

OSCAR Bioenergy Joint Venture

Contract No. EP/SP/61/10
Organic Waste Treatment Facilities
Phase 1:
Eleventh Monthly EM&A Report

1 April 2016 - 30 April 2016

Environmental Resources Management

16/F, Berkshire House,
25 Westlands Road,
Quarry Bay, Hong Kong
Telephone: (852) 2271 3000
Facsimile: (852) 2723 5660
E-mail: post.hk@erm.com
<http://www.erm.com>

Meinhardt Infrastructure and Environment Limited

**Organic Waste Treatment Facilities,
Phase I**

Monthly EM&A Report
(1 April 2016 – 30 April 2016)

(May 2016)

Verified by: Helen Cochrane 

Position: Independent Environmental Checker

Date: 11 May 2016

OSCAR Bioenergy Joint Venture

Contract No. EP/SP/61/10
Organic Waste Treatment Facilities
Phase 1:
Eleventh Monthly EM&A Report

1 April 2016 - 30 April 2016

Reference 0279222

For and on behalf of ERM-Hong Kong, Limited	
Approved by:	Frank Wan
Signed:	
Position:	Partner
Certified by:	 (Environmental Team Leader - Mandy To)
Certified by:	 (Registered Landscape Architect No. R-150 - Albert Chung)
Date:	13 May 2016

CONTENTS

EXECUTIVE SUMMARY

1	INTRODUCTION	1
1.1	PURPOSE OF THE REPORT	1
1.2	STRUCTURE OF THE REPORT	1
2	PROJECT INFORMATION	3
2.1	BACKGROUND	3
2.2	GENERAL SITE DESCRIPTION	3
2.3	CONSTRUCTION ACTIVITIES	4
2.4	PROJECT ORGANISATION AND MANAGEMENT STRUCTURE	4
2.5	STATUS OF ENVIRONMENTAL APPROVAL DOCUMENTS	4
3	ENVIRONMENTAL MONITORING REQUIREMENT, ENVIRONMENTAL MITIGATION MEASURES	5
4	IMPLEMENTATION STATUS ON ENVIRONMENTAL PROTECTION REQUIREMENTS	6
5	WASTE MANAGEMENT	7
6	ENVIRONMENTAL INSPECTIONS	8
6.1	WEEKLY SITE AUDITS	8
6.2	LANDSCAPE AND VISUAL AUDIT	8
7	ENVIRONMENTAL NON-CONFORMANCE	10
7.1	SUMMARY OF ENVIRONMENTAL NON-COMPLIANCE	10
7.2	SUMMARY OF ENVIRONMENTAL COMPLAINT	10
7.3	SUMMARY OF ENVIRONMENTAL SUMMON AND SUCCESSFUL PROSECUTION	10
8	FUTURE KEY ISSUES	11
8.1	KEY ISSUES FOR THE COMING MONTH	11
8.2	CONSTRUCTION PROGRAMME	11
9	CONCLUSIONS	12

LIST OF TABLES

<i>TABLE 2.1</i>	<i>SUMMARY OF CONSTRUCTION ACTIVITIES UNDERTAKEN IN THE REPORTING PERIOD</i>
<i>TABLE 2.2</i>	<i>SUMMARY OF ENVIRONMENTAL LICENSING, NOTIFICATION AND PERMIT STATUS</i>
<i>TABLE 5.1</i>	<i>QUANTITIES OF WASTE GENERATED FROM THE PROJECT</i>
<i>TABLE 8.1</i>	<i>CONSTRUCTION WORKS TO BE UNDERTAKEN IN THE NEXT REPORTING PERIOD</i>

LIST OF ANNEXES

<i>ANNEX A</i>	<i>LOCATION OF PROJECT</i>
<i>ANNEX B</i>	<i>WORKS LOCATION</i>
<i>ANNEX C</i>	<i>CONSTRUCTION PROGRAMME FOR THE PROJECT</i>
<i>ANNEX D</i>	<i>PROJECT ORGANIZATION CHART AND CONTACT DETAIL</i>
<i>ANNEX E</i>	<i>IMPLEMENTATION SCHEDULE OF MITIGATION MEASURES</i>
<i>ANNEX F</i>	<i>WASTE FLOW TABLE</i>
<i>ANNEX G</i>	<i>ENVIRONMENTAL COMPLAINT, ENVIRONMENTAL SUMMONS AND PROSECUTION LOG</i>

EXECUTIVE SUMMARY

The construction works of *No. EP/SP/61/10 Organic Waste Treatment Facilities Phase I (the Project)* commenced on 21 May 2015. This is the 11th monthly Environmental Monitoring and Audit (EM&A) report presenting the EM&A works carried out during the period from 1 April 2016 to 30 April 2016 in accordance with the EM&A Manual.

Summary of Construction Works undertaken during the Reporting Month

Works undertaken in the reporting month included:

- Construction and Raft Foundation Works for Building 1;
- Construction and Superstructure Works for Building 2;
- Excavation, Raft Foundation and Superstructure Works for Building 3;
- Erection Works for AD Tank;
- Excavation, Raft Foundation and Superstructure Works for Biogas Holder and Biogas Plant
- Installation Works for Ammonia Stripping Plant
- Construction Works for Boundary Wall and Boundary Fence Wall; and
- Construction Works for Site-wise Drainage.

Environmental Monitoring and Audit Progress

A summary of the monitoring activities undertaken in this reporting period is listed below:

- | | |
|---------------------------------------|---------|
| • Joint Environmental Site Inspection | 5 times |
| • Landscape & Visual Monitoring | 2 times |

Waste Management

Waste generated from this Project includes inert construction and demolition (C&D) materials (public fill) and non-inert C&D materials (construction wastes).

Inert C&D materials (public fill) include bricks, concrete, building debris, rubble and excavated spoil. In total, 3,186.37 tonnes of inert C&D material were generated from the Project, of which 98.37 tonnes were reused in this Contract. The 3,088.00 tonnes of inert C&D material were disposed of as public fill to the Fill Banks at Tuen Mun Area 38 and Tseung Kwan O Area 137.

Non-inert C&D materials (construction wastes) include metals, paper / cardboard packaging waste, plastics and other wastes such as general refuse. 51,230.00 kg of metals, 77.00 kg of papers/ cardboard packing and 0.00 kg of plastics were sent to recyclers for recycling during the reporting period. 37.63 tonnes of general refuse was disposed as landfill.

255.00 L of chemical waste was collected by licenced waste collector and sent to West New Territories (WENT) Landfill.

Environmental Site Inspection

Five weekly joint environmental site inspections were carried out by the representatives of the Contractor, SOR and the Environmental Team (ET). The IEC was also present at the joint inspection on 20 April 2016. Details of the audit findings and implementation status of the mitigation measures are presented in *Section 6.1*.

Landscape & Visual

Onsite inspections on landscape and visual mitigation measures were performed on 8 and 20 April 2016. Details of the audit findings and implementation status of the mitigation measures are presented in *Sections 6.2*.

Environmental Exceedance/Non-conformance/Compliant/Summons and Prosecution

No exceedance was recorded during the reporting period.

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

No environmental complaint and summon/prosecution was received in this reporting period.

Future Key Issues

Works to be undertaken in the next reporting month include:

- Superstructure, Construction and Raft Foundation Works for Building 1;
- Construction and Superstructure Works for Building 2;
- Excavation, Raft Foundation and Superstructure Works for Building 3;
- Erection Works for AD Tank;
- Construction Works for Boundary Wall and Boundary Fence Wall; and
- Construction Works for Site-wise Drainage.

Environmental impacts arising from the above construction activities are mainly associated with dust, construction noise, site runoffs, waste management and landscaping issues.

1 INTRODUCTION

ERM-Hong Kong, Limited (ERM) was appointed by OSCAR Bioenergy Joint Venture (the Contractor) as the Environmental Team (ET) to undertake the Environmental Monitoring and Audit (EM&A) programme for the *Contract No. EP/SP/61/10 of Organic Waste Treatment Facilities Phase I (the Project)*.

1.1 PURPOSE OF THE REPORT

This is the 11th EM&A report which summarises the monitoring results and audit findings for the EM&A programme during the reporting period from 1 to 30 April 2016.

1.2 STRUCTURE OF THE REPORT

The structure of the report is as follows:

Section 1: **Introduction**

It details the scope and structure of the report.

Section 2: **Project Information**

It summarises the background and scope of the Project, site description, project organization, construction programme, construction works undertaken and status of the Environmental Permits (EP)/licences over the construction phase of the Project.

Section 3: **Environmental Monitoring Requirements**

It summarises the environmental monitoring requirements including monitoring parameters, programmes, methodologies, frequency, locations, Action and Limit Levels, Event/ Action Plans, environmental mitigation measures as recommended in the EM&A Manual and approved EIA report.

Section 4: **Implementation Status on Environmental Mitigation Measures**

It summarises the implementation of environmental protection measures during the reporting period.

Section 5: **Waste Management**

It summarises the quantity of public fill and construction waste generated in the reporting period

Section 6: **Environmental Site Inspection**

It summarises the audit findings of the weekly site inspections undertaken within the reporting period.

Section 7: **Environmental Non-conformance**

It summarises any exceedance of environmental performance standard, environmental complaints and summons received within the reporting period.

Section 8: **Further Key Issues**

It summarises the impact forecast and monitoring schedule for the next reporting month.

Section 9: **Conclusions**

2.1**BACKGROUND**

The Organic Waste Treatment Facilities (OWTF) Phase I development (hereinafter referred to as “the Project”) is to design, construct and operate a biological treatment facility with a capacity of about 200 tonnes per day and convert source-separated organic waste from commercial and industrial sectors (mostly food waste) into compost and biogas through proven biological treatment technologies.

The environmental acceptability of the construction and operation of the Project had been confirmed by findings of the associated Environmental Impact Assessment (EIA) Study completed in 2009. The Director of Environmental Protection approved this EIA Report under the Environmental Impact Assessment Ordinance (EIAO) (Cap. 499) in February 2010 (Register No.: AEIAR-149/2010) (hereafter referred to as the approved EIA Report). Subsequent Report on Re-assessment on Environmental Implications and Report on Re-assessment on Hazard to Life Implications were completed in 2013, respectively.

An Environmental Permit (EP) (No. EP-395/2010) was issued by the Environmental Protection Department (EPD) to the EPD, the Permit Holder, on 21 June 2010 and varied on 18 March 2013 (No. EP-395/2010/A) and 21 May 2013 (No. EP-395/2010/B), respectively. The Design Build and Operate Contract for the OWTF (Contract No. EP/SP/61/10 Organic Waste Treatment Facilities Phase I (the Contract)) was awarded to SITA Waste Services Limited, ATAL Engineering Limited and Ros-Roca, Sociedad Anonima jointly trading as the OSCAR Bioenergy Joint Venture (OSCAR or the Contractor). A Further EP (No. FEP-01/395/2010/B) was issued by the EPD to the OSCAR on 16 February 2015. Variation to both EPs No. EP-395/2010/B and No. FEP-01/395/2010/B were made in December 2015. The latest EPs, No. EP-395/2010/C and No. FEP-01/395/2010/C, were issued by the EPD on 21 December 2015.

Under the requirements of Condition 5 of the EP (No. FEP-01/395/2010/C), an Environmental Monitoring and Audit (EM&A) programme as set out in the Agreement No. CE7/2008 (EP) EM&A Manual (hereinafter referred to as EM&A Manual) is required to be implemented. ERM-Hong Kong, Ltd (ERM) has been appointed by OSCAR as the Environmental Team (ET) to undertake the EM&A programme for the Contract.

The construction works commenced on 21 May 2015 and are scheduled for completion by April 2017.

