

OSCAR Bioenergy Joint Venture

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

1 July 2015 – 31 July 2015

Environmental Resources Management

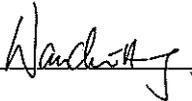
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Reference 0279222

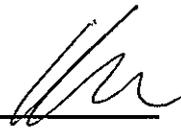
For and on behalf of ERM-Hong Kong, Limited	
Approved by:	Frank Wan
Signed:	
Position:	Partner
Certified by:	 (Environmental Team Leader - Winnie Ko)
Certified by:	 (Registered Landscape Architect No. R-150 - Albert Chung)
Date:	12 August 2015

Meinhardt Infrastructure and Environment Limited

**Organic Waste Treatment Facilities,
Phase I**

Monthly EM&A Report
(1 July 2015 – 31 July 2015)

(August 2015)

Verified by: Helen Cochrane 

Position: Independent Environmental Checker

Date: 12 Aug. 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 2nd monthly Environmental Monitoring and Audit (EM&A) report presenting the EM&A works carried out during the period from 1 July 2015 to 31 July 2015 in accordance with the EM&A Manual.

Summary of Construction Works undertaken during the Reporting Month

Works undertaken in the reporting month included:

- Piling;
- Removing topsoil at the location of Building 2; and
- Construction of foundation footing by tower crane.

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 | 3 times |

Waste Management

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

Inert C&D materials (public fill) include bricks, concrete, building debris, rubble and excavated spoil. In total, 5,088.75 tonnes of inert C&D material were generated from the Project, of which 0.00 tonnes were reused in this Contract and the remaining 5,088.75 tonnes were disposed as public fill to Fill Banks at Tuen Mun Area 38 and Tseung Kwan O Area 137.

Non-inert C&D materials (construction wastes) include metals, paper / cardboard packaging waste, plastics and other wastes such as general refuse. 0.00 kg of metals, papers/ cardboard packing and plastics were sent to recyclers for recycling during the reporting period. 33.68 tonnes of general refuse was disposed as landfill

Environmental Site Inspection

Five weekly joint environmental site inspections were carried out by the representatives of the Contractor, SOR and the Environmental Team (ET). The IEC was also present at the joint inspection on 22 July 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 3, 17 and 31 July 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;
- Excavation Works for Building 1 and Building 2;
- Earthing Copper Tape Installation; and
- Tower Crane Erection.

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 2nd EM&A report which summarises the monitoring results and audit findings for the EM&A programme during the reporting period from 1 to 31 July 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**

2.1**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"> • Piling • Removing topsoil at the location of Building 2 • Construction of foundation footing by tower crane

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	-
Effluent Discharge License	WT00021482-2015	21 May 2015 - 31 May 2020	Approved on 21 May 2015
Construction Noise Permit	GW-RW0078-15	1 April 2015 - 30 August 2015	-
Chemical Waste Producer Registration	WPN 5213-961-O2231-01	Throughout the Contract	Approved on 29 April 2015
Waste Disposal Billing Account	Account number: 702310	Throughout the Contract	-

ENVIRONMENTAL MONITORING REQUIREMENT, ENVIRONMENTAL MITIGATION MEASURES

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

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

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

IMPLEMENTATION STATUS ON ENVIRONMENTAL PROTECTION REQUIREMENTS

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

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

Table 5.1 Quantities of Waste Generated from the Project

Month / Year	Quantity			
	Total Inert C&D Materials Generated ^(a)	Non-inert C&D Materials ^(b)		
		C&D Materials Recycled ^(c)	C&D Waste Disposed of at Landfill ^(d)	Chemical Waste
May 2015	29.58 tonnes	0.00 kg	0.00 tonnes	0 L
June 2015	2,226.90 tonnes	0.00 kg	9.66 tonnes	0 L
July 2015	2,832.27 tonnes	0.00 kg	33.68 tonnes	0 L

Notes:

- (a) Inert C&D materials (public fill) include bricks, concrete, building debris, rubble and excavated spoil. In total, 5,088.75 tonnes of inert C&D material were generated from the Project, of which 0.00 tonnes were reused in this Contract and the remaining 5,088.75 tonnes were disposed as public fill to Fill Banks at Tuen Mun Area 38 and Tseung Kwan O Area 137. The detailed waste flow is presented in *Annex F*.
- (b) Non-inert C&D materials (construction wastes) include metals, paper / cardboard packaging waste, plastics and other wastes such as general refuse. Metals generated from the Project were grouped into construction wastes as the materials were not disposed of with others at the public fill.
- (c) 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 3, 10, 17, 22 and 31 July 2015. The IEC was also present at the joint inspection on 22 July 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:

3 July 2015

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

10 July 2015

- Chemical container was found to be placed in the cop of the excavator. It was recommended to provide drip tray under every chemical containers, and to place the same type of chemical in the same area.
- Pond water was found in drip trays. It was recommended to clear the pond water regularly.
- Pond water was found in the U-channel. It was recommended to clear the pond water regularly.

17 July 2015

- No observation was recorded.

22 July 2015

- Chemical waste containers were found without chemical waste label. It was recommended to ensure proper labelling in accordance with the requirement stipulated in the *Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes* (published under the *Waste Disposal Ordinance (Cap.354) Section 35*). General refuse was also found in the chemical waste storage container. It was recommended to clear it and

ensure that there was no object other than chemical waste in the storage container.

- Temporary chemical waste storage container onsite was improper according to the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes (Published under the Waste Disposal Ordinance (Cap.354) Section 35). It is recommended to provide proper chemical waste storage area in accordance with the requirements.

