



JOB NO.: TCS01062/19

**EPD CONTRACT NO. EP/SP/86/15
ORGANIC WASTE TREATMENT FACILITIES PHASE 2**

**QUARTERLY ENVIRONMENTAL MONITORING AND
AUDIT (EM&A) SUMMARY REPORT
(JUNE TO AUGUST 2024)**

**PREPARED FOR
AJA JOINT VENTURE**

Date	Reference No.	Prepared By	Certified By
28 October 2024	TCS01062/19/600/R0400v2	 Martin Li (Environmental Consultant)	 Tam Tak Wing (Environmental Team Leader)

Version	Date	Remarks
1	17 October 2024	First Submission
2	28 October 2024	Amended as IEC's comments

Your ref TCS1062/19/300/L0401
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Attn: Mr. Samuel Wu

29 October 2024

Dear Sir

Contract No. EP/SP/86/15
Organic Waste Treatment Facilities Phase 2
Quarterly Environmental Monitoring & Audit Report (June to August 2024)

Referring to your report referenced above dated 28 October 2024, we hereby verify that the captioned report ref. no. TCS01062/19/600/R0400v2 complied in general with the requirements as set out in the EM&A Manual.

Should you have any queries, please contact the undersigned at 2268 3437.

Yours faithfully



Ricky Chui
Independent Environmental Checker

cc EPD – Ms. Winnie Chu, Mr. Jason Tsang, Mr. Julian Lam, Mr. Gilbert Wong
Mr. David Ng, Ms. Anita Chan
AECOM – Mr. Desmond Ng, Mr. K. C. Chu, Mr. YW Mok, Mr. Joe Lam
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Ms. Beth Biddle, Ms. Tso So Fong, Ms. Cindy Kam
Mr. Gabriel Wong
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EXECUTIVE SUMMARY

ES01 This is the 19th Quarterly Environmental Monitoring and Audit (EM&A) Summary Report for the Service Contract to summarized environmental monitoring results and inspection findings during the period from **1 June to 30 August 2024** (hereinafter ‘the Reporting Period’).

ENVIRONMENTAL MONITORING AND AUDIT ACTIVITIES

ES02 Environmental monitoring activities under the EM&A program in this Reporting Period are summarized in the following table.

Table ES-1 Summary of Environmental Monitoring Activities Undertaken in the Reporting Period

Issues	Environmental Monitoring Parameters / Inspection	Sessions
Construction Noise	Leq (30min) Daytime	52
Construction Noise during Restricted Hours	Leq (5min) during restricted hours 19:00-07:00 including public holidays and Sundays	104
Inspection / Audit	ET Regular Environmental Site Inspection	13

BREACH OF ACTION AND LIMIT (A/L) LEVELS

ES03 No construction noise monitoring exceedance was recorded in this Reporting Period. The statistics of environmental exceedance and investigation of exceedance are summarized in the following table.

Table ES-2 Summary of Environmental Monitoring Parameter Exceedance in the Reporting Period

Environmental Issues	Monitoring Parameters	Action Level	Limit Level	Event & Action	
				Investigation Results	Corrective Actions
Construction Noise	Leq _{30min} Daytime	0	0	NA	NA
	Leq _{5min} Restricted hour	0	0	NA	NA

SITE INSPECTION

ES04 During the Reporting Period, weekly joint site inspections were undertaken to evaluate the site environmental performance. No non-compliances were observed during the weekly site inspection and environmental audit of the Reporting Period. Minor deficiencies found in the weekly site inspection were in general rectified within the specified deadlines. The environmental performance of the Project was therefore considered satisfactory.

ENVIRONMENTAL COMPLAINT

ES05 No environmental complaint was recorded in this Reporting Period for the Project. The statistics of environmental complaint are summarized in the following table.

Table ES-3 Summary of Environmental Complaint Records in the Reporting Period

Reporting Period	Environmental Complaint Statistics			Related with the Works Contract
	Frequency	Cumulative	Complaint Nature	
1 – 30 June 2024	0	7	NA	NA
1 – 31 July 2024	0	7	NA	NA
1 – 31 August 2024	0	7	NA	NA

NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS

ES06 No environmental summons or prosecutions was received in this Reporting Period for the Project. The statistics of environmental summons or prosecutions are summarized in the following tables.

Table ES-4 Summary of Environmental Summons Records in the Reporting Period

Reporting Period	Environmental Summons Statistics			Related with the Works Contract
	Frequency	Cumulative	Complaint Nature	
1 – 30 June 2024	0	0	NA	NA
1 – 31 July 2024	0	0	NA	NA
1 – 31 August 2024	0	0	NA	NA

Table ES-5 Summary of Environmental Prosecutions Records in the Reporting Period

Reporting Period	Environmental Prosecution Statistics			Related with the Works Contract
	Frequency	Cumulative	Complaint Nature	
1 – 30 June 2024	0	0	NA	NA
1 – 31 July 2024	0	0	NA	NA
1 – 31 August 2024	0	0	NA	NA

REPORTING CHANGE

ES07 No reporting change was made in this Reporting Period.

FUTURE KEY ISSUES

ES08 Construction noise would be a key environmental issue during construction work of the Project. Noise mitigation measures such as using quiet plants should be implemented in accordance with the EM&A requirement.

ES09 In addition, all effluent discharge from the construction site shall fulfill the discharge license stipulation.

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1. INTRODUCTION

1.1 PROJECT BACKGROUND

1.1.1 Environmental Protection Department (hereinafter referred as “EPD”) is the Project Proponent for the Project “*Organic Waste Treatment Facilities Phase 2*” (hereinafter referred as “the Project”). The Project is a Designated Project to be implemented under Environmental Permit No. EP-460/2013 (hereinafter referred as “the EP”). The major construction work of the Project included:

- (i) Demolition and removal of the existing above ground structures of the Sha Ling Livestock Waste Composting Plant (SLCP);
- (ii) Construction of superstructure for an administration building and enclosed waste reception area;
- (iii) Installation of treatment facilities including waste pre-treatment equipment, digesters, biogas holding tanks, composting, wastewater treatment, air treatment systems; and
- (iv) Facilities for biogas processing, utilization and transmission;

1.1.2 AJA Joint Venture (hereinafter referred as “AJAJV”) has been awarded the *EPD Contract No. EP/SP/86/15 “Organic Waste Treatment Facilities Phase 2”*. In accordance with the Works Contract requirements, AJAJV shall take over the responsibility of the EP. Based on the requirement, Further Environmental Permit application was submitted by AJAJV to EPD on 10 September 2019 and granted on 2 October 2019. A variation of Further Environmental Permit was submitted on 21 August 2020 and granted on 14 September 2020. The Further Environmental Permit is named as FEP-01/460/2013/A.

1.1.3 According to the approved Environmental Monitoring and Audit Manual (hereinafter referred as “the EM&A Manual”), AJAJV employed Action-United Environmental Services & Consulting (hereinafter referred as “AUES”) as Environmental Team (hereinafter referred as “ET”) to implement monitoring programme and as well as the associated duties.

1.1.4 According to the EM&A Manual, construction noise was identified as the only key environmental issue during the construction phase of the Project and it is required to carry out construction noise monitoring throughout the construction phase. Furthermore, baseline noise monitoring as part of the EM&A programmes shall be conducted prior to the commencement of the construction works under the Project. Thus, baseline noise monitoring was conducted by ET from **25 September 2019 to 8 October 2019**. The baseline monitoring report compiled by the ET was verified by Independent Environmental Checker (hereinafter the “IEC”) and was submitted to EPD on 19th November 2019 for endorsement.

1.1.5 This is the **19th** Quarterly EM&A Summary Report for the Service Contract to summarized monitoring results and inspection findings during the period from **1 June to 31 August 2024** (hereinafter “the Reporting Period”).

1.2 REPORT STRUCTURE

1.2.1 The Monthly Environmental Monitoring and Audit (EM&A) Report is structured into the following sections:-

Section 1	<i>Introduction</i>
Section 2	<i>Project Organization and Construction Progress</i>
Section 3	<i>Summary of Impact Monitoring Requirements</i>
Section 4	<i>Construction Noise Monitoring</i>
Section 5	<i>Waste Management</i>
Section 6	<i>Site Inspections</i>
Section 7	<i>Environmental Complaints and Non-Compliance</i>
Section 8	<i>Implementation Status of Mitigation Measures</i>
Section 9	<i>Conclusions and Recommendations</i>

2. PROJECT ORGANIZATION AND CONSTRUCTION PROGRESS

2.1 PROJECT ORGANIZATION AND CONSTRUCTION PROGRESS

2.1.1 Organization structure and contact details of relevant parties with respect to on-site environmental management are shown in [Appendix B](#). Details of responsibilities of respective parties can be referred to EM&A Monthly Report.

2.2 CONSTRUCTION PROGRESS

2.2.1 Remaining Rolling Construction program of the Project is enclosed in [Appendix D](#); and the major construction activities undertaken in the Reporting Period is presented as below:

June 2024

- Granulation Building:
 - ABWF works
 - E&M work at Granulation Hall and underground water tanks.
- Admin Building:
 - ABWF works & E&M work
- Reception Building:
 - ABWF works & E&M work
- AD Tanks:
 - E&M, T&C, and external pipes work processing for AD3
- Pump House – External ABWF work

July 2024

- Granulation Building:
 - ABWF works
 - E&M work at Granulation Hall and underground water tanks.
- Admin Building:
 - ABWF works & E&M work
- Reception Building:
 - ABWF works & E&M work
- AD Tanks:
 - T&C, E&M works and external pipes processing for AD2
 - Material fabrication of cladding subframe for AD1 to 4
- Pump House – External ABWF work

August 2024

- Granulation Building:
 - ABWF works
 - E&M work at Granulation Hall and underground water tanks.
- Admin Building:
 - ABWF works & E&M work
- Reception Building:
 - ABWF works & E&M work
- AD Tanks:
 - E&M, T&C, and external pipes work processing for AD3
- Pump House – External ABWF work

2.3 SUMMARY OF ENVIRONMENTAL SUBMISSIONS

2.3.1 Summary of the relevant permits, licenses, and/or notifications on environmental protection for the Project of contract 1 are presented in *Tables 2-1*.

Table 2-1 Status of Environmental Licenses and Permits of the Project

Item	Description	License/Permit Status			
		Permit no./ account no./ Ref. no.	Valid Period		Status
			From	To	
1	Notification pursuant to Air pollution Control (Construction Dust) Regulation	Application No. 448863	9 Sep 2019	NA	Valid
2	Chemical Waste Producer Registration	Ref. No. 5211-641-A2957-01	9 Oct 2019	NA	Valid
3	Water Pollution Control Ordinance - Discharge License	Application No. 448913	--	--	Application made on 10 Sep 2019
4	Waste Disposal Regulation - Billing Account for Disposal of Construction Waste	Account No. 7035307	2 Oct 2019	NA	Valid
5	Further Environmental Permit	FEP-01/460/2013/A	14 Sep 2020	NA	Valid
6	Construction Noise Permit	GW-RN0344-24	29 Mar 2024	28 Jul 2024	Expired on 28 Jul 2024 and superseded by GW-RN0843-24
		GW-RN0843-24	29 Jul 2024	28 Oct 2024	Valid
7	Waste Water Discharge License	WT00035196-2019	20 Mar 2020	31 Mar 2025	Valid

3. SUMMARY OF IMPACT MONITORING REQUIREMENTS

3.1 GENERAL

3.1.1 According to Environmental Monitoring and Audit requirements set out in the Approved EM&A manual, construction noise was identified as the only key environmental issues during the construction phase of the Project.

3.2 MONITORING PARAMETERS

3.2.1 The construction noise monitoring requirement stated in the approved EM&A Manual is summarized in *Table 3-1*.

Table 3-1 Summary of EM&A Requirements

Environmental Issue	Parameters
Noise	<ul style="list-style-type: none"> Leq(30min) in normal working days (Monday to Saturday) 07:00-19:00 except public holiday Supplementary information for data auditing, statistical results such as L₁₀ and L₉₀ shall also be obtained for reference Leq(5min) if construction works are extended to restricted hours 19:00-07:00 including public holidays and Sundays

3.3 MONITORING LOCATIONS

3.3.1 According to the EM&A Manual Section 4.2.3, four (4) designated noise sensitive receivers (NSR) were recommended as construction noise monitoring stations. Since two of the designated monitoring locations N2 and N3 were found not accessible, alternative monitoring locations N2a and N3a were therefore proposed for the noise monitoring and were approved by EPD on 1 June 2021. Details of the locations for construction noise monitoring in the Reporting Period is listed in *Table 3-2* and showed in *Appendix C*.

Table 3-2 Impact Monitoring Stations – Construction Noise

ID	Location
N1	Village House No. 308, Sha Ling
N2a	Village House No. 318, Sha Ling
N3a	Village House No. 261, Sha Ling
N4	Village House in Sha Ling

3.4 MONITORING FREQUENCY AND PERIOD

3.4.1 Noise monitoring shall be conducted at the all available designated monitoring stations or alternative locations. The monitoring frequency shall depend on scale of the construction activities. According to EM&A manual, regular noise monitoring should be carried out once a week when noise generating activities are underway and the monitoring requirement is presented below:

- one set of Leq_(30min) measurements between 07:00 and 19:00 hours on normal weekdays

3.4.2 If construction works are extended to restricted hours 19:00-07:00 in normal working days (Monday to Saturday), and 00:00-24:00 during public holidays including Sunday, additional weekly impact monitoring should be carried out during the respective restricted hour periods. Leq_(5min) measurements should be employed during the restricted hours.

3.5 MONITORING EQUIPMENT

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

3.6 ACTION/LIMIT (A/L) LEVELS

3.6.1 Action and Limit levels for construction noise as stipulated in the approved Environmental Monitoring and Audit Manual are listed in *Tables 3-3*.

Table 3-3 Action and Limit Levels for Construction Noise

Monitoring Location	Action Level	Limit Level in dB(A)
Time Period:	0700-1900 hours on normal weekdays	
N1	When one or more documented complaints are received	75 dB(A)
N2a		
N3a		
N4		
Time Period:	19:00-07:00 in normal working days (Monday to Saturday), and 00:00-24:00 during public holidays including Sunday	
N1	When one or more documented complaints are received	60 dB(A)
N2a		
N3a		
N4		

Note: If works are to be carried out during restricted hours, the conditions stipulated in the construction noise permit issued by the Noise Control Authority should be followed.

4. CONSTRUCTION NOISE MONITORING

4.1 GENERAL

4.1.1 In the Reporting Period, construction noise monitoring was performed at monitoring location N1, N2a, N3a and N4.

4.2 RESULTS OF NOISE MONITORING

4.2.1 In the Reporting Period, a total of 52 sessions of daytime construction noise monitoring and 104 sessions of additional weekly noise monitoring during restricted hours were performed at the agreed monitoring locations in the reporting period. The daytime noise monitoring results and additional weekly noise monitoring results during restricted hours are summarized in *Table 4-1* and *Table 4-2*, respectively. The graphical plots of construction noise monitoring result are shown in *Appendix E*.

Table 4-1 Summary of Construction Noise Monitoring Results

Monitoring Location	Leq, 30min (dB(A))	
	Min	Max
N1	54.0	63.0
Record Date	2-Jul-24	4-Jun-24
N2a	50.7	62.7
Record Date	2-Jul-24	21-Jun-24
N3a	60.2	72.9
Record Date	8-Jul-24	21-Jun-24
N4	57.7	66.3
Record Date	14-Jun-24	21-Jun-24

Table 4-2 Summary of Additional Noise Monitoring Results during Restricted Hours

Monitoring Location	Leq, 5min (dB(A))	
	Min	Max
N1	45.4	58.8
Record Date	3-Jun-24	16-Jun-24
N2a	45.5	58.1
Record Date	12-Aug-24	16-Jun-24
N3a	47.8	59.6
Record Date	5-Aug-24	21-Jul-24
N4	46.0	58.8
Record Date	26-Aug-24	2-Jun-24

4.2.2 As shown in *Table 4-1*, all the measured results during normal daytime were below 75 dB(A) of the acceptance criteria. In addition, all the measured results during restricted hours shown in *Table 4-2* were below 60 dB(A) of the acceptance criteria as set out in Technical Memorandum on Noise from Construction Work other than Percussive Piling. No adverse weather condition which may affect the monitoring result was encountered during the course of noise monitoring in the reporting period.

4.2.3 No documented noise complaint is received in the reporting period. Hence no construction noise monitoring action level exceedance was recorded.

4.2.4 Summary of A/L Level exceedance of construction noise and statistical analysis of compliance for construction noise monitoring results are summarized in *Table 4-3*.

Table 4-3 Summaries of Construction Noise Action/Limit Level Exceedance

Station	Limit Level	Action Level	Received Date
N1	0	0	NA
N2a	0		
N3a	0		
N4	0		

5. WASTE MANAGEMENT

5.1 GENERAL WASTE MANAGEMENT

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

5.2 RECORDS OF WASTE QUANTITIES

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

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

5.2.2 The quantities of waste for disposal in this Reporting Period are summarized in *Tables 5-1* and *5-2*.

Table 5-1 Summary of Quantities of Inert C&D Materials

Type of Waste	Quantity			Disposal Location
	Jun 2024	Jul 2024	Aug 2024	
Total C&D Materials (Inert) ('000m ³)	0.007	0	0	-
Reused in this Contract (Inert) ('000m ³)	0	0	0	-
Reused in other Projects (Inert) ('000m ³)	0	0	0	-
Disposal as Public Fill (Inert) ('000m ³)	0.007	0	0	TM38

Table 5-2 Summary of Quantities of C&D Wastes

Type of Waste	Quantity			Disposal Location
	Jun 2024	Jul 2024	Aug 2024	
Recycled Metal ('000kg)	0	0	0	-
Recycled Paper / Cardboard Packing ('000kg)	0	0	0	-
Recycled Plastic ('000kg)	0	0	0	-
Chemical Wastes ('000kg)	0	0	0	-
General Refuses ('000m ³)	0.028	0.040	0.055	NENT

6. SITE INSPECTION

6.1 REQUIREMENTS

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

6.2 FINDINGS / DEFICIENCIES DURING THE REPORTING PERIOD

6.2.1 In the Reporting Period, 13 events of joint site inspection by the Employer’s Representative (ER), ET, IEC and the Contractor were undertaken for the Contract to evaluate the site environmental performance. No non-compliance was identified during the site inspection. The summaries of findings / deficiencies recorded in the site inspection during the Reporting Period are presented in *Table 6-1*.

6.2.2 The findings / deficiencies of the Project observed during the weekly site inspection are listed in *Table 6-1*.

Table 6-1 Summary of Reminders/Observations of Site Inspection in Reporting Period

Reporting Period	Date of site inspection	Nos. of findings / reminders	Follow-Up Status
June 2024	5, 12, 19 and 26 June 2024	5	Completed
July 2024	3, 10, 17, 24 and 31 July 2024	7	Completed
August 2024	7, 14, 21 and 28 August 2024	2	Completed

7. ENVIRONMENTAL COMPLAINT, NOTIFICATIONS OF SUMMONS AND SUCCESSFUL PROSECUTIONS

7.1 ENVIRONMENTAL COMPLAINT, SUMMONS AND PROSECUTION

7.1.1 In the Reporting Period, no environmental complaint, summons and prosecution under the EM&A Programme was lodged for the project. The statistical summary table of environmental complaint is presented in Tables 7-1, 7-2 and 7-3.

Table 7-1 Statistical Summary of Environmental Complaints

Reporting Period	Environmental Complaint Statistics		
	Frequency	Cumulative	Complaint Nature
June 2024	0	7	NA
July 2024	0	7	NA
August 2024	0	7	NA

Table 7-2 Statistical Summary of Notification of Summons

Reporting Period	Environmental Summons Statistics		
	Frequency	Cumulative	Summons Nature
June 2024	0	0	NA
July 2024	0	0	NA
August 2024	0	0	NA

Table 7-3 Statistical Summary of Successful Prosecutions

Reporting Period	Environmental Prosecution Statistics		
	Frequency	Cumulative	Prosecution Nature
June 2024	0	0	NA
July 2024	0	0	NA
August 2024	0	0	NA

ENVIRONMENTAL MITIGATION IMPLEMENTATION SCHEDULE

7.2 GENERAL REQUIREMENTS

- 7.2.1 The environmental mitigation measures that recommended in the Environmental Mitigation Implementation Schedule (EMIS) in the approved EM&A Manual covered the issues of dust, noise, water and waste and they are summarized presented in [Appendix H](#).
- 7.2.2 AJAJV had been implementing the required environmental mitigation measures according to the Environmental Monitoring and Audit Manual subject to the site condition. Environmental mitigation measures generally implemented by AJAJV in this Reporting Period are summarized in [Table 8-1](#).

Table 8-1 Environmental Mitigation Measures

Issues	Environmental Mitigation Measures
Water Quality	<ul style="list-style-type: none"> • Any wastewater generated should be appropriately treated by treatment facilities; • Drainage channels were provided to convey run-off into the treatment facilities; and • Drainage systems were regularly and adequately maintained.
Air Quality	<ul style="list-style-type: none"> • Regular watering to reduce dust emissions from all exposed site surface, particularly during dry weather; • Frequent watering for particularly dusty construction areas and areas close to air sensitive receivers; • Cover all excavated or stockpile of dusty material by impervious sheeting or sprayed with water to maintain the entire surface wet; • Public roads around the site entrance/exit had been kept clean and free from dust; and • Tarpaulin covering of any dusty materials on a vehicle leaving the site.
Noise	<ul style="list-style-type: none"> • Good site practices to limit noise emissions at the sources; • Use of quiet plant and working methods; • Use of site hoarding or other mass materials as noise barrier to screen noise at ground level of NSRs; • Use of shrouds/temporary noise barriers to screen noise from relatively static PMEs; • Alternative use of plant items within one worksite, where practicable.
Waste Management	<ul style="list-style-type: none"> • Any excavated material should be reused on site as far as possible to minimize off-site disposal. Scrap metals or abandoned equipment should be recycled if possible; • Waste arising should be kept to a minimum and be handled, transported and disposed of in a suitable manner; • Trip ticket system for the disposal of C&D materials to any designed public filling facility and/or landfill was implemented; and • Chemical waste shall be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Wastes.
General	<ul style="list-style-type: none"> • The site was generally kept tidy and clean.

