

OSCAR Bioenergy Joint Venture

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

21 May 2015 - 30 June 2015

Environmental Resources Management

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Meinhardt Infrastructure and Environment Limited

**Organic Waste Treatment Facilities,
Phase I**

Monthly EM&A Report
(21 May 2015 – 30 June 2015)

(July 2015)

Verified by: Helen Cochrane 

Position: Independent Environmental Checker

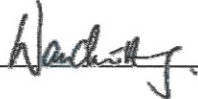

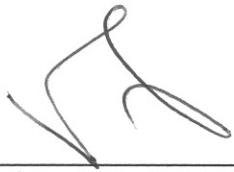
Date: 14 July 2015

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Organic Waste Treatment Facilities
Phase 1:
First Monthly EM&A Report

21 May 2015 - 30 June 2015

Reference 0279222

For and on behalf of ERM-Hong Kong, Limited	
Approved by:	Frank Wan
Signed:	
Position:	Partner
Certified by:	 (Environmental Team Leader - Winnie Ko)
Certified by:	 (Registered Landscape Architect No. 034 (99) - Kenneth Ng)
Date:	14 July 2015

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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 1st monthly Environmental Monitoring and Audit (EM&A) report presenting the EM&A works carried out during the period from 21 May 2015 to 30 June 2015 in accordance with the EM&A Manual.

Summary of Construction Works undertaken during the Reporting Month

Works undertaken in the reporting month included:

- Open cutting;
- Pre-drilling; and
- Piling.

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). In total, 2266.14 tonnes of inert C&D material were generated from the Project. 2256.48 tonnes were disposed as public fill. 9.66 tonnes of general refuse was disposed as landfill. 0.00 kg of metals, 0.00 kg of papers/ cardboard packing and 0.00 kg of plastics were sent to recyclers for recycling during the reporting period.

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 17 June 2015. Details of the audit findings and implementation status of the mitigation measures are presented in *Section 6.1*.

Landscape & Visual

An onsite inspection on landscape and visual mitigation measures was performed on 5 and 17 June 2015. 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:

- Piling;
- Removing Topsoil from Building 2; and
- Foundation Footing of Tower Crane.

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 1st EM&A report which summarises the monitoring results and audit findings for the EM&A programme during the reporting period from **21 May 2015 to 30 June 2015**.

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 PROJECT INFORMATION

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.

Under the requirements of Condition 5 of the EP (No. FEP-01/395/2010/B), 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"> • Open cutting • Pre-drilling • Piling

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/B	Throughout the Contract	Permit granted on 16 February 2015
Notification of Construction Works under the Air Pollution Control (Construction Dust) Regulation	Ref No. 386715	Throughout the Contract	-
Water Discharge License	WT00021482-2015	21 May 2015 - 31 May 2020	-
Construction Noise Permit	GW-RW0078-15	1 April 2015 - 30 August 2015	
Chemical Waste Producer Registration	WPN 5213-961-O2231-01	Throughout the Contract	Licence approved on 29 April 2015

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
May 2015	29.58 tonnes	0.00 kg	0.00 tonnes	0 L
June 2015	2,218.13 tonnes	0.00 kg	9.66 tonnes	0 L

Notes:

- (a) Inert C&D materials (public fill) include bricks, concrete, building debris, rubble and excavated spoil. In total, 2266.14 tonnes of inert C&D material were generated from the Project. 2256.48 tonnes were disposed as public fill. 9.66 tonnes of general refuse was disposed as landfill. 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) 0.00 kg of metals, 0.00 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 28 May, and 5, 12, 17 and 26 June 2015. The IEC was also present at the joint inspection on 17 June 2015. 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.

Major observations during the reporting period are summarised as follows:

28 May 2015

- The discharge point is not yet covered properly. It is recommended to place sand bags around the discharge point or cover the discharge point to avoid untreated wastewater run-off.
- The sedimentation tank was observed to be full after raining and the untreated water in the sedimentation tank was discharged onto the site without passing through the WetSep for treatment. It is recommended to recirculate the untreated water back to the sump pit and stop pumping water to the sedimentation tank from sump pit when the WetSep is shut down for emergency or maintenance purpose.
- General refuse and debris was observed within the tree protection zone of Trees T40, T41 and T44. It is recommended to clear general refuse near the trees (T40, 41 and T44) and provide toolbox talk to all workers on tree protection measures.
- The tree trunk of Trees T40, T41 and T44 was observed to be tied too tight by plastic strips. It is recommended to loosen ropes and plastic strips and avoid tying around the trees.
- No protection zone was set up for trees T43 and T44 within the site. It is recommended to fence off the identified trees to block the access to the identified trees.
- Wire was observed to be hanged on the branches of Tree T44. It is recommended to remove wires and avoid hanging any materials on the tree.

5 June 2015

- Pond water is found in the tray under the chemical container. It is recommended to clear the pond water regularly, especially after raining.

12 June 2015

- Pond water is found in some areas such as areas near vehicle washing facilities, parking area, on tarpaulin sheets and in the U-channel. It is recommended to clear the pond water regularly, especially after raining.

- Pond water is found in the cop of an excavator. It is recommended to check if there is any pond water regularly, especially after raining. It is also recommended to turn it upside down to prevent pond water.
- Pond water is found in drip trays. It is recommended to clear the pond water regularly, especially after raining.
- Drip tray is missing for some of the chemical containers. It is recommended to provide drip tray under every chemical containers, even if the chemical are recently arrived to avoid chemical leakage.

17 June 2015

- A single chemical container without a drip tray is found. It is recommended to provide drip tray under every chemical containers, and to place the same type of chemical in the same area.
- Exposed area is found to be dry and dusty. It is recommended to spray water regularly to prevent dry and dusty situation.

26 June 2015

- Soil is found to be not completely covered by tarpaulin. It is recommended to fully cover it to prevent dry and dusty situation.
- Drip tray is missing for some of the chemical containers. It is recommended to provide drip tray under every chemical containers, even if the chemical are recently arrived to avoid chemical leakage.
- General refuse is found in a tank. It is recommended to provide general refuse point in AD Plant Tank area.
- Pond water is found in drip trays. It is recommended to clear the pond water regularly, especially after raining

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. An onsite inspection of the landscape and visual mitigation measures was performed on 5 and 17 June 2015.

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 most of the necessary landscape and visual mitigation measures as summarised in *Annex E* were implemented by the Contractor.

The major findings are summarised as follows:

5 June 2015

Item	Observation & Recommendation	Photo Record
1.	The tree trunk of Tree T10 was observed to be tied too tight by plastic strips. It is recommended to loosen ropes and plastic strips and avoid tying around the trees.	 <p>(T10)</p>
2.	A branch of a tree outside the site boundary is found to be tied around the trunk of Tree T11. It is recommended to loosen ropes and plastic strips and avoid unwanted tying around the trees.	 <p>(T11)</p>
3.	Name tag for tree T43 is lost. It is recommended to fence off the identified tree to block the access to the identified trees and tag the tree properly.	 <p>(T43)</p>
4.	Trees at the northern site boundary are tagged properly and a fence is erected to separate the trees and the site office. However, to give a clear indication on protecting those trees, it is recommended to provide a "Tree Protection Zone" sign on the fence to restrict the access to the trees.	N/A

17 June 2015

No observation is recorded.

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
<ul style="list-style-type: none">• Piling• Removing Topsoil from Building 2• Foundation Footing of Tower Crane

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 21 May 2015 to 30 June 2015 in accordance with EM&A Manual and requirements of EP (FEP-01/395/2010/B).

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

Bi-weekly landscape and visual monitoring was conducted in the reporting period. Most of the necessary landscape and visual mitigation measures recommended in the EIA Report were implemented by the Contractor. Follow-up actions are required by the Contractor to improve protection of the retained or to-be transplanted trees.

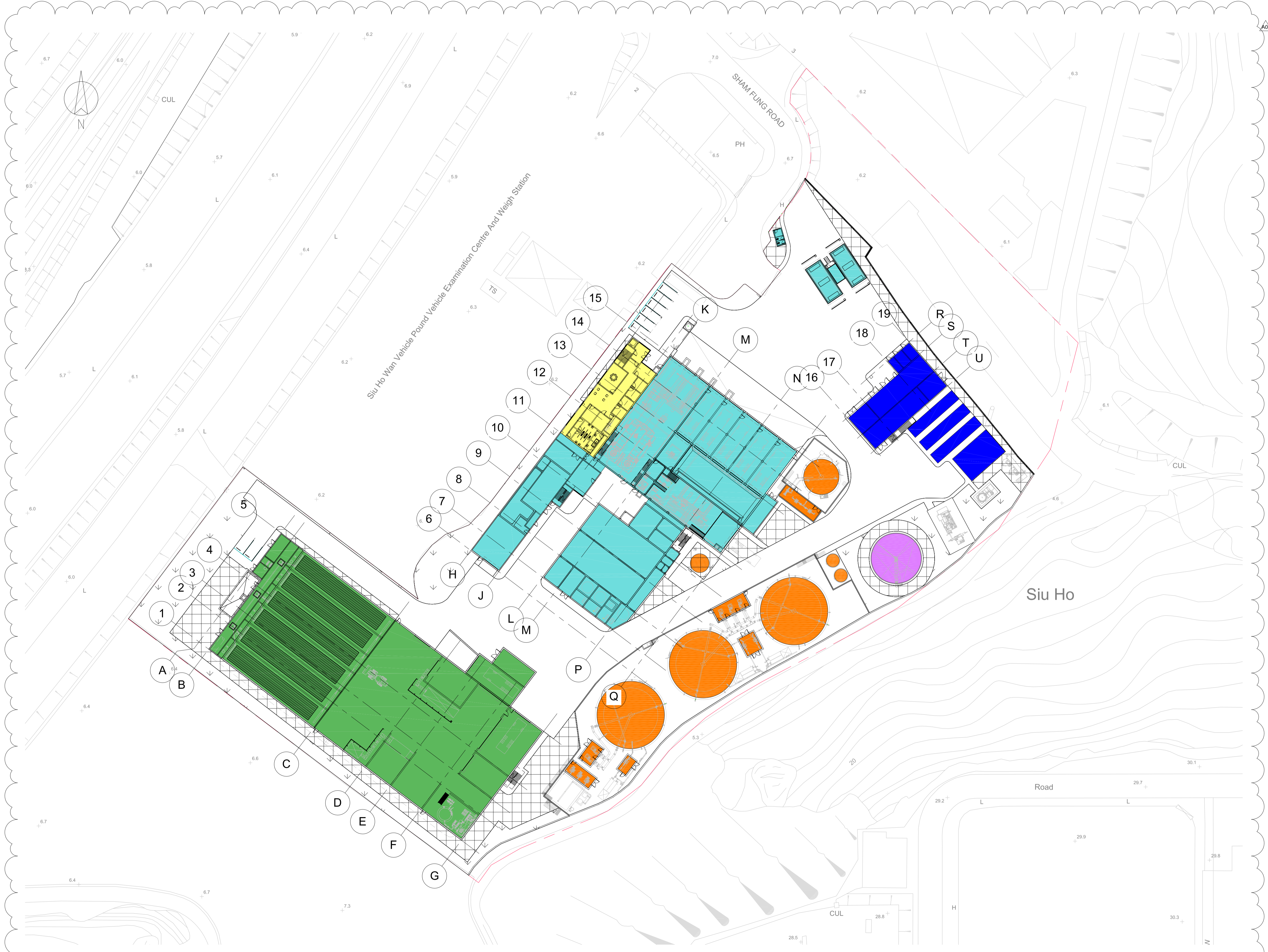
No non-compliance event was recorded during the reporting period.