2.2**GENERAL SITE DESCRIPTION**

The Project Site is located at Siu Ho Wan in North Lantau with an area of about 2 hectares. The layout of the Project Site is illustrated in *Annex A*.

2.3 CONSTRUCTION ACTIVITIES

A summary of the major construction activities undertaken in the reporting period is shown in *Table 2.1*. The locations of the construction activities are shown in *Annex B*. The construction programme of the Project is presented in *Annex C*.

Table 2.1 *Summary of Construction Activities Undertaken in the Reporting Period*

Construction Activities Undertaken
<ul style="list-style-type: none"> • Construction and Raft Foundation Works for Building 1; • Construction and Superstructure Works for Building 2; • Excavation, Raft Foundation and Superstructure Works for Building 3; • Erection Works for AD Tank; • Excavation, Raft Foundation and Superstructure Works for Biogas Holder and Biogas Plant • Installation Works for Ammonia Stripping Plant • Construction Works for Boundary Wall and Boundary Fence Wall; and • Construction Works for Site-wise Drainage.

2.4 PROJECT ORGANISATION AND MANAGEMENT STRUCTURE

The project organisation chart and contact details are shown in *Annex D*.

2.5 STATUS OF ENVIRONMENTAL APPROVAL DOCUMENTS

A summary of the valid permits, licences, and/or notifications on environmental protection for this Project is presented in *Table 2.2*.

Table 2.2 *Summary of Environmental Licensing, Notification and Permit Status*

Permit/ Licences/ Notification	Reference	Validity Period	Remarks
Environmental Permit	FEP-01/395/2010/C	Throughout the Contract	Permit granted on 21 December 2015
Notification of Construction Works under the Air Pollution Control (Construction Dust) Regulation	Ref No. 386715	Throughout the Contract	-
Effluent Discharge License	WT00021482-2015	21 May 2015 - 31 May 2020	Approved on 21 May 2015
Construction Noise Permit	GW-RW0001-16	15 January 2016 - 14 July 2016	Permit granted on 4 January 2016
Chemical Waste Producer Registration	WPN 5213-961-O2231-01	Throughout the Contract	Approved on 29 April 2015
Waste Disposal Billing Account	Account number: 702310	Throughout the Contract	-

ENVIRONMENTAL MONITORING REQUIREMENT, ENVIRONMENTAL MITIGATION MEASURES

All the relevant environmental mitigation measures listed in the EIA Report and EM&A Manual are summarised in *Annex E*.

According to the EM&A Manual and EP requirement, no air quality, noise and water quality monitoring is required.

Bi-weekly landscape and visual audit is required to ensure that the design, implementation and maintenance of landscape and visual mitigation measures recommended in the EIA Report are fully achieved.

IMPLEMENTATION STATUS ON ENVIRONMENTAL PROTECTION REQUIREMENTS

The Contractor has implemented environmental mitigation measures and requirements as stated in the approved EIA Report and EM&A Manual. The implementation status of the measures during the reporting period is summarised in *Annex E*.

Wastes generated from this Project include inert construction and demolition (C&D) materials (public fill) and non-inert C&D materials (construction waste). Construction waste comprises general refuse, metals and paper/cardboard packaging materials. Metals generated from the Project are also grouped into construction waste as the materials were not disposed of with others at public fill. Reference has been made to the Monthly Summary Waste Flow Table prepared by the Contractor (see *Annex F*). With reference to the relevant handling records and trip tickets of this Project, the quantities of different types of waste generated in the reporting month are summarised in *Table 5.1*.

Table 5.1 *Quantities of Waste Generated from the Project*

Month/Year	Quantity			
	Total Inert C&D Materials Generated ^(a)	Non-inert C&D Materials ^(b)		
		C&D Materials Recycled ^(c)	C&D Waste Disposed of at Landfill ^(d)	Chemical Waste
April 2016	3,186.37 tonnes	51,307.00 kg	37.63 tonnes	255.00 L

Notes:

- (a) Inert C&D materials (public fill) include bricks, concrete, building debris, rubble and excavated spoil. In total, 3,186.37 tonnes of inert C&D material were generated from the Project, of which 98.37 tonnes were reused in this Contract and the 3,088.00 tonnes were disposed as public fill to Fill Banks at Tuen Mun Area 38 and Tseung Kwan O Area 137. The detailed waste flow is presented in *Annex F*.
- (b) Non-inert C&D materials (construction wastes) include metals, paper / cardboard packaging waste, plastics and other wastes such as general refuse. Metals generated from the Project were grouped into construction wastes as the materials were not disposed of with others at the public fill.
- (c) 51,230.00 kg of metals, 77.00 kg of papers/ cardboard packing and 0.00 kg of plastics were sent to recyclers for recycling during the reporting period.
- (d) Construction wastes other than metals, paper/cardboard packaging, plastics and chemicals were disposed of at NENT Landfill by subcontractors.

6.1 WEEKLY SITE AUDITS

Joint site inspections were conducted by representatives of the Contractor, the ER, IC and the ET on 1, 8, 15, 20 and 29 April 2016. The IEC was also present at the joint inspection on 20 April 2016. Follow-up actions resulting from the last site inspections were taken as reported by the Contractor and their results were observed in the site inspections conducted in the reporting period.

Key observations during the reporting period are summarised as follows:

1 April 2016

- Stagnant water was found in the well near Building 2 area. The Contractor was reminded to apply Parricidal oil to the stagnant water.
- A chemical container without drip tray was found near the AD Tank area. The Contractor was reminded to provide a drip tray for the chemical container or place the chemical container in the chemical waste storage area.

8 April 2016

- A chemical container was found in the trash skip near Building 1 area. The Contractor was reminded to place the chemical container in the chemical waste storage area.

15 April 2016

- General refuse was found in Building 1 raft foundation area. The Contractor was reminded to clear the refuse regularly.

20 April 2016

- Dust screen at the piling area near the east boundary was pulled up. The Contractor was reminded to ensure the dust screen at the site boundary is enclosing the site properly.

29 April 2016

- Stagnant water was found inside the water-barriers. The Contractor was reminded to check the water-barrier in the site and clear the stagnant water, if possible, or apply Parricidal oil to the stagnant water.
- Stagnant water was found in the wells near Building 2 area. The Contractor was reminded to pump out stagnant water, if possible, or apply Parricidal oil to the stagnant water.

6.2

LANDSCAPE AND VISUAL AUDIT

In accordance with the EM&A Manual, bi-weekly landscape and visual

inspection is required to ensure that the design, implementation and maintenance of landscape and visual mitigation measures recommended in the EIA Report are fully achieved. Onsite inspections of the landscape and visual mitigation measures were performed on 8 and 20 April 2016.

Follow-up actions resulting from the last site inspections were taken as reported by the Contractor and their results were observed in the site inspections conducted in the reporting period.

It was confirmed that the necessary landscape and visual mitigation measures as summarised in *Annex E* were generally implemented by the Contractor. No specific observation was found during site inspection on 8 and 20 April 2016.

7 ENVIRONMENTAL NON-CONFORMANCE

7.1 SUMMARY OF ENVIRONMENTAL NON-COMPLIANCE

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

7.2 SUMMARY OF ENVIRONMENTAL COMPLAINT

No complaint was received during the reporting period. The cumulative environmental complaint log is shown in *Annex G*.

7.3 SUMMARY OF ENVIRONMENTAL SUMMON AND SUCCESSFUL PROSECUTION

No summon/prosecution was received during the reporting period. The cumulative summons/prosecution log is shown in *Annex G*.

8 FUTURE KEY ISSUES

8.1 KEY ISSUES FOR THE COMING MONTH

Works to be undertaken for the coming monitoring period are summarised in *Table 8.1*.

Table 8.1 Construction Works to be undertaken in the Next Reporting Period

Construction Activities Undertaken

- Superstructure, Construction and Raft Foundation Works for Building 1;
 - Construction and Superstructure Works for Building 2;
 - Excavation, Raft Foundation and Superstructure Works for Building 3;
 - Erection Works for AD Tank;
 - Construction Works for Boundary Wall and Boundary Fence Wall; and
 - Construction Works for Site-wise Drainage.
-

Potential environmental impacts arising from the above construction activities will be mainly associated with dust, construction noise, site runoffs, waste management and landscaping issues.

8.2 CONSTRUCTION PROGRAMME

The most up-to-date construction programme for the Project is presented in *Annex C*.

CONCLUSIONS

This EM&A Report presents the EM&A programme undertaken during the reporting period from 1 April 2016 to 30 April 2016 in accordance with EM&A Manual and requirements of EP (FEP-01/395/2010/C).

No air quality, noise and water quality monitoring is required.

Bi-weekly landscape and visual monitoring was conducted in the reporting period. The necessary landscape and visual mitigation measures recommended in the EIA Report were generally implemented by the Contractor.

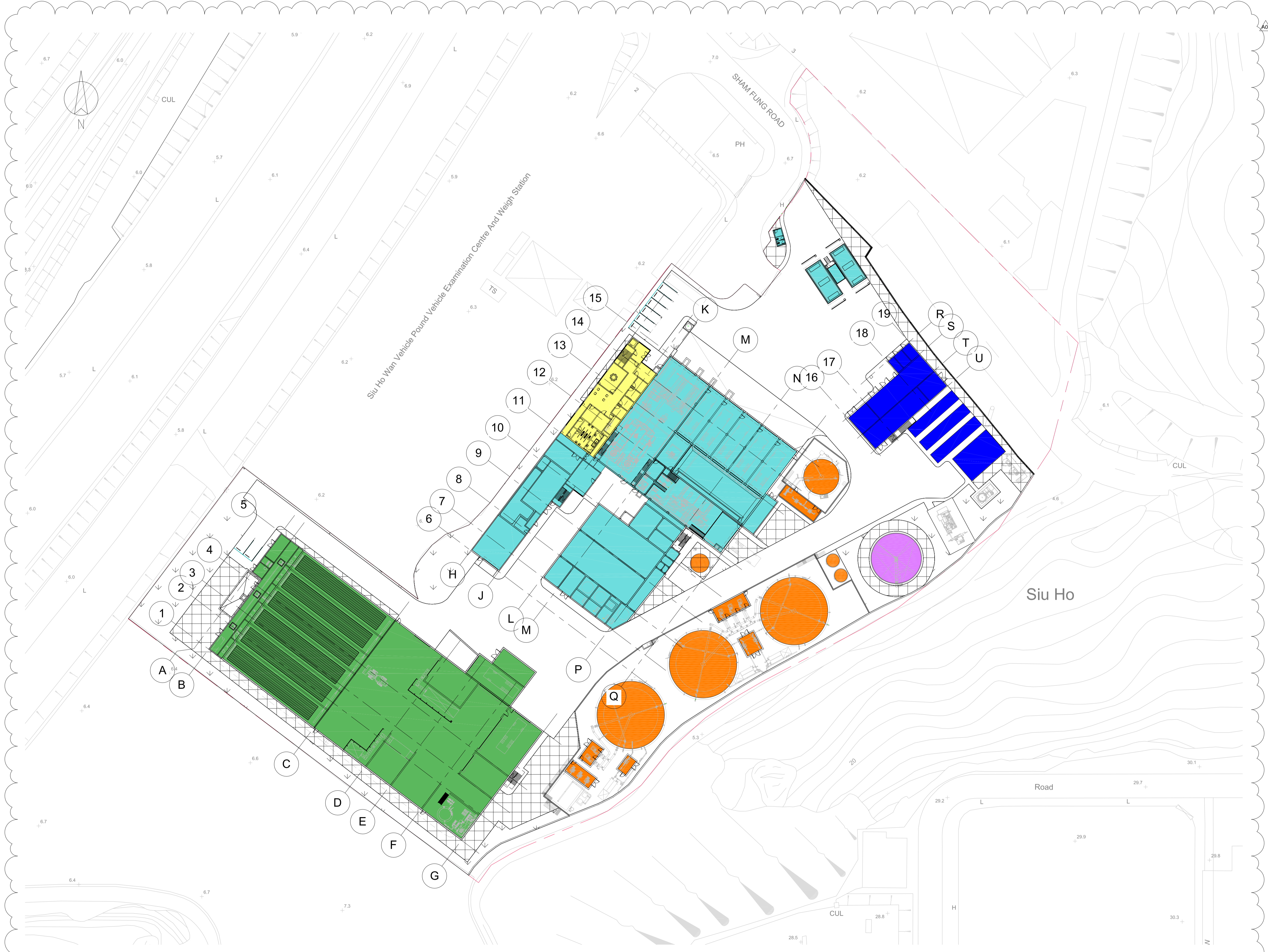
No non-compliance event was recorded during the reporting period.