8. CONCLUSIONS AND RECOMMENDATIONS

8.1 CONCLUSIONS

- 8.1.1 This is the **19th** Quarterly Environmental Monitoring and Audit (EM&A) Summary Report for the Service Contract to summarize monitoring results and inspection findings during the period from **1 June to 31 August 2024** (the Reporting Period).
- 8.1.2 In the Reporting Period, no construction noise limit level exceedance during daytime and restricted hours was recorded and no noise complaint (which is an Action Level exceedance) was received by the ER, EPD and the Contractors.
- 8.1.3 During the Reporting Period, weekly joint site inspections were undertaken to evaluate the site environmental performance. No non-compliances were observed during the weekly site inspection and environmental audit of the Reporting Period. Minor deficiencies found in the weekly site inspection were in general rectified within the specified deadlines. The environmental performance of the Project was therefore considered satisfactory.
- 8.1.4 No documented complaint, notification of summons or successful prosecution was received under the Project.

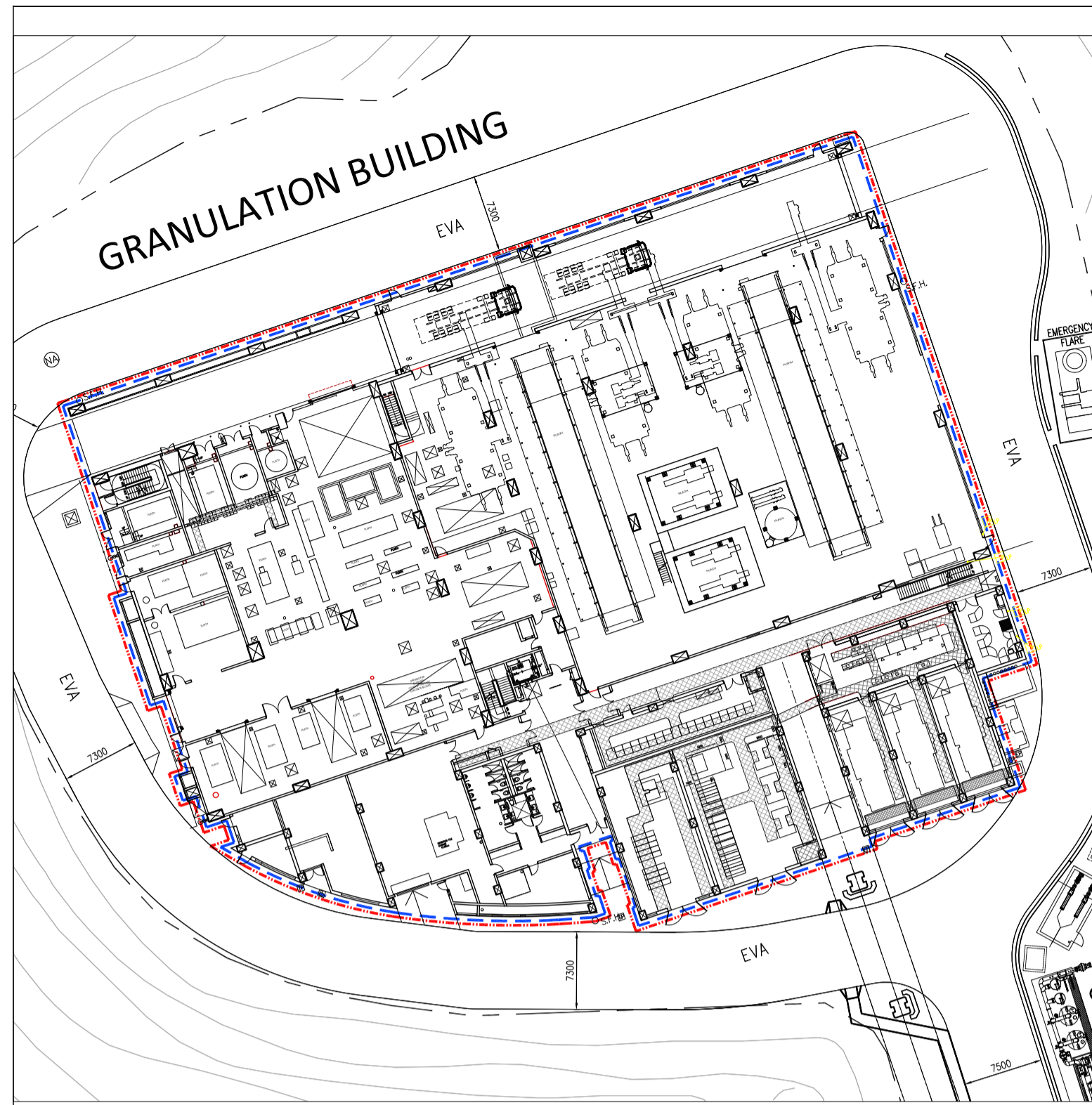
8.2 RECOMMENDATIONS

- 1.2.1 Construction noise should be a key environmental impact during the works. The noise mitigation measures such as use of quiet plants or temporary noise barrier installation at the construction noise predominated area should be implemented in accordance with the EM&A requirement and the latest CNP.
- 8.2.1 In addition, all effluent discharge shall be ensured to fulfill the discharge license stipulation.
- 8.2.2 All the trees proposed to be retained in-situ should be properly preserved and protected during the construction works. Tree Preservation and Protection Works for these retained trees shall follow Section 3 and 26 of CEDD's General Specification for Engineering Works and Section 26 of Contract Specification Part B.
- 8.2.3 Trees to be felled shall be in accordance with the Tree Preservation and Removal Proposal (TPRP) to be approved by relevant approval authority. The tree removal work shall only commence after such approval has been granted.
- 8.2.4 Contract Specification Part B Section 1.78 "Waste Management" and DEVB's "Guidelines on Yard Waste Reduction and Treatment" should be referred before tree removal and plan the necessary arrangement.

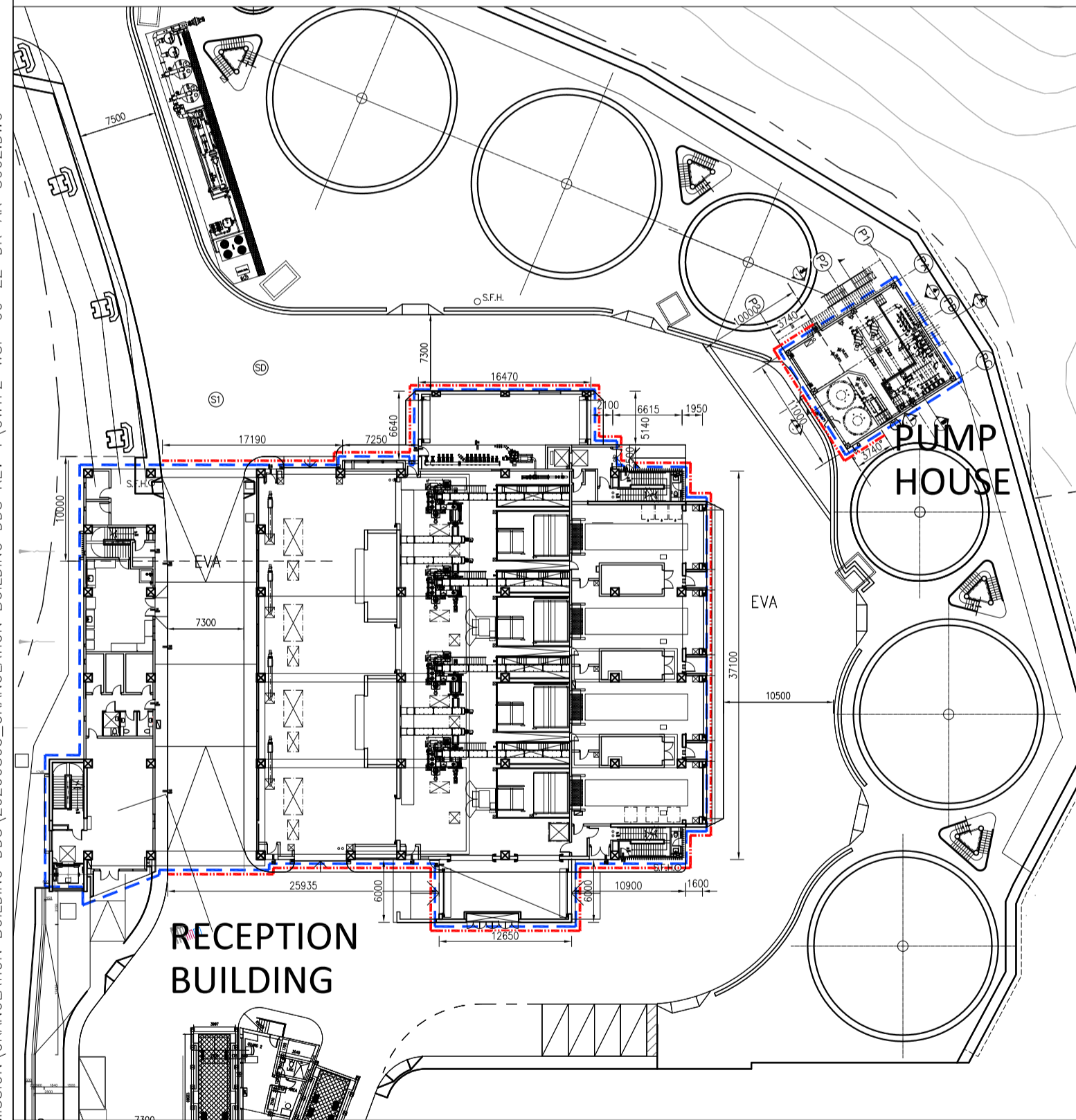
Appendix A

Layout plan of the Project

DATE: 05/Aug/2020 5:24:07 PM
 FILENAME: S:\S1701-CWTF2\04_DRAWINGS\10_DETAIL DESIGN SUBMISSION\GRANULATION BUILDING.DWG

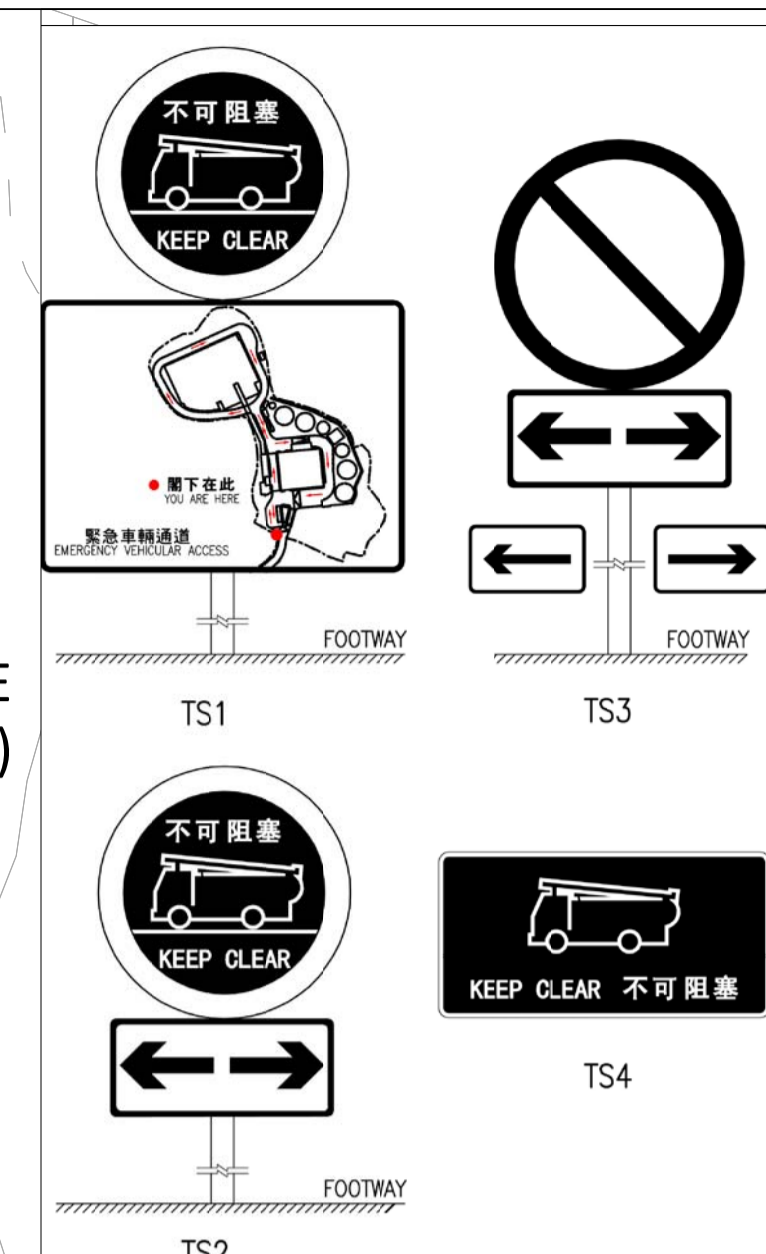
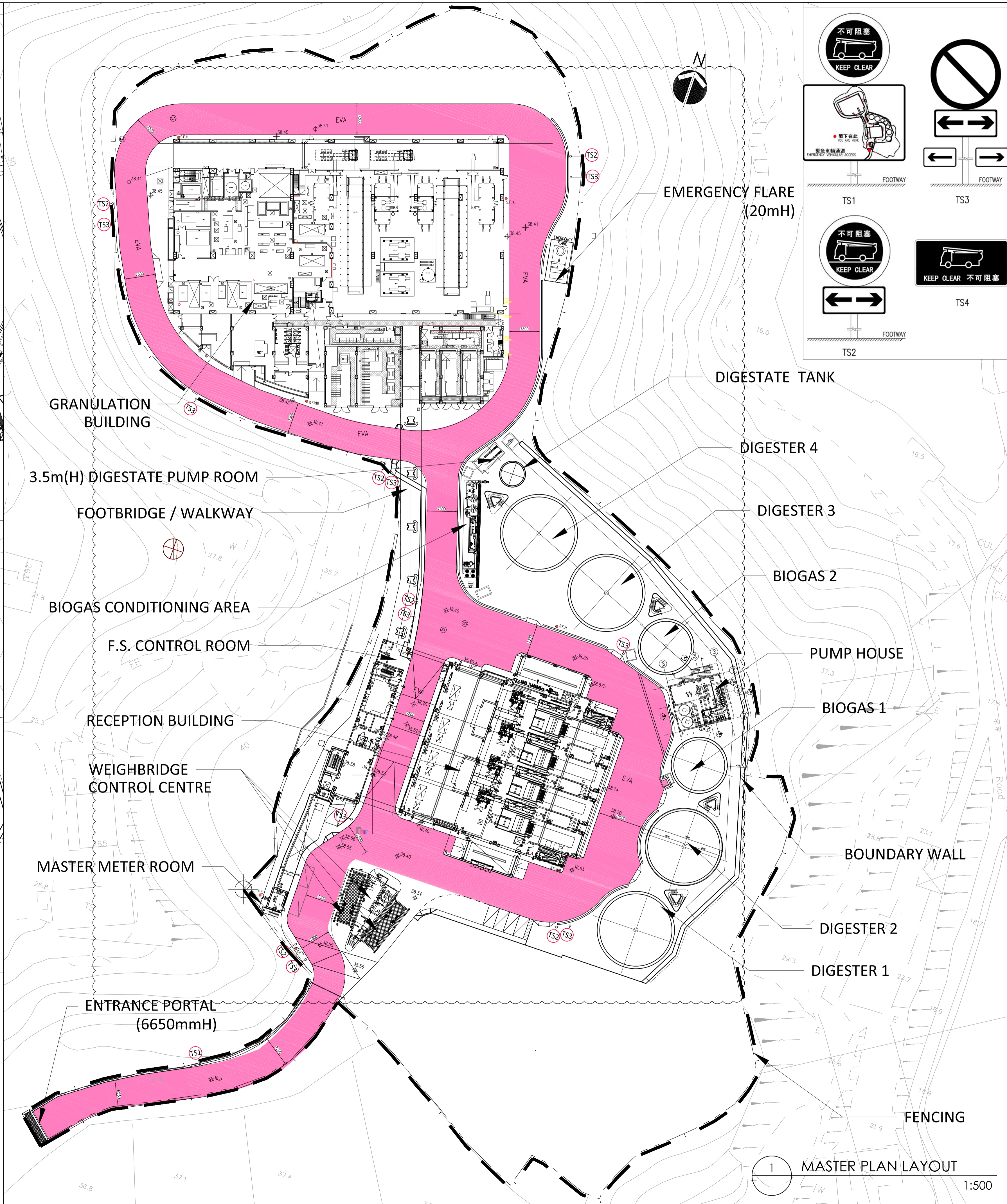


EVA CALCULATION (GRANULATION BUILDING)
 TOTAL FACADE LENGTH OF THE GRANULATION BUILDING = 290.09m
 FACADE LENGTH THAT CAN BE REACHED BY FIRE ENGINE = 290.09m
 PERCENTAGE OF FACADE LENGTH THAT CAN BE REACHED BY FIRE ENGINE = 290.09/290.09 m = 100%



EVA CALCULATION (RECEPTION BUILDING)
 TOTAL FACADE LENGTH OF THE RECEPTION BUILDING = 233.31 m
 FACADE LENGTH THAT CAN BE REACHED BY FIRE ENGINE = 17.19 + 7.25 + 6.64 + 16.47 + 5.14 + 2.10 + 2.50 + 6.615 + 1.95 + 37.10 + 1.60 + 10.90 + 6.00 + 12.65 + 6.00 + 25.935 = 166.04 m
 PERCENTAGE OF FACADE LENGTH THAT CAN BE REACHED BY FIRE ENGINE = 166.04/233.31 m = 71.17%

EVA CALCULATION (PUMP HOUSE)
 TOTAL FACADE LENGTH OF THE PUMP HOUSE BUILDING = 46.80 m
 FACADE LENGTH THAT CAN BE REACHED BY FIRE ENGINE = 3.74 + 3.74 + 11.0 = 18.48m
 PERCENTAGE OF FACADE LENGTH THAT CAN BE REACHED BY FIRE ENGINE = 18.48/46.80 m = 39.49%



NOTES:
 Check all measurement on site. Do not scale off drawings.
 This drawing to be read in conjunction with the Specification and other related drawings. Any discrepancies are to be immediately reported to the Architect.
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EVA NOTE:
 1. ALL COORDINATES ARE TO HONG KONG METRIC GRID (1980).
 2. CLEAR HEADROOM FROM EVA TO SOFFIT OF THE FOOTBRIDGE TO BE NOT LESS THAN 4.5M.
 3. MINIMUM WIDTH OF NEW ACCESS ROAD WITH TWO-WAY TRAFFIC AND ONE WAY TRAFFIC TO BE 7.3M AND 6.0M RESPECTIVELY.
 4. EVA SHALL BE PROVIDED IN ACCORDANCE WITH THE CODE OF FIRE SAFETY IN BUILDING 2011.
 5. THE EVA SHALL ALLOW SAFE AND UNOBSTRUCTED ACCESS AND SAFE OPERATION OF A FIRE ENGINE AND OPERATOR'S ACCESS TO THE BUILDING.
 6. THE EVA SHALL SERVE TWO OPPOSITE SIDES BUILDING FACADE THAT ARE REMOTE FROM EACH OTHER AND EACH HAVING A LENGTH OF NOT LESS THAN ONE-FOURTH OF THE TOTAL LENGTH OF ALL PERIMETER WALLS. THE HORIZONTAL DISTANCE FROM FACADE TO EVA DOES NOT EXCEED 10M.
 7. STREET FIRE HYDRANT AS INDICATED WITHIN WORKS AREA SHALL BE CONNECTED TO FRESH WATER SUPPLY.
 8. THE STREET FIRE HYDRANT SHALL BE CAPABLE OF DELIVERING NOT LESS THAN 4,000 LITRES PER MINUTES WITH A MINIMUM RUNNING PRESSURE OF 170KPA AT OUTLET.

