Stage 1, Stage 2 and Stage 3	WDO	<p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p>

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Status
6.2.4.1	Waste, such as soil, should be handled and stored well to ensure secure containment, thus minimizing the potential of pollution;	Minimize waste impacts arising from waste storage	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	WDO	^
	Stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away; and						*
	Different locations should be designated to stockpile each material to enhance reuse.						^
S6.2.4.2	Remove waste in timely manner;	Minimize waste impacts arising from waste storage	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	WDO	*
	Employ the trucks with cover or enclosed containers for waste transportation						^
	Obtain relevant waste disposal permits from the appropriate authorities						^
	Disposal of waste should be done at licensed waste disposal facilities.						^
S6.2.5.2	Maintain temporary stockpiles and reuse excavated fill material for backfilling;	Minimize waste impacts from excavated and C&D materials	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	Land (Miscellaneous Provisions) Ordinance, WDO, ETWB TCW No. 19/2005	^
	Carry out on-site sorting;						^
	Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate;						^
	Adopt “selective demolition” technique to demolish the existing structure and facilities with a view to recovering broken concrete effectively for recycling purpose, where possible; and						N/A
	Implement a trip-ticket system for each works contract to ensure that the disposal of C&D materials are properly documented and verified.						^
S6.2.5.3	The Contractor should recycle as much as possible of the C&DM on-site. Public fill and C&DM waste should be segregated and stored in different containers or skips to enhance reuse or recycling of materials and their proper disposal. For example, concrete and masonry can be crushed and used as fill, and steel reinforcing bar can be used by scrap steel mills. Different areas of the work sites should be designated for such segregation and storage.	Minimize waste impacts from building demolition and new building construction	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	Land (Miscellaneous Provisions) Ordinance, WDO, ETWB TCW No. 19/2005	^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Status
S6.2.5.3	The use of wooden hoardings shall not be allowed. An alternative material, such as metal, aluminium or alloy etc, could be used.	Minimize waste impacts from building demolition and new building construction	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	Land (Miscellaneous Provisions) Ordinance, WDO, ETWB TCW No. 19/2005	^
	Government has developed a charging policy for the disposal of waste to landfill at present. It will provide additional incentive to reduce the volume of generated waste and ensure proper segregation to allow reuse of the inert material on site when implemented.						^
	In order to minimize the impacts of the demolition works, the generated wastes must be cleared as quickly as possible after demolition. Therefore, the demolition and clearance works should be undertaken simultaneously. To facilitate proper segregation of inert and non-inert C&D material arising from demolition works, selective demolition method should be adopted.						^
S6.2.5.4	If chemical wastes are produced at the construction site, the Contractors should register with EPD as chemical waste producers.	Control the chemical waste and ensure proper storage, handling and disposal	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	Waste Disposal (Chemical Waste General) Regulation, Code of Practice on the Packaging, Labelling and Storage of Chemical Waste	^
	Chemical wastes should be stored in appropriate containers and collected by a licensed chemical waste contractor. Chemical wastes (e.g. spent lubricant oil) should be recycled at an appropriate facility as far as possible, while the chemical waste that cannot be recycled should be disposed of at either the Chemical Waste Treatment Centre, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.						^
S6.2.5.5	General refuse should be stored in enclosed bins separately from construction and chemical wastes.	Minimize production of the general refuse and avoid odour, pest and litter impacts	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	Waste Disposal (Chemical Waste General) Regulation	^
	Recycling bins should also be placed to encourage recycling.						^
	Preferably enclosed and covered areas should be provided for general refuse collection and routine cleaning for these areas should also be implemented to keep areas clean.						^
	A reputable waste collector should be employed to remove general refuse on a daily basis.						^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Status
<b>Landscape and Visual</b>							
S7.3.1.1	<p>For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to.</p> <p>With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.</p>	Minimize the impact to the landscape and visual	Contractor	Work Sites	Prior to construction and construction phase		N/A
S7.3.2.1	<p>MM4 – Tree Protection &amp; Preservation</p> <p>Existing trees to be retained within the Project Site should be carefully protected during construction. In particular Old and Valuable Trees (OVTs) will be preserved according to ETWB TC (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor’s works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.</p>	Protect and Preserve Trees	Designer / Contractor	Work Sites	Prior to construction and construction phase	ETWB TCW No. 29/2004 and DEVB TC(W) No.7/2015	^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Status
S7.3.2.1	<p>MM5 - Tree Transplantation</p> <p>Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme. A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC No. 2/2004 and DEVB TC(W) No. 7/2015 and final locations of transplanted trees should be agreed prior to commencement of the work. For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 'Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.</p>	Transplant Trees where suitable for transplantation	Designer / Contractor	Work Sites where possible. Otherwise consider offsite locations	Prior to construction, construction phase and operation phase	<p>DEVB TC(W) No. 7/2015 and ETWB TCW No.2/2004</p> <p>HyD HQ/GN/13 Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit</p>	N/A
S7.3.2.1	<p>MM6 - Slope Landscaping</p> <p>Site formation should be reduced as far as possible. Hydroseeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedings and/or shrubs should be planted where slope gradient and site conditions allow.</p> <p>In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GWO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.</p>	<p>To avoid substantial slope cutting and fill slopes.</p> <p>To prevent erosion and subsequent loss of landscape resources and character.</p> <p>To ensure man-made slopes are as visually amenable as possible.</p>	Designer / Contractor	Work Sites	Prior to construction, construction phase and operation phase	<p>GEO Publication (1999) - Use of Vegetation as Surface Protection on Slope;</p> <p>GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes</p>	<p>N/A</p> <p>N/A</p>