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

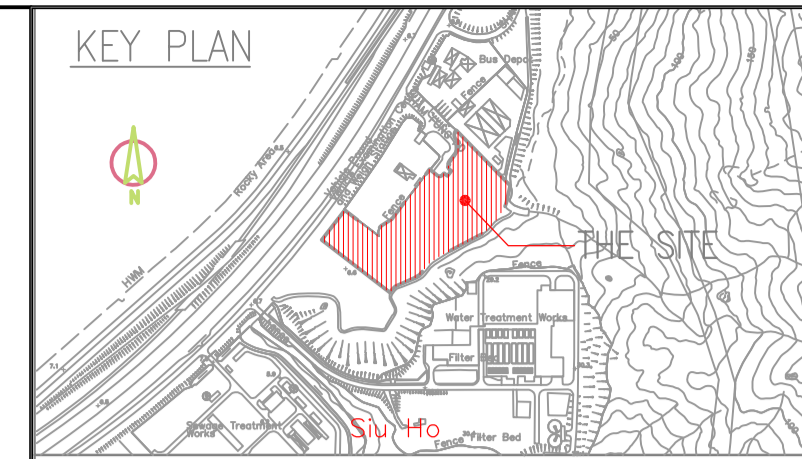
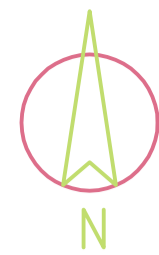
DRAWING TITLE
 SITE LAYOUT

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


D	18 APR 2015	LL	CL	INCORPORATED NEW LAYOUT
C	9 MAR 2015	LL	CL	CHANGE DISCHARGE POINT
B	16 FEB 2015	LL	CL	ADDED DISCHARGE POINT
A	9 FEB 2015	LL	CL	REVISION A
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
 邁進基礎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

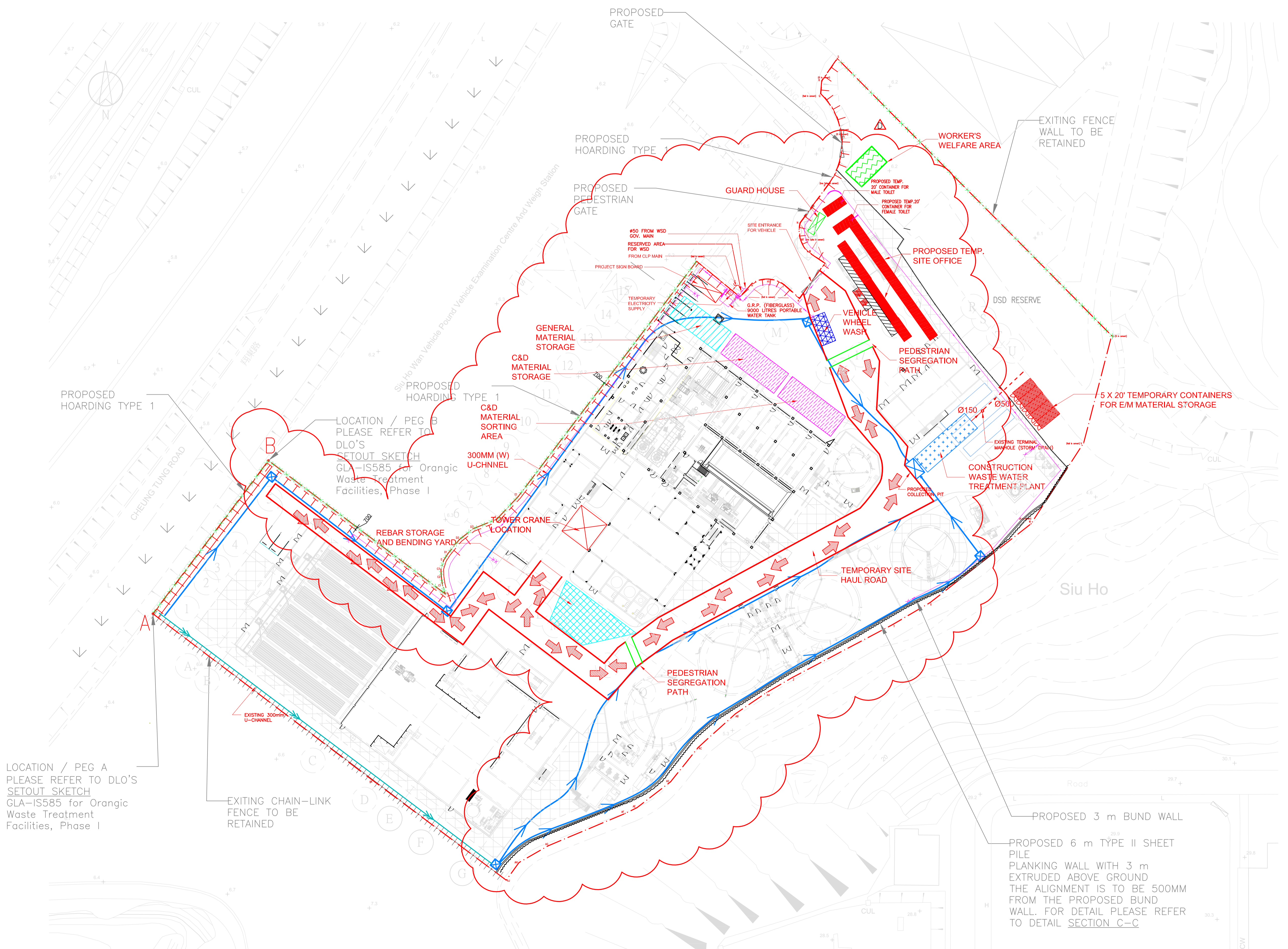
SCALE
 1:500@A1; 1:1000@A3

DATE
 18 APR 2015

JOB NO.
 P00424

DRAWING NO.
 DR-PSC-00-0-CN-1002

REV.
 D



LOCATION / PEG A
 PLEASE REFER TO DLO'S
 SETOUT SKETCH
 GLA-IS585 for Organic
 Waste Treatment
 Facilities, Phase I

EXITING CHAIN-LINK
 FENCE TO BE
 RETAINED

PROPOSED 3 m BUND WALL

PROPOSED 6 m TYPE II SHEET
 PILE
 PLANKING WALL WITH 3 m
 EXTRUDED ABOVE GROUND
 THE ALIGNMENT IS TO BE 500MM
 FROM THE PROPOSED BUND
 WALL. FOR DETAIL PLEASE REFER
 TO DETAIL SECTION C-C

Plot by : LeeJAM
 Plot Time : 4/18/2015 11:32:12 AM

DR-PSC-00-0-CN-1002

Annex C

Construction Programme of the Project

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late 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				
Contract No. EP/SP/61/10 - The Design & Construction Works								712	19-Nov-14	18-Apr-17	19-Nov-14	18-Apr-17	0																												
LETTER OF ACCEPTANCE								1	19-Nov-14	19-Nov-14	19-Nov-14	19-Nov-14	0																												
MAJOR MILESTONES								663	17-Dec-14	16-Mar-17	16-Mar-17	18-Apr-17	24																												
MC1 Milestones for Preliminaries and General Requirements								84	17-Dec-14	27-Apr-15	18-Apr-17	18-Apr-17	490																												
MC110100	MC1.1 - Substantial Completion of ER & IC Accommodation	0		27-Apr-15	18-Apr-17	18-Apr-17	490	◆ MC1.1 - Substantial Completion of ER & IC Accommodation																																	
MC110200	MC1.2 - Joint signing of IC Agreement	0		17-Dec-14	18-Apr-17	18-Apr-17	574	◆ MC1.2 - Joint signing of IC Agreement																																	
MC110300	MC1.3 - Employer's consent granted on draft Contractor's Plans	0		18-Mar-15	18-Apr-17	18-Apr-17	514	◆ MC1.3 - Employer's consent granted on draft Contractor's Plans																																	
MC2 Milestones for Design of the Works								119	15-Jun-15	03-Dec-15	18-Apr-17	18-Apr-17	337																												
MC2.1 The Employer's consent granted on Detailed Design Submission								119	15-Jun-15	03-Dec-15	18-Apr-17	18-Apr-17	337																												
MC210100	MC2.1.1 - Employer's consent granted in respect of Detailed Design of Waste Receiving & Pre-treatment System	0		20-Jul-15	18-Apr-17	18-Apr-17	432	◆ 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	0		25-Aug-15	18-Apr-17	18-Apr-17	406	◆ 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	0		05-Aug-15	18-Apr-17	18-Apr-17	420	◆ 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	0		15-Jun-15	18-Apr-17	18-Apr-17	456	◆ 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	0		21-Sep-15	18-Apr-17	18-Apr-17	387	◆ 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	0		22-Oct-15	18-Apr-17	18-Apr-17	368	◆ 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	0		11-Nov-15	18-Apr-17	18-Apr-17	353	◆ 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	0		25-Nov-15	18-Apr-17	18-Apr-17	343	◆ 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	0		03-Dec-15	18-Apr-17	18-Apr-17	337	◆ MC2.1.9 - Employer's consent granted in respect of Detailed Design of architectural & landscape works																																	
MC2.2 Completion of the Design of the Works								0	03-Dec-15	03-Dec-15	18-Apr-17	18-Apr-17	337																												
MC220100	MC2.2 - Completion of the Design of the Works	0		03-Dec-15	18-Apr-17	18-Apr-17	337	◆ MC2.2 - Completion of the Design of the Works																																	
MC3 Milestones for Construction of the Works								505	06-Jul-15	16-Mar-17	16-Mar-17	18-Apr-17	24																												
MC3.1 Construction of Civil and Structural Works								445	06-Jul-15	31-Dec-16	18-Apr-17	18-Apr-17	84																												
MC310100	MC3.1.1 - Completion of site formation	0		03-Dec-15	18-Apr-17	18-Apr-17	403	◆ MC3.1.1 - Completion of site formation																																	
MC310200	MC3.1.2 - Completion of 50% of piling works	0		06-Jul-15	18-Apr-17	18-Apr-17	529	◆ MC3.1.2 - Completion of 50% of piling works																																	
MC310300	MC3.1.3 - Completion of 100% of piling works	0		22-Sep-15	18-Apr-17	18-Apr-17	462	◆ MC3.1.3 - Completion of 100% of piling works																																	
MC310400	MC3.1.4 - Completion of 50% of superstructure works	0		08-Jan-16	18-Apr-17	18-Apr-17	375	◆ MC3.1.4 - Completion of 50% of superstructure works																																	
MC310500	MC3.1.5 - Completion of 80% of superstructure works	0		13-Feb-16	18-Apr-17	18-Apr-17	347	◆ MC3.1.5 - Completion of 80% of superstructure works																																	
MC310600	MC3.1.6 - Completion of 100% of superstructure works	0		11-Apr-16	18-Apr-17	18-Apr-17	302	◆ MC3.1.6 - Completion of 100% of superstructure works																																	
MC310700	MC3.1.7 - Completion of 100% of drainage, road and geotechnical works	0		31-Dec-16	18-Apr-17	18-Apr-17	84	◆ MC3.1.7 - Completion of 100%																																	
MC3.2 Delivery of Materials and Equipment to the Site								187	11-Nov-15	02-Jul-16	18-Apr-17	18-Apr-17	235																												
MC320100	MC3.2.1 - Completion of Delivery of Pre-treatment System	0		26-Jan-16	18-Apr-17	18-Apr-17	360	◆ MC3.2.1 - Completion of Delivery of Pre-treatment System																																	
MC320200	MC3.2.2 - Completion of Delivery of Anaerobic Digesters	0		11-Jan-16	18-Apr-17	18-Apr-17	373	◆ MC3.2.2 - Completion of Delivery of Anaerobic Digesters																																	
MC320300	MC3.2.3 - Completion of Delivery of Combined Heat and Power Units	0		02-Jul-16	18-Apr-17	18-Apr-17	235	◆ MC3.2.3 - Completion of Delivery of Combined Heat and Power Units																																	
MC320400	MC3.2.4 - Completion of Delivery of Composting Tunnels	0		08-Jan-16	18-Apr-17	18-Apr-17	375	◆ MC3.2.4 - Completion of Delivery of Composting Tunnels																																	
MC320500	MC3.2.5 - Completion of Delivery of Centralized Air Pollution Control System	0		11-Nov-15	18-Apr-17	18-Apr-17	422	◆ MC3.2.5 - Completion of Delivery of Centralized Air Pollution Control System																																	
MC320600	MC3.2.6 - Completion of Delivery of Wastewater Treatment System	0		11-Apr-16	18-Apr-17	18-Apr-17	302	◆ MC3.2.6 - Completion of Delivery of Wastewater Treatment System																																	
MC3.3 Equipment and System Installations								136	20-Jun-16	30-Nov-16	18-Apr-17	18-Apr-17	109																												
MC330100	MC3.3.1 - Completion of Waste Receiving, Storage and Feeding System & Pre-treatment System	0		15-Aug-16	18-Apr-17	18-Apr-17	198	◆ MC3.3.1 - Completion of Waste Receiving, Storage and Feeding																																	
MC330200	MC3.3.2 - Completion of Anaerobic Digestion Treatment System	0		12-Sep-16	18-Apr-17	18-Apr-17	174	◆ MC3.3.2 - Completion of Anaerobic Digestion Treatment S																																	
MC330300	MC3.3.3 - Completion of Biogas Cleaning and Storage System	0		08-Nov-16	18-Apr-17	18-Apr-17	128	◆ MC3.3.3 - Completion of Biogas Cleaning a																																	
MC330400	MC3.3.4 - Completion of Heat Recovery and Power Generation System	0		30-Nov-16	18-Apr-17	18-Apr-17	109	◆ MC3.3.4 - Completion of Heat Recov																																	
MC330500	MC3.3.5 - Completion of Composting System	0		12-Nov-16	18-Apr-17	18-Apr-17	124	◆ MC3.3.5 - Completion of Composting Sys																																	
MC330600	MC3.3.6 - Completion of Centralized Air Pollution Control System	0		25-Aug-16	18-Apr-17	18-Apr-17	189	◆ MC3.3.6 - Completion of Centralized Air Pollution Control Syste																																	