No complaint and summons/prosecution was received during the reporting period.

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

Annex A


Project Layout



A01	05/03/15	CW	MB	IMTECH BACKGROUNDS UPDATED
A00	18/02/15	CW	MB	DRAFT ISSUE
REV	DATE	BY	APP	DESCRIPTION

CLIENT
 ENVIRONMENTAL PROTECTION DEPARTMENT
 GOVERNMENT OF THE HKSAR

CLIENT'S CONSULTANT
 **AECOM**
 AECOM ASIA CO. LTD.

CONTRACTOR
   
 OSCAR BIOENERGY JV

LEAD DESIGNER
 **ARUP**
 Ove Arup & Partners Hong Kong Limited

ENVIRONMENTAL TEAM
 **ERM**
 ERM HONG KONG LIMITED

INDEPENDENT CONSULTANTS
 **MEINHARDT**
 Meinhardt Infrastructure and Environment Limited
 邁達基建環保工程顧問有限公司

PROJECT
 ORGANIC WASTE TREATMENT FACILITIES
 PHASE 1
 EP/SP/61/10

STATUS
 DRAFT ISSUE

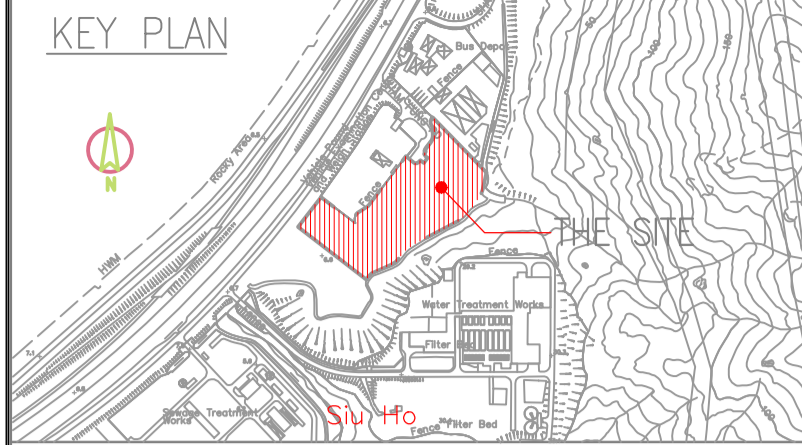
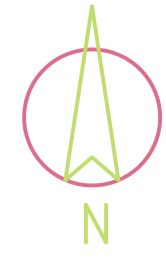
DRAWING TITLE
 SITE LAYOUT

DRAWN	CW	CHECKED	RS	APPROVED	DP
SCALE	1:500@A1 / 1:1000@A3		DATE	12/02/15	
JOB NO.	239956	DRAWING NO.	DR-OAP-20-0-CA-1001	REV.	A01

Plot Time: 05/03/15 21:20:07
 Plot Location: C:\Users\mathew.brown\Documents\QWTF_Architectural Working Model (Combined) - CEH_mathew.brown.rvt