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Status
S7.3.2.1	MM7 - Compensatory Planting Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under DEVB TC(W) No. 7/2015.	Compensate for trees and shrubs lost due to the Project	Designer / Contractor	Work Sites where possible. Otherwise consider offsite locations	Prior to construction, construction phase and operation phase	DEVB TC(W) No. 7/2015 and ETWB TCW No. 2/2004	N/A
	Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots.						N/A
	Compensatory planting for shrubs should be considered in suitable locations. Native species such as <i>Melastoma malabathricum</i> , <i>Diospyros vaccinioides</i> , <i>Gardenia jasminoides</i> , <i>Ixora chinensis</i> , <i>Ligustrum sinense</i> , <i>Litsea rotundifolia</i> , <i>Melastoma dodecandrum</i> , <i>Atalantia buxifolia</i> , <i>Rhodomirtus tomentosa</i> , <i>Rhaphiolepis indica</i> , and <i>Rhododendron simsii</i> are suggested.						N/A
S7.3.2.1	MM9 - Vertical Greening Planting of climbers to grow up vertical surfaces were appropriate.	Soften hard surfaces and facilities	Designer / Contractor	On appropriate structures	Prior to construction, construction phase and operation phase	ETWB TCW No.11/2004 – Cyber Manual for Greening	N/A
S7.3.2.1	MM10 - Green Roof Roof greening where appropriate should be established on proposed buildings as per the guidelines stated. These guidelines provide further details including information regarding structural loading, design, maintenance, etc. considerations as well as providing information on what types of plants might be suitable.	Reduce exposure to untreated concrete surfaces and particularly mitigate visual impact to visually sensitive receivers (VSRs) at high levels. Provide greening.	Designer / Contractor	On appropriate buildings	Prior to construction, construction phase and operation phase	CIBSE HK Branch, Technical Guidelines for Green Roof Systems in Hong Kong (2011); ArchSD/Urbis Study on Green Roof Application in HK (2007)	N/A

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Status
S7.3.2.1	MM11 - Screen Planting Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Designer / Contractor	Along roads, around suitable built structures, or around VSRs to contain their view out to the structures.	Prior to construction, construction phase and operation phase	ETWB TCW No. 10/2013 and 3/2006	N/A
S7.3.2.1	MM16 - Screen Hoarding Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, non-reflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence.	To screen undesirable views of the works site.	Designer	Work Sites	Construction phase		^
S7.3.2.1	MM17 - Light Control Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs.	Designer / Contractor	Work Sites and/or the Plant	Construction phase and operation phase		^

Remarks: EM&A Programme under FEP-02/474/2013	
^	Compliance of mitigation measure;
N/A	Not applicable at this stage;
N/A(1)	Not observed;
*	Recommendation was made during site audit but improved/rectified by the contractor;
#	Recommendation was made during site audit but not yet improved/rectified by the contractor;
X	Non-compliance of mitigation measure;
●	Non-compliance but rectified by the contractor.

---

---

**APPENDIX E**  
**SITE AUDIT SUMMARY**

---

---



## Appendix E – Summary of Observations and Recommendations of Site Audit

Reporting Quarter: December 2019 – March 2020

**Table E-1 Observations and Recommendations of Site Audit of Contract No. DC/2018/06**

Parameters	Date	Observations and Recommendations	Follow-up
<i>Water Quality</i>	14 Jan 2020	Manholes were not covered properly. They should be covered tightly at Portion A.	The condition was observed to be improved/rectified by the contractor during the audit session on 21 Jan 2020.
	14 Jan 2020	Ponding water was found at several points within Portion C. It should be removed or pumped through the sedimentation tank before discharge.	The condition was observed to be improved/rectified by the contractor during the audit session on 19 Feb 2020.
	25 Feb 2020	Muddy water was accumulated at the eastern side of Portion C. It should be removed or pumped through the sedimentation tank to prevent leaking into the river nearby.	The condition was observed to be improved/rectified by the contractor during the audit session on 12 Mar 2020.
	24 Mar 2020	Ponding water accumulated at Portion A should be removed or pumped through the sedimentation tank.	The condition was observed to be improved/rectified by the contractor during the audit session on 31 Mar 2020.
	31 Mar 2020	Leakage of water pump drainage was observed at several locations of Portion C. The Contractor should repair the water pump drainage as soon as possible to prevent water accumulation.	Follow-up actions will be reported in the next quarter.
<i>Air Quality</i>	6 Jan 2020	Haul roads appear dry during site inspection. Regular water spraying at haul road is recommended at Portion C.	The condition was observed to be improved/rectified by the contractor during the audit session on 14 Jan 2020.
	6 Jan 2020	Soil on the public road should be removed outside Portion C.	The condition was observed to be improved/rectified by the contractor during the audit session on 14 Jan 2020.