Rev	Description	By	Date
1	REVISION 1	AL	05/08/20
0	REVISION 0	AL	18/03/20

Employer
 環境保護署
 Environmental Protection Department

Employer's Representative
AECOM
 Independent Consultant

Contractor
ARUP
 Designer

WSP
 In Associated with A.Lead

Project title
 CONTRACT NO. EP/SP/86/15
 ORGANIC WASTE TREATMENT FACILITIES
 PHASE 2

Drawing title
 GENERAL BUILDING PLAN –
 MASTER LAYOUT PLAN AND
 EVA CALCULATION

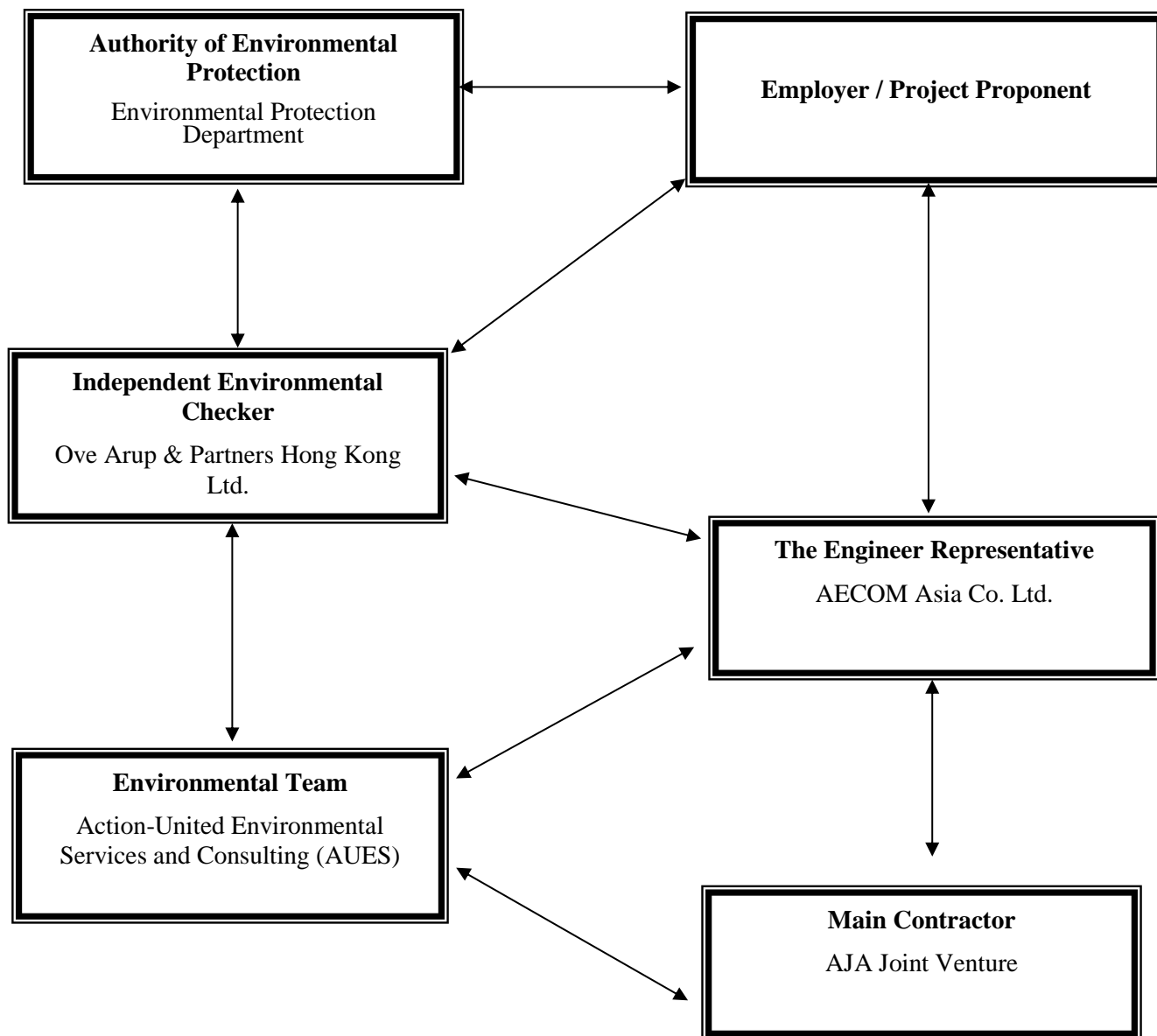
Author	Date	Checker	Approver
AL	18/03/20	KB	ACT
Scale	1:500 @A1	Status	DETAIL DESIGN SUBMISSION

Rev. 1
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Appendix B

Organization Chart

Project Organization Chart



Contact Details of Key Personnel for the Project

Organization	Project Role	Name of Key Staff	Tel No.	Fax No.
EPD	Project Proponent	Sunny Chiu	3151 7209	3528 0492
AECOM	Resident Engineer	Terrence Lam	5579 5239	3010 8507
AECOM	Resident Engineer	Ivan Yung	5723 7750	3010 8507
ARUP	Independent Environmental Checker	Ricky Chui	2268 3437	2268 3380
ARUP	Engineer (Safety, Environment and Planning)	Roy Ng	2268 3588	2268 3588
AJAJV	Project Manager	Victor Wu	2862 5013	2862 5013
AJAJV	Construction Manager	Ethan Wong	9805 7325	9805 7325
AJAJV	Project Environmental Manager	Samuel Tsui	9455 5865	9455 5865
AJAJV	Environmental Officer	Harry Lam	9353 6141	9353 6141
AUES	Environmental Team Leader	T. W. Tam	2959 6059	2959 6079
AUES	Environmental Consultant	Nicola Hon	2959 6059	2959 6079
AUES	Environmental Consultant	Ben Tam	2959 6059	2959 6079
AUES	Environmental Consultant	Martin Li	2959 6059	2959 6079

Legend:

EPD (Employer) – Environmental Protection Department

AECOM (Project Consultant) – AECOM Asia Co. Ltd.

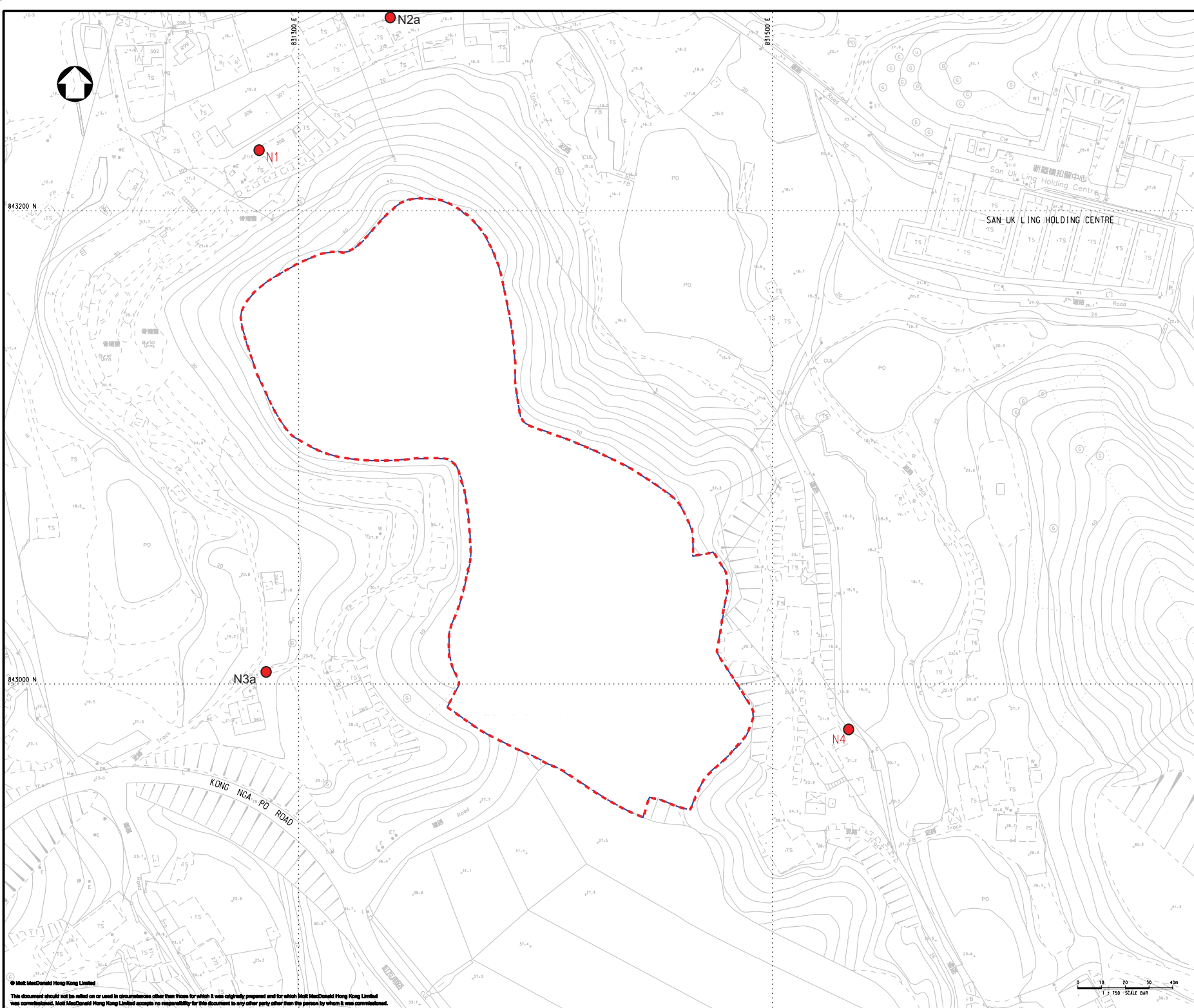
AJAJV (Main Contractor) – AJA Joint Venture

ARUP (IEC) – Ove Arup & Partners Hong Kong Ltd.

AUES (ET) – Action-United Environmental Services & Consulting

Appendix C

Monitoring Locations for Impact Monitoring



Notes

- Key to symbols**
- - - - - Construction Site Boundary
 - Noise Monitoring Station

Reference drawings

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P2	JUL 13	MING	GENERAL REVISION	AM	AFK
P1	DEC 12	MING	FIRST ISSUE	SC	AFK
Rev	Date	Drawn	Description	Chk'd	App'd



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Client



Environmental Protection Department
The Government of the Hong Kong
Special Administrative Region

Project
**AGREEMENT NO. CE34/2011(EP)
DEVELOPMENT OF ORGANIC WASTE
TREATMENT FACILITIES PHASE 2 -
FEASIBILITY STUDY**

Title
**PROPOSED LOCATIONS OF
CONSTRUCTION NOISE
MONITORING STATIONS**

Designed	SC	Eng check	AT
Drawn	MING	Coordination	AT
Dwg check	EY	Approved	AFK
Scale at A1	1:750	Status	PRE
Drawing Number		Rev	P2

FIGURE 4.1

Appendix D

Remaining Rolling Construction Programme

ID	Task Name	Start	Finish	Total Slack	% Complete	Resource Names	Qtr 1, 2024		Qtr 2, 2024			Qtr 3, 2024		Qtr 4, 2024		
							Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
1	O-Park 2 Remaining Works Programme	02 Feb '23	13 Oct '24	1 day	88%											
2	Other Civil / ABWF Works	24 Oct '23	13 Oct '24	1 day	59%											
3	Footbridge	20 Dec '23	30 Jun '24	31 days	88%	Ethan										
4	Guard rail Installation	20 Dec '23	09 Mar '24	0 days	100%	Ethan										
5	Planter box	20 Jun '24	30 Jun '24	31 days	0%	Ethan										
6	Glass Doors / Windows / Panels	04 Nov '23	19 Jun '24	42 days	76%	Ethan										
7	RB - Entrance glass door/ glass panel	22 Apr '24	17 May '24	0 days	100%	Ethan										
8	RB - Glass balustrade	14 May '24	18 May '24	0 days	100%	Ethan										
9	RB - Glass panel	05 May '24	17 May '24	0 days	100%	Ethan										
10	RB - Windows and Glass doors	15 Mar '24	31 May '24	61 days	85%	Ethan										
11	RB - Sliding folding glass door GD4/1	25 Feb '24	31 Mar '24	122 days	0%	Ethan										
12	GB - Window W06 - Installation Glass Panel	04 Nov '23	06 Feb '24	0 days	100%	Ethan										
13	GB - Window Rollers (W01-W05)	03 Jun '24	19 Jun '24	42 days	0%	Ethan										
14	Site Wide	24 Oct '23	31 Jul '24	0 days	67%	Ethan										
15	Construction Benching for Sewerage Manhole	24 Oct '23	15 Jan '24	0 days	100%	Ethan										
16	Air Test for Sewerage System	09 Nov '23	15 Jan '24	0 days	100%	Ethan										
17	CCTV and clearing internal pipes for Sewerage System	09 Nov '23	15 Jan '24	0 days	100%	Ethan										
18	Remaining U-Channel Construction	15 Dec '23	18 May '24	0 days	100%	Ethan										
19	Remaining Ramp Construction (Building and Road)	03 May '24	31 May '24	61 days	65%	Ethan										
20	CLP cable draw pits and other draw pits - re-installation of strip covers	15 Jul '24	31 Jul '24	0 days	0%	Ethan										
21	Remaining Boundary Fence	15 Nov '23	30 Jun '24	31 days	41%	Ethan										
22	Remaining miscellaneous civil works	06 May '24	30 Jun '24	31 days	25%	Ethan										
23	AD farm crash barriers	08 May '24	25 May '24	67 days	70%	Ethan										
24	Carpark roofing - replacement of temporary roofing	10 Jun '24	30 Jun '24	31 days	0%	Ethan										
25	Entrance Portal and Gate	10 Jun '24	30 Jun '24	31 days	0%	Ethan										
26	ABWF Works (Interior)	28 Nov '23	31 Jul '24	0 days	58%	Ethan										
27	Reception Building	18 Jan '24	30 Jun '24	31 days	57%	Ethan										
28	Unloading Bay 1 - Ucrete	01 Mar '24	09 Mar '24	0 days	100%	Ethan										
29	Unloading Bay 4 - Ucrete	11 Jun '24	15 Jun '24	46 days	0%	Ethan										
30	Substrate Tanks 2 to 3 - Remedial and touch up after E&M works	18 Jan '24	24 Jan '24	0 days	100%	Ethan										
31	Substrate Tanks 1 & 4 - Remedial and touch up after E&M works	15 Jun '24	22 Jun '24	39 days	0%	Ethan										
32	Internal Wall and Floor Paint (final coat)	05 Mar '24	30 Jun '24	31 days	24%	Ethan										
33	Fitting-out of EPD Office and Conference Room	05 Mar '24	18 May '24	0 days	100%	Ethan										
34	Fitting-out of G/F Display Area	05 Mar '24	30 Jun '24	31 days	50%	Ethan										
35	Reinstate Ceiling	21 Mar '24	31 May '24	61 days	90%	Ethan										
36	Signage	17 Jun '24	30 Jun '24	31 days	0%	Ethan										
37	Granulation Building	28 Nov '23	29 Nov '23	245 days	63%	Ethan										
38	Internal Wall and Floor Paint (final coat)	08 Jul '24	31 Jul '24	0 days	0%	Ethan										
39	Reinstate Ceiling	21 Mar '24	15 Jun '24	46 days	90%	Ethan										
40	Signage	17 Jun '24	30 Jun '24	31 days	0%	Ethan										
41	ABWF Works (Exterior)	15 Nov '23	13 Oct '24	1 day	50%	Ethan										
42	Pump House (Façade)	15 Nov '23	31 May '24	61 days	95%	Ethan										
43	Tiling	15 Nov '23	31 May '24	61 days	95%	Ethan										
44	Painting	21 Apr '24	31 May '24	61 days	96%	Ethan										
45	Master Meter Room (Façade)	24 Jun '24	30 Jun '24	0 days	0%	Ethan										
46	External Metal Fins	24 Jun '24	30 Jun '24	31 days	0%	Ethan										
47	Reception Building	16 Dec '23	15 Jul '24	16 days	76%	Ethan										
48	Façade - Wet trade	16 Dec '23	18 May '24	0 days	100%	Ethan										
49	Façade - Dry trade	06 Feb '24	15 Jun '24	46 days	71%	Ethan										
50	Wood deck	17 Feb '24	15 Jun '24	46 days	68%	Ethan										

Date: 31 May '24

Task Critical Task Milestone Summary Progress

ID	Task Name	Start	Finish	Total Slack	% Complete	Resource Names	Qtr 1, 2024		Qtr 2, 2024			Qtr 3, 2024		Qtr 4, 2024		
							Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
51	External Signs	15 Jun '24	15 Jul '24	16 days	0%	Ethan										
52	Granulation Building	11 Dec '23	15 Jul '24	16 days	48%	Ethan										
53	Façade - Wet trade	11 Dec '23	15 Jun '24	46 days	70%	Ethan										
54	Façade - Dry trade	22 Feb '24	15 Jun '24	46 days	26%	Ethan										
55	Wood deck	25 May '24	30 Jun '24	31 days	0%	Ethan										
56	Remaining waterproofing on CHP room roof	21 May '24	08 Jun '24	53 days	0%	Ethan										
57	External Signs	15 Jun '24	15 Jul '24	16 days	0%	Ethan										
58	Stack Tower - Aluminium Cladding after E&M works	02 Apr '24	18 May '24	0 days	100%	Ethan										
59	AD Tanks & Digestate Tank Aluminium Cladding	08 Jun '24	13 Oct '24	1 day	0%	Ethan										
60	AD Tank 1 & Tank 2 - Aluminium Cladding	08 Jun '24	30 Sep '24	14 days	0%	Ethan										
61	AD Tank 3, AD Tank 4 & Digestate Tank - Aluminium Cladding	15 Jul '24	13 Oct '24	1 day	0%	Ethan										
62	Soft Landscape	02 Apr '24	03 Oct '24	11 days	9%	Ethan										
63	Soft landscaping works site wide	25 May '24	31 Jul '24	0 days	0%	Ethan										
64	Green Roof	02 Apr '24	31 Jul '24	0.43 days	17%	Ethan										
65	Tree Compensation	15 Aug '24	03 Oct '24	11 days	0%	Ethan										
66	NGI 1 (AD3 & AD4)	08 Jun '23	21 Feb '24	0 days	100%											
67	AD Tanks 4	21 Aug '23	24 Nov '23	0 days	100%											
68	Tank AD 4 (Water Test)	21 Aug '23	04 Sep '23	0 days	100%	Ethan										
69	Tank AD 4 (Air Test)	05 Sep '23	26 Sep '23	0 days	100%	Eric										
70	Tank AD 4 ready (Internal Remedial Works)	27 Sep '23	22 Nov '23	0 days	100%	Ethan										
71	Biogas Pipe & Vent Pipe installation at external wall (AD4)	16 Oct '23	19 Nov '23	0 days	100%	Eric										
72	C&I Installation - containment / cable / sensors at external wall (AD4)	06 Nov '23	19 Nov '23	0 days	100%	Samson										
73	Cable Containment & Wiring for stirrers on AD 4 and related hoists inclusive of LCPs	29 Sep '23	19 Oct '23	0 days	100%	Samson										
74	Calibration of Sensors / T&C for cables / local control boxes / panels	20 Nov '23	24 Nov '23	0 days	100%	Calem										
75	AD Tanks 3	08 Jun '23	27 Jan '24	0 days	100%											
76	Tank AD 3 (Remedial Works for Water Leakage)	08 Jun '23	17 Sep '23	0 days	100%	Ethan										
77	Tank AD 3 (Water Test)	18 Sep '23	28 Sep '23	0 days	100%	Ethan										
78	Tank AD 3 (Air Test)	29 Sep '23	16 Oct '23	0 days	100%	Eric										
79	Tank AD 3 ready (Internal Remedial Works)	17 Oct '23	22 Nov '23	0 days	100%	Ethan										
80	Biogas Pipe & Vent Pipe installation at external wall (AD3)	23 Oct '23	21 Nov '23	0 days	100%	Eric										
81	Biogas analysers installed & Wired	21 Jan '24	27 Jan '24	0 days	100%	Eric										
82	C&I Installation - containment / cable / sensors at external wall (AD3)	06 Nov '23	19 Nov '23	0 days	100%	Samson										
83	Cable Containment & Wiring for stirrers on AD 3 and related hoists inclusive of LCPs	06 Oct '23	26 Oct '23	0 days	100%	Samson										
84	Calibration of Sensors / T&C for cables / local control boxes / panels	20 Nov '23	27 Jan '24	0 days	100%	Calem										
85	Lighning Installation (AD3) & IC/ER Inspection	13 Oct '23	26 Oct '23	0 days	100%	Austin										
86	Pump House	22 Sep '23	21 Feb '24	0 days	100%											
87	Install additional Support for Feeders to MCC3	22 Sep '23	24 Sep '23	0 days	100%	Samson										
88	Install Cable Tray	25 Sep '23	26 Sep '23	0 days	100%	Samson										
89	Install & terminate Feeders to MCC3	27 Sep '23	19 Oct '23	0 days	100%	Samson										
90	Energisation of MCC 3	24 Oct '23	24 Oct '23	0 days	100%	Samson										
91	Wiring (power and control) for NGI 1 related	07 Oct '23	20 Nov '23	0 days	100%	Samson										
92	Wiring (power and control) for remaining Seeding related	28 Oct '23	06 Dec '23	0 days	100%	Samson										
93	Install RIO Panel & Asso. Cabling Works	03 Oct '23	21 Nov '23	0 days	100%	Samson										
94	Fibre Connection (MCC3 & Server Rm)	01 Oct '23	18 Oct '23	0 days	100%	Samson										
95	Piping installation for Substrate System	13 Nov '23	12 Dec '23	0 days	100%	Orlando										
96	FosTac and suspended solids analysers installed and wired	29 Jan '24	18 Feb '24	0 days	100%	Eric										
97	Calibration of Sensors / T&C for cables / local control boxes / panels	19 Feb '24	21 Feb '24	0 days	100%	Samson										
98	Pump House Fit Out	16 Oct '23	09 Nov '23	0 days	100%	Ethan										
99	Flare	15 Sep '23	03 Dec '23	0 days	100%											