Annex B


Works Location



LEGEND

—	SITE BOUNDARY
T T T T T	PROPOSED HOARDING TYPE 1
+++++	EXISTING CHAIN-LINK FENCE
~~~~~	PROPOSED 6 m TYPE II SHEET PILE PLANKING WALL WITH 3 m EXTRUDED ABOVE GROUND
XXXXX	EXISTING FENCE WALL
---	DISCHARGE DRAINAGE
→	300mm(W) PROPOSED TEMP. CHANNEL
→	300mm(W) EXISTING U-CHANNEL
⊠	PROPOSED TEMP. CATCH PIT
—	PORTABLE WATER PIPE
—	PORTABLE WATER TAPE
→	TRAFFIC DIRECTION
▨	REBAR STORAGE AREA AND BENDING YARD
▨	GENERAL MATERIAL STORAGE AREA
▨	C & D MATERIAL STORAGE AREA
▨	VEHICLE WHEEL WASH
▨	WATER TREATMENT PLANT


REV	DATE	BY	APP	DESCRIPTION
H	21 DEC 2015	LL	JC	REVISED LAYOUT
G	30 MAY 2015	LL	CL	REVISED LAYOUT
F	22 MAY 2015	LL	CL	REVISED LAYOUT
E	29 APR 2015	LL	CL	REVISED LAYOUT

CLIENT  
 ENVIRONMENTAL PROTECTION DEPARTMENT  
 GOVERNMENT OF THE HKSAR

CLIENT'S CONSULTANT  
 **AECOM**  
 AECOM ASIA CO. LTD.

CONTRACTOR  
 **SUEZ ATAL RosRoca**  
 OSCAR Bioenergy Joint Venture

LEAD DESIGNER  
 **ARUP**  
 Ove Arup & Partners Hong Kong Limited

ENVIRONMENTAL TEAM  
 **ERM**  
 ERM HONG KONG LIMITED

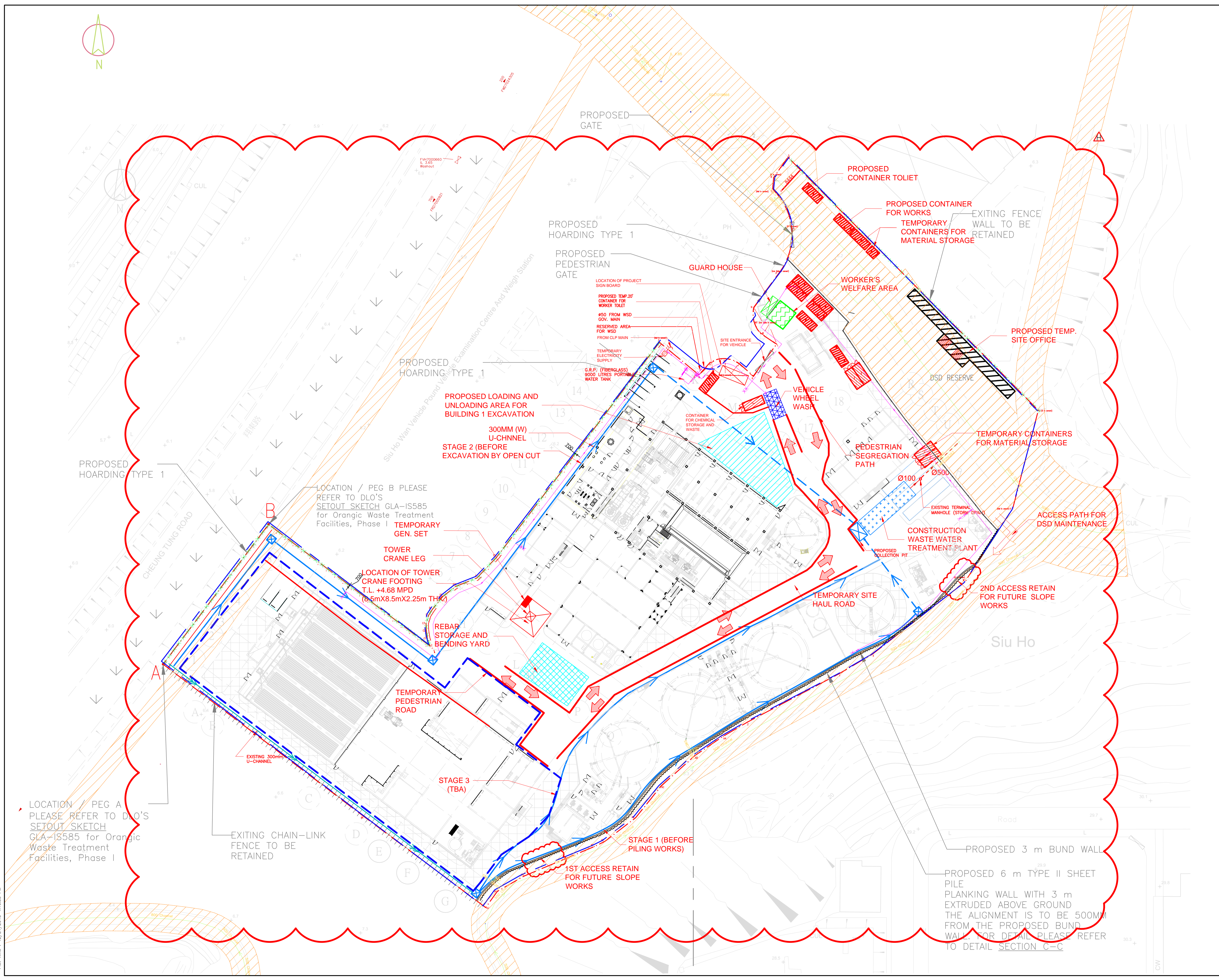
INDEPENDENT CONSULTANTS  
 **MEINHARDT**  
 Meinhardt Infrastructure and Environment Limited  
 邁進基達環境工程顧問有限公司

PROJECT  
 ORGANIC WASTE TREATMENT FACILITIES  
 PHASE I  
 EP/SP/61/10

STATUS  
 ISSUED FOR COMMENT

DRAWING TITLE  
**GENERAL SITE LAYOUT PLAN  
 AT PORTION 1**

DRAWN LL	CHECKED CL	APPROVED CL
SCALE 1:500@A1; 1:1000@A3	DATE 21 DEC 2015	
JOB NO. P00424	DRAWING NO. DR-PSC-00-0-CN-1002	REV. H



Plot By: lml/AM  
 Plot Time: 12/21/2015 4:16:35 PM



Annex C

## Construction Programme of the Project



Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	2015												2016												2017											
						Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
<b>Contract No. EP/SP/61/10 - The Design &amp; Construction Works</b>																																									
<b>LETTER OF ACCEPTANCE</b>																																									
KD100200 LETTER OF ACCEPTANCE						LETTER OF ACCEPTANCE																																			
<b>MAJOR MILESTONES</b>																																									
<b>MC1 Milestones for Preliminaries and General Requirements</b>																																									
MC110100	MC1.1 - Substantial Completion of ER & IC Accommodation	0d	19-Nov-14 A	13-Oct-17	0d	◆ MC1.1 - Substantial Completion of ER & IC Accommodation																																			
MC110200	MC1.2 - Joint signing of IC Agreement	0d	19-Nov-14 A	19-Nov-14 A	0d	◆ MC1.2 - Joint signing of IC Agreement																																			
MC110300	MC1.3 - Employer's consent granted on draft Contractor's Plans	0d	19-Nov-14 A	19-Nov-14 A	0d	◆ MC1.3 - Employer's consent granted on draft Contractor's Plans																																			
<b>MC2 Milestones for Design of the Works</b>																																									
<b>MC2.1 The Employer's consent granted on Detailed Design Submission</b>																																									
MC210100	MC2.1.1 - Employer's consent granted in respect of Detailed Design of Waste Receiving & Pre-treatment System	0d	28-Oct-15 A	17-Jun-16	-92d	◆ MC2.1.1 - Employer's consent granted in respect of Detailed Design of Waste Receiving & Pre-treatment System																																			
MC210200	MC2.1.2 - Employer's consent granted in respect of Detailed Design of Anaerobic Digestion Treatment System	0d	28-Oct-15 A	17-Jun-16	-92d	◆ MC2.1.2 - Employer's consent granted in respect of Detailed Design of Anaerobic Digestion Treatment System																																			
MC210300	MC2.1.3 - Employer's consent granted in respect of Detailed Design of Biogas treatment & CHP Generation System	0d	28-Oct-15 A	17-Jun-16	-92d	◆ MC2.1.3 - Employer's consent granted in respect of Detailed Design of Biogas treatment & CHP Generation System																																			
MC210400	MC2.1.4 - Employer's consent granted in respect of Detailed Design of Composting System	0d	28-Oct-15 A	17-Jun-16	-92d	◆ MC2.1.4 - Employer's consent granted in respect of Detailed Design of Composting System																																			
MC210500	MC2.1.5 - Employer's consent granted in respect of Detailed Design of CAPCS & WWTS	0d	28-Oct-15 A	17-Jun-16	-92d	◆ MC2.1.5 - Employer's consent granted in respect of Detailed Design of CAPCS & WWTS																																			
MC210600	MC2.1.6 - Employer's consent granted in respect of Detail Design of control & instrumentation works	0d	28-Oct-15 A	17-Jun-16	-92d	◆ MC2.1.6 - Employer's consent granted in respect of Detail Design of control & instrumentation works																																			
MC210700	MC2.1.7 - Employer's consent granted in respect of building services & electrical works	0d	28-Oct-15 A	17-Jun-16	-92d	◆ MC2.1.7 - Employer's consent granted in respect of building services & electrical works																																			
MC210800	MC2.1.8 - Employer's consent granted in respect of Detailed Design of civil, structural & geotechnical works	0d	28-Oct-15 A	17-Jun-16	-92d	◆ MC2.1.8 - Employer's consent granted in respect of Detailed Design of civil, structural & geotechnical works																																			
MC210900	MC2.1.9 - Employer's consent granted in respect of Detailed Design of architectural & landscape works	0d	28-Oct-15 A	17-Jun-16	-92d	◆ MC2.1.9 - Employer's consent granted in respect of Detailed Design of architectural & landscape works																																			
<b>MC2.2 Completion of the Design of the Works</b>																																									
MC220100	MC2.2 - Completion of the Design of the Works	0d	17-Jun-16	17-Jun-16	-92d	◆ MC2.2 - Completion of the Design of the Works																																			
<b>MC3 Milestones for Construction of the Works</b>																																									
<b>MC3.1 Construction of Civil and Structural Works</b>																																									
MC310100	MC3.1.1 - Completion of site formation	0d	22-Jul-15 A	14-Sep-17	-146d	◆ MC3.1.1 - Completion of site formation																																			
MC310200	MC3.1.2 - Completion of 50% of piling works	183d	22-Jul-15 A	03-Jan-17	61d	◆ MC3.1.2 - Completion of 50% of piling works																																			
MC310300	MC3.1.3 - Completion of 100% of piling works	183d	22-Jul-15 A	03-Jan-17	61d	◆ MC3.1.3 - Completion of 100% of piling works																																			
MC310400	MC3.1.4 - Completion of 50% of superstructure works	0d	22-Jul-15 A	03-Jan-17	61d	◆ MC3.1.4 - Completion of 50% of superstructure works																																			
MC310500	MC3.1.5 - Completion of 80% of superstructure works	0d	22-Jul-15 A	03-Jan-17	61d	◆ MC3.1.5 - Completion of 80% of superstructure works																																			
MC310600	MC3.1.6 - Completion of 100% of superstructure works	0d	22-Jul-15 A	03-Jan-17	61d	◆ MC3.1.6 - Completion of 100% of superstructure works																																			
MC310700	MC3.1.7 - Completion of 100% of drainage, road and geotechnical works	0d	22-Jul-15 A	03-Jan-17	61d	◆ MC3.1.7 - Completion of 100% of drainage, road and geotechnical works																																			
<b>MC3.2 Delivery of Materials and Equipment to the Site</b>																																									
MC320100	MC3.2.1 - Completion of Delivery of Pre-treatment System	99d	29-Apr-16	29-Aug-16	5d	◆ MC3.2.1 - Completion of Delivery of Pre-treatment System																																			
MC320200	MC3.2.2 - Completion of Delivery of Anaerobic Digesters	99d	29-Apr-16	29-Aug-16	5d	◆ MC3.2.2 - Completion of Delivery of Anaerobic Digesters																																			
MC320300	MC3.2.3 - Completion of Delivery of Combined Heat and Power Units	0d	29-Apr-16	29-Aug-16	5d	◆ MC3.2.3 - Completion of Delivery of Combined Heat and Power Units																																			
MC320400	MC3.2.4 - Completion of Delivery of Composting Tunnels	0d	29-Apr-16	29-Aug-16	5d	◆ MC3.2.4 - Completion of Delivery of Composting Tunnels																																			
MC320500	MC3.2.5 - Completion of Delivery of Centralized Air Pollution Control System	0d	29-Apr-16	29-Aug-16	5d	◆ MC3.2.5 - Completion of Delivery of Centralized Air Pollution Control System																																			
MC320600	MC3.2.6 - Completion of Delivery of Wastewater Treatment System	0d	29-Apr-16	29-Aug-16	5d	◆ MC3.2.6 - Completion of Delivery of Wastewater Treatment System																																			
<b>MC3.3 Equipment and System Installations</b>																																									
MC330100	MC3.3.1 - Completion of Waste Receiving, Storage and Feeding System & Pre-treatment System	132d	25-Nov-16	12-May-17	-92d	◆ MC3.3.1 - Completion of Waste Receiving, Storage and Feeding System & Pre-treatment System																																			
MC330200	MC3.3.2 - Completion of Anaerobic Digestion Treatment System	132d	25-Nov-16	12-May-17	-92d	◆ MC3.3.2 - Completion of Anaerobic Digestion Treatment System																																			
MC330300	MC3.3.3 - Completion of Biogas Cleaning and Storage System	0d	01-Mar-17	01-Mar-17	-133d	◆ MC3.3.3 - Completion of Biogas Cleaning and Storage System																																			
MC330400	MC3.3.4 - Completion of Heat Recovery and Power Generation System	0d	09-Feb-17	09-Feb-17	-55d	◆ MC3.3.4 - Completion of Heat Recovery and Power Generation System																																			
MC330500	MC3.3.5 - Completion of Composting System	0d	21-Jan-17	21-Jan-17	-53d	◆ MC3.3.5 - Completion of Composting System																																			
MC330600	MC3.3.6 - Completion of Centralized Air Pollution Control System	0d	25-Nov-16	12-May-17	-92d	◆ MC3.3.6 - Completion of Centralized Air Pollution Control System																																			
MC330700	MC3.3.7 - Completion of Wastewater Treatment System	0d	06-Mar-17	06-Mar-17	-40d	◆ MC3.3.7 - Completion of Wastewater Treatment System																																			
MC330800	MC3.3.8 - Completion of control and instrumentation works	0d	30-Dec-16	30-Dec-16	-109d	◆ MC3.3.8 - Completion of control and instrumentation works																																			
MC330900	MC3.3.9 - Completion of building services works & electrical works	0d	18-Feb-17	18-Feb-17	-124d	◆ MC3.3.9 - Completion of building services works & electrical works																																			
<b>MC3.4 Architectural and Landscape works</b>																																									
MC340100	MC3.4 - Completion of architectural and landscape works	0d	22-May-17	22-May-17	-49d	◆ MC3.4 - Completion of architectural and landscape works																																			
<b>MC3.5 Testing and Commissioning</b>																																									
MC3.5 Testing and Commissioning						100d 18-May-17 14-Sep-17 -146d																																			

















Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	2015												2016												2017											
						Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
<b>Man-made Slope</b>																																									
DD101460	Prepare & submit Design of Manmade Slope to GEO	87d	01-Mar-16	17-Jun-16	88d	■ Prepare & submit Design of Manmade Slope to GEO																																			
DD101470	Prepare & submit Manmade Slope Method of Construction	20d	01-Mar-16	30-Mar-16	-60d	■ Prepare & submit Manmade Slope Method of Construction																																			
DD101475	IC checks & certifies Method of Construction of Manmade Slope Design	14d	29-Apr-16	12-May-16	143d	■ IC checks & certifies Method of Construction of Manmade Slope Design																																			
DD101480	GEO - Approval of Manmade Slope Design	0d		28-Apr-16	-60d	◆ GEO - Approval of Manmade Slope Design																																			
DD101500	Submit Manmade Slope Design to IC, ER & Employer	0d		29-Apr-16	-60d	◆ Submit Manmade Slope Design to IC, ER & Employer																																			
DD101520	IC checks & comments on Manmade Slope Design	14d	30-Apr-16	13-May-16	-92d	■ IC checks & comments on Manmade Slope Design																																			
DD101540	Revise & resubmit Manmade Slope Design to IC, Employer & ER	7d	14-May-16	20-May-16	-92d	■ Revise & resubmit Manmade Slope Design to IC, Employer & ER																																			
DD101560	IC checks & certifies Manmade Slope Design	14d	21-May-16	03-Jun-16	-92d	■ IC checks & certifies Manmade Slope Design																																			
DD101580	Employer consents to Manmade Slope Design	0d		17-Jun-16	-92d	◆ Employer consents to Manmade Slope Design																																			
<b>Waste Receiving, Pre-treatment &amp; Administration Building #1</b>																																									