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late 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						
MC330700	MC3.3.7 Completion of Wastewater Treatment System	0		20-Jun-16		18-Apr-17	245	◆ MC3.3.7 Completion of Wastewater Treatment System																																			
MC330800	MC3.3.8 - Completion of control and instrumentation works	0		19-Aug-16		18-Apr-17	194	◆ MC3.3.8 - Completion of control and instrumentation works																																			
MC330900	MC3.3.9 - Completion of building services works & electrical works	0		29-Sep-16		18-Apr-17	160	◆ MC3.3.9 - Completion of building services works & electrical works																																			
MC3.4 Architectural and Landscape works		0	20-Dec-16	20-Dec-16	18-Apr-17	18-Apr-17	92																																				
MC340100	MC3.4 - Completion of architectural and landscape works	0	20-Dec-16	20-Dec-16	18-Apr-17	18-Apr-17	92	◆ MC3.4 - Completion of architectural and landscape works																																			
MC3.5 Testing and Commissioning		45	19-Jan-17	16-Mar-17	18-Apr-17	18-Apr-17	24																																				
MC350100	MC3.5.1 - Employer's consent granted on all FAT,SAT, System Comm. Test, Process Start Up & Process Comm.&Plant Comm. T. Plan	45	19-Jan-17	16-Mar-17	18-Apr-17	18-Apr-17	24	◆ MC3.5.1 - Employer's consent granted on all FAT,SAT, System Comm. Test, Process Start Up & Process Comm.&Plant Comm. T. Plan																																			
MC350200	MC3.5.2 - Employer's consent granted on all System Commissioning Reports	0		19-Jan-17		18-Apr-17	69	◆ MC3.5.2 - Employer's consent granted on all System Commissioning Reports																																			
MC350300	MC3.5.3 - Employer's consent granted on the Process Start Up & Process Commissioning Report	0		14-Feb-17		18-Apr-17	50	◆ MC3.5.3 - Employer's consent granted on the Process Start Up & Process Commissioning Report																																			
MC350400	MC3.5.4 - Employer's consent granted on the Plant Commissioning Report	0		16-Mar-17		18-Apr-17	24	◆ MC3.5.4 - Employer's consent granted on the Plant Commissioning Report																																			
MC3.6 Issuance of the Certificate of Substantial Completion by the Employer		0	16-Mar-17	16-Mar-17	16-Mar-17	16-Mar-17	0																																				
MC360100	MC3.6 Issuance of the Certificate of Substantial Completion by the Employer	0	16-Mar-17	16-Mar-17	16-Mar-17	16-Mar-17	0	◆ MC3.6 Issuance of the Certificate of Substantial Completion by the Employer																																			
PRELIMINARY AND GENERAL REQUIREMENT WORKS		711	20-Nov-14	18-Apr-17	20-Nov-14	18-Apr-17	0																																				
Appointment and Assignment of Contractor's Superintendents, Designers, IC and ER		20	20-Nov-14	17-Dec-14	02-Dec-14	20-May-15	101																																				
PL100110	Notify the Employer of the proposed Project Manager	5	20-Nov-14	26-Nov-14	02-Dec-14	08-Dec-14	8	■ Notify the Employer of the proposed Project Manager																																			
PL100120	Submit Contractor's Management Team to Employer	10	27-Nov-14	10-Dec-14	09-Dec-14	22-Dec-14	8	■ Submit Contractor's Management Team to Employer																																			
PL100130	Employer approves proposed Project Manager	0		10-Dec-14		22-Dec-14	8	◆ Employer approves proposed Project Manager																																			
PL100140	Appoint Project Manager	5	11-Dec-14	17-Dec-14	23-Dec-14	31-Dec-14	8	■ Appoint Project Manager																																			
PL100150	Jointly Appoint the Independent Consultant with the Employer	10	20-Nov-14	03-Dec-14	02-Dec-14	15-Dec-14	8	■ Jointly Appoint the Independent Consultant with the Employer																																			
PL100160	IC to submit names of representatives to Employer & Contractor	20	20-Nov-14	17-Dec-14	22-Apr-15	20-May-15	101	■ IC to submit names of representatives to Employer & Contractor																																			
PL100180	Employer notifies Contractor of Employer's Representative	0		17-Dec-14		31-Dec-14	8	◆ Employer notifies Contractor of Employer's Representative																																			
Further Environmental Permit		39	20-Nov-14	16-Jan-15	22-Apr-15	17-Jun-15	101																																				
PL100190	Submit application for Further Environmental Permit	39	20-Nov-14	16-Jan-15	22-Apr-15	17-Jun-15	101	■ Submit application for Further Environmental Permit																																			
PL100200	Prepare & submit Emergency Procedures Plan by ET to IEC & ER	5	20-Nov-14	26-Nov-14	20-May-15	27-May-15	120	■ Prepare & submit Emergency Procedures Plan by ET to IEC & ER																																			
PL100210	IEC checks & verifies Emergency Procedures Plan	12	20-Nov-14	05-Dec-14	22-Apr-15	08-May-15	101	■ IEC checks & verifies Emergency Procedures Plan																																			
PL100220	ER approves Emergency Procedures Plan	0		05-Jan-15		04-Jun-15	101	◆ ER approves Emergency Procedures Plan																																			
PL100230	Submit approved Emergency Procedures Plan to Dir of EP	4	06-Jan-15	09-Jan-15	05-Jun-15	10-Jun-15	101	■ Submit approved Emergency Procedures Plan to Dir of EP																																			
PL100240	Obtain Further Environmental Permit from Dir of EP	0		16-Jan-15		17-Jun-15	101	◆ Obtain Further Environmental Permit from Dir of EP																																			
Guarantees, Undertakings & Insurances		40	20-Nov-14	19-Jan-15	02-Dec-14	22-May-15	83																																				
PL100250	Provision of Guarantee to Employer	40	20-Nov-14	19-Jan-15	02-Dec-14	22-May-15	83	■ Provision of Guarantee to Employer																																			
PL100260	Provision of Undertaking to Employer	10	20-Nov-14	03-Dec-14	16-Dec-14	31-Dec-14	18	■ Provision of Undertaking to Employer																																			
PL100270	Provision of Undertakings from related companies to Employer	10	20-Nov-14	03-Dec-14	16-Dec-14	31-Dec-14	18	■ Provision of Undertakings from related companies to Employer																																			
PL100280	Provision of the Bond to Employer	15	20-Nov-14	10-Dec-14	09-Dec-14	31-Dec-14	13	■ Provision of the Bond to Employer																																			
PL100290	Provision of Contractor's All Risks Insurance	20	20-Nov-14	17-Dec-14	02-Dec-14	31-Dec-14	8	■ Provision of Contractor's All Risks Insurance																																			
PL100300	Provision of Professional Indemnity Insurance	20	20-Nov-14	17-Dec-14	02-Dec-14	31-Dec-14	8	■ Provision of Professional Indemnity Insurance																																			
PL100310	Provision of Employee Compensation Insurance	20	20-Nov-14	17-Dec-14	02-Dec-14	31-Dec-14	8	■ Provision of Employee Compensation Insurance																																			
PL100320	Provision of Motor Vehicle Insurance	20	20-Nov-14	17-Dec-14	02-Dec-14	31-Dec-14	8	■ Provision of Motor Vehicle Insurance																																			
PL100330	Submit Undertakings & Certificates of PI Insurance	40	20-Nov-14	19-Jan-15	24-Mar-15	22-May-15	83	■ Submit Undertakings & Certificates of PI Insurance																																			
Programme		45	20-Nov-14	14-Jan-15	25-Mar-15	17-Jun-15	123																																				
PL100340	Prepare & Submit Programme to IC & Employer	45	20-Nov-14	14-Jan-15	25-Mar-15	17-Jun-15	123	■ Prepare & Submit Programme to IC & Employer																																			
PL100350	IC checks & certifies Programme	14	18-Dec-14	31-Dec-14	21-May-15	03-Jun-15	154	■ IC checks & certifies Programme																																			
PL100360	Employer Consents to Contract Programme	0		14-Jan-15		17-Jun-15	154	◆ Employer Consents to Contract Programme																																			
PL100370	Prepare & submit 3 months programme to Employer, ER & IC	10	04-Dec-14	17-Dec-14	11-May-15	22-May-15	103	■ Prepare & submit 3 months programme to Employer, ER & IC																																			