<b>Parameters</b>	<b>Date</b>	<b>Observations and Recommendations</b>	<b>Follow-up</b>
	14 Jan 2020	Dust generation was observed at the western side of Portion C. Haul road should be sprayed with water to avoid excessive dusty materials.	The condition was observed to be improved/rectified by the contractor during the audit session on 21 Jan 2020.
	14 Jan 2020	Stockpile observed in Portion C should be covered by impervious materials or cleared as soon as possible.	The condition was observed to be improved/rectified by the contractor during the audit session on 21 Jan 2020.
	21 Jan 2020	Soil was observed on the public road outside Portion C. The Contractor should clean it up as soon as possible.	The condition was observed to be improved/rectified by the contractor during the audit session on 13 Feb 2020.
	6 Feb 2020	The haul road appeared to be dry and dirty at Portion A. It should be sprayed with water to avoid dust generation.	The condition was observed to be improved/rectified by the contractor during the audit session on 13 Feb 2020.
	19 Feb 2020	Stockpiles should be covered by impervious materials to avoid dust generation at Portion A and C.	The condition was observed to be improved/rectified by the contractor during the audit session on 25 Feb 2020.
	19 Feb 2020	The haul road appeared to be dry at Portion C. Water spraying should be provided to prevent excessive dust generation.	The condition was observed to be improved/rectified by the contractor during the audit session on 25 Feb 2020.
	25 Feb 2020	The haul road appeared to be dry and dirty at Portion A. The Contractor should clean the haul road to prevent excessive dust generation.	The condition was observed to be improved/rectified by the contractor during the audit session on 3 Mar 2020.
	12 Mar 2020	Dusty materials were generated on the haul road when truck drove by at Portion C. Contractor is reminded to conduct water spraying more frequently to avoid dust emission.	The condition was observed to be improved/rectified by the contractor during the audit session on 17 Mar 2020.
	17 Mar 2020	The top of the cement mixing facility was not covered at Portion A. The Contractor should entirely cover the cement mixing to avoid dust generation.	The condition was observed to be improved/rectified by the contractor during the audit session on 24 Mar 2020.

<b>Parameters</b>	<b>Date</b>	<b>Observations and Recommendations</b>	<b>Follow-up</b>
<i>Noise</i>	N/A	There was no observation in the reporting period.	N/A
<i>Waste / Chemical Management</i>	14 Jan 2020	Waste was deposited on the road at Portion A. The Contractor should remove the waste as soon as possible.	The condition was observed to be improved/rectified by the contractor during the audit session on 6 Feb 2020.
	13 Feb 2020	Unused nylon bags and fences were deposited at Portion A. The Contractor should remove them to avoid waste accumulation.	The condition was observed to be improved/rectified by the contractor during the audit session on 19 Feb 2020.
	24 Mar 2020	Waste deposited at the eastern side of Portion C should be cleared as soon as possible.	The condition was observed to be improved/rectified by the contractor during the audit session on 31 Mar 2020.
<i>Ecology and Fisheries</i>	N/A	There was no observation in the reporting period.	N/A
<i>Visual and Landscape</i>	N/A	There was no observation in the reporting period.	N/A
<i>Permits /Licences</i>	N/A	There was no observation in the reporting period.	N/A

**Table E-2 Observations and Recommendations of Site Audit of Contract No. DC/2018/07**

<b>Parameters</b>	<b>Date</b>	<b>Observations and Recommendations</b>	<b>Follow-up</b>
<i>Water Quality</i>	17 Mar 2020	The gully at Portion B should be covered by impervious sheets to prevent muddy water and soil flowing into the drainage system.	The condition was observed to be improved/rectified by the contractor during the audit session on 24 Mar 2020.
<i>Air Quality</i>	14 Jan 2020	Dust generation was found in Portion B. The soil inside should be sprayed with water to avoid dust generation.	The condition was observed to be improved/rectified by the contractor during the audit session on 21 Jan 2020.
	3 Mar 2020	The haul road was dirty and dry at Portion B. The Contractor should clean the road to prevent excessive dust.	The condition was observed to be improved/rectified by the contractor during the audit session on 12 Mar 2020.
	3 Mar 2020	Stockpile should be covered by impervious materials to avoid dust generation at Portion B.	The condition was observed to be improved/rectified by the contractor during the audit session on 12 Mar 2020.
	24 Mar 2020	The haul road at Portion B was dirty and dusty. The Contractor should clean and wet the haul road as soon as possible to prevent dust generation.	The condition was observed to be improved/rectified by the contractor during the audit session on 31 Mar 2020.
<i>Noise</i>	N/A	There was no observation in the reporting period.	N/A
<i>Waste / Chemical Management</i>	6 Jan 2020	Temporary waste pile accumulated at Portion B should be covered by impervious materials before removal.	The condition was observed to be improved/rectified by the contractor during the audit session on 14 Jan 2020.
	14 Jan 2020	Waste stockpile is accumulated at Portion B. Contractor is reminded to remove the waste pile and cover it with impervious sheeting until disposal.	The condition was observed to be improved/rectified by the contractor during the audit session on 6 Feb 2020.
	25 Feb 2020	Waste stockpile accumulated should be removed at Portion B.	The condition was observed to be improved/rectified by the contractor during the audit session on 3 Mar 2020.