<b>Raft Footing and Substructure Design</b>																																									
DD111000	Prepare & submit Detailed Substructure Design of Bldg #1 to IC, ER & Employer	0d	13-Apr-15 A	20-Jul-15 A		■ Prepare & submit Detailed Substructure Design of Bldg #1 to IC, ER & Employer																																			
DD111010	Prepare & submit Method of Construction for Substructure of Bldg #1	20d	23-Nov-15 A	17-Feb-16	403d	■ Prepare & submit Method of Construction for Substructure of Bldg #1																																			
DD111015	IC checks & certifies Method of Construction of Detailed Substructure Design of Bldg #1	14d	18-Feb-16	02-Mar-16	590d	■ IC checks & certifies Method of Construction of Detailed Substructure Design of Bldg #1																																			
DD111020	IC checks & comments on Detailed Substructure Design of Bldg #1	0d	21-Jul-15 A	11-Aug-15 A		■ IC checks & comments on Detailed Substructure Design of Bldg #1																																			
DD111040	Revise & resubmit Detailed Substructure Design of Bldg #1 to IC, Employer & ER	0d	12-Aug-15 A	28-Aug-15 A		■ Revise & resubmit Detailed Substructure Design of Bldg #1 to IC, Employer & ER																																			
DD111060	IC checks & certifies Detailed Substructure Design of Bldg #1	0d	29-Aug-15 A	31-Dec-15 A		■ IC checks & certifies Detailed Substructure Design of Bldg #1																																			
DD111080	Employer consents to Detailed Substructure Design of Bldg #1	0d		15-Feb-16	606d	◆ Employer consents to Detailed Substructure Design of Bldg #1																																			
<b>Superstructure Design</b>																																									
DD111100	Prepare & submit Detailed Superstructure Design of Bldg #1 to IC, ER & Employer	0d	04-Jun-15 A	11-Mar-16	-130d	■ Prepare & submit Detailed Superstructure Design of Bldg #1 to IC, ER & Employer																																			
DD111110	Prepare & submit Method of Construction for Superstructure of Bldg #1	16d	18-Jan-16	11-Feb-16	-112d	■ Prepare & submit Method of Construction for Superstructure of Bldg #1																																			
DD111115	IC checks & certifies Method of Construction of Detailed Superstructure Design of Bldg #1	14d	12-Feb-16	25-Feb-16	-168d	■ IC checks & certifies Method of Construction of Detailed Superstructure Design of Bldg #1																																			
DD111120	IC checks & comments on Detailed Superstructure Design of Bldg #1	0d	27-Nov-15 A	10-Dec-15 A		■ IC checks & comments on Detailed Superstructure Design of Bldg #1																																			
DD111140	Revise & resubmit Detailed Superstructure Design of Bldg #1 to IC, Employer & ER	33d	11-Dec-15 A	19-Feb-16	-159d	■ Revise & resubmit Detailed Superstructure Design of Bldg #1 to IC, Employer & ER																																			
DD111160	IC checks & certifies Detailed Superstructure Design of Bldg #1	7d	20-Feb-16	26-Feb-16	-159d	■ IC checks & certifies Detailed Superstructure Design of Bldg #1																																			
DD111180	Employer consents to Detailed Superstructure Design of Bldg #1	0d		11-Mar-16	-159d	◆ Employer consents to Detailed Superstructure Design of Bldg #1																																			
<b>Steelwork Design</b>																																									
<b>Building #1 Roof Steel Structure</b>																																									
DD111200	Prepare & submit Detailed Design of Bldg #1 Roof - Structural Steelwork to IC, ER & Employer	39d	01-Feb-16	31-Mar-16	-110d	■ Prepare & submit Detailed Design of Bldg #1 Roof - Structural Steelwork to IC, ER & Employer																																			
DD111210	Prepare & submit Method of Construction for Bldg #1 Roof - Structural Steelwork	25d	24-Feb-16	31-Mar-16	-91d	■ Prepare & submit Method of Construction for Bldg #1 Roof - Structural Steelwork																																			
DD111215	IC checks & certifies Method of Construction of Bldg #1 Roof - Structural Steelwork	14d	01-Apr-16	14-Apr-16	-136d	■ IC checks & certifies Method of Construction of Bldg #1 Roof - Structural Steelwork																																			
DD111220	IC checks & comments on Detailed Design of Bldg #1 Roof - Structural Steelwork	14d	01-Apr-16	14-Apr-16	-164d	■ IC checks & comments on Detailed Design of Bldg #1 Roof - Structural Steelwork																																			
DD111240	Revise & resubmit Detailed Design of Bldg #1 Roof - Structural Steelwork to IC, Employer & ER	7d	15-Apr-16	21-Apr-16	-164d	■ Revise & resubmit Detailed Design of Bldg #1 Roof - Structural Steelwork to IC, Employer & ER																																			
DD111260	IC checks & certifies Detailed Design of Bldg #1 Roof - Structural Steelwork	7d	22-Apr-16	28-Apr-16	-164d	■ IC checks & certifies Detailed Design of Bldg #1 Roof - Structural Steelwork																																			
DD111280	Employer consents to Detailed Design of Bldg #1 Roof - Structural Steelwork	0d		12-May-16	-164d	◆ Employer consents to Detailed Design of Bldg #1 Roof - Structural Steelwork																																			
<b>CAPC Stack</b>																																									
DD311300	Prepare & submit Detailed CAPC Stack - Steel Support Design to IC, ER & Employer	21d	26-Jan-16	29-Feb-16	-13d	■ Prepare & submit Detailed CAPC Stack - Steel Support Design to IC, ER & Employer																																			
DD311310	Prepare & submit Method of Construction for CAPC Stack - Steel Support	21d	26-Jan-16	26-Feb-16	75d	■ Prepare & submit Method of Construction for CAPC Stack - Steel Support																																			
DD311315	IC checks & certifies Method of Construction of CAPC Stack - Steel Support	14d	27-Feb-16	11-Mar-16	114d	■ IC checks & certifies Method of Construction of CAPC Stack - Steel Support																																			
DD311320	IC checks & comments on Detailed CAPC Stack - Steel Support Design	14d	29-Feb-16	13-Mar-16	-24d	■ IC checks & comments on Detailed CAPC Stack - Steel Support Design																																			
DD311340	Revise & resubmit Detailed CAPC Stack - Steel Support Design to IC, Employer & ER	7d	14-Mar-16	20-Mar-16	-24d	■ Revise & resubmit Detailed CAPC Stack - Steel Support Design to IC, Employer & ER																																			
DD311360	IC checks & certifies Detailed CAPC Stack - Steel Support Design	7d	21-Mar-16	27-Mar-16	-24d	■ IC checks & certifies Detailed CAPC Stack - Steel Support Design																																			
DD311380	Employer consents to Detailed CAPC Stack - Steel Support Design	0d		10-Apr-16	-24d	◆ Employer consents to Detailed CAPC Stack - Steel Support Design																																			
<b>Composting &amp; Maturation Building #2</b>																																									
<b>Raft Footing and Substructure Design</b>																																									
DD211000	Prepare & submit Detailed Substructure Design of Bldg #2 to IC, ER & Employer	0d	12-Mar-15 A	15-Oct-15 A		■ Prepare & submit Detailed Substructure Design of Bldg #2 to IC, ER & Employer																																			
DD211010	Prepare & submit Method of Construction for Substructure of Bldg #2	0d	12-Mar-15 A	28-Apr-15 A		■ Prepare & submit Method of Construction for Substructure of Bldg #2																																			
DD211015	IC checks & certifies Method of Construction of Substructure Design of Bldg #2	0d	24-Jun-15 A	15-Oct-15 A		■ IC checks & certifies Method of Construction of Substructure Design of Bldg #2																																			
DD211020	IC checks & comments on Detailed Substructure Design of Bldg #2	0d	29-Apr-15 A	12-May-15 A		■ IC checks & comments on Detailed Substructure Design of Bldg #2																																			
DD211040	Revise & resubmit Detailed Substructure Design of Bldg #2 to IC, Employer & ER	0d	13-May-15 A	24-Jun-15 A		■ Revise & resubmit Detailed Substructure Design of Bldg #2 to IC, Employer & ER																																			
DD211045	IC checks & comments on Detailed Substructure Design of Bldg #2	0d	25-Jun-15 A	06-Jul-15 A		■ IC checks & comments on Detailed Substructure Design of Bldg #2																																			
DD211050	Revise & resubmit Detailed Substructure Design of Bldg #2 to IC, Employer & ER	0d	07-Jul-15 A	03-Aug-15 A		■ Revise & resubmit Detailed Substructure Design of Bldg #2 to IC, Employer & ER																																			
DD211060	IC checks & certifies Detailed Substructure Design of Bldg #2	0d	04-Aug-15 A	18-Sep-15 A		■ IC checks & certifies Detailed Substructure Design of Bldg #2																																			
DD211080	Employer consents to Detailed Substructure Design of Bldg #2	0d		02-Oct-15 A		◆ Employer consents to Detailed Substructure Design of Bldg #2																																			















Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	2015												2016												2017											
						Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
<b>Digestate Dewatering System</b>																																									
0d 23-Feb-15 A 25-Nov-15 A																																									
DE163200	Prepare & make Digestate Dewatering Equipment & Performance Submission to IC, ER & Employer	0d	23-Feb-15 A	25-Nov-15 A		■ Prepare & make Digestate Dewatering Equipment & Performance Submission to IC, ER & Employer																																			
DE163250	IC checks & comments on Digestate Dewatering Equipment	0d	23-Feb-15 A	25-Nov-15 A		■ IC checks & comments on Digestate Dewatering Equipment																																			
DE163300	Revise & resubmit Digestate Dewatering Equipment to IC, Employer & ER	0d	23-Feb-15 A	16-Mar-15 A		■ Revise & resubmit Digestate Dewatering Equipment to IC, Employer & ER																																			
DE163350	IC checks & certifies Digestate Dewatering Equipment	0d	17-Mar-15 A	15-Apr-15 A		■ IC checks & certifies Digestate Dewatering Equipment																																			
DE163400	Employer consents to Digestate Dewatering Equipment	0d	25-Mar-15 A	08-Apr-15 A		◆ Employer consents to Digestate Dewatering Equipment																																			
DE163450	Employer consents to Digestate Dewatering Equipment	0d	09-Apr-15 A	15-Apr-15 A																																					
DE163450	Prepare & submit Detailed Design of Digestate Dewatering System to IC, ER & Employer	0d	10-Apr-15 A	08-Aug-15 A		■ Prepare & submit Detailed Design of Digestate Dewatering System to IC, ER & Employer																																			
DE163550	IC checks & comments on Detailed Design of Digestate Dewatering System	0d	09-Aug-15 A	12-Aug-15 A		■ IC checks & comments on Detailed Design of Digestate Dewatering System																																			
DE163600	Revise & resubmit Detailed Design of Digestate Dewatering System to IC, Employer & ER	0d	13-Aug-15 A	16-Oct-15 A		■ Revise & resubmit Detailed Design of Digestate Dewatering System to IC, Employer & ER																																			
DE163650	IC checks & certifies Digestate Dewatering System	0d	25-Sep-15 A	03-Nov-15 A		■ IC checks & certifies Digestate Dewatering System																																			
DE163700	Employer consents to Digestate Dewatering System	0d	25-Sep-15 A	03-Nov-15 A		◆ Employer consents to Digestate Dewatering System																																			
<b>Composting and Maturation System</b>																																									
0d 29-Dec-14 A 25-Nov-15 A																																									
DE160200	Prepare & make Composting & Maturation Equipment & Performance Submission to IC, ER & Employer	0d	29-Dec-14 A	25-Nov-15 A		■ Prepare & make Composting & Maturation Equipment & Performance Submission to IC, ER & Employer																																			
DE160250	IC checks & comments on Composting & Maturation Equipment	0d	29-Dec-14 A	25-Nov-15 A		■ IC checks & comments on Composting & Maturation Equipment																																			
DE160300	Revise & resubmit Composting & Maturation Equipment to IC, Employer & ER	0d	29-Dec-14 A	25-Nov-15 A		■ Revise & resubmit Composting & Maturation Equipment to IC, Employer & ER																																			
DE160350	IC checks & certifies Composting & Maturation Equipment	0d	28-Jan-15 A	03-Feb-15 A		■ IC checks & certifies Composting & Maturation Equipment																																			
DE160400	Employer consents to Composting & Maturation Equipment	0d	04-Feb-15 A	18-Feb-15 A		◆ Employer consents to Composting & Maturation Equipment																																			
DE160450	Employer consents to Composting & Maturation Equipment	0d	05-Oct-15 A	05-Oct-15 A																																					