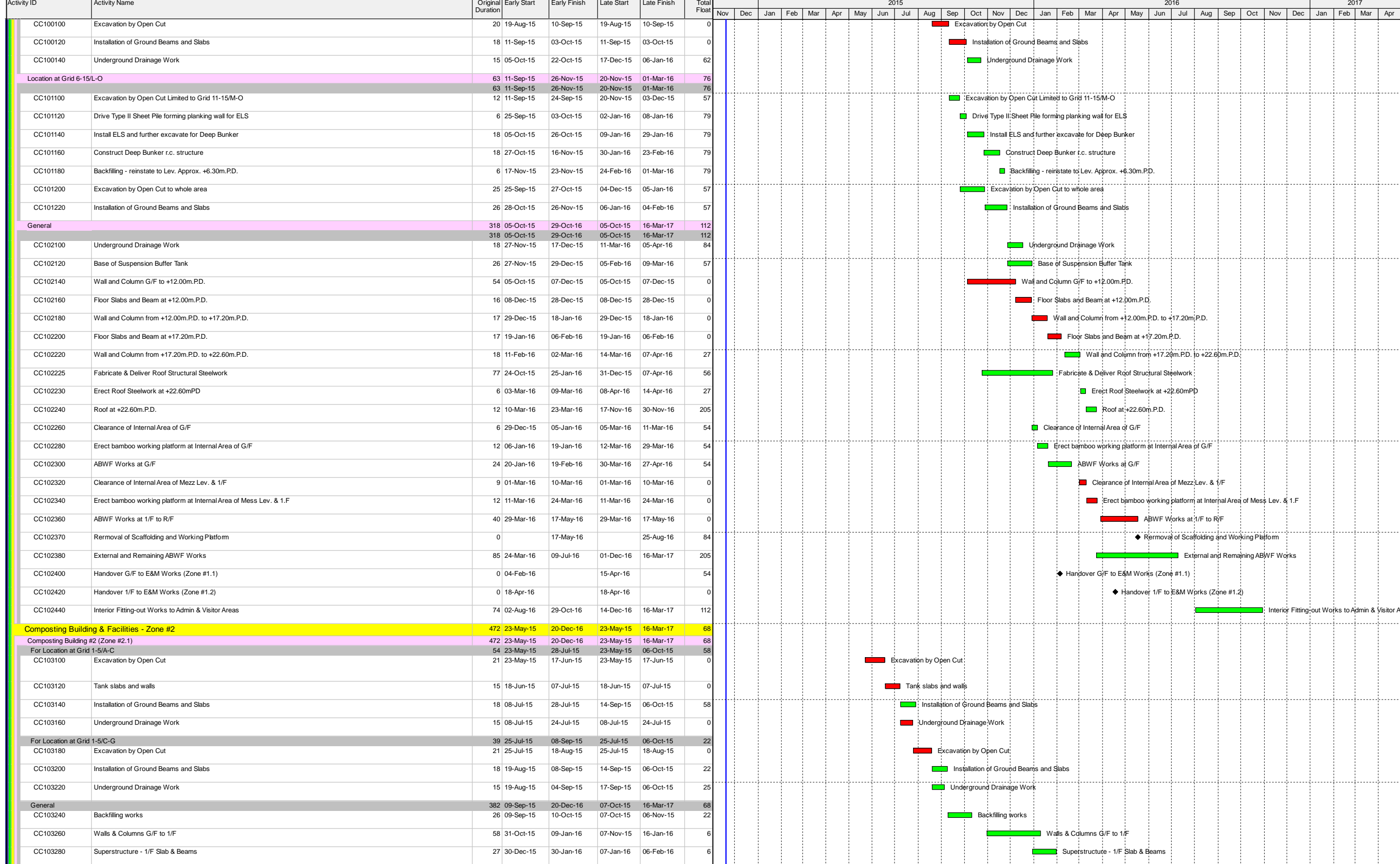
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	2015												2016												2017											
								Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr						
PL100380	Prepare & submit Critical Path Network to Employer, ER & IC	20	20-Nov-14	17-Dec-14	25-Mar-15	24-Apr-15	84	■ Prepare & submit Critical Path Network to Employer, ER & IC																																			
PL100390	IC checks & certifies Critical Path Network	14	18-Dec-14	31-Dec-14	25-Apr-15	08-May-15	128	■ IC checks & certifies Critical Path Network																																			
PL100400	Employer Consents to Critical Path Network	0		14-Jan-15		22-May-15	128	◆ Employer Consents to Critical Path Network																																			
Prepare & submit Contractor's Plans to Employer, ER & IC		128	20-Nov-14	30-Apr-15	20-Nov-14	22-May-15	19																																				
PL100410	Sub-contractor Management Plan	20	20-Nov-14	17-Dec-14	24-Apr-15	22-May-15	103	■ Sub-contractor Management Plan																																			
PL100420	Draft Project Management Plan	20	20-Nov-14	17-Dec-14	25-Mar-15	24-Apr-15	84	■ Draft Project Management Plan																																			
PL100430	IC checks & certifies Project Management Plan	14	18-Dec-14	31-Dec-14	25-Apr-15	08-May-15	128	■ IC checks & certifies Project Management Plan																																			
PL100440	Employer consents to Project Management Plan	0		14-Jan-15		22-May-15	128	◆ Employer consents to Project Management Plan																																			
PL100450	Draft Human Resource Plan	20	20-Nov-14	17-Dec-14	25-Mar-15	24-Apr-15	84	■ Draft Human Resource Plan																																			
PL100460	IC checks & certifies Human Resource Plan	14	18-Dec-14	31-Dec-14	25-Apr-15	08-May-15	128	■ IC checks & certifies Human Resource Plan																																			
PL100470	Employer consents to Human Resource Plan	0		14-Jan-15		22-May-15	128	◆ Employer consents to Human Resource Plan																																			
PL100480	Draft Design Plan	20	20-Nov-14	17-Dec-14	20-Nov-14	17-Dec-14	0	■ Draft Design Plan																																			
PL100490	IC checks & certifies Design Plan	14	18-Dec-14	31-Dec-14	18-Dec-14	31-Dec-14	0	■ IC checks & certifies Design Plan																																			
PL100500	Employer consents to Design Plan	0		14-Jan-15		14-Jan-15	0	◆ Employer consents to Design Plan																																			
PL100510	Draft Works Plan	20	20-Nov-14	17-Dec-14	25-Mar-15	24-Apr-15	84	■ Draft Works Plan																																			
PL100520	IC checks & certifies Works Plan	14	18-Dec-14	31-Dec-14	25-Apr-15	08-May-15	128	■ IC checks & certifies Works Plan																																			
PL100530	Employer consents to Works Plan	0		14-Jan-15		22-May-15	128	◆ Employer consents to Works Plan																																			
PL100540	Draft Operation Plan	62	20-Nov-14	18-Feb-15	22-Jan-15	24-Apr-15	42	■ Draft Operation Plan																																			
PL100550	IC checks & certifies Operation Plan	14	19-Feb-15	04-Mar-15	25-Apr-15	08-May-15	65	■ IC checks & certifies Operation Plan																																			
PL100560	Employer consents to Operation Plan	0		18-Mar-15		22-May-15	65	◆ Employer consents to Operation Plan																																			
PL100570	Draft Asset Management Plan	20	20-Nov-14	17-Dec-14	25-Mar-15	24-Apr-15	84	■ Draft Asset Management Plan																																			
PL100580	IC checks & certifies Asset Management Plan	14	18-Dec-14	31-Dec-14	25-Apr-15	08-May-15	128	■ IC checks & certifies Asset Management Plan																																			
PL100590	Employer consents to Asset Management Plan	0		14-Jan-15		22-May-15	128	◆ Employer consents to Asset Management Plan																																			
PL100600	Draft Environmental Management Plan	20	20-Nov-14	17-Dec-14	07-Jan-15	03-Feb-15	31	■ Draft Environmental Management Plan																																			
PL100610	IC checks & certifies Environmental Management Plan	14	18-Dec-14	31-Dec-14	25-Apr-15	08-May-15	128	■ IC checks & certifies Environmental Management Plan																																			
PL100620	Employer consents to Environmental Management Plan	0		14-Jan-15		22-May-15	128	◆ Employer consents to Environmental Management Plan																																			
PL100630	Final Environmental Management Plan	20	18-Dec-14	19-Jan-15	04-Feb-15	05-Mar-15	31	■ Final Environmental Management Plan																																			
PL100640	Draft Quality Plan	20	20-Nov-14	17-Dec-14	25-Mar-15	24-Apr-15	84	■ Draft Quality Plan																																			
PL100650	IC checks & certifies Quality Plan	14	18-Dec-14	31-Dec-14	25-Apr-15	08-May-15	128	■ IC checks & certifies Quality Plan																																			
PL100660	Employer consents to Quality Plan	0		14-Jan-15		22-May-15	128	◆ Employer consents to Quality Plan																																			
PL100670	Submit CV for Quality Sub-agent	0		30-Apr-15		22-May-15	16	◆ Submit CV for Quality Sub-agent																																			
PL100680	Draft Safety and Health Plan	20	20-Nov-14	17-Dec-14	25-Mar-15	24-Apr-15	84	■ Draft Safety and Health Plan																																			
PL100690	IC checks & certifies Safety & Health Plan	14	18-Dec-14	31-Dec-14	25-Apr-15	08-May-15	128	■ IC checks & certifies Safety & Health Plan																																			
PL100700	Employer consents to Safety & Health Plan	0		14-Jan-15		22-May-15	128	◆ Employer consents to Safety & Health Plan																																			
PL100710	Final Safety and Health Plan	17	18-Dec-14	14-Jan-15	29-Apr-15	22-May-15	86	■ Final Safety and Health Plan																																			
PL100720	Site Management Plan for Trip Ticket System (TTS)	14	11-Dec-14	02-Jan-15	02-Apr-15	24-Apr-15	75	■ Site Management Plan for Trip Ticket System (TTS)																																			
PL100730	IC checks & certifies TTS Site Management Plan	14	03-Jan-15	16-Jan-15	25-Apr-15	08-May-15	112	■ IC checks & certifies TTS Site Management Plan																																			
PL100740	Employer consents to TTS Site Management Plan	0		30-Jan-15		22-May-15	112	◆ Employer consents to TTS Site Management Plan																																			
Prepare & submit complaints procedure		32	20-Nov-14	07-Jan-15	08-Apr-15	22-May-15	91																																				
PL100750	Submit complaints procedure to ER	32	20-Nov-14	07-Jan-15	08-Apr-15	22-May-15	91	■ Submit complaints procedure to ER																																			
PL100760	ER agrees to complaint procedures	0		31-Dec-14		18-May-15	91	◆ ER agrees to complaint procedures																																			
PL100770	Establish Hotline for complaints	4	02-Jan-15	07-Jan-15	19-May-15	22-May-15	91	■ Establish Hotline for complaints																																			
General		5	02-Feb-15	09-Feb-15	12-Sep-16	19-Sep-16	398																																				
PL100780	Submit particulars of Tree supervisor to Employer	5	02-Feb-15	09-Feb-15	12-Sep-16	19-Sep-16	398	■ Submit particulars of Tree supervisor to Employer																																			

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late 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				
Training of Operation & Maintenance Staff								176	27-Apr-16	25-Nov-16	15-Aug-16	17-Mar-17	90																												
TN100100	Prepare & submit training syllabus and materials to IC & Employer	20	27-Apr-16	25-May-16	15-Aug-16	09-Sep-16	75	■ Prepare & submit training syllabus and materials to IC & Employer																																	
TN100150	IC checks & certifies training syllabus & materials	14	26-May-16	08-Jun-16	05-Nov-16	18-Nov-16	163	■ IC checks & certifies training syllabus & materials																																	
TN100200	Employer agrees to training syllabus and materials	0		20-Jun-16		28-Nov-16	113	◆ Employer agrees to training syllabus and materials																																	
TN100250	O&M Training of Contractor's Operation staff	60	29-Jul-16	25-Oct-16	14-Nov-16	14-Feb-17	75	■ O&M Training of Contractor's Operation staff																																	
TN100300	O&M Training of Employer's staff	64	26-Aug-16	25-Nov-16	13-Dec-16	17-Mar-17	75	■ O&M Training of Employer's staff																																	
Preparation of Testing / Operation Plan								183	14-Jun-16	20-Jan-17	09-Sep-16	16-Mar-17	44																												
Detail CV								36	20-Jun-16	01-Aug-16	09-Sep-16	23-Oct-16	68																												
OP100100	Submission of Detail CV before Process Start up and commissioning	1	20-Jun-16	20-Jun-16	09-Sep-16	09-Sep-16	58	■ Submission of Detail CV before Process Start up and commissioning																																	
OP100110	IC checks & comments on Detail CV	14	21-Jun-16	04-Jul-16	12-Sep-16	25-Sep-16	83	■ IC checks & comments on Detail CV																																	
OP100120	Revise & resubmit Detail CV	7	05-Jul-16	11-Jul-16	26-Sep-16	02-Oct-16	83	■ Revise & resubmit Detail CV																																	
OP100130	IC checks & certifies Detail CV	7	12-Jul-16	18-Jul-16	03-Oct-16	09-Oct-16	83	■ IC checks & certifies Detail CV																																	
OP100140	Employer Consents to Detail CV before Process Start up and commissioning	0		01-Aug-16		23-Oct-16	83	◆ Employer Consents to Detail CV before Process Start up and commissioning																																	
All System Commissioning Plan								41	14-Jun-16	01-Aug-16	15-Nov-16	02-Jan-17	126																												
OP100150	Submission of All System Commissioning Plan	5	14-Jun-16	20-Jun-16	15-Nov-16	21-Nov-16	107	■ Submission of All System Commissioning Plan																																	
OP100160	IC checks & comments on All System Commissioning Plan	14	21-Jun-16	04-Jul-16	22-Nov-16	05-Dec-16	154	■ IC checks & comments on All System Commissioning Plan																																	
OP100170	Revise & resubmit All System Commissioning Plan	7	05-Jul-16	11-Jul-16	06-Dec-16	12-Dec-16	154	■ Revise & resubmit All System Commissioning Plan																																	
OP100180	IC checks & certifies All System Commissioning Plan	7	12-Jul-16	18-Jul-16	13-Dec-16	19-Dec-16	154	■ IC checks & certifies All System Commissioning Plan																																	
OP100190	Employer Consents to All System Commissioning Plan	0		01-Aug-16		02-Jan-17	154	◆ Employer Consents to All System Commissioning Plan																																	
Process Start Up Plan								40	03-Oct-16	18-Nov-16	02-Dec-16	19-Jan-17	50																												
OP100200	Submission of Process Start up Plan	5	03-Oct-16	07-Oct-16	02-Dec-16	08-Dec-16	43	■ Submission of Process Start up Plan																																	
OP100210	IC checks & comments on Process Start up Plan	14	08-Oct-16	21-Oct-16	09-Dec-16	22-Dec-16	62	■ IC checks & comments on Process Start up Plan																																	
OP100220	Revise & resubmit Process Start up Plan	7	22-Oct-16	28-Oct-16	23-Dec-16	29-Dec-16	62	■ Revise & resubmit Process Start up Plan																																	
OP100230	IC checks & certifies Process Start up Plan	7	29-Oct-16	04-Nov-16	30-Dec-16	05-Jan-17	62	■ IC checks & certifies Process Start up Plan																																	
OP100240	Employer Consents to Process Start up Plan	0		18-Nov-16		19-Jan-17	62	◆ Employer Consents to Process Start up Plan																																	
Process Commissioning Plan								38	05-Dec-16	20-Jan-17	25-Jan-17	16-Mar-17	44																												
OP100250	Submission of Process Commissioning Plan	5	05-Dec-16	09-Dec-16	25-Jan-17	02-Feb-17	34	■ Submission of Process Commissioning Plan																																	
OP100260	IC checks & comments on Process Commissioning Plan	14	10-Dec-16	23-Dec-16	03-Feb-17	16-Feb-17	55	■ IC checks & comments on Process Commissioning Plan																																	
OP100270	Revise & resubmit Process Commissioning Plan	7	24-Dec-16	30-Dec-16	17-Feb-17	23-Feb-17	55	■ Revise & resubmit Process Commissioning Plan																																	
OP100280	IC checks & certifies Process Commissioning Plan	7	31-Dec-16	06-Jan-17	24-Feb-17	02-Mar-17	55	■ IC checks & certifies Process Commissioning Plan																																	
OP100290	Employer Consents to Process Commissioning Plan	0		20-Jan-17		16-Mar-17	55	◆ Employer Consents to Process Commissioning Plan																																	
Operation Plan								36	21-Jun-16	02-Aug-16	05-Jan-17	16-Feb-17	161																												
OP100300	Submission of Operation Plan	1	21-Jun-16	21-Jun-16	05-Jan-17	05-Jan-17	136	■ Submission of Operation Plan																																	
OP100310	IC checks & comments on Operation Plan	14	22-Jun-16	05-Jul-16	06-Jan-17	19-Jan-17	198	■ IC checks & comments on Operation Plan																																	
OP100320	Revise & resubmit Operation Plan	7	06-Jul-16	12-Jul-16	20-Jan-17	26-Jan-17	198	■ Revise & resubmit Operation Plan																																	
OP100330	IC checks & certifies Operation Plan	7	13-Jul-16	19-Jul-16	27-Jan-17	02-Feb-17	198	■ IC checks & certifies Operation Plan																																	
OP100340	Employer Consents to Operation Plan	0		02-Aug-16		16-Feb-17	198	◆ Employer Consents to Operation Plan																																	
Plant Commissioning Plan								41	07-Nov-16	23-Dec-16	02-Dec-16	23-Feb-17	47																												
OP100350	Submission of Plant Commissioning Plan	5	07-Nov-16	11-Nov-16	02-Dec-16	08-Dec-16	19	■ Submission of Plant Commissioning Plan																																	
OP100360	IC checks & comments on Plant Commissioning Plan	14	12-Nov-16	25-Nov-16	13-Jan-17	26-Jan-17	62	■ IC checks & comments on Plant Commissioning Plan																																	
OP100370	Revise & resubmit Plant Commissioning Plan	7	26-Nov-16	02-Dec-16	27-Jan-17	02-Feb-17	62	■ Revise & resubmit Plant Commissioning Plan																																	
OP100380	IC checks & certifies Plant Commissioning Plan	7	03-Dec-16	09-Dec-16	03-Feb-17	09-Feb-17	62	■ IC checks & certifies Plant Commissioning Plan																																	
OP100390	Employer Consents to Plant Commissioning Plan	0		23-Dec-16		23-Feb-17	62	◆ Employer Consents to Plant Commissioning Plan																																	
Operation and Maintenance Manuals and Record Drawings								94	19-Dec-16	18-Apr-17	17-Feb-17	18-Apr-17	0																												
OP100400	Submission of draft Operation and Maintenance Manual (SPE-A Clause 1.16.1.1)	0	19-Dec-16		17-Feb-17		39	◆ Submission of draft Operation and Maintenance Manual (SPE-A Clause 1.16.1.1)																																	