<b>Parameters</b>	<b>Date</b>	<b>Observations and Recommendations</b>	<b>Follow-up</b>
<i>Ecology and Fisheries</i>	N/A	There was no observation in the reporting period.	N/A
<i>Visual and Landscape</i>	N/A	There was no observation in the reporting period.	N/A
<i>Permits /Licences</i>	N/A	There was no observation in the reporting period.	N/A

---

---

**APPENDIX F**  
**WASTE FLOW TABLE**

---

---

### Monthly Summary Waste Flow Table for 2019 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics	Chemical Waste	Others, e.g. general refuse
	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000kg)	(in '000kg)	(in '000kg)	(in kg)	(in '000kg)
Jan											
Feb											
Mar											
Apr											
May											
Jun											
<b>Sub-total</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jul											
Aug											
Sep											
Oct											
Nov											
Dec	1.235	0.000	0.000	0.000	1.235	0.000	0.000	0.000	0.000	0.000	80.000
<b>Total</b>	1.235	0.000	0.000	0.000	1.235	0.000	0.000	0.000	0.000	0.000	80.000

- Notes:
1. Assume the density of soil fill is 2 ton/m<sup>3</sup>.
  2. Assume the density of rock and broken concrete is 2.5 ton/m<sup>3</sup>.
  3. Assume the density of mixed rock and soil is 1.9 ton/m<sup>3</sup>.
  4. Assume the density of slurry and bentonite is 2.8 ton/m<sup>3</sup>.
  5. The slurry and bentonite are disposed at Tseung Kwan O Area 137 Fill Bank.
  6. The non-inert C&D wastes are disposed at NENT.

Forecast of Total Quantities of C&D Materials to be Generated from the Contract										
Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Diposal as Public Fill	Imported Fill	Metals	Paper/card board packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse
(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )
26.2	0.0	6.3	0.0	20.0	1.5	50.0	50.0	20.0	0.1	0.4

Notes:

- (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
- (2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.
- (3) The Contractor shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the Works, together with a breakdown of the nature where the total amount of C&D materials expected to be generated from the Works if equal to or exceed 50,000 m<sup>3</sup>.
- (4) The density of soil fill is 2.24 ton/m<sup>3</sup>.



**SUMMARY TABLE FOR WORK PROCESSES OR ACTIVITIES REQUIRING TIMBER FOR TEMPORARY WORKS**

Contract No.: DC/2018/06

Contract Title: Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1 Civil Works for Sludge Treatment Facilities and 132kV Primary Substation

<b>Item No.</b>	<b>Month.</b>	<b>Description of Works Process or Activity [see note (a) below]</b>	<b>Justifications for Using Timber in Temporary Construction Works</b>	<b>Est. Quantities of Timber Used (m<sup>3</sup>)</b>	<b>Est. Quantities of Timber reused (m<sup>3</sup>)</b>	<b>Actual Quantities Used (m<sup>3</sup>)</b>	<b>Remarks</b>
1	Oct-19	N/A	N/A	0	0	0	N/A
2	Nov-19	N/A	N/A	0	0	0	N/A
3	Dec-19	N/A	N/A	0	0	0	N/A
Total Estimated Quantity of Timber Used				0.00			

Notes: (a) The Contractor shall list out all the work items requiring timber for use in temporary construction works. Several minor work items may be grouped into one for ease of updating.

### Monthly Summary Waste Flow Table for 2020 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics	Chemical Waste	Others, e.g. general refuse
	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )
Jan	0.376	0.000	0.000	0.000	0.376	0.000	0.000	0.000	0.000	0.000	0.040
Feb	1.122	0.000	0.000	0.250	0.872	0.000	0.000	0.000	0.000	0.000	0.082
Mar	2.289	0.000	0.000	0.350	1.939	0.000	0.000	0.000	0.000	0.000	0.057
Apr											
May											
Jun											
<b>Sub-total</b>	3.787	0.000	0.000	0.600	3.187	0.000	0.000	0.000	0.000	0.000	0.179
Jul											
Aug											
Sep											
Oct											
Nov											
Dec											
<b>Total</b>	3.787	0.000	0.000	0.600	3.187	0.000	0.000	0.000	0.000	0.000	0.179

- Notes:
1. Assume the density of soil fill is 2 ton/m<sup>3</sup>.
  2. Assume the density of rock and broken concrete is 2.5 ton/m<sup>3</sup>.
  3. Assume the density of mixed rock and soil is 1.9 ton/m<sup>3</sup>.
  4. Assume the density of slurry and bentonite is 2.8 ton/m<sup>3</sup>.
  5. The slurry and bentonite are disposed at Tseung Kwan O Area 137 Fill Bank.
  6. The non-inert C&D wastes are disposed at NENT.

Forecast of Total Quantities of C&D Materials to be Generated from the Contract										
Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Diposal as Public Fill	Imported Fill	Metals	Paper/card board packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse
(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )
26.2	0.0	6.3	0.0	20.0	1.5	50.0	50.0	20.0	0.1	0.4

Notes:

- (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
- (2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.
- (3) The Contractor shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the Works, together with a breakdown of the nature where the total amount of C&D materials expected to be generated from the Works if equal to or exceed 50,000 m<sup>3</sup>.
- (4) The density of soil fill is 2.24 ton/m<sup>3</sup>.

**SUMMARY TABLE FOR WORK PROCESSES OR ACTIVITIES REQUIRING TIMBER FOR TEMPORARY WORKS**

Contract No.: DC/2018/06

Contract Title: Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1 Civil Works for Sludge Treatment Facilities and 132kV Primary Substation

<b>Item No.</b>	<b>Month.</b>	<b>Description of Works Process or Activity [see note (a) below]</b>	<b>Justifications for Using Timber in Temporary Construction Works</b>	<b>Est. Quantities of Timber Used (m<sup>3</sup>)</b>	<b>Est. Quantities of Timber reused (m<sup>3</sup>)</b>	<b>Actual Quantities Used (m<sup>3</sup>)</b>	<b>Remarks</b>
1	Oct-19	N/A	N/A	0	0	0	N/A
2	Nov-19	N/A	N/A	0	0	0	N/A
3	Dec-19	N/A	N/A	0	0	0	N/A
4	Jan-20	N/A	N/A	0	0	0	N/A
5	Feb-20	N/A	N/A	0	0	0	N/A
6	Mar-20	N/A	N/A	0	0	0	N/A
Total Estimated Quantity of Timber Used				0			

Notes: (a) The Contractor shall list out all the work items requiring timber for use in temporary construction works. Several minor work items may be grouped into one for ease of updating.