DE160450	Prepare & submit Detailed Design of Composting System to IC, ER & Employer	0d	12-Mar-15 A	08-Aug-15 A		■ Prepare & submit Detailed Design of Composting System to IC, ER & Employer																																			
DE160500	IC checks & comments on Detailed Design of Composting System	0d	09-Aug-15 A	12-Aug-15 A		■ IC checks & comments on Detailed Design of Composting System																																			
DE160550	Revise & resubmit Detailed Design of Composting System to IC, Employer & ER	0d	13-Aug-15 A	16-Oct-15 A		■ Revise & resubmit Detailed Design of Composting System to IC, Employer & ER																																			
DE160600	IC checks & certifies Composting System	0d	25-Sep-15 A	03-Nov-15 A		■ IC checks & certifies Composting System																																			
DE160650	Employer consents to Composting System	0d	25-Sep-15 A	03-Nov-15 A		◆ Employer consents to Composting System																																			
<b>Wastewater Treatment System (WWTS)</b>																																									
0d 23-Jan-15 A 28-Oct-15 A																																									
DE190200	Prepare & make WWTS Equipment & Performance Submission to IC, ER & Employer	0d	23-Jan-15 A	28-Oct-15 A		■ Prepare & make WWTS Equipment & Performance Submission to IC, ER & Employer																																			
DE190250	IC checks & comments on WWTS Equipment	0d	23-Jan-15 A	28-Oct-15 A		■ IC checks & comments on WWTS Equipment																																			
DE190300	Revise & resubmit WWTS Equipment to IC, Employer & ER	0d	23-Jan-15 A	13-Feb-15 A		■ Revise & resubmit WWTS Equipment to IC, Employer & ER																																			
DE190350	IC checks & certifies WWTS Equipment	0d	10-Mar-15 A	13-Mar-15 A		■ IC checks & certifies WWTS Equipment																																			
DE190400	Employer consents to WWTS Equipment	0d	14-Feb-15 A	09-Mar-15 A		◆ Employer consents to WWTS Equipment																																			
DE190450	Employer consents to WWTS Equipment	0d	02-Jun-15 A	02-Jun-15 A																																					
DE190450	Prepare & submit Detailed Design of WWTS to IC, ER & Employer	0d	04-May-15 A	27-Jul-15 A		■ Prepare & submit Detailed Design of WWTS to IC, ER & Employer																																			
DE190500	IC checks & comments on Detailed Design of WWTS	0d	04-May-15 A	27-Jul-15 A		■ IC checks & comments on Detailed Design of WWTS																																			
DE190550	Revise & resubmit Detailed Design of WWTS to IC, Employer & ER	0d	28-Jul-15 A	14-Aug-15 A		■ Revise & resubmit Detailed Design of WWTS to IC, Employer & ER																																			
DE190600	IC checks & certifies Wastewater Treatment System	0d	15-Aug-15 A	01-Sep-15 A		■ IC checks & certifies Wastewater Treatment System																																			
DE190650	Employer consents to Wastewater Treatment System	0d	26-Aug-15 A	11-Sep-15 A		◆ Employer consents to Wastewater Treatment System																																			
<b>Centralized Air Pollution Control (CAPC) System</b>																																									
0d 18-Dec-14 A 12-Oct-15 A																																									
DE170200	Prepare & make CAPC Equipment & Performance Submission to IC, ER & Employer	0d	18-Dec-14 A	12-Oct-15 A		■ Prepare & make CAPC Equipment & Performance Submission to IC, ER & Employer																																			
DE170250	IC checks & comments on CAPC System Equipment	0d	18-Dec-14 A	12-Oct-15 A		■ IC checks & comments on CAPC System Equipment																																			
DE170300	Revise & resubmit CAPC System Equipment to IC, Employer & ER	0d	18-Dec-14 A	14-Jan-15 A		■ Revise & resubmit CAPC System Equipment to IC, Employer & ER																																			
DE170350	IC checks & certifies CAPC System Equipment	0d	28-Jan-15 A	03-Feb-15 A		■ IC checks & certifies CAPC System Equipment																																			
DE170400	Employer consents to CAPC System Equipment	0d	04-Feb-15 A	25-Feb-15 A		◆ Employer consents to CAPC System Equipment																																			
DE170450	Employer consents to CAPC System Equipment	0d	11-May-15 A	11-May-15 A																																					
DE170450	Prepare & Submit Detailed Design of CAPC System to IC, ER & Employer	0d	12-May-15 A	05-Jun-15 A		■ Prepare & Submit Detailed Design of CAPC System to IC, ER & Employer																																			
DE170500	IC checks & comments on Detailed Design of CAPC System	0d	06-Jun-15 A	23-Jun-15 A		■ IC checks & comments on Detailed Design of CAPC System																																			
DE170550	Revise & resubmit Detailed Design of CAPC System to IC, Employer & ER	0d	24-Jun-15 A	02-Jul-15 A		■ Revise & resubmit Detailed Design of CAPC System to IC, Employer & ER																																			
DE170600	IC checks & certifies CAPC System	0d	03-Jul-15 A	31-Jul-15 A		■ IC checks & certifies CAPC System																																			
DE170650	Employer consents to CAPC System	0d	03-Jul-15 A	31-Jul-15 A		◆ Employer consents to CAPC System																																			
<b>Electrical System and Accessories - Switchgear, LCP, Cable, Earthing, etc.</b>																																									
68d 09-Mar-15 A 13-Apr-16 447d																																									
DE200200	Prepare & make Elect. Equipment & Performance Submission to IC, ER & Employer	68d	09-Mar-15 A	13-Apr-16 447d		■ Prepare & make Elect. Equipment & Performance Submission to IC, ER & Employer																																			
DE200250	IC checks & comments on Electrical System Equipment	50d	09-Mar-15 A	13-Apr-16 447d		■ IC checks & comments on Electrical System Equipment																																			
DE200300	Revise & resubmit Electrical System Equipment to IC, Employer & ER	57d	09-Mar-15 A	22-Feb-16 408d		■ Revise & resubmit Electrical System Equipment to IC, Employer & ER																																			





















































Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	2015												2016												2017											
						Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
<b>Building #2 (Composting &amp; Maturation Building)</b>																																									
EMBS2000	Building #2 MVAC System	80d	08-Aug-16	11-Nov-16	-47d	[Gantt bar: Aug-16 to Nov-16]																																			
EMBS2050	Building #2 Fire Services System	100d	08-Aug-16	05-Dec-16	-117d	[Gantt bar: Aug-16 to Dec-16]																																			
EMBS2100	Building #2 Plumbing & Drainage System	80d	08-Aug-16	11-Nov-16	-97d	[Gantt bar: Aug-16 to Nov-16]																																			
<b>Building #3 (Energy Centre)</b>																																									
EMBS3000	Building #3 MVAC System	60d	19-Sep-16	29-Nov-16	-62d	[Gantt bar: Sep-16 to Nov-16]																																			
EMBS3050	Building #3 Fire Services System	110d	20-Aug-16	31-Dec-16	-138d	[Gantt bar: Aug-16 to Dec-16]																																			
EMBS3100	Building #3 Plumbing & Drainage System	70d	04-Oct-16	24-Dec-16	-134d	[Gantt bar: Oct-16 to Dec-16]																																			
<b>Anaerobic Digesters Area</b>																																									
EMBS4000	Anaerobic Digesters Area MVAC System	65d	27-Aug-16	14-Nov-16	-49d	[Gantt bar: Aug-16 to Nov-16]																																			
EMBS4050	Anaerobic Digesters Area Fire Services System	68d	26-Sep-16	15-Dec-16	-126d	[Gantt bar: Sep-16 to Dec-16]																																			
EMBS4100	Anaerobic Digesters Area Plumbing & Drainage System	50d	05-Oct-16	02-Dec-16	-115d	[Gantt bar: Oct-16 to Dec-16]																																			
<b>Biogas Cleaning &amp; Storage Tank, Desulphurization/Biogas Plant Rm., Desulphurization Tank</b>																																									
EMBS5000	Biogas Area MVAC System	45d	11-Nov-16	05-Jan-17	-91d	[Gantt bar: Nov-16 to Jan-17]																																			
EMBS5050	Biogas Area Fire Services System	40d	28-Oct-16	13-Dec-16	-124d	[Gantt bar: Oct-16 to Dec-16]																																			
EMBS5100	Biogas Area Plumbing & Drainage System	60d	06-Sep-16	17-Nov-16	-102d	[Gantt bar: Sep-16 to Nov-16]																																			
<b>Weighbridge and Gate House</b>																																									
EMBS6000	Weighbridge and Gate House MVAC System	60d	22-Sep-16	02-Dec-16	-65d	[Gantt bar: Sep-16 to Dec-16]																																			
EMBS6050	Weighbridge and Gate House Fire Services System	60d	22-Sep-16	02-Dec-16	-115d	[Gantt bar: Sep-16 to Dec-16]																																			
<b>General</b>																																									
<b>11kV Switchboard Room</b>																																									
EM190600	Building services installation in 11kV Switch Board Room	33d	20-Aug-16	28-Sep-16	-144d	[Gantt bar: Aug-16 to Sep-16]																																			
EM190620	Install 11kV / 380V Transformers and cables	123d	20-Aug-16	17-Jan-17	-134d	[Gantt bar: Aug-16 to Jan-17]																																			
EM190640	11kV Switchgear and cables Installation	123d	20-Aug-16	17-Jan-17	-144d	[Gantt bar: Aug-16 to Jan-17]																																			
<b>Electrical, Instrumentation &amp; Control</b>																																									
EM190150	Instrumentation, Control & Monitoring System (SCADA/PLC)	103d	15-Oct-16	18-Feb-17	-124d	[Gantt bar: Oct-16 to Feb-17]																																			
EM19021B	Switchboard and MCC Installation	100d	29-Sep-16	01-Feb-17	-127d	[Gantt bar: Sep-16 to Feb-17]																																			
EM190220	Cabling works (from Main LVSB to MCC)	45d	13-Dec-16	09-Feb-17	-116d	[Gantt bar: Dec-16 to Feb-17]																																			
EM19022B	Cables and Accessories, Cable Containment System Installation	133d	03-Oct-16	14-Mar-17	-144d	[Gantt bar: Oct-16 to Mar-17]																																			
EM19023B	Earthing and Lightning System Installation	210d	31-Aug-15 A	13-Feb-17	-119d	[Gantt bar: Aug-15 to Feb-17]																																			
EM19024B	Emergency Genset Installation	30d	14-Jan-17	21-Feb-17	-128d	[Gantt bar: Jan-17 to Feb-17]																																			
EM19024D	Diesel Tank Installation	20d	02-Nov-16	24-Nov-16	-98d	[Gantt bar: Nov-16 to Nov-16]																																			
EM19024P	Diesel Tank Pipework	40d	25-Nov-16	13-Jan-17	-98d	[Gantt bar: Nov-16 to Jan-17]																																			
EM19025B	Equipment at Gate House	12d	19-Nov-16	02-Dec-16	-63d	[Gantt bar: Nov-16 to Dec-16]																																			
EM19030B	ELV System Installation	60d	29-Nov-16	13-Feb-17	-119d	[Gantt bar: Nov-16 to Feb-17]																																			
<b>Building Services and Management System</b>																																									
EM19020B	Building Services and Management System	125d	05-Dec-16	12-May-17	-132d	[Gantt bar: Dec-16 to May-17]																																			
EM19050B	Platform & Handrails (FRP)	45d	05-Jan-17	01-Mar-17	-105d	[Gantt bar: Jan-17 to Mar-17]																																			
EM19055B	Pipe Bridge (AD Link to Building 1 & 2) Footing	15d	25-Jun-16	13-Jul-16	-13d	[Gantt bar: Jun-16 to Jul-16]																																			
EM19065B	Pipe Bridge (AD Link to Building 1 & 2) Structural Steelwork	22d	14-Jul-16	08-Aug-16	-13d	[Gantt bar: Jul-16 to Aug-16]																																			
EM19075B	Pipe Bridge (AD Link to Building 1 & 2) Installations	45d	03-Sep-16	28-Oct-16	-35d	[Gantt bar: Sep-16 to Oct-16]																																			
EM200060	Lifting Appliances, Monorail	45d	15-Oct-16	06-Dec-16	-38d	[Gantt bar: Oct-16 to Dec-16]																																			
EM200100	Permanent Mobile Plants	45d	01-Feb-17	24-Mar-17	-125d	[Gantt bar: Feb-17 to Mar-17]																																			
<b>Energisation of Switchboards</b>																																									
EN100050	Energisation of Switchboard (Main 11kV Switchboard room)	1d	02-Feb-17	02-Feb-17	-144d	[Gantt bar: Feb-17 to Feb-17]																																			
EN100100	Energisation of Switchboard (Main LV Switchroom)	1d	07-Feb-17	07-Feb-17	-144d	[Gantt bar: Feb-17 to Feb-17]																																			
EN100150	Energisation of Switchboard (For Anaerobic Digestion System and Dewatering System)	1d	07-Feb-17	07-Feb-17	-116d	[Gantt bar: Feb-17 to Feb-17]																																			
EN100200	Energisation of Switchboard (For Administration Building)	1d	07-Feb-17	07-Feb-17	-144d	[Gantt bar: Feb-17 to Feb-17]																																			
EN100250	Energisation of Switchboard (For Composting System)	1d	07-Feb-17	07-Feb-17	-103d	[Gantt bar: Feb-17 to Feb-17]																																			
EN100300	Energisation of Switchboard (For Pre-Treatment System)	1d	07-Feb-17	07-Feb-17	-144d	[Gantt bar: Feb-17 to Feb-17]																																			