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late 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				
DD411440	Employer consents to Detailed Civil Design of External Works (Sub & Superstructure - Boundary Wall)	0		13-Nov-15		04-Feb-16	83													◆ Employer consents to Detailed Civil Design of External Works (Sub & Superstructure - Boundary Wall)																					
Architectural, Building Works & Finishes (ABWF)								155	17-Apr-15	22-Oct-15	29-Sep-15	28-Mar-16	126																												
Building #1 (Waste Receiving, Pre-treatment & Admin. Building)								87	04-Jun-15	15-Sep-15	10-Dec-15	28-Mar-16	155																												
DD120100	Prepare & submit Detailed Design of Bldg.#1 ABWF to IC, ER & Employer	43	04-Jun-15	04-Aug-15	10-Dec-15	15-Feb-16	131													■ Prepare & submit Detailed Design of Bldg.#1 ABWF to IC, ER & Employer																					
DD120110	Prepare & submit Method of Construction for Bldg.#1 ABWF	25	30-Jun-15	04-Aug-15	07-Jan-16	15-Feb-16	131													■ Prepare & submit Method of Construction for Bldg.#1 ABWF																					
DD120120	IC checks & comments on Detailed Design of Bldg.#1 ABWF	14	05-Aug-15	18-Aug-15	16-Feb-16	29-Feb-16	195													■ IC checks & comments on Detailed Design of Bldg.#1 ABWF																					
DD120140	Revise & resubmit Detailed Design of Bldg.#1 ABWF to IC, Employer & ER	7	19-Aug-15	25-Aug-15	01-Mar-16	07-Mar-16	195													■ Revise & resubmit Detailed Design of Bldg.#1 ABWF to IC, Employer & ER																					
DD120160	IC checks & certifies Detailed Design of Bldg.#1 ABWF	7	26-Aug-15	01-Sep-15	08-Mar-16	14-Mar-16	195													■ IC checks & certifies Detailed Design of Bldg.#1 ABWF																					
DD120180	Employer consents to Detailed Design of Bldg.#1 ABWF	0		15-Sep-15		28-Mar-16	195													◆ Employer consents to Detailed Design of Bldg.#1 ABWF																					
Building #2 (Composting & Maturation Building)								86	17-Apr-15	30-Jul-15	29-Sep-15	11-Jan-16	135																												
DD121100	Prepare & submit Detailed Design of Bldg.#2 ABWF to IC, ER & Employer	43	17-Apr-15	18-Jun-15	29-Sep-15	30-Nov-15	113													■ Prepare & submit Detailed Design of Bldg.#2 ABWF to IC, ER & Employer																					
DD121110	Prepare & submit Method of Construction for Bldg.#2 ABWF	25	14-May-15	18-Jun-15	27-Oct-15	30-Nov-15	113													■ Prepare & submit Method of Construction for Bldg.#2 ABWF																					
DD121120	IC checks & comments on Detailed Design of Bldg.#2 ABWF	14	19-Jun-15	02-Jul-15	01-Dec-15	14-Dec-15	165													■ IC checks & comments on Detailed Design of Bldg.#2 ABWF																					
DD121140	Revise & resubmit Detailed Design of Bldg.#2 ABWF to IC, Employer & ER	7	03-Jul-15	09-Jul-15	15-Dec-15	21-Dec-15	165													■ Revise & resubmit Detailed Design of Bldg.#2 ABWF to IC, Employer & ER																					
DD121160	IC checks & certifies Detailed Design of Bldg.#2 ABWF	7	10-Jul-15	16-Jul-15	22-Dec-15	28-Dec-15	165													■ IC checks & certifies Detailed Design of Bldg.#2 ABWF																					
DD121180	Employer consents to Detailed Design of Bldg.#2 ABWF	0		30-Jul-15		11-Jan-16	165													◆ Employer consents to Detailed Design of Bldg.#2 ABWF																					
Building #3 (Auxiliary Buildings & Facilities)								84	14-Jul-15	22-Oct-15	02-Nov-15	14-Feb-16	92																												
DD122100	Prepare & submit Detailed Design of Bldg.#3 ABWF to IC, ER & Employer	43	14-Jul-15	10-Sep-15	02-Nov-15	31-Dec-15	76													■ Prepare & submit Detailed Design of Bldg.#3 ABWF to IC, ER & Employer																					
DD122110	Prepare & submit Method of Construction for Bldg.#3 ABWF	25	07-Aug-15	10-Sep-15	26-Nov-15	31-Dec-15	76													■ Prepare & submit Method of Construction for Bldg.#3 ABWF																					
DD122120	IC checks & comments on Detailed Design of Bldg.#3 ABWF	14	11-Sep-15	24-Sep-15	04-Jan-16	17-Jan-16	115													■ IC checks & comments on Detailed Design of Bldg.#3 ABWF																					
DD122140	Revise & resubmit Detailed Design of Bldg.#3 ABWF to IC, Employer & ER	7	25-Sep-15	01-Oct-15	18-Jan-16	24-Jan-16	115													■ Revise & resubmit Detailed Design of Bldg.#3 ABWF to IC, Employer & ER																					
DD122160	IC checks & certifies Detailed Design of Bldg.#3 ABWF	7	02-Oct-15	08-Oct-15	25-Jan-16	31-Jan-16	115													■ IC checks & certifies Detailed Design of Bldg.#3 ABWF																					
DD122180	Employer consents to Detailed Design of Bldg.#3 ABWF	0		22-Oct-15		14-Feb-16	115													◆ Employer consents to Detailed Design of Bldg.#3 ABWF																					
Interior Fitting-out Works								75	04-Sep-15	03-Dec-15	15-Sep-16	13-Dec-16	305																												
DD120200	Prepare & submit Detailed Interior Fitting-out Design to IC, ER & Employer	32	04-Sep-15	22-Oct-15	15-Sep-16	01-Nov-16	255													■ Prepare & submit Detailed Interior Fitting-out Design to IC, ER & Employer																					
DD120210	Prepare & submit Method of Construction for Interior Fitting-out	25	15-Sep-15	22-Oct-15	27-Sep-16	01-Nov-16	255													■ Prepare & submit Method of Construction for Interior Fitting-out																					
DD120220	IC checks & comments on Detailed Interior Fitting-out Design	14	23-Oct-15	05-Nov-15	02-Nov-16	15-Nov-16	376													■ IC checks & comments on Detailed Interior Fitting-out Design																					
DD120240	Revise & resubmit Detailed Fitting-out Design to IC, Employer & ER	7	06-Nov-15	12-Nov-15	16-Nov-16	22-Nov-16	376													■ Revise & resubmit Detailed Fitting-out Design to IC, Employer & ER																					
DD120260	IC checks & certifies Detailed Interior Fitting-out Design	7	13-Nov-15	19-Nov-15	23-Nov-16	29-Nov-16	376													■ IC checks & certifies Detailed Interior Fitting-out Design																					
DD120280	Employer consents to Detailed Interior Fitting-out Design	0		03-Dec-15		13-Dec-16	376													◆ Employer consents to Detailed Interior Fitting-out Design																					
External Landscape Works and Building #2 Green Roof								98	28-May-15	21-Sep-15	16-Jun-16	10-Oct-16	310																												
DD410200	Prepare & submit Detailed Design of Landscape and Building #2 Green Roof to EPD, LandsD, PlanD, ArchSD	32	28-May-15	13-Jul-15	16-Jun-16	01-Aug-16	261													■ Prepare & submit Detailed Design of Landscape and Building #2 Green Roof to EPD, LandsD, PlanD, ArchSD																					
DD410210	Prepare & submit Method of Construction for Landscape and Building #2 Green Roof	20	14-Jul-15	10-Aug-15	02-Aug-16	29-Aug-16	261													■ Prepare & submit Method of Construction for Landscape and Building #2 Green Roof																					
DD410220	Submit Detailed Design of Landscape and Building #2 Green Roof to IC, Employer & ER	0		10-Aug-15		29-Aug-16	261													◆ Submit Detailed Design of Landscape and Building #2 Green Roof to IC, Employer & ER																					
DD410240	IC checks & comments on Detailed Design of Landscape and Building #2 Green Roof	14	11-Aug-15	24-Aug-15	30-Aug-16	12-Sep-16	385													■ IC checks & comments on Detailed Design of Landscape and Building #2 Green Roof																					
DD410260	Revise & resubmit Detailed Design of Landscape and Building #2 Green Roof to IC, Employer & ER	7	25-Aug-15	31-Aug-15	13-Sep-16	19-Sep-16	385													■ Revise & resubmit Detailed Design of Landscape and Building #2 Green Roof to IC, Employer & ER																					
DD410280	IC checks & certifies Detailed Design of Landscape and Building #2 Green Roof	7	01-Sep-15	07-Sep-15	20-Sep-16	26-Sep-16	385													■ IC checks & certifies Detailed Design of Landscape and Building #2 Green Roof																					
DD410300	Employer consents to Detailed Design of Landscape and Building #2 Green Roof	0		21-Sep-15		10-Oct-16	385													◆ Employer consents to Detailed Design of Landscape and Building #2 Green Roof																					
DETAILED DESIGN SUBMISSION (DDS) - ELECTRICAL AND MECHANICAL								247	18-Dec-14	21-Oct-15	18-Dec-14	11-Feb-16	91																												
HAZOP								10	23-Mar-15	08-Apr-15	20-Jul-15	31-Jul-15	79																												
DE010050	HAZOP Analysis	10	23-Mar-15	08-Apr-15	20-Jul-15	31-Jul-15	79													■ HAZOP Analysis																					
Detailed Process Documentation Submission								53	09-Apr-15	11-Jun-15	03-Aug-15	03-Nov-15	119																												
DE010100	Prepare & submit Detailed Process Documentation Submission to IC, ER & Employer	16	09-Apr-15	30-Apr-15	03-Aug-15	24-Aug-15	79													■ Prepare & submit Detailed Process Documentation Submission to IC, ER & Employer																					