### Monthly Summary Waste Flow Table for 2019 (year)

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

- Notes:
1. Assume the density of soil fill is 2 ton/m<sup>3</sup>.
  2. Assume the density of rock and broken concrete is 2.5 ton/m<sup>3</sup>.
  3. Assume the density of mixed rock and soil is 1.9 ton/m<sup>3</sup>.
  4. Assume the density of slurry and bentonite is 2.8 ton/m<sup>3</sup>.
  5. The slurry and bentonite are disposed at Tseung Kwan O Area 137 Fill Bank.
  6. The non-inert C&D wastes are disposed at NENT.

### Monthly Summary Waste Flow Table for 2020 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics	Chemical Waste	Others, e.g. general refuse
	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000kg)	(in '000kg)	(in '000kg)	(in kg)	(in '000kg)
Jan	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.760
Feb	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.490
Mar	150.170	0.000	0.000	0.000	150.170	0.000	0.000	0.000	0.000	0.000	0.000
Apr											
May											
Jun											
<b>Sub-total</b>	150.170	0.000	0.000	0.000	150.170	0.000	0.000	0.000	0.000	0.000	10.250
Jul											
Aug											
Sep											
Oct											
Nov											
Dec											
<b>Total</b>	150.170	0.000	0.000	0.000	150.170	0.000	0.000	0.000	0.000	0.000	10.250

- Notes:
1. Assume the density of soil fill is 2 ton/m<sup>3</sup>.
  2. Assume the density of rock and broken concrete is 2.5 ton/m<sup>3</sup>.
  3. Assume the density of mixed rock and soil is 1.9 ton/m<sup>3</sup>.
  4. Assume the density of slurry and bentonite is 2.8 ton/m<sup>3</sup>.
  5. The slurry and bentonite are disposed at Tseung Kwan O Area 137 Fill Bank.
  6. The non-inert C&D wastes are disposed at NENT.



## Environmental Aspect Evaluation Form

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

- Notes:
- (1) The performance targets are given in PS Clause 6A.27.8(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 *Contractor* shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the Works, together with a breakdown of the nature where the total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000 m<sup>3</sup>. (PS Clause 6.21.7(4)(b) refers)





## Environmental Aspect Evaluation Form

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

- Notes:
- (1) The performance targets are given in PS Clause 6A.27.8(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 *Contractor* shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the Works, together with a breakdown of the nature where the total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000 m<sup>3</sup>. (PS Clause 6.21.7(4)(b) refers)

### Monthly Summary Waste Flow Table for 2019 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse
	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )
Jan											
Feb											
Mar											
Apr											
May											
June											
Sub-total											
July											
Aug											
Sept											
Oct											
Nov											
Dec	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0

- Notes:
- (1) The performance targets are given in PS Clause 6.21.8(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

### Monthly Summary Waste Flow Table for 2020 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse
	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )
Jan	0	0	0	0	0	0	0	0	0	0	0
Feb	0	0	0	0	0	0	0	0	0	0	0
Mar	0	0	0	0	0	0	0	0	0	0	0
Apr											
May											
June											
Sub-total	0	0	0	0	0	0	0	0	0	0	0
July											
Aug											
Sept											
Oct											
Nov											
Dec											
Total	0	0	0	0	0	0	0	0	0	0	0

- Notes:
- (1) The performance targets are given in PS Clause 6.21.8(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

---

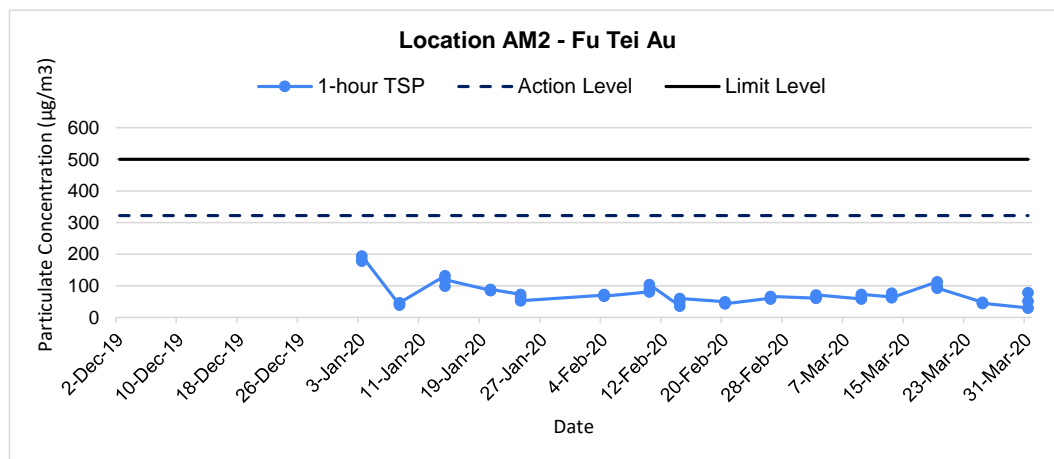
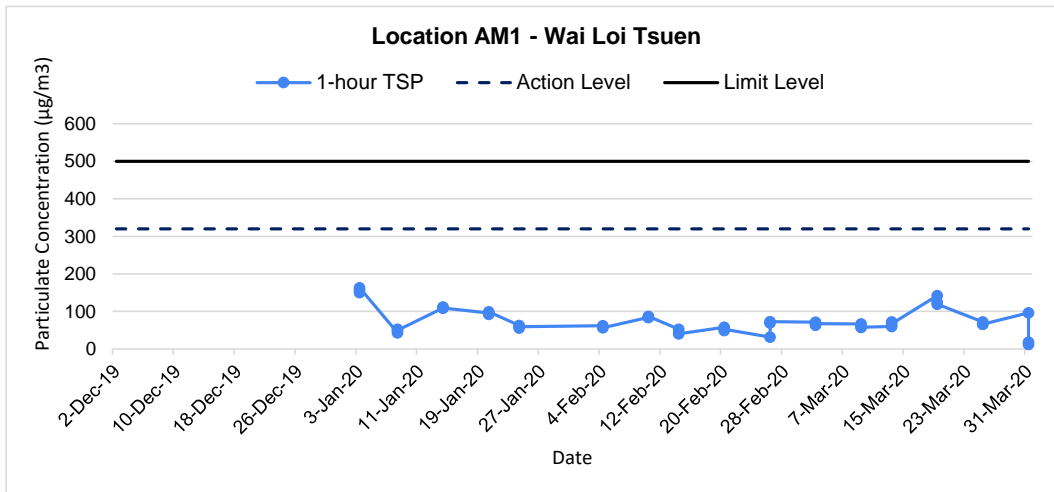
---