Date: 31 May '24 Task Critical Task Milestone Summary Progress

ID	Task Name	Start	Finish	Total Slack	% Complete	Resource Names	Qtr 1, 2024			Qtr 2, 2024			Qtr 3, 2024			Qtr 4, 2024
							Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
100	Excavation & Repair HDPE Pipe & Reinstatement of Rio Panel	04 Nov '23	03 Dec '23	0 days	100%	Ethan										
101	Excavation for underground gas pipe to Flare	15 Sep '23	22 Sep '23	0 days	100%	Ethan										
102	Install underground gas pipe to Flare	23 Sep '23	27 Sep '23	0 days	100%	Ethan										
103	Install Compressed Air Piping	23 Sep '23	27 Sep '23	0 days	100%	Alan, Eric										
104	Backfilling	28 Sep '23	30 Sep '23	0 days	100%	Ethan										
105	Install above ground gas pipe	06 Nov '23	19 Nov '23	0 days	100%	Chris L										
106	Wiring to the flare LCP from PLC A	20 Nov '23	26 Nov '23	0 days	100%	Mike										
107	PLC / SCADA	05 Oct '23	10 Dec '23	0 days	100%											
108	Modification of PLC / SCADA for Seeding	05 Oct '23	08 Nov '23	0 days	100%	Tony										
109	T&C of PLC / SCADA for Seeding	26 Nov '23	10 Dec '23	0 days	100%	Tony										
110	NGI 1 (AD3, AD4, Digestate Tank & Flare) Inspection	24 Nov '23	29 Nov '23	0 days	100%											
111	Submission of Form 105 & Request for NGI inspection	24 Nov '23	24 Nov '23	0 days	100%	Eric										
112	NGI 1 inspection & Approval	27 Nov '23	29 Nov '23	0 days	100%	Eric										
113	NGI 1 Use Approval complete	29 Nov '23	29 Nov '23	0 days	100%	Eric										
114	NGI 2 (Biogas Storage Tanks & Biogas Conditioning Plant)	18 Sep '23	12 Mar '24	0 days	100%											
115	Biogas Storage	18 Sep '23	27 Jan '24	0 days	100%											
116	Air Vents for Biogas Tanks	18 Sep '23	15 Oct '23	0 days	100%	Eric										
117	Valve Chambers for Biogas Tanks	18 Sep '23	24 Jan '24	0 days	100%	Eric										
118	Install Compressed Air Piping	09 Oct '23	24 Jan '24	0 days	100%	Alan										
119	Condensate Chamber	18 Oct '23	31 Oct '23	0 days	100%	Eric										
120	Cable Containment & Wiring for Biogas Tanks	16 Oct '23	25 Oct '23	0 days	100%	Samson										
121	Wiring of the fans on the Biogas Tanks	23 Oct '23	29 Oct '23	0 days	100%	Samson										
122	C&I Installation - containment / cable / sensors / gas detectors	26 Oct '23	08 Nov '23	0 days	100%	Samson										
123	Calibration of Sensors / T&C for cables / local control boxes / panels	25 Nov '23	27 Jan '24	0 days	100%	Tony										
124	Biogas Conditioning	25 Sep '23	09 Feb '24	0 days	100%											
125	Modification of the connection to the cooling tower on the biogas conditio	25 Sep '23	01 Oct '23	0 days	100%	Jack										
126	Piping Installation to biogas conditioning plant (incl. bypass pipe)	06 Oct '23	04 Nov '23	0 days	100%	Jack										
127	Wiring of the biogas conditioning package	24 Nov '23	07 Dec '23	0 days	100%	Austin										
128	Calibration of Sensors / T&C for cables / local control boxes / panels	27 Jan '24	09 Feb '24	0 days	100%	Mike										
129	Weather Shelter for Panel	25 Nov '23	15 Dec '23	0 days	100%	Alex Choi										
130	Biogas Trap	01 Nov '23	14 Nov '23	0 days	100%	Eric										
131	PLC / SCADA	09 Nov '23	25 Jan '24	0 days	100%											
132	Modification of PLC / SCADA for SPA	09 Nov '23	13 Jan '24	0 days	100%	Tony										
133	T&C of PLC / SCADA for SPA	01 Dec '23	25 Jan '24	0 days	100%	Tony										
134	NGI 2A (Biogas Storage Tanks) Inspection	27 Jan '24	02 Feb '24	0 days	100%											
135	Submission of Form 105 & Request for NGI inspection	27 Jan '24	27 Jan '24	0 days	100%	Eric										
136	NGI inspection & Approval (Biogas Storage Tanks)	27 Jan '24	02 Feb '24	0 days	100%	Eric										
137	NGI 2A Use Approval complete	02 Feb '24	02 Feb '24	0 days	100%	Eric										
138	NGI 2B (Conditioning Plant) Inspection	20 Feb '24	12 Mar '24	0 days	100%											
139	Submission of Form 105 & Request for NGI inspection	20 Feb '24	20 Feb '24	0 days	100%	Eric										
140	NGI inspection & Approval (Conditioning Plant)	21 Feb '24	12 Mar '24	0 days	100%	Eric										
141	NGI 2B Use Approval complete	12 Mar '24	12 Mar '24	0 days	100%	Eric										
142	Waste Reception & Pre-treatment 2 & 3	21 Aug '23	12 Mar '24	0 days	100%											
143	Floor Epoxy for Unloading Bay	01 Mar '24	12 Mar '24	0 days	100%	Ethan										
144	Remaining finishes and remedial works for Substrate Tanks	18 Jan '24	24 Jan '24	0 days	100%	Ethan										
145	PVC piping for substrate and water feed to hammermills 2&3	30 Oct '23	23 Jan '24	0 days	100%	Orlando										
146	Remaining PVC piping for Liquid Tank and Dilutant Tank	21 Aug '23	21 Aug '23	0 days	100%	Orlando										
147	Process water piping installation (SS)	30 Sep '23	05 Feb '24	0 days	100%	Orlando										
148	Tanker bay Macerator / Manifold / Piping Installation	09 Oct '23	07 Feb '24	0 days	100%	Orlando										
149	Remaining Works Grey Water Pump Room Installation	21 Aug '23	21 Aug '23	0 days	100%	Wing										

Date: 31 May '24 Task █ Critical Task █ Milestone ◆ Summary ▬ Progress ▬

ID	Task Name	Start	Finish	Total Slack	% Complete	Resource Names	Qtr 1, 2024	Feb	Mar	Qtr 2, 2024	May	Jun	Qtr 3, 2024	Aug	Sep	Qtr 4, 2024
							Jan			Apr			Jul			Oct
150	Remaining Works Process Water Pump Room Installation	21 Aug '23	21 Aug '23	0 days	100%	Wing										
151	Wiring (power) for the moving floor, Conveyors, Hammermills & Contaminan	21 Aug '23	19 Oct '23	0 days	100%	Edward										
152	Wiring (Control) for the moving floor, Conveyors, Hammermills & Contaminan	07 Oct '23	20 Jan '24	0 days	100%	Tony										
153	Wiring of balance of installation from MCC 2 to field devices in Reception Buil	06 Nov '23	10 Dec '23	0 days	100%	Edward										
154	Installation of roller shutters / fast doors	14 Oct '23	13 Jan '24	0 days	100%	Terry										
155	Wiring (power) of building services; shutter doors and air curtain fans	21 Aug '23	16 Jan '24	0 days	100%	Edward										
156	Wiring (control) of building services; shutter doors and air curtain fans	07 Dec '23	20 Jan '24	0 days	100%	Tony										
157	Energisation of MCC1	30 Nov '23	30 Nov '23	0 days	100%	Edward										
158	Energisation of MCC2	13 Sep '23	13 Sep '23	0 days	100%	Edward										
159	Hay Crane Installation (Remaining Works)	04 Dec '23	23 Dec '23	0 days	100%	Samson										
160	Bin Tippers Installation	27 Nov '23	17 Dec '23	0 days	100%	Graham										
161	Bunker Lids 2&3	30 Oct '23	13 Dec '23	0 days	100%	Graham										
162	Instrumentation Installation	11 Nov '23	20 Jan '24	0 days	100%	Tony										
163	Calibration of Sensors / T&C for cables / local control boxes / panels	21 Jan '24	25 Jan '24	0 days	100%	Tony										
164	Traffic Control & Vehicle Washing System	11 Nov '23	25 Jun '24	111.26 d...	80%											
165	Weighbridge Installation - containment / cable / sensors	15 Nov '23	12 Dec '23	0 days	100%	Mike										
166	Traffic Control System Installation	04 Mar '24	31 Mar '24	0 days	100%	Tony										
167	Vehicle Washing System Installation 2 & 3	11 Nov '23	13 Jan '24	0 days	100%	Dickson										
168	Vehicle Washing System Installation 1 & 4	18 May '24	25 Jun '24	111.26 d...	20%	Dickson										
169	Heating System	10 Apr '23	12 Apr '24	0 days	100%	Orlando										
170	Heat Recovery in GB	10 Apr '23	05 Apr '24	0 days	100%	Orlando										
171	Re-Assamble Manifold Components in Energy Recovery	16 May '23	09 Jun '23	0 days	100%	Orlando										
172	Installation of Boilers and Distribution Pumps & Power connection	10 Aug '23	15 Nov '23	0 days	100%	Orlando										
173	Piping, Insulation, Flushing & Fill up Demin Water to Boilers	16 Nov '23	22 Nov '23	0 days	100%	Orlando										
174	Piping, Insulation, Flushing & Fill up Demin Water to CHP	08 Sep '23	25 Feb '24	0 days	100%	Orlando										
175	Piping, Insulation, Flushing & Fill up Demin Water to Chiller	10 Apr '23	05 Apr '24	0 days	100%	Orlando										
176	Piping, Insulation, Flushing & Fill up Demin Water to Granulators 1 & 2	10 Apr '23	05 Apr '24	0 days	100%	Orlando										
177	Piping, Insulation, Flushing & Fill up Demin Water to Annamox	10 Feb '24	10 Mar '24	0 days	100%	Orlando										
178	Piping, Insulation, Flushing & Fill up Demin Water to Pump House	25 Jul '23	25 Nov '23	0 days	100%	Orlando										
179	Wiring & Testing I/O Instruments to LCP / SCADA	15 Feb '24	29 Feb '24	0 days	100%	Orlando										
180	Make up Water and Pressure stabilzation installation & Ele. Connections	10 Nov '23	16 Nov '23	0 days	100%	Orlando										
181	Commissioning of Boilers and Pumps	28 Nov '23	05 Dec '23	0 days	100%	Orlando										
182	Pump House Heating System	20 May '23	12 Apr '24	0 days	100%	Orlando										
183	Re-Assamble Manifold Components in Pump House	20 May '23	05 Oct '23	0 days	100%	Austin										
184	Piping, Insulation, Flushing & Fill up Demin Water to AD 1	15 Feb '24	15 Mar '24	0 days	100%	Orlando										
185	Piping, Insulation, Flushing & Fill up Demin Water to AD 2	15 Feb '24	15 Mar '24	0 days	100%	Orlando										
186	Piping, Insulation, Flushing & Fill up Demin Water to AD 3	17 Oct '23	15 Nov '23	0 days	100%	Orlando										
187	Piping, Insulation, Flushing & Fill up Demin Water to AD 4	17 Oct '23	15 Nov '23	0 days	100%	Orlando										
188	Wiring & Testing I/O Instruments to LCP / SCADA	06 Feb '24	20 Feb '24	0 days	100%	Orlando										
189	Make up Water and Pressure stabilzation installation & Ele. Connections	10 Nov '23	16 Nov '23	0 days	100%	Orlando										
190	Commissioning of Pumps	05 Dec '23	05 Dec '23	0 days	100%	Orlando										
191	Temp. Heating System Installation & Commissioning	24 Nov '23	12 Dec '23	0 days	100%	Orlando										
192	Temp. Heating System Available	12 Dec '23	12 Dec '23	0 days	100%	Orlando										
193	Commissioning of AD Heat System	08 Apr '24	12 Apr '24	0 days	100%	Orlando										
194	Server Room	10 Sep '23	20 Jan '24	0 days	100%											
195	Make Good Server Room for dust free and water tight	10 Sep '23	21 Sep '23	0 days	100%	Ethan										
196	Provide Power to the Server Room	11 Sep '23	22 Sep '23	0 days	100%	Edward										
197	Temp. AC for Server Room Available	23 Sep '23	29 Sep '23	0 days	100%	Edward										
198	PLC A & B networks	18 Sep '23	17 Oct '23	0 days	100%	Mike										
199	Internet installed for Server Room	20 Oct '23	20 Oct '23	0 days	100%	Mike										

Date: 31 May '24 Task Critical Task Milestone Summary Progress

ID	Task Name	Start	Finish	Total Slack	% Complete	Resource Names	Timeline													
							Qtr 1, 2024 Jan	Feb	Mar	Qtr 2, 2024 Apr	May	Jun	Qtr 3, 2024 Jul	Aug	Sep	Qtr 4, 2024 Oct				
200	Install Server for PLC A	30 Sep '23	29 Oct '23	0 days	100%	Tony														
201	Install Server for Weighbridge	30 Oct '23	12 Dec '23	0 days	100%	Mike														
202	UPS Ready for Server Room	30 Oct '23	05 Nov '23	0 days	100%	Tony														
203	PLC A and B configuration complete (new fire walls etc)	06 Nov '23	20 Jan '24	0 days	100%	Tony														
204	PLC Live / Start of control system hot commissioning	20 Jan '24	20 Jan '24	0 days	100%	Tony														
205	Control Room	11 Sep '23	30 Oct '23	0 days	100%															
206	Control Room dust free and water tight	11 Sep '23	25 Sep '23	0 days	100%	Ethan														
207	Provide Power to the Control Room	11 Sep '23	22 Sep '23	0 days	100%	Edward														
208	Install furniture and workstations in Control Rm	24 Oct '23	30 Oct '23	0 days	100%	WY														
209	Control Room Available	30 Oct '23	30 Oct '23	0 days	100%	Tony														
210	Compressed Air	12 Sep '23	16 Apr '24	0 days	100%															
211	Extension of plinth for the IA package	12 Sep '23	21 Sep '23	0 days	100%	Dickson														
212	IA package installation complete	29 Sep '23	05 Oct '23	0 days	100%	Dickson														
213	IA piping for Waste Reception & Pre-treatment	23 Oct '23	15 Apr '24	0 days	100%	Dickson														
214	IA piping for AD System	06 Nov '23	19 Jan '24	0 days	100%	Orlando														
215	Electrical hook up to IA compressor / drier package	24 Nov '23	07 Dec '23	0 days	100%	Edward														
216	IA system available	16 Apr '24	16 Apr '24	0 days	100%	Dickson														
217	MVAC	02 Feb '23	20 Jul '24	86 days	99%															
218	MVAC air side MC	02 Feb '23	15 Aug '23	0 days	100%															
219	Vent Fan at AB	02 Feb '23	30 Apr '23	0 days	100%	Edwin														
220	Vent Fan at RB	02 Feb '23	30 Apr '23	0 days	100%	Edwin														
221	Vent Fan at GB	02 Feb '23	30 Apr '23	0 days	100%	Edwin														
222	Vent Fan at Pump house	02 Feb '23	30 Apr '23	0 days	100%	Edwin														
223	Duct Work at AB	02 Feb '23	15 Aug '23	0 days	100%	Edwin														
224	Duct Work at RB	02 Feb '23	15 Aug '23	0 days	100%	Edwin														
225	Duct Work at GB	02 Feb '23	15 Aug '23	0 days	100%	Edwin														
226	Duct Work at Pump House	02 Feb '23	15 Aug '23	0 days	100%	Edwin														
227	MVAC water side MC	02 Feb '23	15 Dec '23	0 days	100%	Edwin														
228	Fan Coil unit at AB	02 Feb '23	30 Apr '23	0 days	100%	Edwin														
229	Fan Coil unit at RB	02 Feb '23	30 Apr '23	0 days	100%	Edwin														
230	Fan Coil unit at GB	02 Feb '23	30 Apr '23	0 days	100%	Edwin														
231	Fan Coil unit at Pump house	02 Feb '23	15 Jul '23	0 days	100%	Edwin														
232	Pipework at AB	02 Feb '23	15 Nov '23	0 days	100%	Edwin														
233	Pipework at RB	02 Feb '23	15 Nov '23	0 days	100%	Edwin														
234	Pipework at GB	02 Feb '23	15 Dec '23	0 days	100%	Edwin														
235	Pipework at Pump House	02 Feb '23	15 Nov '23	0 days	100%	Edwin														
236	Cooling Tower	02 Feb '23	15 Dec '23	0 days	100%	Edwin														
237	AC Water Pump	02 Feb '23	15 Dec '23	0 days	100%	Edwin														
238	Water Cooled Chiller	02 Feb '23	15 Dec '23	0 days	100%	Edwin														
239	Absorption Chiller	02 Feb '23	15 Dec '23	0 days	100%	Edwin														
240	Wiring to ancilliary chiller	30 Sep '23	23 Nov '23	0 days	100%	Austin														
241	Wiring for the MVAC system	16 Oct '23	29 Oct '23	0 days	100%	Austin														
242	Commissioning of Absorption Chiller	16 Jul '24	20 Jul '24	86 days	0%	Edwin														
243	DG Inspection	06 Nov '23	25 Mar '24	0 days	100%															
244	FSD Discussion & Amendment of DG Drawings	06 Nov '23	29 Nov '23	0 days	100%	Edwin														
245	FSD Review & Approval for DG Drawings	30 Nov '23	14 Feb '24	0 days	100%	Edwin														
246	DG Inspection, Defects Rectification & Approval	15 Feb '24	25 Mar '24	0 days	100%	Edwin														
247	DG for Ferric Chloride System	06 Oct '23	25 Mar '24	0 days	100%															
248	FSD Discussion & Amendment of DG Drawings	06 Oct '23	05 Jan '24	0 days	100%	Edwin														
249	FSD Review & Approval for DG (Ferric Chloride System)	06 Jan '24	14 Feb '24	0 days	100%	Edwin														

Date: 31 May '24 Task █ Critical Task █ Milestone ◆ Summary ▬ Progress ▬

ID	Task Name	Start	Finish	Total Slack	% Complete	Resource Names	Qtr 1, 2024	Feb	Mar	Qtr 2, 2024	May	Jun	Qtr 3, 2024	Aug	Sep	Qtr 4, 2024
							Jan			Apr			Jul			Oct
250	Piping installation for Ferric Chloride System	06 Oct '23	24 Jan '24	0 days	100%	Orlando										
251	Wiring (power and control) for Ferric Chloride System	16 Oct '23	09 Nov '23	0 days	100%	Samson										
252	DG Inspection, Defects Rectification & Approval	15 Feb '24	25 Mar '24	0 days	100%	Edwin										
253	CAPCS	03 Oct '23	19 Jul '24	87 days	95%											
254	uPVC Pipe Installation	03 Oct '23	11 Nov '23	0 days	100%	Karen										
255	Extraction Fans Installation	03 Oct '23	11 Nov '23	0 days	100%	Karen										
256	Wiring complete (power and control) for CAPCS system in reception building	30 Oct '23	09 Dec '23	0 days	100%	Edward										
257	Wiring complete (power and control) for CAPCS system to MCC 6	08 Nov '23	09 Dec '23	0 days	100%	Austin										
258	Lightning Installation at GB Roof & Stack	21 Oct '23	09 Dec '23	0 days	100%	Austin										
259	Chemical Pipeworks Installation	01 Apr '24	19 Apr '24	0 days	100%	Dickson										
260	Instrumentations Installation	05 Apr '24	25 May '24	137 days	80%	Dickson										
261	System Commissioning for Entire CAPCS	15 Jul '24	19 Jul '24	87 days	0%	Karen										
262	CHP 2	24 Sep '23	26 Jul '24	80 days	86%											
263	Installation of CHP 2 Silencers & Auxilary Equipment Installation	24 Sep '23	22 Dec '23	0 days	100%	Alex Choi										
264	Installation of Flue Stack	08 Nov '23	05 Apr '24	0 days	100%	Alex Choi										
265	Heat Recovery Pipeworks (primary side)	20 Nov '23	08 Apr '24	0 days	100%	Alex Choi										
266	Electrical Installation for CHP 2	13 Nov '23	28 Mar '24	0 days	100%	Alex Choi										
267	Wiring complete (Control) for CHP 2	01 Mar '24	19 Apr '24	0 days	100%	Alex Choi										
268	CEMS sensors & sampling from CHP2 Flue Stack to CEMS room	27 Mar '24	15 Apr '24	0 days	100%	Austin										
269	Calibration of Sensors / T&C for cables / local control boxes / panels	16 Apr '24	22 Apr '24	0 days	100%	Mike										
270	Trial Run for CHP2 with 25% Load	26 Apr '24	26 Apr '24	0 days	100%	Alex Choi										
271	Delivery & Install additional equipment as per Supplier's request	27 Apr '24	11 Jun '24	3 days	0%	Alex Choi										
272	Vendor Specialist arrive HK	15 Jun '24	15 Jun '24	0 days	0%	Alex Choi										
273	Commissioning for CHP 2 (incl. Dummy Load Test)	16 Jun '24	22 Jun '24	0 days	0%	Alex Choi										
274	Prepare & Submmit Report to CLP	23 Jun '24	25 Jun '24	80 days	0%	Austin										
275	CLP Review & Approval of CHP Report	26 Jun '24	09 Jul '24	80 days	0%	Austin										
276	Acquisition of Grid Coonnection Agreement (T&C) from CLP	10 Jul '24	16 Jul '24	80 days	0%	Austin										
277	T&C with CLP for CHP 2 connection to Power Grid	17 Jul '24	26 Jul '24	80 days	0%	Austin										
278	CEMS	13 Oct '23	25 Jun '24	111 days	98%											
279	CEMS room readiness	13 Oct '23	13 Oct '23	0 days	100%	Ethan										
280	CEMS analyser installation complete	30 Oct '23	13 Dec '23	0 days	100%	Austin										
281	CEMS sensors & sampling from CAPCS to CEMS room	02 Dec '23	31 Jan '24	0 days	100%	Austin										
282	CEMS sensors & sampling from Flare to CEMS room	30 Oct '23	27 Jan '24	0 days	100%	Austin										
283	AC for CEMS room Ready	30 Nov '23	28 Mar '24	0 days	100%	Edwin										
284	SICK Oversea Technician arrive HK	04 Dec '23	04 Dec '23	0 days	100%	Austin										
285	Calibration of Sensors / T&C for cables / local control boxes / panels	01 Feb '24	07 Feb '24	0 days	100%	Austin										
286	Commissioning for CEMS system (CHP)	20 Jun '24	22 Jun '24	111 days	0%	Mike										
287	Commissioning for CEMS system (CAPCS)	23 Jun '24	25 Jun '24	111 days	0%	Mike										
288	WWTP	16 Oct '23	15 Jun '24	121 days	90%											
289	Pipework Installation for Buffer Tank	13 Nov '23	30 Mar '24	0 days	100%	Karen / Samm										
290	Pipework Installation for Neutralisation Tank	13 Nov '23	30 Mar '24	0 days	100%	Karen / Samm										
291	Pipework Installation for Phospaq Reactors	20 Nov '23	22 Feb '24	0 days	100%	Karen / Samm										
292	Pipework Installation for Clarifier	28 Nov '23	24 Feb '24	0 days	100%	Karen / Samm										
293	Pipework Installation for Anamox Influent Tank, Reactor Tank, Effluent Tank	02 Dec '23	20 Mar '24	0 days	100%	Karen / Samm										
294	Rectification of Wall Painting in Anammox Reactors Tank	21 Mar '24	17 May '24	0 days	100%	Ethan										
295	Pipes flushing and install diffusers for Anammox Reactors Tank	18 May '24	24 May '24	143 days	0%	Karen / Samm										
296	Pipework Installation for Sludge Holding Tank	29 Nov '23	24 Feb '24	0 days	100%	Karen / Samm										
297	Pipework Installation for Wastewater Effluent Tank	07 Dec '23	24 Feb '24	0 days	100%	Karen / Samm										
298	Pipework Installation for BioReactor Tank	18 Nov '23	30 Apr '24	0 days	100%	Karen / Samm										
299	Pipework Installation for MBR Tank	18 Nov '23	23 Mar '24	0 days	100%	Karen / Samm										