Environmental Protection Department of the HKSAR		Contract No. EP/SP/61/10 Organic Waste Treatment Facilities, Phase 1						Contract Programme v1.2 OSCAR BIOENERGY JV																													
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late 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
DE140300	Revise & resubmit Biogas Cleaning & Storage Equipment to IC, Employer & ER	7	11-Mar-15	17-Mar-15	31-Mar-15	06-Apr-15	20																														
DE140350	IC checks & certifies Biogas Cleaning & Storage Equipment	7	18-Mar-15	24-Mar-15	07-Apr-15	13-Apr-15	20																														
DE140400	Employer consents to Biogas Cleaning & Storage Equipment	0		07-Apr-15		27-Apr-15	20																														
DE140450	Prepare & submit Detailed Design of Biogas System to IC, ER & Employer	37	04-May-15	24-Jun-15	22-May-15	15-Jul-15	14																														
DE140460	Prepare & submit Method of Construction for Biogas Cleaning & Storage System	25	20-May-15	24-Jun-15	10-Jun-15	15-Jul-15	14																														
DE140500	IC checks & comments on Detailed Design of Biogas System	14	25-Jun-15	08-Jul-15	16-Jul-15	29-Jul-15	21																														
DE140550	Revise & resubmit Detailed Design of Biogas System to IC, Employer & ER	7	09-Jul-15	15-Jul-15	30-Jul-15	05-Aug-15	21																														
DE140600	IC checks & certifies Biogas Cleaning & Storage System	7	16-Jul-15	22-Jul-15	06-Aug-15	12-Aug-15	21																														
DE140650	Employer consents to Biogas Cleaning & Storage System	0		05-Aug-15		26-Aug-15	21																														
Combined Heat Recovery and Power (CHP) Generation System		135	15-Jan-15	03-Jul-15	15-Jan-15	03-Jul-15	0																														
DE150200	Prepare & make CHP Equipment & Performance Submission to IC, ER & Employer	12	15-Jan-15	30-Jan-15	15-Jan-15	30-Jan-15	0																														
DE150250	IC checks & comments on CHP Equipment	14	31-Jan-15	13-Feb-15	31-Jan-15	13-Feb-15	0																														
DE150300	Revise & resubmit CHP Equipment to IC, Employer & ER	7	14-Feb-15	20-Feb-15	14-Feb-15	20-Feb-15	0																														
DE150350	IC checks & certifies CHP Equipment	7	21-Feb-15	27-Feb-15	21-Feb-15	27-Feb-15	0																														
DE150400	Employer consents to CHP Equipment	0		13-Mar-15		13-Mar-15	0																														
DE150450	Prepare & submit Detailed Design of CHP Generation System to IC, ER & Employer	35	31-Mar-15	22-May-15	31-Mar-15	22-May-15	0																														
DE150460	Prepare & submit Method of Construction for CHP Generation System	25	17-Apr-15	22-May-15	17-Apr-15	22-May-15	0																														
DE150500	IC checks & comments on Detailed Design of CHP Generation System	14	23-May-15	05-Jun-15	23-May-15	05-Jun-15	0																														
DE150550	Revise & resubmit Detailed Design of CHP Generation System to IC, Employer & ER	7	06-Jun-15	12-Jun-15	06-Jun-15	12-Jun-15	0																														
DE150600	IC checks & certifies CHP Generation System	7	13-Jun-15	19-Jun-15	13-Jun-15	19-Jun-15	0																														
DE150650	Employer consents to CHP Generation System	0		03-Jul-15		03-Jul-15	0																														
Continuous Emission Monitoring System (CEMS)		157	27-Feb-15	07-Sep-15	09-Mar-15	09-Dec-15	77																														
DE180200	Prepare & make CEMS Equipment & Performance Submission to IC, ER & Employer	20	27-Feb-15	26-Mar-15	09-Mar-15	08-Apr-15	6																														
DE180250	IC checks & comments on CEMS Equipment	14	27-Mar-15	09-Apr-15	09-Apr-15	22-Apr-15	13																														
DE180300	Revise & resubmit CEMS Equipment to IC, Employer & ER	7	10-Apr-15	16-Apr-15	23-Apr-15	29-Apr-15	13																														
DE180350	IC checks & certifies CEMS Equipment	7	17-Apr-15	23-Apr-15	30-Apr-15	06-May-15	13																														
DE180400	Employer consents to CEMS Equipment	0		07-May-15		20-May-15	13																														
DE180450	Prepare & submit Detailed Design of CEMS to IC, ER & Employer	36	05-Jun-15	27-Jul-15	18-Jun-15	07-Aug-15	9																														
DE180460	Prepare & submit Method of Construction for CAPC System	25	22-Jun-15	27-Jul-15	21-Sep-15	28-Oct-15	64																														
DE180500	IC Checks & comments on Detailed Design of CEMS	14	28-Jul-15	10-Aug-15	29-Oct-15	11-Nov-15	93																														
DE180550	Revise & resubmit Detailed Design of CEMS to IC, Employer & ER	7	11-Aug-15	17-Aug-15	12-Nov-15	18-Nov-15	93																														
DE180600	IC checks & certifies CEMS	7	18-Aug-15	24-Aug-15	19-Nov-15	25-Nov-15	93																														
DE180650	Employer consents to CEMS	0		07-Sep-15		09-Dec-15	93																														
Digestate Dewatering System		141	19-Dec-14	15-Jun-15	19-Dec-14	11-Feb-16	196																														
DE163200	Prepare & make Digestate Dewatering Equipment & Performance Submission to IC, ER & Employer	16	19-Dec-14	14-Jan-15	19-Dec-14	14-Jan-15	0																														
DE163250	IC checks & comments on Digestate Dewatering Equipment	14	15-Jan-15	28-Jan-15	15-Jan-15	28-Jan-15	0																														
DE163300	Revise & resubmit Digestate Dewatering Equipment to IC, Employer & ER	7	29-Jan-15	04-Feb-15	29-Jan-15	04-Feb-15	0																														
DE163350	IC checks & certifies Digestate Dewatering Equipment	7	05-Feb-15	11-Feb-15	05-Feb-15	11-Feb-15	0																														
DE163400	Employer consents to Digestate Dewatering Equipment	0		25-Feb-15		25-Feb-15	0																														
DE163450	Prepare & submit Detailed Design of Digestate Dewatering System to IC, ER & Employer	34	12-Mar-15	04-May-15	13-Nov-15	31-Dec-15	167																														
DE163500	Prepare & submit Method of Construction for Digestate Dewatering System	25	25-Mar-15	04-May-15	26-Nov-15	31-Dec-15	167																														
DE163550	IC checks & comments on Detailed Design of Digestate Dewatering System	14	05-May-15	18-May-15	01-Jan-16	14-Jan-16	241																														
DE163600	Revise & resubmit Detailed Design of Digestate Dewatering System to IC, Employer & ER	7	19-May-15	25-May-15	15-Jan-16	21-Jan-16	241																														
DE163650	IC checks & certifies Digestate Dewatering System	7	26-May-15	01-Jun-15	22-Jan-16	28-Jan-16	241																														

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late 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
PR170300	Wheel Loaders	103	16-Jun-15	11-Nov-15	17-May-16	12-Oct-16	227													Wheel Loaders															
Wastewater Treatment System (WWTS)		264	16-Mar-15	11-Apr-16	26-Mar-15	17-Jun-16	47																												
PR150100	Issue orders & receive shop drawings from WWTS suppliers	17	16-Mar-15	10-Apr-15	26-Mar-15	22-Apr-15	8													Issue orders & receive shop drawings from WWTS suppliers															
PR150120	Wastewater Treatment Plant	103	22-Sep-15	23-Feb-16	23-Nov-15	25-Apr-16	41													Wastewater Treatment Plant															
PR150140	Ammonia Stripping Plant	134	22-Sep-15	11-Apr-16	01-Dec-15	17-Jun-16	47													Ammonia Stripping Plant															
Centralized Air Pollution Control (CAPC) System		184	12-Feb-15	11-Nov-15	12-Feb-15	03-Jun-16	138																												
PR180100	Issue orders & receive shop drawings from CAPC suppliers	18	12-Feb-15	11-Mar-15	12-Feb-15	11-Mar-15	0													Issue orders & receive shop drawings from CAPC suppliers															
PR180120	CAPC System Equipment	103	16-Jun-15	11-Nov-15	04-Jan-16	03-Jun-16	138													CAPC System Equipment															
Bulk Material		169	21-Jul-15	23-Mar-16	11-Nov-15	25-Aug-16	105																												
PR220100	Mechanical Equipment - Penstock, Pipework, Valve, Lifting Appliance, Roller Shutters etc.	105	21-Jul-15	17-Dec-15	11-Nov-15	15-Apr-16	78													Mechanical Equipment - Penstock, Pipework, Valve, Lifting Appliance, Roller Shutters etc.															
PR220120	Platforms, Handrails and Ladders	90	12-Nov-15	23-Mar-16	19-Apr-16	25-Aug-16	105													Platforms, Handrails and Ladders															
Electrical System & Accessories		219	15-May-15	01-Apr-16	15-May-15	20-Apr-16	12																												
PR230100	Issue orders & receive shop drawings from Electrical suppliers	12	15-May-15	02-Jun-15	15-May-15	02-Jun-15	0													Issue orders & receive shop drawings from Electrical suppliers															
PR230120	MCC and Electrical Accessories System	121	06-Oct-15	01-Apr-16	19-Oct-15	15-Apr-16	9													MCC and Electrical Accessories System															
PR230180	Cables and Accessories, Cable Containment System	61	06-Oct-15	31-Dec-15	14-Jan-16	15-Apr-16	69													Cables and Accessories, Cable Containment System															
PR230200	Earthing and Lightning	40	06-Oct-15	01-Dec-15	17-Feb-16	15-Apr-16	90													Earthing and Lightning															
PR230220	Emergency Generator	101	06-Oct-15	02-Mar-16	17-Nov-15	15-Apr-16	29													Emergency Generator															
Main LV Switch Board		121	06-Oct-15	01-Apr-16	23-Oct-15	20-Apr-16	12																												
PR230140	LV Switch Board, switchgear and Instrumentation	121	06-Oct-15	01-Apr-16	23-Oct-15	20-Apr-16	12													LV Switch Board, switchgear and Instrumentation															
PR230160	FAT of LV Switch Board	2	24-Mar-16	29-Mar-16	14-Apr-16	15-Apr-16	12													FAT of LV Switch Board															
SCADA /PLC System		185	27-May-15	22-Feb-16	24-Aug-15	04-May-16	48																												
PR240100	Issue orders & receive shop drawings from SCADA/PLC suppliers	20	27-May-15	23-Jun-15	24-Aug-15	18-Sep-15	62													Issue orders & receive shop drawings from SCADA/PLC suppliers															
PR240120	SCADA/PLC System and component	83	22-Oct-15	22-Feb-16	30-Dec-15	04-May-16	48													SCADA/PLC System and component															
PR240140	FAT of SCADA/PLC System	2	29-Jan-16	01-Feb-16	14-Apr-16	15-Apr-16	48													FAT of SCADA/PLC System															
Building Services Equipment (Including Lift & Renewable Energy System)		279	12-Feb-15	01-Apr-16	13-Mar-15	06-Jul-16	64																												
PR250100	Issue orders & receive shop drawings from BS suppliers	20	12-Feb-15	13-Mar-15	13-Mar-15	14-Apr-15	19													Issue orders & receive shop drawings from BS suppliers															
PR250120	Firemen and Disable Lift	83	14-Oct-15	15-Feb-16	11-Dec-15	15-Apr-16	41													Firemen and Disable Lift															
PR250140	Absorption Chiller	83	30-Jul-15	26-Nov-15	11-Dec-15	15-Apr-16	93													Absorption Chiller															
PR250160	Electrical Chiller	81	12-Nov-15	10-Mar-16	15-Dec-15	15-Apr-16	23													Electrical Chiller															
PR250170	Cooling Tower	81	12-Nov-15	10-Mar-16	25-Nov-15	23-Mar-16	9													Cooling Tower															
PR250175	Air duct and Accessories	45	25-Jan-16	01-Apr-16	05-Feb-16	15-Apr-16	9													Air duct and Accessories															
PR250180	Chilled Water Circulation Pumps	83	30-Jul-15	26-Nov-15	11-Dec-15	15-Apr-16	93													Chilled Water Circulation Pumps															
PR250200	Fan coil and air handling units	83	30-Jul-15	26-Nov-15	11-Dec-15	15-Apr-16	93													Fan coil and air handling units															
PR250210	Fire Services System Equipment	81	12-Nov-15	10-Mar-16	15-Dec-15	15-Apr-16	23													Fire Services System Equipment															
PR250220	Plumbing and Drainage System Equipment	81	12-Nov-15	10-Mar-16	15-Dec-15	15-Apr-16	23													Plumbing and Drainage System Equipment															
PR250230	ELV System Equipment	81	12-Nov-15	10-Mar-16	08-Mar-16	06-Jul-16	78													ELV System Equipment															
CIVIL AND STRUCTURAL WORKS		549	26-Feb-15	31-Dec-16	14-Apr-15	18-Apr-17	84																												
General		24	26-Feb-15	25-Mar-15	14-Apr-15	12-May-15	36																												
CC100010	Permission / Comments from WSD before Commencement of works	24	26-Feb-15	25-Mar-15	14-Apr-15	12-May-15	36													Permission / Comments from WSD before Commencement of works															
Waste Receiving, Pre-treatment & Administration Building #1 (Zone #1)		356	19-Aug-15	29-Oct-16	19-Aug-15	16-Mar-17	112																												
Location at Grid 6-15/H-M		53	19-Aug-15	22-Oct-15	19-Aug-15	06-Jan-16	62																												
Location at Grid 6-15/H-M		53	19-Aug-15	22-Oct-15	19-Aug-15	06-Jan-16	62																												