**APPENDIX G  
GRAPHICAL PRESENTATIONS OF AIR  
QUALITY MONITORING RESULTS (1-  
HOUR)**

---

---

### 1-hr TSP Concentration Levels



**Remarks:**

- (1) Since no actual construction works were carried out in December 2019, no 1-hour TSP monitoring was conducted. Thus, 1-hour TSP monitoring results were not applicable in December 2019.
- (2) Weather conditions within the reporting period were generally sunny and cloudy.
- (3) Major construction activities carried out during the reporting period include site clearance and preparation, underground utility detection, sheet piling installation, H-piles installation, drainage diversion works, demolition works, tree felling works, hoarding installation, trial pit works and pre-drilling works.
- (4) Other factors which might affect the monitoring results include village house renovation works and road traffic at Sheung Shui Tung Hing Road.

Title Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1  Graphical Presentation of 1-hour TSP Monitoring Results	Date Mar 2020	Project No. MA19019	CINOTECH
		Appendix G	

---

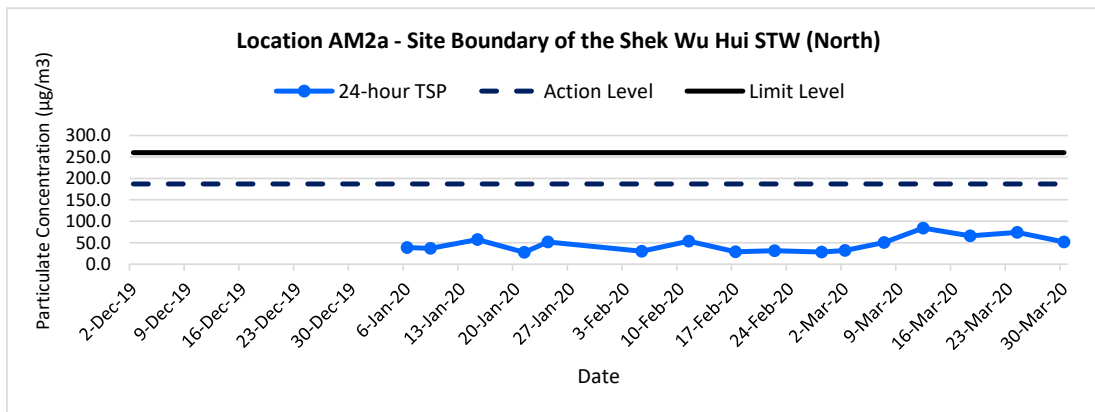
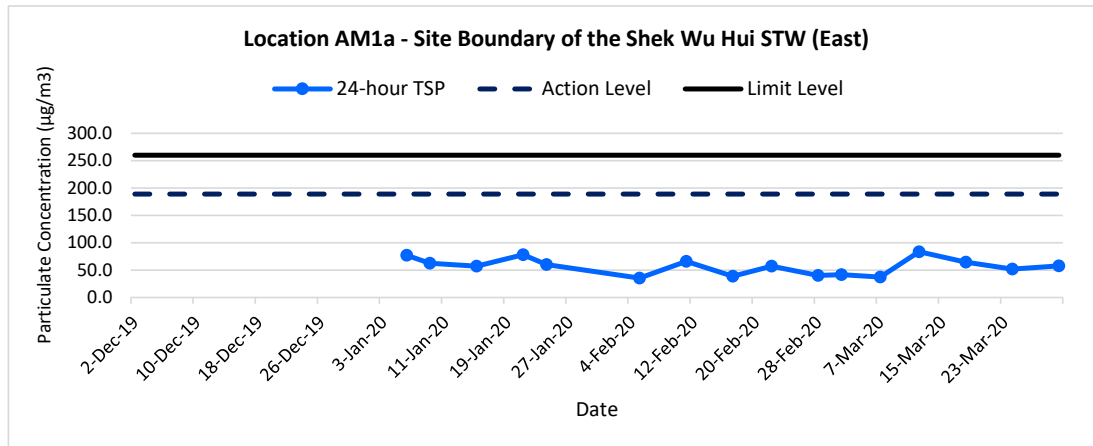
---