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ID	Task Name	Start	Finish	Total Slack	% Complete	Resource Names	Qtr 1, 2024		Qtr 2, 2024			Qtr 3, 2024		Qtr 4, 2024		
							Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
300	Pipework Installation for Treated Effluent Tank	18 Nov '23	21 Dec '23	0 days	100%	Karen										
301	Pipework Installation for RO Feed Tank, UF & RO System	10 Jan '24	30 Jan '24	0 days	100%	Karen / Samm										
302	Chemical Dosing System	16 Oct '23	27 May '24	130 days	78%	Karen / Samm										
303	MBR Filter Installation	18 Dec '23	19 Apr '24	0 days	100%	Karen / Samm										
304	Wiring complete (power and control) for Buffer Tank & Neutralisation Tank	15 Dec '23	20 Apr '24	0 days	100%	Edward										
305	Wiring complete (power and control) for WWTP System (exclu. UF/RO & Ana)	28 Nov '23	15 Jun '24	121 days	54%	Austin										
306	Instrumentation Installation	28 Nov '23	15 Jun '24	121 days	74%	Mike										
307	Calibration of Sensors / T&C for cables / local control boxes / panels	11 Jun '24	15 Jun '24	121 days	0%	Mike										
308	Ductwork Installation for Compressed Air	25 Mar '24	19 Apr '24	0 days	100%	Karen / Chris										
309	Pipework Installation for Grey Water System	11 Apr '24	30 May '24	137 days	80%	Karen / Chris										
310	Pipework Installation for Process Water System	11 Apr '24	30 May '24	137 days	80%	Karen / Chris										
311	Water Supply	28 Sep '23	17 Jan '24	0 days	100%											
312	Submission of WWO46 Pt IV	28 Sep '23	13 Oct '23	0 days	100%	Terry										
313	WSD Inspection	14 Oct '23	31 Oct '23	0 days	100%	Terry										
314	Issurance of WWO46 Pt V(a)	01 Nov '23	17 Nov '23	0 days	100%	Terry										
315	Sytematic Flushing & Water Sampling	05 Dec '23	08 Dec '23	0 days	100%	Terry										
316	Submission of Water Sample Report to WSD	09 Dec '23	12 Dec '23	0 days	100%	Terry										
317	Water Connection by WSD	13 Dec '23	15 Dec '23	0 days	100%	Terry										
318	Issurance of WWO46 Pt V(b)	17 Jan '24	17 Jan '24	0 days	100%	Terry										
319	Sytem Commissioning, Process Startup & Process Commissioning	23 Nov '23	24 Jul '24	82 days	81%											
320	System Commissioning for Waste Reception & Pre-treatment System - Line 2	07 Jan '24	20 Jan '24	0 days	100%	Steven										
321	System Commissioning for Waste Reception & Pre-treatment System - Line 3	04 Mar '24	30 Mar '24	0 days	100%	Steven										
322	System Commissioning for AD System	23 Nov '23	13 Dec '23	0 days	100%	Steven										
323	N2 Purging for the AD System	07 Dec '23	13 Dec '23	0 days	100%	Joe										
324	Import of Seeding to AD4 (Process Startup)	15 Dec '23	26 Dec '23	0 days	100%	Joe										
325	Start Collection of Food Waste	21 Jan '24	21 Jan '24	0 days	100%	Joe										
326	Food waste and Pig manure introduction (gradual ramp up to 50T per day)	21 Jan '24	25 Mar '24	0 days	100%	Joe										
327	Peformance Test (75T per day)	26 Mar '24	28 Mar '24	0 days	100%	Joe										
328	Submission of Process Start-up and Process Commissioning Report	29 Mar '24	02 Apr '24	0 days	100%	Joe										
329	Commissioning for WWTP (Stream 1)	01 Apr '24	30 Apr '24	0 days	100%	Larsson / Kare										
330	Commissioning of WWTP (Stream 1) with SCADA System	01 May '24	31 May '24	126.4 days	71%	Larsson / Kare										
331	WWTP Ready for Seeding (excluding Anammox)	30 May '24	31 May '24	98 days	0%	Larsson / Kare										
332	Seeding for WWTP (excluding Anammox)	17 Jun '24	14 Jul '24	82 days	0%	Larsson / Kare										
333	Commissioning for WWTP (Stream 2)	15 Jul '24	17 Jul '24	82 days	0%	Larsson / Kare										
334	Commissioning of WWTP (Stream 2) with SCADA System	18 Jul '24	24 Jul '24	82 days	0%	Larsson / Kare										
335																
336		03 Aug '23	31 Jul '24	75 days	70%											
337	NGI 3	03 Aug '23	06 May '24	0 days	100%											
338	AD Tank 1	03 Oct '23	18 Apr '24	0 days	100%											
339	Tank AD1 (Remedial Works for Water Leakage)	03 Oct '23	30 Nov '23	0 days	100%	Ethan										
340	Tank AD1 (Water Test)	01 Dec '23	08 Dec '23	0 days	100%	Ethan										
341	Tank AD1 (Air Test)	09 Dec '23	22 Dec '23	0 days	100%	Eric										
342	Tank AD1 ready (Internal Remedial Works)	23 Dec '23	21 Jan '24	0 days	100%	Ethan										
343	Biogas Pipe & Vent Pipe installation at external wall (AD1)	04 Apr '24	18 Apr '24	0 days	100%	Eric										
344	Cable Containment & Wiring for stirrers on AD1 and related hoists inclusiv	27 Oct '23	23 Mar '24	0 days	100%	Samson										
345	Lighning Installation (AD1&2) & IC/ER Inspection	06 Nov '23	21 Nov '23	0 days	100%	Samson										
346	AD Tank 2	03 Aug '23	19 Apr '24	0 days	100%											
347	Tank AD2 (Remedial Works for Water Leakage)	02 Jan '24	29 Feb '24	0 days	100%	Ethan										
348	Tank AD2 (Water Test)	01 Mar '24	08 Mar '24	0 days	100%	Ethan										
349	Tank AD2 (Air Test)	09 Mar '24	18 Apr '24	0 days	100%	Eric										

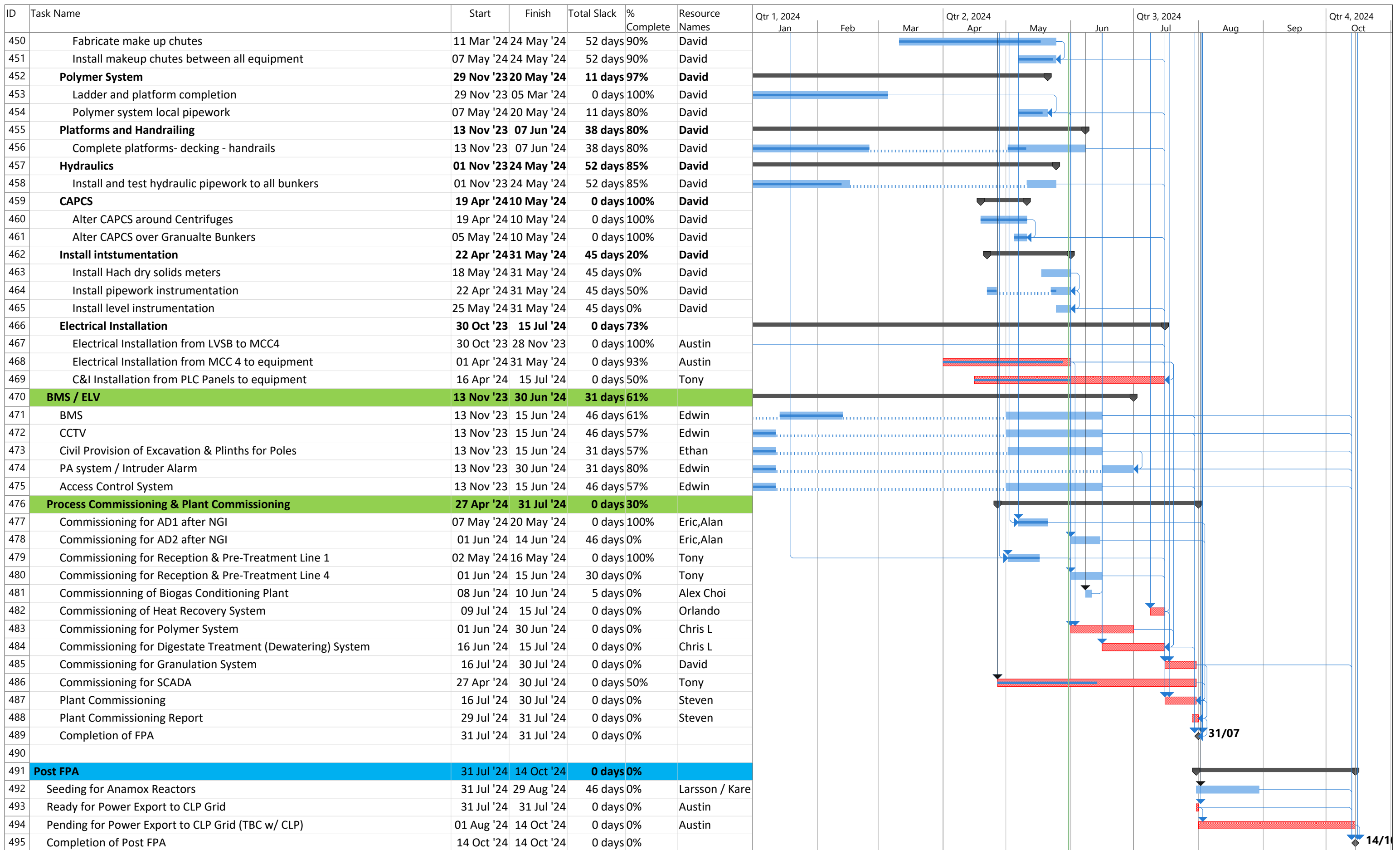
Date: 31 May '24 Task Critical Task Milestone Summary Progress

ID	Task Name	Start	Finish	Total Slack	% Complete	Resource Names	Qtr 1, 2024			Qtr 2, 2024			Qtr 3, 2024			Qtr 4, 2024
							Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
350	Biogas Pipe & Vent Pipe installation at external wall (AD2)	05 Apr '24	19 Apr '24	0 days	100%	Eric										
351	C&I Installation - containment / cable / sensors at external wall (AD2)	03 Aug '23	30 Mar '24	0 days	100%	Samson										
352	Cable Containment & Wiring for stirrers on AD2 and related hoists inclusive	17 Nov '23	30 Mar '24	0 days	100%	Samson										
353	NGI 3 Inspection for FPA	18 Apr '24	06 May '24	0 days	100%											
354	Submission of Form 105 & Request for NGI inspection	18 Apr '24	18 Apr '24	0 days	100%	Eric										
355	NGI inspection & Approval (AD1 & AD2)	30 Apr '24	06 May '24	0 days	100%	Eric										
356	NGI inspection for FPA Complete	06 May '24	06 May '24	0 days	100%	Eric										
357	Other Installation for AD Tanks	08 Apr '24	16 Jun '24	120 days	33%											
358	Substrate Pipe Installation	25 May '24	07 Jun '24	12 days	25%	Alan, Eric										
359	AD Tank 1	08 Apr '24	17 May '24	150 days	41%											
360	Substrate Pipe Installation	08 Apr '24	17 May '24	60 days	50%	Alan, Eric										
361	Antiform Pipe Installation	08 Apr '24	17 May '24	150 days	50%	Alan, Eric										
362	Grey Water Pipe Installation	08 Apr '24	17 May '24	60 days	40%	Alan, Eric										
363	DO Pipe Installation	08 Apr '24	17 May '24	150 days	40%	Alan, Eric										
364	Desulphurisation Pipe Installation	08 Apr '24	17 May '24	150 days	40%	Alan, Eric										
365	Compressed Air Pipe Installation	08 Apr '24	17 May '24	150 days	40%	Alan, Eric										
366	C&I Installation - containment / cable / sensors at external wall (AD1)	03 May '24	17 May '24	60 days	0%	Samson										
367	AD Tank 2	25 May '24	07 Jun '24	129 days	25%											
368	Substrate Pipe Installation	25 May '24	07 Jun '24	129 days	25%	Alan, Eric										
369	Antiform Pipe Installation	25 May '24	07 Jun '24	12 days	30%	Alan, Eric										
370	Grey Water Pipe Installation	25 May '24	07 Jun '24	129 days	30%	Alan, Eric										
371	DO Pipe Installation	25 May '24	07 Jun '24	12 days	30%	Alan, Eric										
372	Desulphurisation Pipe Installation	25 May '24	07 Jun '24	12 days	30%	Alan, Eric										
373	Compressed Air Pipe Installation	25 May '24	07 Jun '24	12 days	30%	Alan, Eric										
374	C&I Installation - containment / cable / sensors at external wall (AD1)	25 May '24	07 Jun '24	129 days	0%	Samson										
375	T&C Works	03 Jun '24	16 Jun '24	6 days	0%											
376	Calibration of Instruments / Sensors	03 Jun '24	14 Jun '24	8 days	0%	Alan, Eric										
377	Commissioning for Antiform System	14 Jun '24	16 Jun '24	6 days	0%	Alan, Eric										
378	Commissioning for DO System	14 Jun '24	16 Jun '24	6 days	0%	Alan, Eric										
379	Commissioning for Desulphurisation System	07 Jun '24	10 Jun '24	12 days	0%	Alan, Eric										
380	Commissioning for Compressed Air System	07 Jun '24	10 Jun '24	12 days	0%	Alan, Eric										
381	Commissioning for Substrate Pipe Manifold	14 Jun '24	16 Jun '24	6 days	0%	Alan, Eric										
382	Waste Reception & Pre-treatment 1 & 4	13 Nov '23	29 Jun '24	107 days	92%											
383	PVC piping for substrate and water feed to hammermills 1 & 4	29 Nov '23	24 Jan '24	0 days	100%	Orlando										
384	Bunker lids 1 & 4	14 Dec '23	12 Jan '24	0 days	100%	Graham										
385	Wiring (power) for the moving floor, Conveyors, Hammermills & Contaminan	13 Nov '23	07 Dec '23	0 days	100%	Edward										
386	Wiring (Control) for the moving floor, Conveyors, Hammermills & Contamina	21 Jan '24	19 Feb '24	0 days	100%	Mike										
387	Wiring of balance of installation from MCC 2 to field devices in reception buil	11 Dec '23	31 Dec '23	0 days	100%	Edward										
388	Calibration of Sensors / T&C for cables / local control boxes / panels	26 Jan '24	30 Jan '24	258 days	0%	Mike										
389	T&C for Grit Conveyors	24 Jun '24	29 Jun '24	107 days	0%	Wing										
390	Digestate Tank	10 Oct '23	15 Jun '24	121 days	45%											
391	Biogas Piping Installation at External Wall	10 Oct '23	16 Oct '23	0 days	100%	Eric										
392	Substrate Pipe Installation	17 May '24	31 May '24	136 days	30%	Alan, Eric										
393	Digestate Pipe Installation	17 May '24	31 May '24	136 days	30%	Alan, Eric										
394	Sludge Pipe Installation	17 May '24	31 May '24	136 days	25%	Alan, Eric										
395	Grey Water Pipe Installation	17 May '24	31 May '24	136 days	25%	Alan, Eric										
396	DO Pipe Installation	17 May '24	31 May '24	136 days	25%	Alan, Eric										
397	Desulphurisation Pipe Installation	17 May '24	31 May '24	136 days	25%	Alan, Eric										
398	Wiring & Termination to Stirrer	20 Nov '23	26 Nov '23	0 days	100%	Samson										
399	C&I Installation for Digestate Tank	30 May '24	08 Jun '24	121 days	0%	Samson										

Date: 31 May '24 Task █ Critical Task █ Milestone ◆ Summary ▬ Progress ▬

ID	Task Name	Start	Finish	Total Slack	% Complete	Resource Names	Qtr 1, 2024			Qtr 2, 2024			Qtr 3, 2024			Qtr 4, 2024
							Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
400	Calibration of Sensors / T&C for cables / local control boxes / panels	09 Jun '24	15 Jun '24	121 days	0%	Calem										
401	Digestate Pump Rm Pipeworks	20 Jan '24	02 Feb '24	0 days	100%	Orlando										
402	Digestate Pump Rm Fit Out	24 Oct '23	06 Nov '23	0 days	100%	Ethan										
403	CHP 1 & 3	30 Nov '23	30 Jul '24	76 days	36%											
404	Installation of CHP 1 & 3 Silencers & Auxilary Equipment Installation	30 Nov '23	29 Dec '23	0 days	100%	Alex Choi										
405	Installation of Flue Stack	30 Nov '23	15 Jun '24	121 days	58%	Alex Choi										
406	Electrical Installation for CHP system	30 Nov '23	15 Jun '24	121 days	49%	Alex Choi										
407	Wiring complete (Control) for CHP system	16 Dec '23	15 Jun '24	121 days	58%	Alex Choi										
408	CEMS sensors & sampling from CHP1 & 3 Flue Stack to CEMS room	06 Jun '24	15 Jun '24	121 days	0%	Austin										
409	Calibration of Sensors / T&C for cables / local control boxes / panels	04 Jun '24	15 Jun '24	121 days	0%	Mike										
410	Water Pipe & Heat Exchanger Installation	02 May '24	25 May '24	142 days	0%	Alex Choi										
411	Lubricant tank, pipe and flushing	02 May '24	25 May '24	142 days	0%	Alex Choi										
412	Delivery & Install additional equipment as per Supplier's request	27 Apr '24	15 Jun '24	7 days	0%	Alex Choi										
413	Commissioning for CHP (incl. Dummy Load Test)	23 Jun '24	04 Jul '24	0 days	0%	Alex Choi										
414	Prepare & Submmit Report to CLP	05 Jul '24	06 Jul '24	0 days	0%	Austin										
415	CLP Review & Approval of CHP Report	07 Jul '24	20 Jul '24	0 days	0%	Austin										
416	T&C with CLP for CHP connection to Power Grid	21 Jul '24	30 Jul '24	0 days	0%	Austin										
417	WWTP System (UF/RO & Anammox)	27 May '24	30 Jul '24	0 days	0%	Karen, Mike										
418	Wiring complete (Control) for WWTP System (UF/RO & Anammox)	27 May '24	25 Jun '24	46 days	0%	Karen, Mike										
419	System Commissioning for WWTP (UF/RO & Anammox)	26 Jun '24	09 Jul '24	46 days	0%	Karen										
420	T&C of WWTP (UF/RO & Anammox) with SCADA System	10 Jul '24	30 Jul '24	46 days	0%	Karen										
421	Ready for Seeding (Anammox)	30 Jul '24	30 Jul '24	46 days	0%	Karen										
422	Dewatering & Granulation	12 Oct '23	15 Jul '24	91 days	89%											
423	Conveyors	12 Oct '23	11 Feb '24	0 days	100%	David										
424	Install Granulate Inclined Vehicle Loading Conveyors	12 Oct '23	13 Oct '23	0 days	100%	David										
425	Granulator backmix conveyors	04 Dec '23	11 Feb '24	0 days	100%	David										
426	Pipework	14 Oct '23	23 May '24	53 days	99%	David										
427	Digestate Transfer Pipework	14 Oct '23	18 Feb '24	0 days	100%	David										
428	Digestate transfer pipework to Separators	14 Oct '23	01 Feb '24	0 days	100%	David										
429	Digestate transfer pipework to Separators to Centrifuge Feed Tank	01 Nov '23	20 Dec '23	0 days	100%	David										
430	Digestate transfer pipework to Centrifuge Feed Tank to Centrifuge	06 Nov '23	18 Feb '24	0 days	100%	David										
431	Centrate Pipework	21 Feb '24	30 Apr '24	0 days	100%	David										
432	Centrate pipework to WWTW	21 Feb '24	30 Apr '24	0 days	100%	David										
433	Polymer Pipework	18 Nov '23	30 Apr '24	0 days	100%	David										
434	Polymer pipework to centrifuges	18 Nov '23	30 Apr '24	0 days	100%	David										
435	Grey and Process Water Pipework	25 Nov '23	23 May '24	53 days	95%	David										
436	Grey water pipework	25 Nov '23	23 May '24	53 days	95%	David										
437	Process water pipework	05 Dec '23	23 May '24	53 days	95%	David										
438	Granulator	30 Apr '24	31 May '24	136 days	90%	David										
439	Complete wall panelling, doors. sealing on Granulator	01 May '24	31 May '24	136 days	90%	David										
440	Complete scraper system	30 Apr '24	30 Apr '24	0 days	100%	David										
441	Firefly Fire Supression System	25 Nov '23	31 May '24	45 days	90%	David										
442	Install Firefly, pumps, tanks, air dryers	25 Nov '23	25 Feb '24	0 days	100%	David										
443	Firefly water pipework to and around granualtors	03 May '24	31 May '24	45 days	70%	David										
444	Install compressors for firefly system	01 Dec '23	07 Dec '23	0 days	100%	David										
445	Firefly air pipework to and around granualtors	02 Jan '24	31 May '24	45 days	70%	David										
446	Bagging System	20 Nov '23	20 Dec '23	0 days	100%	David										
447	Inclined conveyor motor install including support framework	20 Nov '23	23 Nov '23	0 days	100%	David										
448	Replace rusty rollers	18 Dec '23	20 Dec '23	0 days	100%	David										
449	Chutes	11 Mar '24	24 May '24	52 days	90%	David										