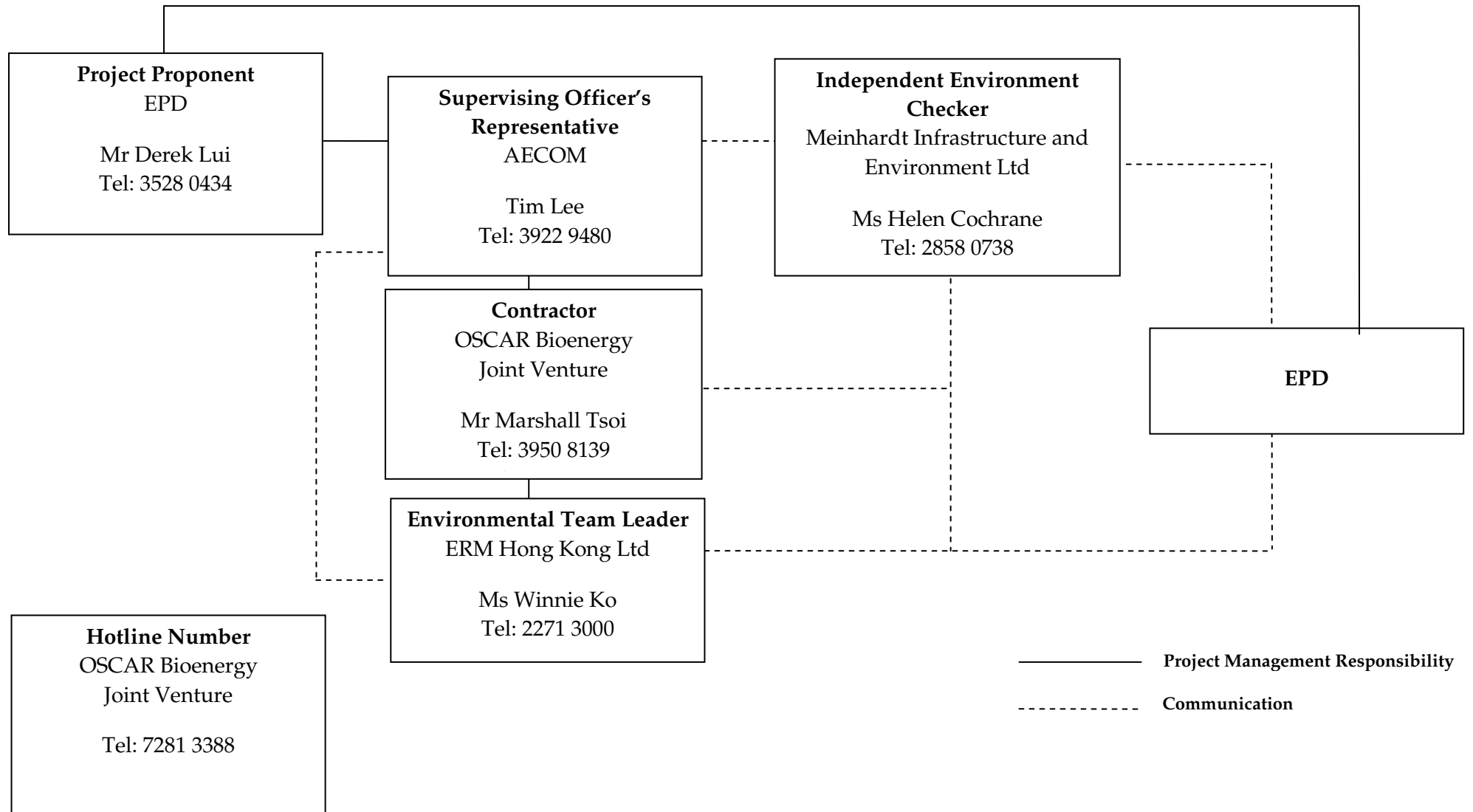
Activity ID	Activity Name	Original Duration	2015					2016												2017													
			Early Start	Early Finish	Late Start	Late Finish	Total Float	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr								
EM130280	Cable Tray Laying Works	39	23-Jul-16	06-Sep-16	24-Sep-16	10-Nov-16	53																										
EM130290	Cabling Works	17	07-Sep-16	27-Sep-16	11-Nov-16	30-Nov-16	53																										
EM130295	Completion of E&M Installation of Biogas Distribution System	0		27-Sep-16		30-Nov-16	53																										
Wastewater Treatment System			94	24-Feb-16	20-Jun-16	26-Apr-16	17-Aug-16	49																									
EM140100	Installation of Pumping System and associated pipework	40	24-Feb-16	14-Apr-16	26-Apr-16	14-Jun-16	49																										
EM140150	Installation of Aeration Pipework	24	15-Apr-16	13-May-16	15-Jun-16	13-Jul-16	49																										
EM140200	Installation of Odour Containment System	26	16-May-16	15-Jun-16	14-Jul-16	12-Aug-16	49																										
EM140250	Installation of Odour Extraction Ductwork	21	26-May-16	20-Jun-16	25-Jul-16	17-Aug-16	49																										
EM140300	Installation of ASP	51	12-Apr-16	13-Jun-16	18-Jun-16	17-Aug-16	55																										
EM140350	Cable Tray Laying Works	21	15-Apr-16	10-May-16	23-Jun-16	18-Jul-16	56																										
EM140400	Cabling Works	26	11-May-16	11-Jun-16	19-Jul-16	17-Aug-16	56																										
EM140450	Completion of E&M Installation of Wastewater Treatment System	0		20-Jun-16		17-Aug-16	49																										
Composting System			144	24-May-16	12-Nov-16	31-May-16	19-Nov-16	6																									
Installation of Tunnel Composting 1 to 6			126	24-May-16	22-Oct-16	31-May-16	29-Oct-16	6																									
EM160100	Installation Air Extraction Ductwork	75	24-May-16	20-Aug-16	31-May-16	27-Aug-16	6																										
EM160150	Installation of Water Spraying System	51	22-Aug-16	22-Oct-16	29-Aug-16	29-Oct-16	6																										
Installation of Leachate Treatment System			18	24-Oct-16	12-Nov-16	31-Oct-16	19-Nov-16	6																									
EM160200	Installation of Leachate Treatment System	18	24-Oct-16	12-Nov-16	31-Oct-16	19-Nov-16	6																										
Installation of Maturation Area			108	24-May-16	29-Sep-16	13-Oct-16	19-Nov-16	42																									
EM160250	Installation Air Extraction System	18	22-Aug-16	10-Sep-16	13-Oct-16	02-Nov-16	42																										
EM160300	Installation of Sieve	9	12-Sep-16	22-Sep-16	03-Nov-16	12-Nov-16	42																										
EM160350	Installation of Bagging Facilities	6	23-Sep-16	29-Sep-16	14-Nov-16	19-Nov-16	42																										
EM160400	Installation of Mobile Mixer	2	24-May-16	25-May-16	25-Oct-16	26-Oct-16	127																										
EM160450	Cable Tray Laying Works	9	26-May-16	04-Jun-16	27-Oct-16	05-Nov-16	127																										
EM160500	Cabling Works	12	06-Jun-16	20-Jun-16	07-Nov-16	19-Nov-16	127																										
Installation of Structurant Storage Area			44	24-May-16	15-Jul-16	19-Jul-16	07-Sep-16	46																									
EM160550	Installation Air Extraction System	26	24-May-16	23-Jun-16	19-Jul-16	17-Aug-16	46																										
EM160600	Installation of Structurant Storage System	12	24-May-16	06-Jun-16	04-Aug-16	17-Aug-16	60																										
EM160650	Cable Tray Laying Works	12	24-Jun-16	08-Jul-16	18-Aug-16	31-Aug-16	46																										
EM160700	Cabling Works	12	02-Jul-16	15-Jul-16	25-Aug-16	07-Sep-16	46																										
Installation of Digestate Dewatering System			60	16-Jul-16	24-Sep-16	08-Sep-16	19-Nov-16	46																									
EM160750	Installation of Centrifuges	9	16-Jul-16	26-Jul-16	08-Sep-16	19-Sep-16	46																										
EM160800	Installation of Sludge Pumping system	9	27-Jul-16	05-Aug-16	24-Oct-16	02-Nov-16	73																										
EM160850	Installation of Screw Conveyors System	9	06-Aug-16	16-Aug-16	03-Nov-16	12-Nov-16	73																										
EM160900	Installation of Dewatering Storage Tank	4	17-Aug-16	20-Aug-16	14-Nov-16	17-Nov-16	73																										
EM160950	Installation of Strirer	2	22-Aug-16	23-Aug-16	18-Nov-16	19-Nov-16	73																										
EM161000	Cable Tray Laying Work	43	22-Jul-16	09-Sep-16	14-Sep-16	05-Nov-16	46																										
EM161050	Cabling Works	43	05-Aug-16	24-Sep-16	29-Sep-16	19-Nov-16	46																										
Composting System			144	24-May-16	12-Nov-16	27-Sep-16	19-Nov-16	6																									
EM161100	Completion of E&M Installation of Composting System	0		12-Nov-16		19-Nov-16	6																										
EM161150	Installation Electrical Switchboard Room no 4	39	24-May-16	09-Jul-16	27-Sep-16	12-Nov-16	105																										
Centralized Air Pollution Control System			108	18-Apr-16	25-Aug-16	06-Jun-16	10-Nov-16	63																									
EM150100	Installation of Chemical Scrubber	26	18-Apr-16	19-May-16	06-Jun-16	07-Jul-16	40																										
EM150150	Installation of Dosing Pumps and associated pipeworks	26	28-Apr-16	30-May-16	17-Jun-16	18-Jul-16	40																										
EM150200	Installation of Activated Carbon Filter	26	31-May-16	30-Jun-16	12-Oct-16	10-Nov-16	110																										