**APPENDIX H  
GRAPHICAL PRESENTATIONS OF AIR  
QUALITY MONITORING RESULTS (24-  
HOUR)**

---

---

## 24-hr TSP Concentration Levels



**Remarks:**

- (1) Since no actual construction works were carried out in December 2019, no 24-hour TSP monitoring was conducted. Thus, 24-hour TSP monitoring results were not applicable in December 2019.
- (2) Weather conditions within the reporting period were generally sunny and cloudy.
- (3) Major construction activities carried out during the reporting period include site clearance and preparation, underground utility detection, sheet piling installation, H-piles installation, drainage diversion works, demolition works, tree felling works, hoarding installation, trial pit works and pre-drilling works.
- (4) Other factors which might affect the monitoring results include vehicle movement within SWHSTW.

Title Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1	Date Mar 2020	Project No. MA19019	
Graphical Presentation of 24-hour TSP Monitoring Results		Appendix H	



---

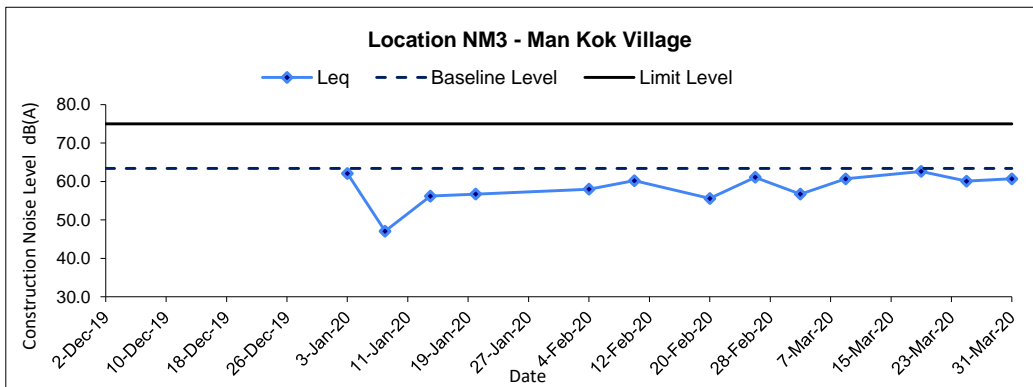
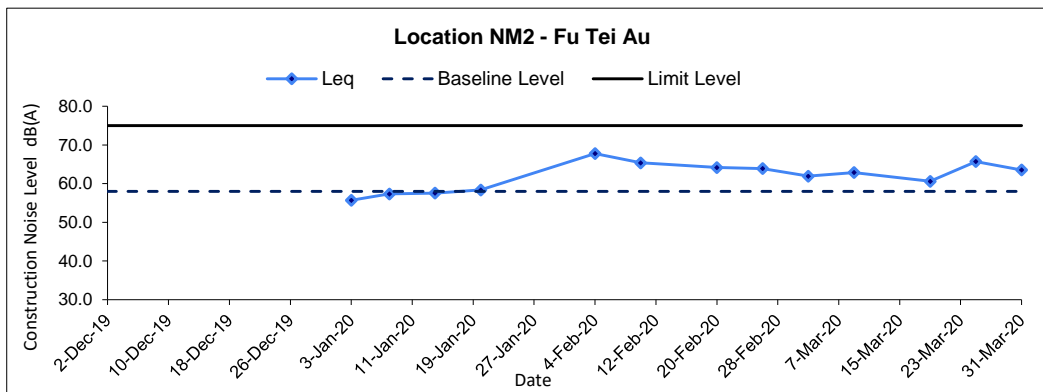
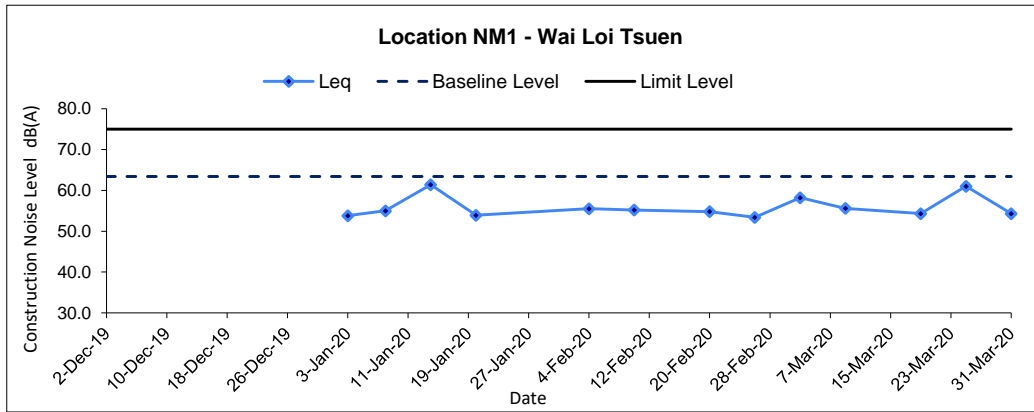
---

**APPENDIX I  
GRAPHICAL PRESENTATIONS OF  
NOISE MONITORING RESULTS**

---

---

## Noise Levels



**Remarks:**

- (1) Since no actual construction works were carried out in December 2019, no construction noise monitoring was conducted. Thus, construction noise monitoring results were not applicable in December 2019.
- (2) Weather conditions within the reporting period were generally sunny and cloudy.
- (3) Major construction activities carried out during the reporting period include site clearance and preparation, underground utility detection, sheet piling installation, H-piles installation, drainage diversion works, demolition works, tree felling works, hoarding installation, trial pit works and pre-drilling works.
- (4) Other factors which might affect the monitoring results include railway noise, village house renovation works and road traffic at Sheung Shui Tung Hing Road.