Date: 31 May '24 Task Critical Task Milestone Summary Progress

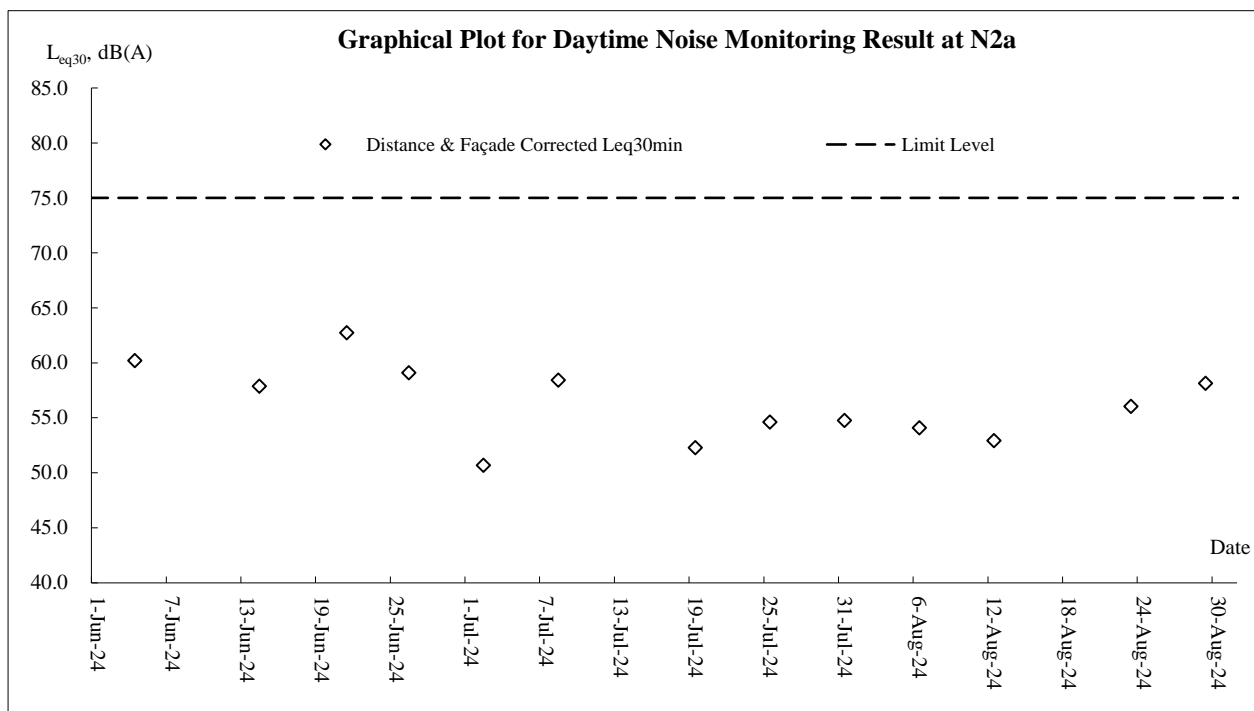
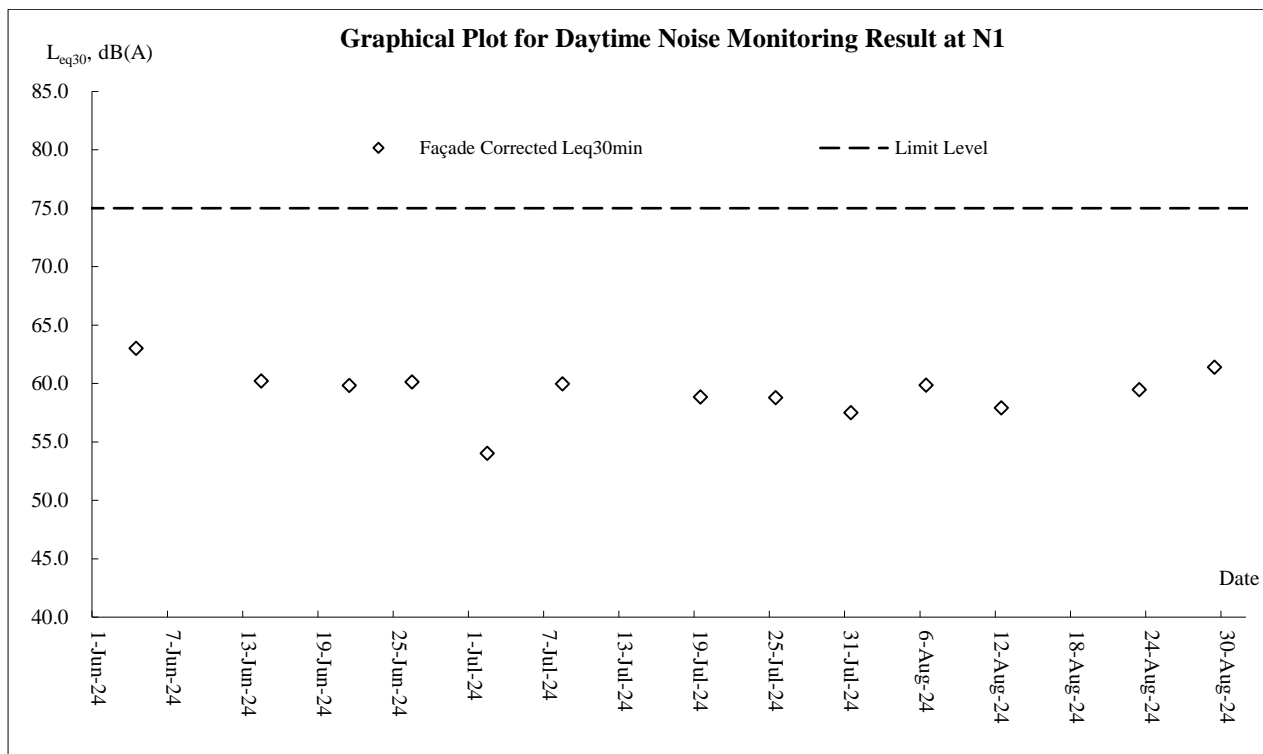


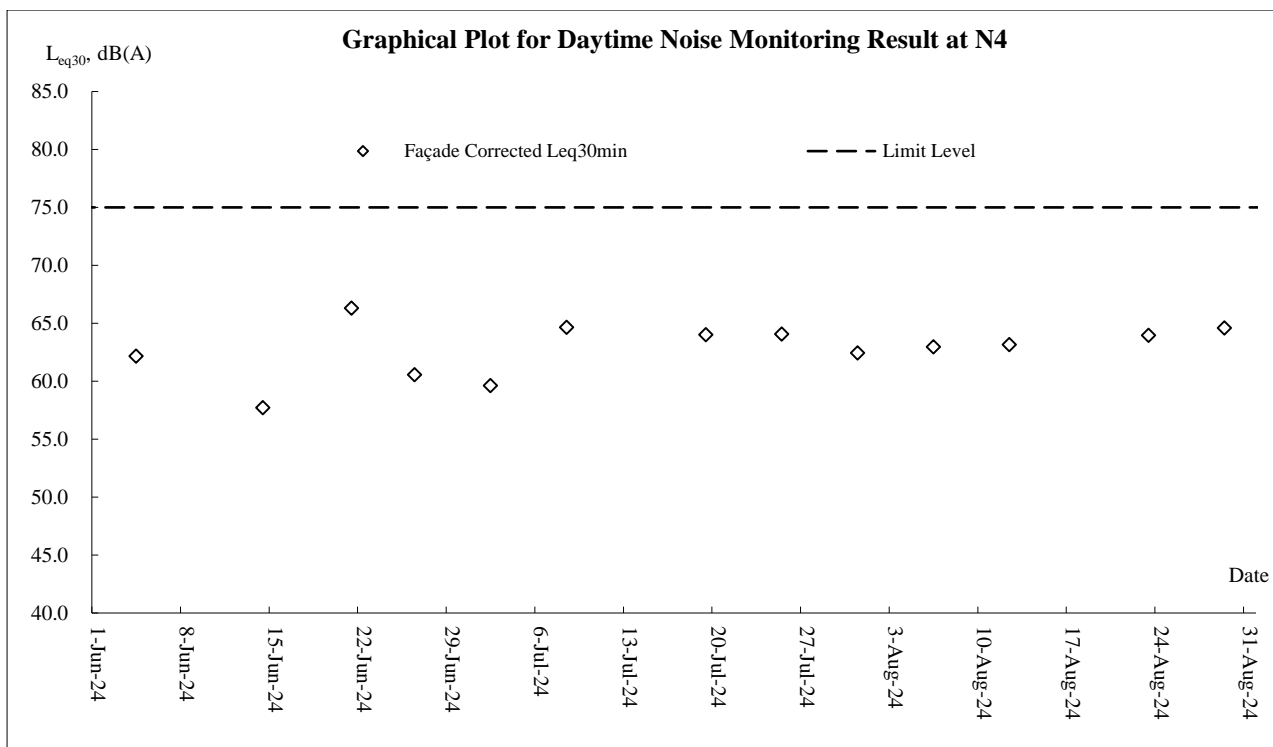
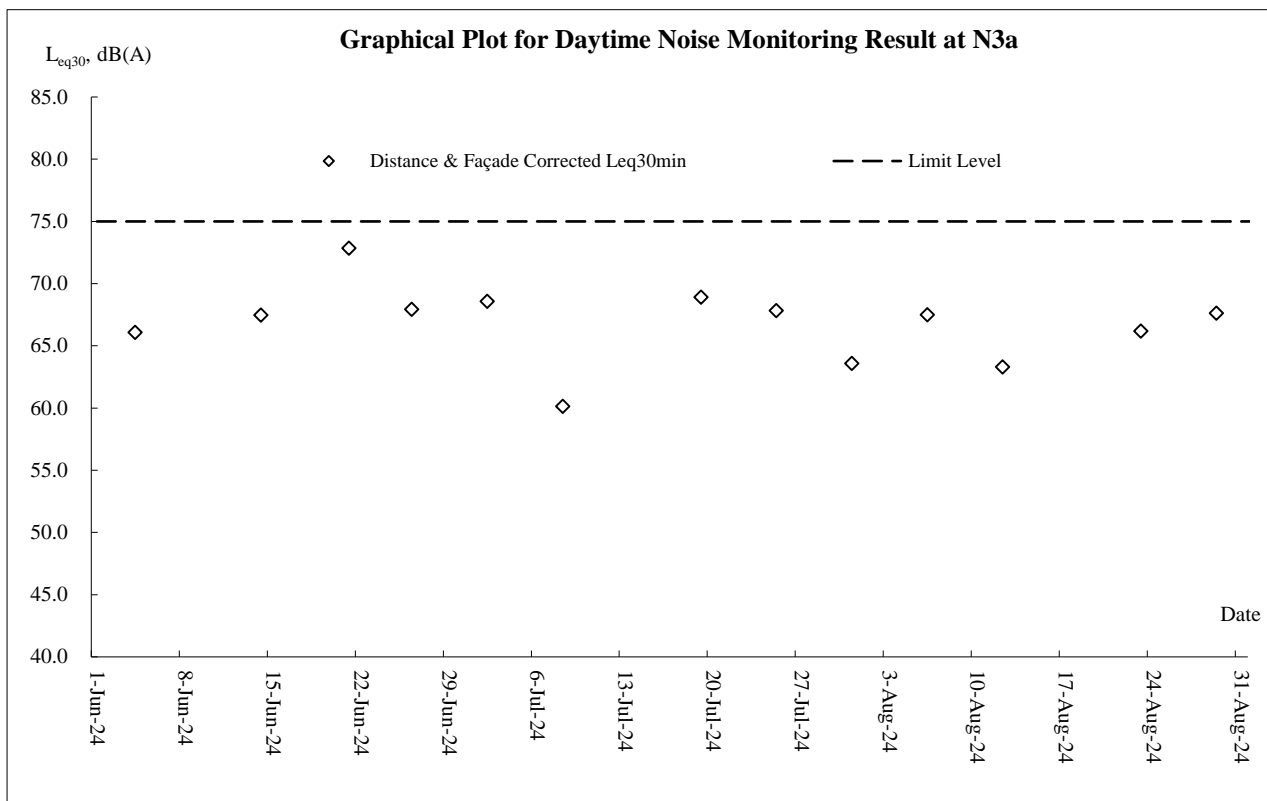
Date: 31 May '24 Task Critical Task Milestone Summary Progress

Appendix E

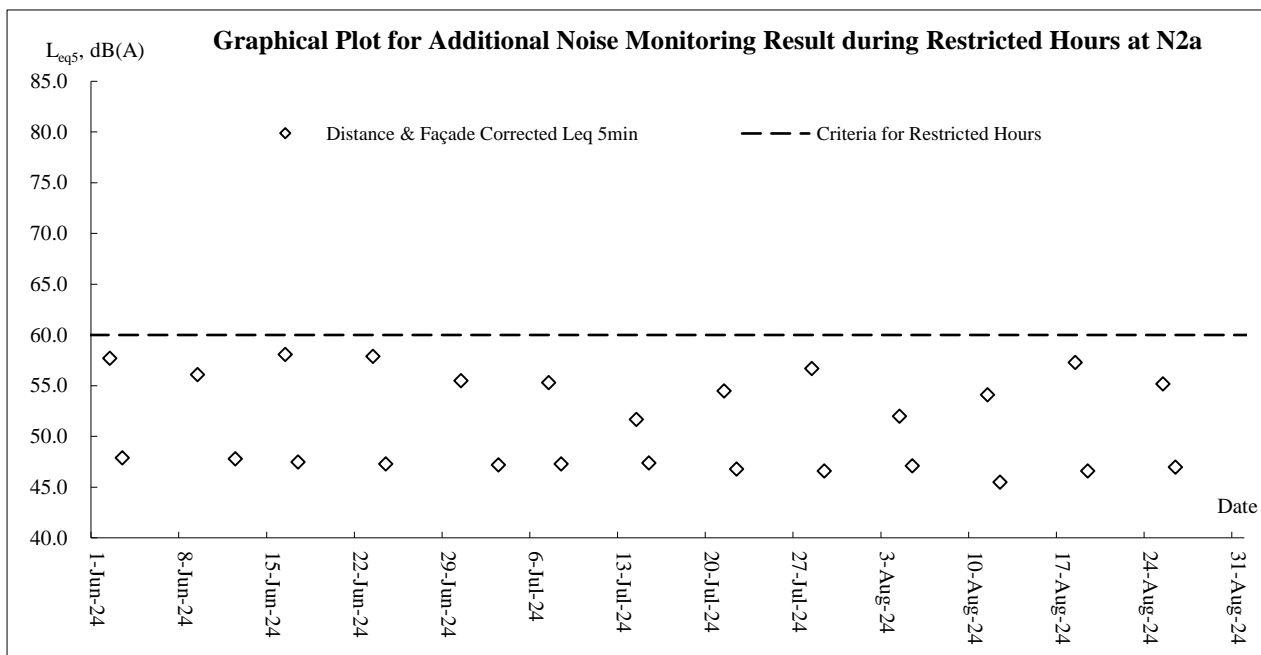
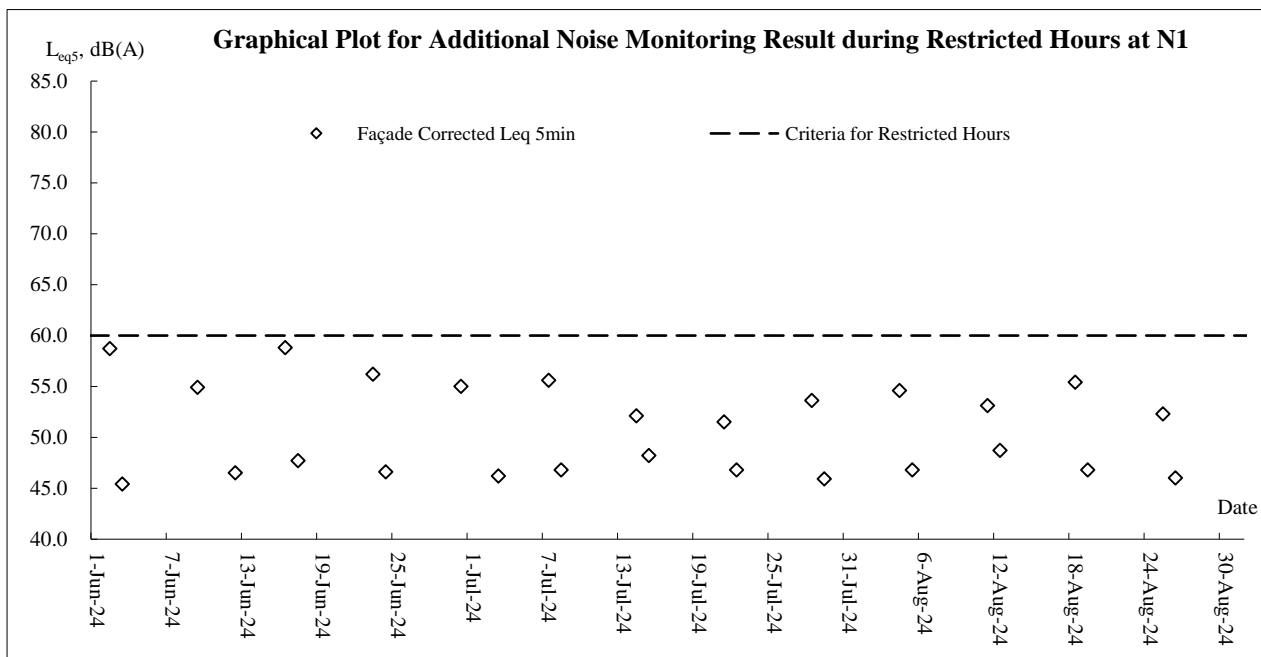
Graphical Plots of Monitoring Results

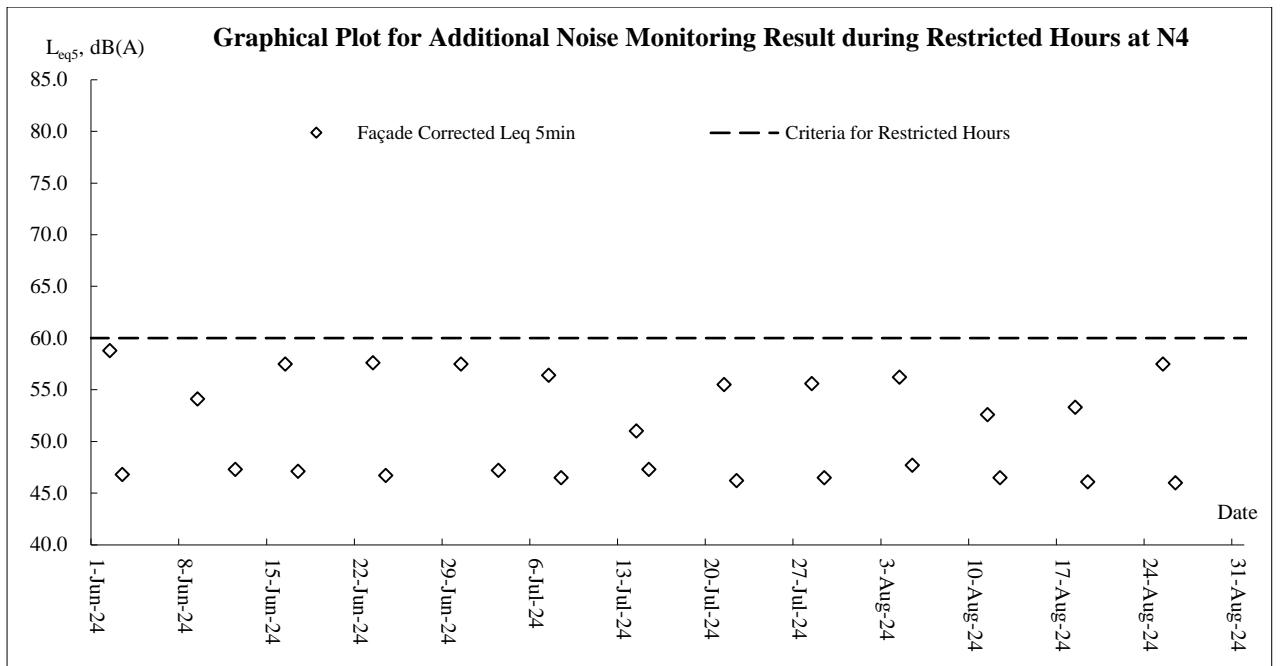
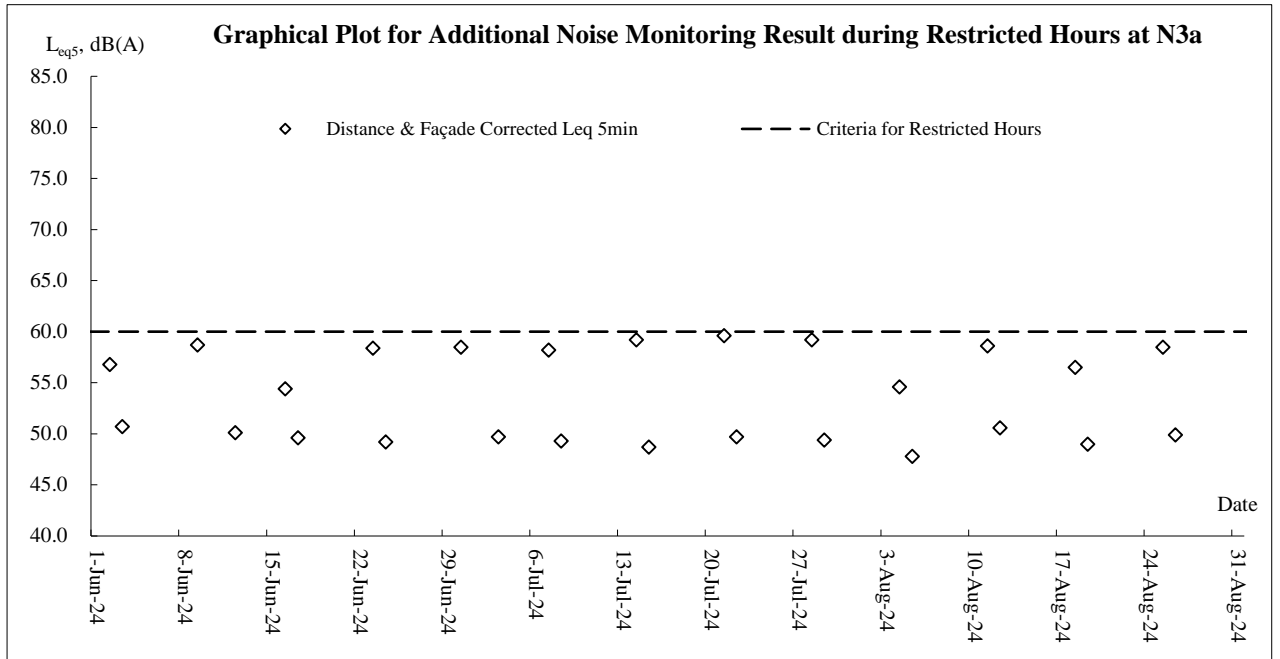
Construction Noise





Additional Noise Monitoring





Appendix F

Meteorological Information

The weather of June 2024

June 2024 was characterised by generally cloudier and showery weather during the first half of the month. With the subtropical ridge over the western North Pacific extending westwards and covering southeastern China, local weather became generally fine with high temperatures in the second half of the month, including nine consecutive very hot days from 20 to 28 June, one of the longest on record for June. Overall, the month was cloudier than usual. The mean amount of cloud in the month was 86 percent, 9 percent above the normal of 77 percent. The duration of bright sunshine in the month was 116.3 hours, about 19 percent below the normal figure of 144.3 hours. The month was also hotter than usual with the mean temperature of 28.8 degrees, 0.5 degrees above the normal of 28.3 degrees. With five out of the six months warmer than usual, the first half of 2024 was abnormally warm. The mean minimum temperature of 21.4 degrees, the mean temperature of 23.3 degrees and the mean maximum temperature of 25.8 degrees were respectively the highest, one of the highest and the second highest on record for the same period. Despite the generally cloudier and showery conditions for the first half of June, the monthly rainfall was 281.3 millimetres, about 43 percent below the normal of 491.5 millimetres in June. The accumulated rainfall recorded in the first six months of the year was 863.4 millimetres, about 20 percent below the normal figure of 1082.5 millimetres for the same period.