EN100350	Energisation of Switchboard (For Centralized Air Pollution System)	1d	07-Feb-17	07-Feb-17	-144d	[Gantt bar: Feb-17 to Feb-17]																																			



Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	2015												2016												2017											
						Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
<b>TESTING AND COMMISSIONING</b>																																									
<b>Site Testing (including hydraulic testing &amp; pipe pressure testing)</b>																																									
		74d	08-Feb-17	11-May-17	-89d																																				
		74d	08-Feb-17	11-May-17	-89d																																				
TC100100	Site Testing of Pretreatment System	27d	15-Mar-17	19-Apr-17	-144d																																				
TC100150	Site Testing of Anaerobic Digestion Treatment System	30d	02-Mar-17	06-Apr-17	-135d																																				
TC100200	Site Testing of Heat Recovery and Power Generation System	42d	08-Feb-17	28-Mar-17	-64d																																				
TC100250	Site Testing of Biogas Cleaning and Storage System	30d	10-Feb-17	16-Mar-17	-55d																																				
TC100300	Site Testing of WWTS	51d	08-Feb-17	08-Apr-17	-138d																																				
TC100350	Site Testing of CAPCS	51d	07-Mar-17	11-May-17	-91d																																				
TC100400	Site Testing of Composting System	43d	08-Feb-17	29-Mar-17	-60d																																				
TC100450	Site Testing of Weighbridge System & Vehicle Wash System	39d	08-Feb-17	24-Mar-17	-54d																																				
<b>System Commissioning (24 hours)</b>																																									
		29d	20-Apr-17	18-May-17	-117d																																				
		29d	20-Apr-17	18-May-17	-117d																																				
TC110100	Pre-Treatment Building & Facilities	1d	20-Apr-17	20-Apr-17	-180d																																				
TC110300	Biogas Cleaning and Storage System	1d	24-Apr-17	24-Apr-17	-105d																																				
TC110500	Wastewater Treatment System	1d	28-Apr-17	28-Apr-17	-105d																																				
TC110550	Centralized Air Pollution Control System	1d	29-Apr-17	29-Apr-17	-105d																																				
TC110850	Vehicle Washing System	1d	17-May-17	17-May-17	-117d																																				
TC110900	Master Control System - SCADA/PLC System	1d	18-May-17	18-May-17	-117d																																				
<b>Anaerobic Digestion Treatment System</b>																																									
		3d	21-Apr-17	23-Apr-17	-105d																																				
		3d	21-Apr-17	23-Apr-17	-105d																																				
TC110150	Anaerobic Digester no 1	1d	21-Apr-17	21-Apr-17	-180d																																				
TC110200	Anaerobic Digester no 2	1d	22-Apr-17	22-Apr-17	-105d																																				
TC110250	Anaerobic Digester no 3	1d	23-Apr-17	23-Apr-17	-105d																																				
<b>Heat Recovery and Power Generation System</b>																																									
		3d	25-Apr-17	27-Apr-17	-105d																																				
		3d	25-Apr-17	27-Apr-17	-105d																																				
TC110350	Combine Heat Power System no 1	1d	25-Apr-17	25-Apr-17	-105d																																				
TC110400	Combine Heat Power System no 2	1d	26-Apr-17	26-Apr-17	-105d																																				
TC110450	Combine Heat Power System no 3	1d	27-Apr-17	27-Apr-17	-105d																																				
<b>Composting System</b>																																									
		3d	12-May-17	14-May-17	-117d																																				
		3d	12-May-17	14-May-17	-117d																																				
TC110600	Tunnel Composting nos 1 - 3	1d	12-May-17	12-May-17	-117d																																				
TC110650	Tunnel Composting nos 4 - 6	1d	13-May-17	13-May-17	-117d																																				
TC110700	Maturation Area Facilities	1d	14-May-17	14-May-17	-117d																																				
<b>Weighbridge System</b>																																									
		2d	15-May-17	16-May-17	-117d																																				
		2d	15-May-17	16-May-17	-117d																																				
TC110750	Weighbridge System No 1	1d	15-May-17	15-May-17	-117d																																				
TC110800	Weighbridge System No 2	1d	16-May-17	16-May-17	-117d																																				
<b>Process Startup, Process Commissioning &amp; Plant Commissioning</b>																																									
<b>Process Start up</b>																																									
		90d	22-Apr-17	20-Jul-17	-180d																																				
		90d	22-Apr-17	20-Jul-17	-180d																																				
PS900100	N2 Purging of Anaerobic Digester No 1	7d	22-Apr-17	28-Apr-17	-180d																																				
PS900150	Inoculate Anaerobic Digester No.1 (Seeding)	14d	29-Apr-17	12-May-17	-180d																																				
PS900200	N2 Purging of Anaerobic Digester No 2	7d	13-May-17	19-May-17	-164d																																				
PS900250	N2 Purging of Anaerobic Digester No 3	7d	20-May-17	26-May-17	-164d																																				
PS900300	Start up test with Anaerobic Digester No 1	30d	13-May-17	11-Jun-17	-180d																																				
PS900350	Biogas Production from Anaerobic Digester No 1	7d	12-Jun-17	18-Jun-17	-180d																																				
PS900400	Start-Up of Gas System (Including Desulphurisation System)	7d	19-Jun-17	25-Jun-17	-165d																																				
PS900450	Dewatering Test and Start-Up of Dewatering System	15d	19-Jun-17	03-Jul-17	-177d																																				
PS900500	Start-Up of Composting System	14d	04-Jul-17	17-Jul-17	-177d																																				
PS900550	Transferring 50% Digester from Anaerobic Digester No.1 to No.2	1d	19-Jun-17	19-Jun-17	-180d																																				
PS900600	Start up test with Anaerobic Digester No 2	30d	20-Jun-17	19-Jul-17	-180d																																				
PS900650	Biogas Production from Anaerobic Digester No 2	7d	13-Jul-17	19-Jul-17	-180d																																				
PS900700	Transferring 50% Digester from Anaerobic Digester No.2 to No.3	1d	20-Jul-17	20-Jul-17	-180d																																				
PS900750	Start up test with Anaerobic Digester No 3	30d	21-Jun-17	20-Jul-17	-180d																																				
PS900800	Biogas Production from Anaerobic Digester No 3	7d	14-Jul-17	20-Jul-17	-180d																																				
<b>Process Commissioning</b>																																									
		39d	21-Jul-17	28-Aug-17	-180d																																				
		39d	21-Jul-17	28-Aug-17	-180d																																				



Annex D

## Project Organization Chart with Contact Details





Annex E

## Implementation Schedule of Mitigation Measures

Annex E Summary of Mitigation Measures Implementation Schedule

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location/ Timing	Status
<i>Summary of Environmental Mitigation Measures in the EIA and EM&amp;A Manual</i>				
A. Air Quality				
3.73	2.5	<p><u>Air Pollution Control (Construction Dust) Regulation &amp; Good Site Practices</u></p> <ul style="list-style-type: none"> <li>• Use of regular watering, with complete coverage, to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather.</li> <li>• Use of frequent watering for particularly dusty construction areas and areas close to ASRs.</li> <li>• Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering should be applied to aggregate fines.</li> <li>• Open stockpiles should be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs.</li> <li>• Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations.</li> <li>• Establishment and use of vehicle wheel and body washing facilities at the exit points of the site.</li> <li>• Provision of wind shield and dust extraction units or similar dust mitigation measures at the loading points, and use of water sprinklers at the loading area where dust generation is likely during the loading process of loose material, particularly in dry seasons/ periods.</li> <li>• Imposition of speed controls for vehicles on unpaved site roads. 8 kilometers per hour is the recommended limit.</li> <li>• Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs.</li> <li>• Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides.</li> <li>• Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an audible high level alarm which is interlocked with the material filling line and no overfilling is allowed.</li> <li>• Loading, unloading, transfer, handling or storage of bulk cement or dry PFA should be carried out in a totally enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system.</li> </ul>	Construction Site / During Construction Period	<>

<i>B. Hazard to Life</i>				
4.102	3.3	<p><u>Construction Phase</u></p> <ul style="list-style-type: none"> <li>• The number of workers on site during construction stage should be kept at the same level as the assessment.</li> <li>• Construction works should be suspended when delivery of chlorine takes place.</li> <li>• 3m high fence should be constructed along the boundary facing the SHWWTW.</li> <li>• Emergency evacuation procedures should be formulated and the Contractor should ensure all workers on site should be familiar with these procedures as well as the route to escape in case of gas release incident. Relevant Departments, such as Fire Services Department (FSD), should be consulted during the development of Emergency procedures. Diagram showing the escape routes to a safe place should be posted in the site notice boards and at the entrance/exit of site. A copy of the latest version emergency procedures should be dispatched to Tung Chung Fire Station for reference once available.</li> <li>• The emergency procedures should specify means of providing a rapid and direct warning (e.g. Siren and Flashing Light) to construction workers in the event of chlorine gas release in the SHWWTW.</li> <li>• The Contractor should establish a communication channel with the SHWWTW operation personnel and FSD during construction stage. In case of any hazardous incidents in the treatment works, operation personnel of SHWWTW should advise the Contractor to inform construction workers to proceed with emergency procedure. The Contractor should appoint a Liaison Officer to communicate with FSD Incident Commander on site in case of emergency.</li> <li>• Introduction training should be provided to any staff before carryout construction works at the Project site.</li> <li>• Periodic drills should be coordinated and conducted to ensure all construction personnel are familiar with the emergency procedures. Upon completion of the drills, a review on every step taken should be conducted to identify area of improvement. Prior notice of periodic drills should be given to Station Commander of Tung Chung Fire Station. Joint operational exercise with FSD and SHWWTW is recommended.</li> </ul>	Construction Site / During Construction Period	√
<i>C. Water Quality</i>				
5.44	4.5	<p><u>Construction site run-off and general construction activities:</u></p> <p>The mitigation measures as outlined in the ProPECC PN 1/94 Construction Site Drainage should be adopted where applicable.</p>	Construction Site / During Construction Period	<>
5.45	4.5	<p><u>Excavation of Soil Materials</u></p> <p>The construction programme should be properly planned to minimise soil excavation, if any, in rainy seasons. This prevents soil erosion from exposed soil surfaces. Any exposed soil surfaces should also be properly protected to minimise dust emission. In areas where a large</p>	Construction Site / During Construction Period	√

		amount of exposed soils exist, earth bunds or sand bags should be provided. Exposed stockpiles should be covered with tarpaulin or impervious sheets at all times. The stockpiles of materials should be placed at locations away from any stream courses so as to avoid releasing materials into the water bodies. Final surfaces of earthworks should be compacted and protected by permanent work.		
5.46	4.5	<u>Accidental spillage of chemicals:</u> Contractor must register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes.	Construction Site / During Construction Period	√
5.47	4.5	Maintenance of vehicles and equipments involving activities with potential for leakage and spillage should only be undertaken within the areas which appropriately equipped to control these discharges.	Construction Site / During Construction Period	√