Title Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1	Date Mar 2020	Project No. MA19019	
Graphical Presentation of Construction Noise Monitoring Results		Appendix I	

---

---

**APPENDIX J  
SUMMARY OF ECOLOGICAL  
MONITORING ANALYSIS**

---

---

**Agreement No. SPW 07/2019**  
**Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1**

**Appendix J – Summary of Ecology Monitoring Analysis**

**Reporting Quarter:** December 2019 – March 2020

**Table J-1 Summary Result of T-Test Analysis for All Waterbirds**

T-values of Data*		Confidence Level	
		95%	99%
January 2020	Monthly	✓	✓
	Season	✓	✓
	Overall	✓	✓
February 2020	Monthly	✓	✓
	Season	✓	✓
	Overall	✓	✓
March 2020	Monthly	✓	✓
	Season	✓	✓
	Overall	✓	✓

Remarks:

\* Since no actual construction works were carried out in December 2019, no ecological monitoring was conducted. Thus, T-Test analysis for waterbirds was not applicable in December 2019.

✓ = T-value falls within the confidence level, the impact monitoring data shows no significant difference to the baseline data.

✗ = T-value falls outside the confidence level, the impact monitoring data shows significant difference to the baseline data.

## Agreement No. SPW 07/2019

### Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1

#### Appendix J – Summary of Ecology Monitoring Analysis

Table J-2 Summary Result of T-test Analysis for Representative Waterbirds from Point Count

Representative Species			Compliance*		
Species Name	Common Name	Chinese Name	January 2020	February 2020	March 2020
<i>Egretta garzetta</i>	Little Egret	小白鷺	✓	✓	✓
<i>Ardea cinerea</i>	Grey Heron	蒼鷺	✓	✓	✓
<i>Ardeola bacchus</i>	Chinese Pond Heron	池鷺	Action Level	✓	Action Level
<i>Phalacrocorax carbo</i>	Great Cormorant	普通鸕鶿	✓	✓	✓
<i>Ardea alba</i>	Great Egret	大白鷺	✓	✓	✓
<i>Bubulcus coromandus</i>	Eastern Cattle Egret	牛背鷺	✓	✓	✓

#### Remarks

\* Since no actual construction works were carried out in December 2019, no ecological monitoring was conducted. Thus, T-Test analysis for representative waterbirds from point count was not applicable in December 2019.

✓ = T-value falls within the confidence level, the impact monitoring data shows no significant difference to the baseline data.

✗ = T-value falls outside the confidence level, the impact monitoring data shows significant difference to the baseline data.

---

---

**APPENDIX K**  
**SUMMARY OF EXCEEDANCES**

---

---

**Agreement No. SPW 07/2019**

**Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1**

**Appendix K – Summary of Exceedance**

**Reporting Quarter:** December 2019 – March 2020

**(A) Exceedance Report for Air Quality**

(NIL in the reporting quarter)

**(B) Exceedance Report for Construction Noise**

(NIL in the reporting quarter)

**(C) Exceedance Report for Ecology**

One (1) Action Level of ecological monitoring was triggered in January 2020.

One (1) Action Level of ecological monitoring was triggered in March 2020.

No Action Level of ecological monitoring was triggered in February 2020.

No Limit Level of ecological monitoring was triggered between January and March 2020.

**Remarks:** Since no actual construction works were carried out in December 2019, no air quality, construction noise and ecological monitoring were conducted. Thus, Action and Limit Level exceedances for air quality, construction noise and ecological monitoring were not applicable in December 2019.

---

---

**APPENDIX L  
SUMMARIES OF ENVIRONMENTAL  
COMPLAINT, WARNING, SUMMON  
AND NOTIFICATION OF SUCCESSFUL  
PROSECUTION**

---

---



**Agreement No. SPW 07/2019**

**Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1**

**Appendix L – Summary of Environmental Complaint, Warning, Summon and Notification of Successful Prosecution**

**Reporting Quarter:** December 2019 – March 2020

**Table L-1 Environmental Complaint Records**

<b>Log Ref.</b>	<b>Location</b>	<b>Received Date</b>	<b>Details of Complaint</b>	<b>Investigation/Mitigation Action</b>	<b>Status</b>
1	Expansion Site of SWHSTP (Portion C)	18 March 2020	Muddy water was suspected to be discharged from the expansion site of SWHSTP to Shek Sheung River, manholes and foul drains nearby	<ul style="list-style-type: none"><li>• Employed suction truck and dump truck to clear the silt and mud at Shek Sheung River</li><li>• Arranged to repair the wastewater treatment system</li><li>• Installed additional sedimentation tanks and wastewater treatment system to increase the on-site treatment capacity</li></ul>	Investigation undergoing

**Remarks:** 1 environmental complaint was received in the reporting quarter.

**Table L-2 Environmental Warning/Summon and Prosecution Records**

<b>Log Ref.</b>	<b>Location</b>	<b>Received Date</b>	<b>Details of Warning/Summon and Prosecution</b>	<b>Status</b>
N/A	N/A	N/A	N/A	N/A

**Remarks:** No environmental warning/summon and prosecution were received in the reporting quarter.