The weather of July 2024

With a stronger than usual subtropical ridge dominating over southern China for most of the time in the month, July 2024 was exceptionally hot in Hong Kong. The monthly mean minimum temperature of 28.0 degrees, monthly mean temperature of 29.9 degrees and monthly mean maximum temperature of 32.4 degrees were respectively 1.1 degrees, 1.0 degrees and 0.8 degrees above their normals and respectively one of the third, the fourth and one of the ninth highest on record for July. The monthly rainfall was 458.5 millimetres, about 19 percent above the normal of 385.8 millimetres. The accumulated rainfall recorded in the first seven months of the year was 1321.9 millimetres, about 10 percent below the normal figure of 1468.2 millimetres for the same period.

The weather of August 2024

Mainly attributing to the warmer than normal sea surface temperature over the northern part of the South China Sea and a stronger than usual southwesterly flow in the lower atmosphere over the coast of southern China, August 2024 was exceptionally hot in Hong Kong. The monthly mean temperature of 29.6 degrees, monthly mean minimum temperature of 27.7 degrees and monthly mean maximum temperature of 32.3 degrees were respectively 0.9 degrees, 1.0 degree and 1.0 degree above their normals and respectively the second, one of the second and the fourth highest on record for August. Together with the well above normal temperatures in June and July, the summer of this year from June to August was much hotter than usual. The mean minimum temperature of 27.5 degrees, mean temperature of 29.4 degrees and mean maximum temperature of 31.9 degrees were respectively the third, one of the third and the seventh highest on record for the same period. There were 18 hot nights in August 2024, the highest on record for August. The month was also drier than usual with a total rainfall of 261.5 millimetres, only about 58 percent of the normal figure of 453.2 millimetres. The accumulated rainfall up to August this year was 1583.4 millimetres, a deficit of about 18 percent compared with the normal of 1921.5 millimetres for the same period.

Appendix G

Waste Flow Table

Monthly Summary Waste Flow Table for 2024

Version: 0

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantity of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects (see Note 10)	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging (see Notes 4)	Plastics (see Notes 2 &4)	Chemical Waste	Others, eg. general refuse
	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m3)
sub-total up to 2023	102.182	0.000	0.000	83.508	18.441	0.233	337.486	1.500	0.700	0.000	4.750
Jan-24	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.112
Feb-24	0.060	0.000	0.000	0.000	0.060	0.000	0.000	0.000	0.000	0.000	0.172
Mar-24	0.037	0.000	0.000	0.000	0.037	0.000	0.000	0.000	0.000	0.000	0.121
Apr-24	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.057
May-24	0.099	0.000	0.000	0.000	0.099	0.000	0.000	0.000	0.000	0.000	0.113
Jun-24	0.007	0.000	0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.028
Sub total (since 2019)	102.386	0.000	0.000	83.508	18.645	0.233	337.486	1.500	0.700	0.000	5.353
Jul-24	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.040
Aug-24	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.055
Sep-24											
Oct-24											
Nov-24											
Dec-24											
Total (since 2019)	102.386	0.000	0.000	83.508	18.645	0.233	337.486	1.500	0.700	0.000	5.448

Note 1	The waste flow table shall also include C&D materials that are not 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 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 50,000m ³ .
4	All recyclable materials, including metals, paper / cardboard packaging, plastics, etc. will be collected by registered collector for recycling.
5	Conversion factors for reporting purpose:
	in-situ: rock = 2.5 tonnes/m ³ ; soil = 2.0 tonnes/m ³
	excavated: rock = 2.0 tonnes/m ³ ; soil = 1.8 tonnes/m ³ ; broken concrete and bitumen = 2.4 tonnes/m ³
	C&D Waste (including tree waste) = 0.9 tonnes/m ³ ; bentonite slurry = 2.8 tonnes/m ³
6	Numbers are rounded off to the nearest three decimal places
7	The "Total Quantity Generated" equals to the sum of "Reuse in the Contract", "Reuse in Other Projects" and "Disposed as Public Fill"
8	The "Hard Rock and Large Broken Concrete" were disposed as public fill
9	The amount in "Disposed as Public Fill" includes the "Hard Rock and Large Broken Concrete" disposed as public fill
10	The "Reused in other projects" include C&D inert material and hard rock and large broken concrete

Appendix H

Environmental Mitigation Implementation Schedule (Extracted from EM&A Manual)

EIA Ref.	EM&A Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	Con	Op	Dec	
Air Quality Impact (Construction)									
3.8.1.1	2.4	<p>General Dust Control Measures</p> <p>Dust emissions could be suppressed by regular water spraying on site. In general, water spraying twice a day could reduce dust emission from active construction area by 50%. However, for the Project more frequent water spraying is proposed. Watering eight times per day, or once every 1.5 hours, is suggested at all active works areas in order to achieve a higher dust suppression efficiency of 87.5%.</p>	Within construction site / Duration of the construction phase	Contractor		✓			EIA Recommendation and Air Pollution Control (Construction Dust) Regulation
3.8.1.2	2.4	<p>Best Practice For Dust Control</p> <p>The relevant best practices for dust control as stipulated in the <i>Air Pollution Control (construction Dust) Regulation</i> should be adopted to further reduce the construction dust impacts of the Project. These best practices include:</p> <p><i>Good Site Management</i></p> <ul style="list-style-type: none"> ▪ Good site management is important to help reducing potential air quality impact down to an acceptable level. As a general guide, the Contractor should maintain a high standard of housekeeping to prevent emissions of fugitive dust. Loading, unloading, handling and storage of raw materials, wastes or by-products should be carried out in a manner so as to minimise the release of visible dust emission. Any piles of materials accumulated on or around the work areas should be cleaned up regularly. Cleaning, repair and maintenance of all plant facilities within the work areas should be carried out in a manner minimising generation of fugitive dust emissions. The material should be handled properly to prevent fugitive dust emission before cleaning. <p><i>Disturbed Parts of the Roads</i></p> <ul style="list-style-type: none"> ▪ Each and every main temporary access should be paved with concrete, bituminous hardcore materials or metal plates and kept clear of dusty materials; or ▪ Unpaved parts of the road should be sprayed with water or a dust suppression chemical so as to keep the entire road 	Within construction site / Duration of the construction phase	Contractor		✓			EIA Recommendation and Air Pollution Control (Construction Dust) Regulation

EIA Ref.	EM&A Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	Con	Op	Dec	
		<p>surface wet.</p> <p><i>Exposed Earth</i></p> <ul style="list-style-type: none"> Exposed earth should be properly treated by compaction, hydroseeding, vegetation planting or seeding with latex, vinyl, bitumen within six months after the last construction activity on the site or part of the site where the exposed earth lies. <p><i>Loading, Unloading or Transfer of Dusty Materials</i></p> <ul style="list-style-type: none"> All dusty materials should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet. <p><i>Debris Handling</i></p> <ul style="list-style-type: none"> Any debris should be covered entirely by impervious sheeting or stored in a debris collection area sheltered on the top and the three sides. Before debris is dumped into a chute, water should be sprayed so that it remains wet when it is dumped. <p><i>Transport of Dusty Materials</i></p> <ul style="list-style-type: none"> Vehicle used for transporting dusty materials/spoils should be covered with tarpaulin or similar material. The cover should extend over the edges of the sides and tailboards. <p><i>Wheel washing</i></p> <ul style="list-style-type: none"> Vehicle wheel washing facilities should be provided at each construction site exit. Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels. <p><i>Use of vehicles</i></p> <ul style="list-style-type: none"> The speed of the trucks within the site should be controlled to about 10km/hour in order to reduce adverse dust impacts and secure the safe movement around the site. Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels. Where a vehicle leaving the construction site is carrying a load of dusty materials, the load should be covered entirely 							

EIA Ref.	EM&A Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	Con	Op	Dec	
		by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle. <i>Site hoarding</i> <ul style="list-style-type: none"> Where a site boundary adjoins a road, street, service lane or other area accessible to the public, hoarding of not less than 2.4m high from ground level should be provided along the entire length of that portion of the site boundary except for a site entrance or exit. 							
Air Quality Impact (Operation)									
3.8.2	2.3	Odour patrol at site boundary of the Project	Site boundary / During operation stage (the need to continue the odour patrol after the end of the 2-year monitoring period would depend on the monitoring results and should be agreed with EPD)	OWTF Operator	✓		✓		EIAO-TM
3.8.2	2.4	Install gas cleaning equipment and stack on the CHP and odour treatment unit <ul style="list-style-type: none"> The preliminary design suggests the use of a two stage process involving either a biofilter or Ultraviolet Light (UV-C) together with ozone treatment as the first stage, and an activated carbon filter as the second stage for the odour treatment unit. It is recommended to install the UV-C and ozone treatment system with second stage active carbon filters as this has a lower footprint requirement than the biofilter option. However, the actual unit installed depends on the final design by the contractor in the design phase. The preliminary design incorporates a combination of thermal and catalytic treatment processes to remove pollutants from the exhaust gasses from the CHP. Both the odour treatment unit and the CHP emissions are suggested to be directed to a flue to aid the dispersion and minimise effects on ASRs. 	CHP and odour treatment unit	Design Consultant / OWTF Operator	✓		✓		EIA Recommendation
Hazard Risk Assessment (Operation)									

EIA Ref.	EM&A Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	Con	Op	Dec	
4.9	3.2	<p>The HA has assumed that the following “Good Practices” and “recommended design measures” for the safe operation of OWTF 2 shall be carried out as far as reasonably practicable:</p> <ul style="list-style-type: none"> ▪ The process plant building will be provided with adequate number of gas detectors distributed over the various areas of potential leak sources to provide adequate coverage. ▪ All electrical equipment inside the building will be classified in accordance with the electrical area classification requirements. No unclassified electrical equipment will be used during operations or maintenance. ▪ Reference can be made to Codes of Practice and guidance issued in Europe that applies to places where explosive atmospheres may occur (called ‘ATEX’ requirements). These are covered as part of the European Directive: the Explosive Atmospheres Directive (99/92/EC) and the UK regulations, Dangerous Substances and Explosive Atmospheres Regulations 2002 (DSEAR). Where potentially explosive atmospheres may occur in the workplace, the requirements include, identifying and classifying (zoning) areas where potentially explosive atmospheres may occur; avoiding ignition sources in zoned areas, in particular those from electrical and mechanical equipment; where necessary, identifying the entrances to zoned areas; providing appropriate anti-static clothing for employees; and before they come into operation, verifying the overall explosion protection safety of areas where explosive atmospheres may occur. ▪ All safety valves design shall take into account discharging any released fluid to a safe location, or stopping misdirection of fluid flows in order to avoid hazardous outcome. ▪ Safety markings and crash barriers will be provided to the aboveground piping, digesters and the gas holder near the entrance. ▪ Lightning protection installations will be installed following IEC 62305, BS EN 62305, AS/NZS 1768, NFPA 780 or equivalent standards. ▪ A 10m high boundary wall with fire resistance will be 	During design and operation phases	Design Consultant / OWTF Operator	✓		✓		EIAO & EIAO TM Annex 4

EIA Ref.	EM&A Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	Con	Op	Dec	
		<p>provided in the vicinity of the digester tanks, gasholders and gas purification equipment to protect the equipment against external fires, and to provide some protection to external areas from the effects of fire/explosion.</p> <ul style="list-style-type: none"> ▪ Suitable fire extinguishers will be provided within the site. An External Water Spray System (EWSS) will be installed in appropriate areas, such as around the gasholders, gas purification, desulphurisation units, and digester areas. The facilities will also be equipped with fire and gas detection system and fire suppression system. Stringent procedures are implemented to prohibit smoking or naked flames to be used on-site. ▪ Fixed crash barriers will be provided in areas where process equipment is adjacent to the internal roadway to protect against vehicle collision. Adequate warning signage and lighting will also be provided and maximum speed limit will also be in place. 							
Noise Impact (Construction)									
5.9.1	4.2.7	<p>Good Site Practice Good site practice and noise management can significantly reduce the impact of construction site activities on nearby NSRs. The following package of measures should be followed during each phase of construction:</p> <ul style="list-style-type: none"> ▪ only well-maintained plant to be operated on-site and plant should be serviced regularly during the construction works; ▪ machines and plant that may be in intermittent use to be shut down between work periods or should be throttled down to a minimum; ▪ plant known to emit noise strongly in one direction, should, where possible, be orientated to direct noise away from the NSRs; ▪ mobile plant should be sited as far away from NSRs as possible; and ▪ material stockpiles and other structures to be effectively utilised, where practicable, to screen noise from on-site 	Within construction site / During construction phase	Contractor		✓			EIAO, EIAO-TM and Noise Control Ordinance

EIA Ref.	EM&A Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	Con	Op	Dec	
		construction activities.							
5.9.1	4.2.7	Selection of Quieter PME The recommended quieter PME adopted in the assessment were taken from the EPD's QPME Inventory and British Standard, namely <i>Noise Control on Construction and Open Sites, BS 5228: Part 1: 2009</i> . It should be noted that the silenced PME selected for assessment can be found in Hong Kong.	Within construction site / During construction phase	Contractor		✓			EIAO, EIAO-TM and Noise Control Ordinance
5.9.1	4.2.7	Use of Movable Noise Barriers Movable noise barriers can be very effective in screening noise from particular items of plant when constructing the Project. Noise barriers located along the active works area close to the noise generating component of a PME could produce at least 10 dB(A) screening for stationary plant and 5 dB(A) for mobile plant provided the direct line of sight between the PME and the NSRs is blocked.	Within construction site / During construction phase	Contractor		✓			EIAO, EIAO-TM and Noise Control Ordinance
5.9.1	4.2.7	Use of Noise Enclosure/ Acoustic Shed The use of noise enclosure or acoustic shed is to cover stationary PME such as air compressor and generator. With the adoption of the noise enclosure, the PME could be completely screened, and noise reduction of 15 dB(A) can be achieved according to the EIAO Guidance Note No.9/2010.	Within construction site / During construction phase	Contractor		✓			EIAO, EIAO-TM and Noise Control Ordinance
5.9.1	4.2.7	Use of Noise Insulating Fabric Noise insulating fabric can also be adopted for certain PME (e.g. pilling machine etc). The fabric should be lapped such that there are no openings or gaps on the joints. According to the approved Tsim Sha Tsui Station Northern Subway EIA report (AEIAR-127/2008), a noise reduction of 10 dB(A) can be achieved for the PME lapped with the noise insulating fabric.	Within construction site / During construction phase	Contractor		✓			EIAO, EIAO-TM and Noise Control Ordinance
Noise Impact (Operation)									
5.9.2	4.2.7	Fixed Plant Noise Specification of the maximum allowable sound power levels of the proposed fixed plants should be followed. The following noise reduction measures should be considered as far as practicable during operation: <ul style="list-style-type: none"> ▪ Choose quieter plant such as those which have been effectively silenced; 	Within construction site / During operation phase / Throughout operation phase	Design Consultant / Contractor	✓		✓		EIAO, EIAO-TM and Noise Control Ordinance

EIA Ref.	EM&A Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
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		<ul style="list-style-type: none"> ▪ Include noise levels specification when ordering new plant (including chillier and E/M equipment); ▪ Locate fixed plant/louver away from any NSRs as far as practicable; ▪ Locate fixed plant in walled plant rooms or in specially designed enclosures; ▪ Locate noisy machines in a completely separate building; ▪ Install direct noise mitigation measures including silencers, acoustic louvers and acoustic enclosure where necessary; and ▪ Develop and implement a regularly scheduled plant maintenance programme so that equipment is properly operated and serviced in order to maintain a controlled level of noise. 							
Water Quality Impact (Construction)									
6.8.1.1	5.3	<p>Construction site runoff</p> <p>The site practices outlined in ProPECC Note PN 1/94 should be followed as far as practicable in order to minimise surface runoff and the chance of erosion. The following measures are recommended to protect water quality and sensitive uses of the coastal area, and when properly implemented should be sufficient to adequately control site discharges so as to avoid water quality impacts:</p> <ul style="list-style-type: none"> ▪ At the start of site establishment, perimeter cut-off drains to direct off-site water around the site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented. Channels, earth bunds or sand bag barriers should be provided on site to direct storm water to silt removal facilities. The design of the temporary on-site drainage system should be undertaken by the Contractor prior to the commencement of construction; ▪ Sand/silt removal facilities such as sand/silt traps and sediment basins should be provided to remove sand/silt particles from runoff to meet the requirements of the TM standards under the WPCO. The design of efficient silt 	Within construction site / Duration of the construction phase	Contractor		✓			ProPECC Note PN 1/94

EIA Ref.	EM&A Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
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		<p>removal facilities should be based on the guidelines in Appendix A1 of ProPECC Note PN 1/94. Sizes may vary depending upon the flow rate. The detailed design of the sand/silt traps should be undertaken by the Contractors prior to the commencement of construction.</p> <ul style="list-style-type: none"> ▪ All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly during rainstorms. Deposited silt and grit should be regularly removed, at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times. ▪ Measures should be taken to minimize the ingress of site drainage into excavations. If excavation of trenches in wet periods is necessary, they should be dug and backfilled in short sections wherever practicable. Water pumped out from foundation excavations should be discharged into storm drains via silt removal facilities. ▪ All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing facility should be provided at construction site exit where practicable. Wash-water should have sand and silt settled out and removed regularly to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains. ▪ Open stockpiles of construction materials or construction wastes on-site should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system. ▪ Manholes (including newly constructed ones) should be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and stormwater runoff being directed into 							

EIA Ref.	EM&A Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
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		foul sewers. <ul style="list-style-type: none"> ▪ Precautions should be taken at any time of the year when rainstorms are likely. Actions should be taken when a rainstorm is imminent or forecasted and actions to be taken during or after rainstorms are summarized in Appendix A2 of ProPECC Note PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events, especially for areas located near steep slopes. ▪ Bentonite slurries used in piling or slurry walling should be reconditioned and reused wherever practicable. Temporary enclosed storage locations should be provided on-site for any unused bentonite that needs to be transported away after all the related construction activities are completed. The requirements in ProPECC Note PN 1/94 should be adhered to in the handling and disposal of bentonite slurries. 							
6.8.1.2	5.3	General construction activities Construction solid waste, debris and refuse generated on-site should be collected, handled and disposed of properly to avoid entering any nearby storm water drain. Stockpiles of cement and other construction materials should be kept covered when not being used.	Within construction site / During construction phase	Contractor		✓			ProPECC Note PN 1/94
6.8.1.3	5.3	Excavation works The construction programme should be properly planned to minimise excavation works during the wet season (April to September), temporarily exposed slope/soil surfaces should be covered by a tarpaulin or other means, as far as practicable. Interception channels should be provided (e.g. along the crest/edge of the excavation) to prevent storm runoff from washing across exposed soil surfaces. Arrangements should be in place to ensure that adequate surface protection measures can be safely carried out well before the arrival of a rainstorm. Other measures that need to be implemented before, during and after rainstorms are summarized in ProPECC PN 1/94.	Within construction site / During construction phase	Contractor		✓			ProPECC Note PN 1/94
6.8.1.4	5.3	Accidental spillage <ul style="list-style-type: none"> ▪ The Contractor should register as a chemical waste producer 	Within construction site / During construction phase	Contractor		✓			ProPECC Note PN 1/94 and Waste Disposal