5.48	4.5	Oils and fuels should only be used and stored in designated areas which have pollution prevention facilities. All fuel tanks and storage areas should be sited on sealed areas in order to prevent spillage of fuels and solvents to the nearby watercourses. All waste oils and fuels should be collected in designated tanks prior to disposal.	Construction Site / During Construction Period	<>
5.49	4.5	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"> <li>• Suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport.</li> <li>• Chemical waste containers should be suitably labeled, to notify and warn the personnel who are handling the wastes, to avoid accidents.</li> <li>• Storage area should be selected at a safe location on site and adequate space should be allocated to the storage area.</li> </ul>	Construction Site / During Construction Period	<>
5.50		Construction solid waste, debris and rubbish on site should be collected, handled and disposed of properly to avoid entering to the nearby watercourses. Stockpiles of cement and other construction materials should be kept covered when not being used. Rubbish and litter from construction sites should also be collected to prevent spreading of rubbish and litter from the site area. It is recommended to clean the construction sites on a regular basis.	Construction Site / During Construction Period	√
5.51	4.5	<u>Sewage Effluent</u>	Work site/During the	√



		The presence of construction workers generates sewage. It is recommended to provide sufficient chemical toilets in the works areas. The toilet facilities should be more than 30m from any watercourse. A licensed waste collector should be deployed to clean the chemical toilets on a regular basis.	construction period	
5.52	4.5	Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment during the construction phase of the project. Regular environmental audit on the construction site can provide an effective control of any malpractices and can achieve continual improvement of environmental performance on site.	Work Site / During Construction Period	√
5.53	4.5	<p><u>Nullah Decking</u></p> <p>To minimize the potential water quality impacts from the nullah reconstruction works, the practices outlined below should be adopted where applicable:</p> <ul style="list-style-type: none"> <li>• The proposed works should be carried out within the dry season between October and March when the flow in the open nullah is low.</li> <li>• The use of less or smaller construction plants may be specified to reduce the disturbance to the nullah bed.</li> <li>• Temporary storage of materials (e.g. equipment, filling materials, chemicals and fuel) and temporary stockpile of construction materials should be located well away from the nullah and any water courses during carrying out of the construction works.</li> <li>• Stockpiling of construction materials and dusty materials should be covered and located away from the nullah any water courses.</li> <li>• Construction debris and spoil should be covered up and/or disposed of as soon as possible to avoid being washed into the nullah and nearby water receivers.</li> <li>• Construction activities, which generate large amount of wastewater, should be carried out in a distance away from the nullah, where practicable.</li> <li>• Construction effluent, site run-off and sewage should be properly collected and/or treated.</li> <li>• Any works site inside the nullah should be temporarily isolated, such as by placing of sandbags or silt curtains with lead edge at bottom and properly supported props to prevent adverse impact on the water quality.</li> <li>• Proper shoring may need to be erected in order to prevent soil/mud from slipping into the nullah and nearby watercourse.</li> <li>• Supervisory staff should be assigned to station</li> </ul>	Work Site / During Construction Period	N/A
<i>D. Waste Management</i>				
6.41	5.4	<p><u>Good Site Practices</u></p> <p>Recommendations for good site practices during the construction phase would include:</p> <ul style="list-style-type: none"> <li>• Obtain relevant waste disposal permits from appropriate authorities, in accordance with the</li> </ul>	Work Site / During Construction Period	√

		<p>Waste Disposal Ordinance (Cap. 354) and subsidiary Regulations and the Land (Miscellaneous Provisions) Ordinance (Cap. 28);</p> <ul style="list-style-type: none"> <li>• Provide staff training for proper waste management and chemical handling procedures;</li> <li>• Provide sufficient waste disposal points and regular waste collection;</li> <li>• Provide appropriate measures to minimize windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers;</li> <li>• Carry out regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors;</li> <li>• Separate chemical wastes for special handling and disposed of to licensed facility for treatment; and</li> <li>• Employ licensed waste collector to collect waste.</li> </ul>		
6.42	5.5	<p><u>Waste Reduction Measures</u></p> <p>Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction include:</p> <ul style="list-style-type: none"> <li>• Design foundation works that could minimise the amount of excavated material to be generated;</li> <li>• Provide training to workers on the importance of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycling;</li> <li>• Sort out demolition debris and excavated materials from demolition works to recover reusable/ recyclable portions (i.e. soil, broken concrete, metal etc.);</li> <li>• Segregate and store different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal;</li> <li>• Encourage the collection of aluminium cans by providing separate labelled bins to enable this waste to be segregated from other general refuse generated by the workforce; and</li> <li>• Plan and stock construction materials carefully to minimize the amount of waste to be generated and to avoid unnecessary generation of waste.</li> </ul>	Work Site/During Design & Construction Period	√
6.44	5.7	<p><u>Excavated and C&amp;D Materials</u></p> <p>In order to minimise the impact resulting from collection and transportation of C&amp;D material for off-site disposal, the excavated material arising from site formation and foundation works should be reused on-site as backfilling material and for landscaping works as far as practicable. Other mitigation requirements are listed below:</p> <ul style="list-style-type: none"> <li>• A WMP, which becomes part of the Environmental Management Plan (EMP), should be prepared in accordance with ETWB TCW No.19/2005;</li> <li>• A recording system for the amount of wastes generated, recycled and disposed of (including the disposal sites) should be adopted for easy tracking; and</li> <li>• In order to monitor the disposal of excavated and C&amp;D material at public filling facilities and landfills and to control fly-tipping, a trip-ticket system should be adopted (refer to ETWB</li> </ul>	Work Site/During Design & Construction Period	√

		TCW No. 31/2004).		
6.45 – 6.46	5.8 – 5.9	An EMP should be prepared and implemented in accordance with ETWB TCW No. 19/2005 which describes the arrangements for avoidance, reuse, recovery, recycling, storage, collection, treatment and disposal of different categories of waste to be generated from construction activities. The EMP should be submitted to the Supervising Officer (SO) and Supervising Officer's Representative (SOR) for approval. The EMP should be reviewed regularly and updated, preferably on a monthly basis. A system should be devised to work for on-site sorting of excavated and C&D materials and promptly removing all sorted and process materials arising from the construction activities to minimize temporary stockpiling on-site. The system should be included in the EMP identifying the source of generation, estimated quantity, arrangement for on-site sorting, collection, temporary storage areas and frequency of collection by recycling Contractors or frequency of removal off-site.	Work Site/During Design & Construction Period	√
6.47	5.10	<u>Chemical Waste</u> 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.	Work Site / During Construction Period	<>
6.48	5.11	<u>General Refuse</u> General refuse should be stored in enclosed bins or compaction units separated from C&D material. A licensed waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D material. Preferably an enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.	Work Site / During Construction Period	√
<i>E. Landscape and Visual</i>				
7.99 & Table 7.7	Table 6.1	<u>Construction Phase</u> <ul style="list-style-type: none"> <li>• Topsoil, where identified, should be stripped and stored for re-use in the construction of the soft landscape works, where practical</li> <li>• Compensatory tree planting should be provided to compensate for felled trees. <ul style="list-style-type: none"> <li>- Compensation tree species shall be chosen from both indigenous and ornamental species</li> <li>- Compensation tree planting quantities shall be as per DLO approved requirement.</li> </ul> </li> <li>• Control of night-time lighting</li> <li>• Erection of decorative screen hoarding compatible with the surrounding setting</li> </ul>	Work site/During Design & Construction Stages	√

F. Noise				
8.25	7.3	<p>Good Site Practice:</p> <ul style="list-style-type: none"> <li>• Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction program;</li> <li>• Mobile plant, if any, should be sited as far from noise sensitive receivers (NSRs) as possible;</li> <li>• Machines and plant (such as trucks) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum;</li> <li>• Plant known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the nearby NSRs; and</li> <li>• Material stockpiles and other structures should be effectively utilized, wherever practicable, in screening noise from on-site construction activities.</li> </ul>	Work site/During Design & Construction Stages	√

Remark:

- √ Compliance of Mitigation Measures
- <> Compliance of Mitigation but need improvement
- x Non-compliance of Mitigation Measures
- ▲ Non-compliance of Mitigation Measures but rectified by OSCAR Bioenergy JV
- Δ Deficiency of Mitigation Measures but rectified by OSCAR Bioenergy JV
- N/A Not Applicable in Reporting Period

Annex F

## Waste Flow Table



**No. EP/SP/61/10 of Organic Waste Treatment Facilities Phase I  
Monthly Summary Waste Flow Table**

Month	Actual Quantities of Inert C&D Materials Generated					Actual Quantities of Non-inert C&D Materials (Construction Waste) Generated				
	Total Quantity Generated	Reused in the Contract	Reused in other Projects	Hard Rocks & Large Broken Concrete	Disposed as Public Fill	Metals (see Note 1)	Paper/ cardboard packaging (see Note 1)	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse (see Note 3)
	tonne	tonne	tonne	tonne	tonne	kilogram	kilogram	kilogram	Litre	tonne
May 2015	29.58	0.00	0.00	0.00	29.58	0.00	0.00	0.00	0.00	0.00
June 2015	2226.90	0.00	0.00	0.00	2226.90	0.00	0.00	0.00	0.00	9.66
July 2015	2832.27	0.00	0.00	0.00	2832.27	0.00	0.00	0.00	0.00	33.68
August 2015	6657.25	0.00	0.00	0.00	6657.25	0.00	20.00 (See Note 4)	0.00	0.00	55.06
September 2015	5467.05	0.00	0.00	0.00	5467.05	3480.00	0.00	0.00	0.00	83.81
October 2015	5419.04	0.00	0.00	0.00	5419.04	18710.00	0.00	0.00	0.00	20.45
November 2015	1375.26	0.00	0.00	0.00	1375.26	21610.00	0.00	0.00	0.00	17.38
December 2015	2199.56	75.28	0.00	0.00	2124.28	0.00	41.00	0.00	0.00	21.83
January 2016	4601.43	0.00	0.00	0.00	4601.43	18140.00	50.00 (See Note 4)	0.00	640.00	20.86
February 2016	4166.42	0.00	0.00	0.00	4166.42	510.00	79.00	0.00	0.00	16.57
March 2016	299.92	41.28	0.00	0.00	258.64	22320.00 (See Note 4)	75.00	0.00	0.00	22.69
April 2016	3186.37	98.37	0.00	0.00	3088.00	51230.00	77.00	0.00	255.00	37.63
<b>Total</b>	<b>38461.05</b>	<b>214.93</b>	<b>0.00</b>	<b>0.00</b>	<b>38246.12</b>	<b>136000.00</b>	<b>342.00</b>	<b>0.00</b>	<b>895.00</b>	<b>339.62</b>

- Notes: (1) Metal and paper/cardboard packaging were collected by recycler for recycling.  
(2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material collected by recycler for recycling.  
(3) General refuse was disposed of at NENT by subcontractors.  
(4) Receipts were received on April 2016

Annex G

Environmental Complaint,  
Environmental Summons  
and Persecution Log

*Annex G Cumulative Complaint and Summons/Prosecutions Log*

<b>Reporting Month</b>	<b>Number of Complaints in Reporting Month</b>	<b>Number of Summons/Prosecutions in Reporting Month</b>
May 2015	0	0
June 2015	0	0
July 2015	0	0
August 2015	0	0
September 2015	0	0
October 2015	0	0
November 2015	0	0
December 2015	0	0
January 2016	0	0
February 2016	0	0
March 2016	0	0
April 2016	0	0
<b>Overall Total</b>	<b>0</b>	<b>0</b>