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late 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				
								Gantt Chart Area																																	
EM150250	Installation of Odour Extraction Duct Work	77	26-May-16	25-Aug-16	21-Jul-16	21-Oct-16	46	Installation of Odour Extraction Duct Work																																	
EM150300	Installation of Chemical Storage Tanks	26	31-May-16	30-Jun-16	19-Jul-16	17-Aug-16	40	Installation of Chemical Storage Tanks																																	
EM150350	Cable Tray Laying Works	34	20-May-16	29-Jun-16	30-Aug-16	11-Oct-16	85	Cable Tray Laying Works																																	
EM150400	Cabling Works	26	30-Jun-16	30-Jul-16	12-Oct-16	10-Nov-16	85	Cabling Works																																	
EM150450	Completion of E&M Installation of Centralized Air Pollution Control System	0		25-Aug-16		10-Nov-16	63	Completion of E&M Installation of Centralized Air Pollution Control System																																	
EM150500	Installation of Switchboard at CAPCS Switchboard room	42	07-Jun-16	27-Jul-16	07-Jun-16	27-Jul-16	0	Installation of Switchboard at CAPCS Switchboard room																																	
Administration Offices & Visitor Areas								146	04-Feb-16	04-Aug-16	26-May-16	25-Aug-16	18																												
EM17010B	Building Service Installation of Administration Offices	37	18-Apr-16	01-Jun-16	26-May-16	09-Jul-16	31	Building Service Installation of Administration Offices																																	
EM17012B	Lift Installation of Administration Offices	60	25-May-16	04-Aug-16	06-Jun-16	16-Aug-16	10	Lift Installation of Administration Offices																																	
EM170150	Visitor and Educational Centre	40	02-Jun-16	20-Jul-16	11-Jul-16	25-Aug-16	31	Visitor and Educational Centre																																	
EM17020B	Completion of E&M Installation of Administration Offices & Visitor Areas	0		01-Aug-16		25-Aug-16	21	Completion of E&M Installation of Administration Offices & Visitor Areas																																	
EM170250	Installation of Electrical Switchboard Room no 3	41	04-Feb-16	29-Mar-16	07-Jun-16	26-Jul-16	97	Installation of Electrical Switchboard Room no 3																																	
General								138	16-Apr-16	29-Sep-16	18-Apr-16	20-Oct-16	16																												
EM190150	Instrumentation, Control & Monitoring System (SCADA/PLC)	103	18-Apr-16	19-Aug-16	16-May-16	14-Sep-16	22	Instrumentation, Control & Monitoring System (SCADA/PLC)																																	
EM19020B	Building Services and Management System (Building #1)	125	18-Apr-16	14-Sep-16	18-Apr-16	14-Sep-16	0	Building Services and Management System (Building #1)																																	
EM19021B	Switchboard and MCC Installation (Building #1)	100	18-Apr-16	16-Aug-16	18-Apr-16	16-Aug-16	0	Switchboard and MCC Installation (Building #1)																																	
EM19022B	Cables and Accessories, Cable Containment System Installation (Building #1)	115	18-Apr-16	02-Sep-16	29-Apr-16	14-Sep-16	10	Cables and Accessories, Cable Containment System Installation (Building #1)																																	
EM19023B	Earthing and Lightning System Installation (Building #1)	110	18-Apr-16	27-Aug-16	04-May-16	12-Sep-16	13	Earthing and Lightning System Installation (Building #1)																																	
EM19024B	Emergency Genset Installation (Building #1)	30	08-Jul-16	11-Aug-16	22-Jul-16	25-Aug-16	12	Emergency Genset Installation (Building #1)																																	
EM19025B	Equipment at Gate House	12	16-Apr-16	29-Apr-16	01-Sep-16	14-Sep-16	114	Equipment at Gate House																																	
EM19030B	ELV System Installation (Building #3)	60	18-Jun-16	27-Aug-16	07-Jul-16	14-Sep-16	15	ELV System Installation (Building #3)																																	
EM19050B	Platform & Handrails (FRP)	45	08-Aug-16	29-Sep-16	26-Aug-16	20-Oct-16	16	Platform & Handrails (FRP)																																	
Energisation of Switchboards								1	28-Jul-16	28-Jul-16	28-Jul-16	14-Nov-16	90																												
EN100100	Energisation of Switchboard (Main LV Switchroom)	1	28-Jul-16	28-Jul-16	28-Jul-16	28-Jul-16	0	Energisation of Switchboard (Main LV Switchroom)																																	
EN100150	Energisation of Switchboard (For Anaerobic Digestion System and Dewatering System)	1	28-Jul-16	28-Jul-16	12-Sep-16	12-Sep-16	39	Energisation of Switchboard (For Anaerobic Digestion System and Dewatering System)																																	
EN100200	Energisation of Switchboard (For Administration Building)	1	28-Jul-16	28-Jul-16	28-Jul-16	28-Jul-16	0	Energisation of Switchboard (For Administration Building)																																	
EN100250	Energisation of Switchboard (For Composting System)	1	28-Jul-16	28-Jul-16	14-Nov-16	14-Nov-16	90	Energisation of Switchboard (For Composting System)																																	
EN100300	Energisation of Switchboard (For Pre-Treatment System)	1	28-Jul-16	28-Jul-16	28-Jul-16	28-Jul-16	0	Energisation of Switchboard (For Pre-Treatment System)																																	
EN100350	Energisation of Switchboard (For Centralized Air Pollution System)	1	28-Jul-16	28-Jul-16	28-Jul-16	28-Jul-16	0	Energisation of Switchboard (For Centralized Air Pollution System)																																	
TESTING AND COMMISSIONING								189	29-Jul-16	16-Mar-17	18-Aug-16	16-Mar-17	0																												
Site Testing (including hydraulic testing & pipe pressure testing)								134	29-Jul-16	07-Jan-17	18-Aug-16	14-Jan-17	6																												
TC100100	Site Testing of Pretreatment System	27	15-Sep-16	19-Oct-16	15-Sep-16	19-Oct-16	0	Site Testing of Pretreatment System																																	
TC100150	Site Testing of Anaerobic Digestion Treatment System	30	13-Sep-16	20-Oct-16	13-Sep-16	20-Oct-16	0	Site Testing of Anaerobic Digestion Treatment System																																	
TC100200	Site Testing of Heat Recovery and Power Generation System	30	01-Dec-16	07-Jan-17	01-Dec-16	07-Jan-17	0	Site Testing of Heat Recovery and Power Generation System																																	
TC100250	Site Testing of Biogas Cleaning and Storage System	30	09-Nov-16	13-Dec-16	01-Dec-16	07-Jan-17	19	Site Testing of Biogas Cleaning and Storage System																																	
TC100300	Site Testing of WWTS	51	29-Jul-16	27-Sep-16	18-Aug-16	19-Oct-16	17	Site Testing of WWTS																																	
TC100350	Site Testing of CAPCS	51	26-Aug-16	27-Oct-16	11-Nov-16	12-Jan-17	63	Site Testing of CAPCS																																	
TC100400	Site Testing of Composting System	43	14-Nov-16	05-Jan-17	21-Nov-16	12-Jan-17	6	Site Testing of Composting System																																	
TC100450	Site Testing of Weighbridge System & Vehicle Wash System	39	29-Jul-16	12-Sep-16	28-Nov-16	14-Jan-17	101	Site Testing of Weighbridge System & Vehicle Wash System																																	
System Commissioning (24 hours)								92	20-Oct-16	19-Jan-17	20-Oct-16	19-Jan-17	0																												
TC110100	Pre-Treatment Building & Facilities	1	20-Oct-16	20-Oct-16	20-Oct-16	20-Oct-16	0	Pre-Treatment Building & Facilities																																	
TC110300	Biogas Cleaning and Storage System	1	24-Oct-16	24-Oct-16	07-Jan-17	07-Jan-17	75	Biogas Cleaning and Storage System																																	

Annex D

Project Organization Chart with Contact Details

Project Organization During Construction Phase (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&A Manual</i>				
A. Air Quality				
3.73	2.5	<p><u>Air Pollution Control (Construction Dust) Regulation & Good Site Practices</u></p> <ul style="list-style-type: none"> • Use of regular watering, with complete coverage, to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather. • Use of frequent watering for particularly dusty construction areas and areas close to ASRs. • 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. • Open stockpiles should be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs. • Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations. • Establishment and use of vehicle wheel and body washing facilities at the exit points of the site. • 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. • Imposition of speed controls for vehicles on unpaved site roads. 8 kilometers per hour is the recommended limit. • Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs. • Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides. • Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an audible high level alarm which is interlocked with the material filling line and no overfilling is allowed. • Loading, unloading, transfer, handling or storage of bulk cement or dry PFA should be carried out in a totally enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system. 	Construction Site / During Construction Period	<>
B. Hazard to Life				
4.102	3.3	<u>Construction Phase</u>	Construction Site / During	N/A

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location/ Timing	Status
		<ul style="list-style-type: none"> • The number of workers on site during construction stage should be kept at the same level as the assessment. • Construction works should be suspended when delivery of chlorine takes place. • 3m high fence should be constructed along the boundary facing the SHWWTW. • 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. • 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. • 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. • Introduction training should be provided to any staff before carryout construction works at the Project site. • 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. 	Construction Period	
<i>C. Water Quality</i>				
5.44	4.5	<u>Construction site run-off and general construction activities:</u> The mitigation measures as outlined in the ProPECC PN 1/94 Construction Site Drainage should be adopted where applicable.	Construction Site / During Construction Period	<>
5.45	4.5	<u>Excavation of Soil Materials</u> 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 amount of exposed soils exist, earth bunds or sand bags should be provided. Exposed	Construction Site / During Construction Period	<>

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location/ Timing	Status
		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"> • 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 labeled, 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. 	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	<>

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location/ Timing	Status
5.51	4.5	<u>Sewage Effluent</u> 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.	Work site/During the construction period	N/A
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	<u>Nullah Decking</u> To minimize the potential water quality impacts from the nullah reconstruction works, the practices outlined below should be adopted where applicable: <ul style="list-style-type: none"> • The proposed works should be carried out within the dry season between October and March when the flow in the open nullah is low. • The use of less or smaller construction plants may be specified to reduce the disturbance to the nullah bed. • 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. • Stockpiling of construction materials and dusty materials should be covered and located away from the nullah any water courses. • Construction debris and spoil should be covered up and/or disposed of as soon as possible to avoid being washed into the nullah and nearby water receivers. • Construction activities, which generate large amount of wastewater, should be carried out in a distance away from the nullah, where practicable. • Construction effluent, site run-off and sewage should be properly collected and/or treated. • 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. • Proper shoring may need to be erected in order to prevent soil/mud from slipping into the nullah and nearby watercourse. • Supervisory staff should be assigned to station 	Work Site / During Construction Period	√
<i>D. Waste Management</i>				

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location/ Timing	Status
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"> • Obtain 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); • Provide staff training for proper waste management and chemical handling procedures; • Provide sufficient waste disposal points and regular waste collection; • Provide appropriate measures to minimize 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 disposed of to licensed facility for treatment; and • Employ licensed waste collector to collect waste. 	Work Site / During Construction Period	<>
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"> • Design foundation works that could minimise the amount of excavated material to be generated; • Provide training to workers on the importance of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycling; • Sort out demolition debris and excavated materials from demolition works to recover reusable/ recyclable portions (i.e. soil, broken concrete, metal etc.); • Segregate and store different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal; • 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 • Plan and stock construction materials carefully to minimize the amount of waste to be generated and to avoid unnecessary generation of waste. 	Work Site/During Design & Construction Period	√
6.44	5.7	<p><u>Excavated and C&D Materials</u></p> <p>In order to minimise the impact resulting from collection and transportation of C&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"> • A WMP, which becomes part of the Environmental Management Plan (EMP), should be 	Work Site/During Design & Construction Period	√

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location/ Timing	Status
		<p>prepared in accordance with ETWB TCW No.19/2005;</p> <ul style="list-style-type: none"> • 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 C&D material at public filling facilities and landfills and to control fly-tipping, a trip-ticket system should be adopted (refer to ETWB TCW No. 31/2004). 		
6.45 - 6.46	5.8 - 5.9	<p>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.</p> <p>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.</p>	Work Site/ During Design & Construction Period	√
6.47	5.10	<p><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.</p>	Work Site / During Construction Period	√
6.48	5.11	<p><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.</p>	Work Site / During Construction Period	<>

E. Landscape and Visual

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location/ Timing	Status
7.99 & Table 7.7	Table 6.1	<u>Construction Phase</u> <ul style="list-style-type: none"> • Topsoil, where identified, should be stripped and stored for re-use in the construction of the soft landscape works, where practical • Compensatory tree planting should be provided to compensate for felled trees. <ul style="list-style-type: none"> - Compensation tree species shall be chosen from both indigenous and ornamental species - Compensatory tree planting quantities shall be as per DLO approved requirement. • Control of night-time lighting • Erection of decorative screen hoarding compatible with the surrounding setting 	Work site/During Design & Construction Stages	<>
<i>F. Noise</i>				
8.25	7.3	Good Site Practice: <ul style="list-style-type: none"> • Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction program; • Mobile plant, if any, should be sited as far from noise sensitive receivers (NSRs) as possible; • 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; • 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 • Material stockpiles and other structures should be effectively utilized, wherever practicable, in screening noise from on-site construction activities. 	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 (see Note 13)					Actual Quantities of Non-inert C&D Materials (Construction Waste) Generated (see Note 13)				
	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	2236.56	0.00	0.00	0.00	2226.9	0.00	0.00	0.00	0.00	9.66
Total	2266.14	0.00	0.00	0.00	2256.48	0.00	0.00	0.00	0.00	9.66

- 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.

Annex G

Environmental Complaint,
Environmental Summons
and Persecution Log

Annex G Cumulative Complaint and Summons/Prosecutions Log

Reporting Month	Number of Complaints in Reporting Month	Number of Summons/Prosecutions in Reporting Month
May 2015	0	0
June 2015	0	0
Overall Total	0	0