EIA Ref.	EM&A Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	Con	Op	Dec	
		<p>if chemical wastes are produced from construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes.</p> <ul style="list-style-type: none"> ▪ Maintenance of vehicles and equipment, involving activities with potential for leakage and spillage, should only be undertaken within areas appropriately equipped to control these discharges. ▪ Oils and fuels should only be stored in designated areas which have pollution prevention facilities. To prevent spillage of fuels and solvents to any nearby storm water drain, all fuel tanks and storage areas should be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank. The bund should be drained of rainwater after a rain event. ▪ Disposal of chemical wastes should be carried out in compliance with the Waste Disposal Ordinance. The Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes published under the Waste Disposal Ordinance details the requirements to deal with chemical wastes. General requirements are given as follows: <ul style="list-style-type: none"> – Suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport. – Chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents. – Storage area should be selected at a safe location on site and adequate space should be allocated to the storage area. 						Ordinance	
6.8.1.5	5.3	<p>Sewage effluent from construction workforce</p> <p>Temporary sanitary facilities, such as portable chemical toilets, should be employed on-site where necessary to handle sewage from the workforce. A licensed contractor should be employed to provide appropriate and adequate portable toilets and be</p>	<p>Within construction site / During construction phase</p>	Contractor		✓			ProPECC Note PN 1/94

EIA Ref.	EM&A Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	Con	Op	Dec	
		responsible for appropriate disposal and maintenance.							
Water Quality Impact (Operation)									
6.8.2.1	5.3	<p>Sewage effluent and sewerage impact</p> <p>In order to minimise the risk of exceeding capacity of the sewerage system, on-site underground storage of effluent is recommended for the OWTF 2, with a capacity of 6 hours of peak flow. Using the values presented in the preliminary design, the on-site storage required to buffer excess capacity would be equivalent to 30 m³. A below ground effluent retention tank would function to store effluent produced during peak periods when usage of the Sha Ling pumping station is high. Effluent stored during such periods could then be pumped out of the retention tank and discharged into the public sewer during off-peak times when capacity is sufficient.</p>	Within construction site / During design and operation phase	Design Consultant / OWTF Operator	✓		✓		EIA recommendations
6.8.2.2	5.3	<p>Wastewater generation from organic waste treatment processes</p> <p>Wastewater must be collected and diverted to the wastewater treatment plant (WWTP).</p> <p>An adequately sized WWTP with technologies such as membrane bioreactor, reverse osmosis or multi-phase separation process or system should be provided for the OWTF 2. Polluting parameters in the effluent should be in compliance with the requirements as specified in the TM-DSS.</p> <p><i>Leachate from the waste reception and composting process</i></p> <ul style="list-style-type: none"> A drainage system will be provided at the reception area connecting to the proposed onsite WWTP. The leachate would be treated in the WWTP and there would be no direct discharge of leachate. <p><i>Dewatering of the digestate from the separators</i></p> <ul style="list-style-type: none"> The wastewater generated from the dewatering of digestate from the digesters is expected to be around 229.18 m³/day and a peak flow of 5.31L/s. The on-site WWTP will deploy suitable treatment process in order to reduce the pollution level to an acceptable standard. The effluent shall be treated according to the TM-DSS standard before discharging to foul sewers. 	Within construction site / During design and operation phase	Design Consultant / OWTF Operator	✓		✓		TM-DSS, Water Pollution Control Ordinance

EIA Ref.	EM&A Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
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		<p><i>Condensate from biogas drying, odour treatment and ventilation system</i></p> <ul style="list-style-type: none"> Condensate from biogas handling and wastewater from the odour treatment process would be collected and transferred to the WWTP. There is no direct discharge of wastewater to the sewer. <p><i>Washing of waste delivery trucks</i></p> <ul style="list-style-type: none"> Surplus wastewater generated from the vehicle washing facilities would be collected and transferred to the WWTP for further treatment before discharging to the foul sewer. <p><i>Untreated wastewater from wastewater treatment plant</i></p> <ul style="list-style-type: none"> Maintenance of the WWTP and its connection pipe work would be conducted regularly to confirm the condition of the holding tank and pipes. This will ensure early detection of any damage for repair or replacement. <p><i>Leakage of materials from WWTP</i></p> <ul style="list-style-type: none"> Regular scheduled maintenance of the WWTP will be carried out to confirm the condition of the facility and detect any damages at an early stage for repair or replacement. 							
6.8.2.3	5.3	<p>Contaminated stormwater runoff and accidental spillages</p> <p>Regular maintenance of plant facilities, as recommended in Section 6.8.2.2 of the EIA report, will be performed to confirm the condition of plant facilities and detect any damage for repair or replacement. Training should be provided to the employees on handling accidental spillage, so that in such cases, actions can be carried out quickly to avoid runoff to nearby streams/drains.</p>	Within construction site / During operation phase / Throughout operation phase	OWTF Operator			✓		TM-DSS; Water Pollution Control Ordinance
Waste Management Implications (Construction)									
7.6.1.1	6.3	<p>Good Site Practices</p> <p>Recommendations for good site practices during the construction activities include:</p> <ul style="list-style-type: none"> Obtain the relevant waste disposal permits from appropriate authorities, in accordance with the Waste Disposal Ordinance (Cap. 354) and subsidiary Regulations and the Land (Miscellaneous Provisions) Ordinance (Cap. 28); 	Project construction site / Throughout construction stage / Until completion of all construction activities	Contractor			✓		Waste Disposal Ordinance; Regulation and the Land (Miscellaneous Provisions) Ordinance;

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		<ul style="list-style-type: none"> ▪ Provide staff training for proper waste management and chemical handling procedures; ▪ Provide sufficient waste disposal points and regular waste collection; ▪ Provide appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers; ▪ Carry out regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors; ▪ Separate chemical wastes for special handling and disposal to licensed facilities for treatment; and ▪ Employ licensed waste collectors to collect waste. 							Waste Disposal (Chemical Wastes) (General) Regulation; Technical Circular (Works) No. 19/2005 Environmental Management on Construction Site
7.6.1.2	6.3	<p>Waste Reduction Measures</p> <p>Recommendations to achieve waste reduction include:</p> <ul style="list-style-type: none"> ▪ Design foundation works to minimise the amount of excavated material to be generated; ▪ Provide training on the importance of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycling; ▪ Sort demolition debris and excavated materials from demolition works to recover reusable/recyclable portions ▪ Segregation and storage of different types of waste in different containers or skips to enhance reuse or recycling of materials and their proper disposal ▪ Encourage collection of recyclable waste such as waste paper and aluminium cans by providing separate labelled bins to enable such waste to be segregated from other general refuse generated by the work force ▪ Plan the use of construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste 	Project construction site / Throughout construction stage / Until completion of all construction activities	Contractor	✓	✓			Waste Disposal Ordinance
7.6.1.3	6.3	<p>Excavated and C&D Materials</p> <p>In order to minimise impacts resulting from collection and transportation of C&D material for off-site disposal, the</p>	Project construction site / Throughout construction stage / Until completion	Contractor	✓	✓			Waste Disposal Ordinance ; DEVB Technical

EIA Ref.	EM&A Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
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		excavated materials should be reused on-site as fill material as backfilling material and for landscaping works far as practicable. Other mitigation requirements are: <ul style="list-style-type: none"> ▪ A Waste Management Plan (WMP), which becomes part of the Environmental Management Plan (EMP), should be prepared in accordance with ETWB TC(W) No.19/2005; ▪ A recording system for the amount of wastes generated, recycled and disposed of (including the disposal sites) should be adopted for easy tracking; and ▪ In order to monitor the disposal of excavated and non-inert C&D material at public filling facilities and landfills and to control fly-tipping, a trip-ticket system should be adopted (refer to DEVB TC(W) No. 6/2010). 	of all construction activities					Circular (Works) No.6/2010 for Trip Ticket System for Disposal of Construction & Demolition Materials; Technical Circular (Works) No. 19/2005 Environmental Management on Construction Site	
7.6.1.4	6.3	Chemical Waste Should chemical wastes be produced at the construction site, the Contractor would be required to register with EPD as a Chemical Waste Producer and to follow the guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste (such as explosive, flammable, oxidizing, irritant, toxic, harmful, or corrosive). The Contractor should employ a licensed collector to transport and dispose of the chemical wastes, to either the CWTC in Tsing Yi, or any other licensed facilities, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.	Project construction site / Throughout construction stage / Until completion of all construction activities	Contractor		✓			Code of Practice on the Packaging Labelling and Storage of Chemical Wastes; Waste Disposal (Chemical Waste) (General) Regulation
7.6.1.5	6.3	General Refuse General refuse should be stored in enclosed bins or compaction units separated from excavated and non-inert C&D materials. A reputable waste collector should be employed by the Contractor to remove general refuse from the site, separately from inert C&D materials. Preferably an enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.	Project construction site / Throughout construction stage / Until completion of all construction activities	Contractor		✓			Waste Disposal Ordinance and Public Health and Municipal Services Ordinance - Public Cleansing and Prevention of Nuisances

EIA Ref.	EM&A Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
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Waste Management Implications (Operation)									
7.6.2.1	6.3	<p>Good site practices</p> <p>Adoption of the following good operational practices should be recommended to minimise waste management impacts:</p> <ul style="list-style-type: none"> ▪ Obtain the necessary waste disposal permits from the appropriate authorities, in accordance with the Waste Disposal Ordinance (Cap. 354), Waste Disposal (Chemical Waste) (General) Regulation and the Land (Miscellaneous Provision) Ordinance (Cap. 28); ▪ Nomination of an approved person to be responsible for good site practice, arrangements for collection and effective disposal to an appropriate facility of all wastes generated at the site; ▪ Use of a waste haulier licensed to collect specific category of waste; ▪ A trip-ticket system should be included as one of the contractual requirements and implemented by the Environmental Team to monitor the disposal of solid wastes at public filling facilities and landfills, and to control fly tipping. Reference should be made to DEVB TC(W) No. 6/2010. ▪ Training of site personnel in proper waste management and chemical waste handling procedures; ▪ Separation of chemical wastes for special handling and appropriate treatment at a licensed facility; ▪ Routine cleaning and maintenance programme for drainage systems, sumps and oil interceptors; ▪ Provision of sufficient waste disposal points and regular collection for disposal; ▪ Adoption of appropriate measures to minimise windblown litter and dust during transportation of waste, such as covering trucks or transporting wastes in enclosed containers; and, ▪ Implementation of a recording system for the amount of 	Construction site / On a regular basis / Throughout operation stage	OWTF Operator			✓		Regulation Waste Disposal Ordinance; Waste Disposal (Chemical Waste) (General); Regulation and the Land (Miscellaneous Provision) Ordinance; DEVB Technical Circular (Works) No. 6/2010.

EIA Ref.	EM&A Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
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		wastes generated, recycled and disposed of (including the disposal sites).							
7.6.2.2	6.3	<p>Waste reduction measures</p> <p>Adoption of the following good operational practices should be recommended to ensure waste reduction:</p> <ul style="list-style-type: none"> ▪ Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal; ▪ Encourage collection of aluminium cans, plastic bottles and packaging material (e.g. carton boxes) and office paper by individual collectors. Separate labelled bins should be provided to help segregate this waste from other general refuse generated by the work force; and ▪ Any unused chemicals or those with remaining functional capacity should be reused as far as practicable. 	Construction site / On a regular basis / Throughout operation stage	OWTF Operator			✓		Waste Disposal Ordinance; Waste Disposal (Chemical Waste) (General); Regulation and the Land (Miscellaneous Provision) Ordinance
7.6.2.3	6.3	<p>Waste generated from pre-treatment process</p> <p>Wastes generated from pre-treatment process should be recycled as far as possible. Wastes generated from pre-treatment process should also be separated from any chemical waste and stored in covered skips. The recyclables should be collected by licensed collectors, while the rest of the waste should be removed from the site on a daily basis to minimise odour, pest and litter impacts. Open burning must be strictly prohibited.</p>	Pre-treatment process / Throughout operation stage	OWTF Operator			✓		Waste Disposal (Chemical Waste) (General)
7.6.2.4	6.3	<p>Chemical Waste</p> <ul style="list-style-type: none"> ▪ Chemical waste generated from machinery maintenance and servicing should be managed in accordance with the Code of Practice on the Packaging, Labelling and storage of Chemical Wastes under the provisions of Waste Disposal (Chemical Waste) (General) Regulation. The chemical waste should be collected by drum-type containers and, when transported off-site, removed by licensed chemical waste contractors. Alternatively, some of the chemical waste may be retained on-site for re-use by the Project in the manufacture of biogas or other products, subject to their composition being confirmed as suitable for such application. 	Construction site Throughout operation stage	OWTF Operator			✓		Code of Practice on the Packaging Labelling and Storage of Chemical Wastes; Waste Disposal (Chemical Waste) (General) Regulation

EIA Ref.	EM&A Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
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		<ul style="list-style-type: none"> Plant / equipment maintenance schedules should be planned in order to minimise the generation of chemical waste. Non-recyclable chemical wastes and lubricants should be disposed of at appropriate facilities, such as CWTC. Copies or counterfoils from collection receipts issued by the licensed waste collector should be kept for recording purpose. Recyclable chemical waste will be transported off-site for treatment by a licensed collector. The Contractor will need to register with EPD as a chemical waste producer. 							
7.6.2.5	6.3	<p>General Refuse</p> <ul style="list-style-type: none"> Waste generated in site offices should be reduced through segregation and collection of recyclables. To promote the recycling of wastes such as used paper, aluminium cans and plastic bottles, it is recommended that recycling bins should be clearly labelled and placed at locations with easy access. For the collection of recyclable materials, they should be collected by licensed collectors. General refuse, other than segregated recyclable wastes, should be separated from any chemical waste and stored in covered skips. The general refuse should be removed from the site on a daily basis to minimise odour, pest and litter impacts. Also, open burning of refuse must be strictly prohibited. 	Construction site / On a regular basis / Throughout operation stage	OWTF Operator			✓		Waste Disposal Ordinance
Ecological Impact (Construction)									
8.7	7.3	For precautionary purposes and to further ensure that no wild flora species of conservation interest will be affected, prior to commencement of any construction works, it is recommended to conduct a detailed vegetation survey as baseline monitoring to update the exact locations, number and condition of individuals of <i>Aquilaria sinensis</i> and any other floral species of conservation interest within the Project Area. A Vegetation Survey Report summarizing the findings and recommendations of the detailed vegetation survey should be prepared and submitted to AFCD for approval no later than one month prior to commencement of construction works.	Before Project commencement	OWTF Operator	✓				EIAO-TM
8.7	7.3	During construction phase, erection of a temporary protective	Throughout construction	OWTF Operator			✓		EIAO-TM

EIA Ref.	EM&A Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
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		fence along the plantation area where trees and vegetation, including those of conservation concern identified under the detailed vegetation survey, would be retained within the Project Area is recommended for precautionary purposes to avoid any potential impact from construction activities such as vehicle movement and materials storage. Establishment of the protective fence could also raise the awareness of personnel to be present and protection of the plants. While the protective fence should be properly maintained, monitoring of individuals of <i>Aquilaria sinensis</i> and any other floral species of conservation interest identified in the detailed vegetation survey during construction phase on a monthly basis should be conducted to make sure that they are not affected by the construction works of the Project.	stage						
Ecological Impact (Operation)									
No mitigation measure is required.									
Landscape and Visual Impact (Construction)									
Table 10.7 (CP1)	Table 8.1 (CP1)	Preservation of Existing Vegetation The development proposals would avoid disturbance to the existing trees as far as practicable within the confines of the development site. A preliminary tree survey has been undertaken to establish the existing resources. A tree survey review with formal tree removal application will be submitted to the relevant government departments for approval in accordance with ETWB TC(W) 03/2006 Tree Preservation, during the detailed design phase of the Project. Based on the preliminary findings it would be possible to retain 441 of the existing trees. If possible, all trees which are not in conflict with the proposals would be retained and shall be protected through the means of fencing, where appropriate, to prevent potential damage to tree canopies and root zones from vehicles and materials storage. Specifications for the protection of existing trees will be circulated to the relevant government authorities for approval together with the formal tree removal application.	Construction site / Throughout construction stage / Until completion of all construction activities	Contractor	✓	✓			Technical Circular (Works) No. 3/2006
Table 10.7 (CP2)	Table 8.1 (CP2)	Control of site construction activities <ul style="list-style-type: none"> ■ Storage of materials should be carefully arranged to minimise potential landscape and visual impact. 	Construction site / Throughout construction stage / Until completion	Contractor	✓	✓			EIAO-TM

EIA Ref.	EM&A Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
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		<ul style="list-style-type: none"> The location and appearance of site accommodation should be carefully designed to minimise potential landscape and visual impact. Site lighting should be carefully designed to prevent light spillage, Extent of the works area and construction period should be minimised as far as practicable. Screen hoarding with compatible design to blend into the surrounding natural environment should be considered. Temporary works areas should be reinstated at the earliest possible opportunity. 	of all construction activities						
Table 10.7 (CP3)	Table 8.1 (CP3)	<p>Transplantation of existing trees</p> <p>Under current proposal, no tree is recommended to be transplanted since the trees in conflict with the proposed works are not suitable to be transplanted. However, should transplantation be proposed in the detailed design stage after an update tree survey, the recommended final recipient sites should be adjacent to their current locations. Enough time should be reserved for tree transplantation works to increase the survival rate of the transplanting trees. To ensure the survival of transplanted trees, protection work should be considered. The tree transplantation proposal will be submitted to relevant authorities for approval together with the formal tree removal application.</p>	Construction site / Throughout construction stage / Until completion of all construction activities	Contractor	✓	✓			Technical Circular (Works) No. 3/2006
Landscape and Visual Impact (Operation)									
Table 10.8 (OP1)	Table 8.2 (OP1)	<p>Design of the Proposed OWTF</p> <p>OWTF will incorporate design features as part of design mitigation measures including</p> <ul style="list-style-type: none"> Integrated design approach - the location of OWTF should be within the existing Livestock Waste Composting Plant, as far as technically feasible. The location and orientation of the OWTF should be away from landscape and visually sensitive areas such as ponds and woodlands. Building massing – the proposed use of simple responsive design includes having specific height profile requirement 	Construction site / During design stage	Design Consultant / OWTF Operator	✓				EIAO-TM

EIA Ref.	EM&A Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	Con	Op	Dec	
		<p>such as, single-storey, lower than the adjacent building structures, and avoiding large built structure for supporting facilities to reduce the intrusion of mass in the rural areas.</p> <ul style="list-style-type: none"> ▪ Treatment of built structures – the structural design should seek to reduce the apparent visual mass of the facilities further through the use of natural materials such as wooden frames or other sustainable materials such as recycled plastics. ▪ Responsive building finishes – Natural tones should be considered for the colour palette for proposed structures. Non-reflective finishes are recommended on the outward facing building facades to reduce glare effect. ▪ Responsive lighting design – Aesthetic design of architectural and lighting with following glare design measures: <ul style="list-style-type: none"> – Directional and full cut off lighting is recommended within the boundaries of OWTF to minimise light spillage to the surroundings; – Minimise geographical spread of lighting, only applying for safety at the key access points and staircases; and <p>Limited lighting intensity to meet the minimum safety and operation requirement.</p>							
Table 10.8 (OP2)	Table 8.2 (OP2)	<p>Amenity / Compensatory Planting</p> <p>Tree retention within the works area is considered to be important. New tree plantings will be concentrated in the proposed amenity areas along the boundaries of the site and along the exterior of OWTF buildings. Although a preliminary planting proposal is not yet available at the moment of producing this EIA Report, anticipated new tree planting within the Project site should be able to fully compensate for the loss of 14 trees proposed to be felled in terms of both quantity and quality. 441 existing trees will be retained through preserving them at their current locations. Establishment of newly planted trees is expected. Trees with high amenity value will be placed along the access routes to provide shade and soften the hard structures of OWTF buildings. Amenity plantings will utilise native tree species found on existing neighbouring slopes or</p>	Construction site / during design and operation stage	Design Consultant / OWTF Operator	✓		✓		Technical Circular (Works) Nos. 7/2002 and 3/2006

EIA Ref.	EM&A Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	Con	Op	Dec	
		woodland areas to improve the ecological connectivity between existing habitats and create a coherent landscape network. Tree species with aggressive roots should be avoided to prevent damage to OWTF buildings and structures. Trees with high or moderate amenity value and low to medium maintenance should be considered as part of landscape resource enhancement. Recommended tree species include <i>Celtis sinensis</i> and <i>Liquidambar formosana</i> . These proposals will be subjected to review at detail design stage of the Project.							
Table 10.8 (OP3)	Table 8.2 (OP3)	Treatment of Slopes In accordance with GEO Publication No. 1/2011 “Technical Guidelines on Landscape Treatment for Slopes”, these engineering structures will be aesthetically enhanced through the use of soft landscape works including tree and shrub planting to give man-made slopes a natural appearance, blending into the natural landscape. Whip-sized plantings are preferred on the face of soil cut slopes, at the crest and toe of the slope and within berm planters. These smaller, younger plants can adapt to their new growing conditions quicker than larger sized stock and establish a naturalistic effect rapidly. Recommended tree species include <i>Mallotus paniculatus</i> , <i>Broussonetia papyrifera</i> and <i>Alangium chinense</i> .	Construction site / during design and operation stage	Design Consultant / OWTF Operator	✓		✓		GEO Publication No. 1/2011 “Technical Guidelines on Landscape Treatment for Slopes
Table 10.8 (OP4)	Table 8.2 (OP4)	Amenity enhancement Rooftop greening and vertical greening to mitigate the visual impact of taller structures can soften the façade of OWTF structures. Frameworks utilised for vertical greening should appear naturalistic.	Construction site / during design and operation stage	Design Consultant / OWTF Operator	✓		✓		Technical Circular (Works) No. 7/2002

Remarks:

1. Des – Design Stage, C – Construction Stage, O – Operation, Dec - Decommissioning