31 July 2015

- General refuse was found in some area. It was recommended to clear general refuse regularly.
- Pond water was found in the U-channel. It was recommended to clear the pond water regularly.

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 3, 17 and 31 July 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:

Item	Observation & Recommendation	Photo Record
3 July 2015		
1.	General refuse was observed within the tree protection zone of Trees T43 and T44. It was recommended to clear general refuse near the trees.	 <p>(T43)</p>

Item	Observation & Recommendation	Photo Record
		 <p data-bbox="1002 450 1062 483">(T44)</p>
17 July 2015		
1.	A side of T41 tree protection boundary was found to be collapsed. It was recommended to repair it and check the tree protection boundaries regularly.	 <p data-bbox="1002 864 1062 898">(T41)</p>
2.	Machines were found to be placed near tree T41. It was recommended to avoid placing machine near the tree protection zone.	 <p data-bbox="1002 1234 1062 1267">(T41)</p>
3.	Tree T43 was found to be in poor health condition. It was recommended to spray water to it regularly.	 <p data-bbox="1002 1597 1062 1630">(T43)</p>
31 July 2015		
1.	No observation was 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

- Piling
 - Excavation Works for Building 1 and Building 2
 - Earthing Copper Tape Installation
 - Tower Crane Erection
-

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

8.2 CONSTRUCTION PROGRAMME

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

CONCLUSIONS

This EM&A Report presents the EM&A programme undertaken during the reporting period from 1 July 2015 to 31 July 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.

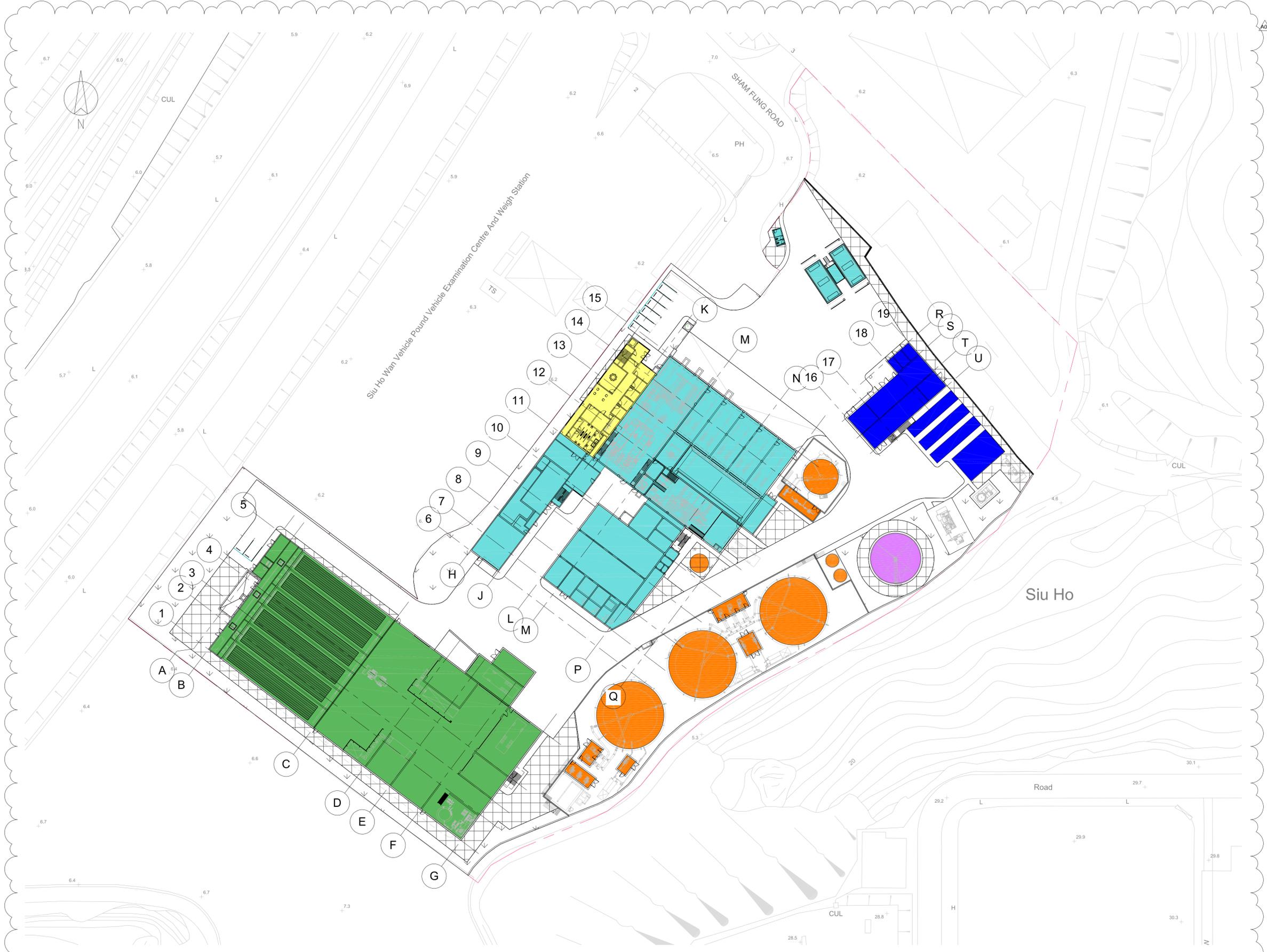
No non-compliance event was recorded during the reporting period.

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
 邁達基建築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

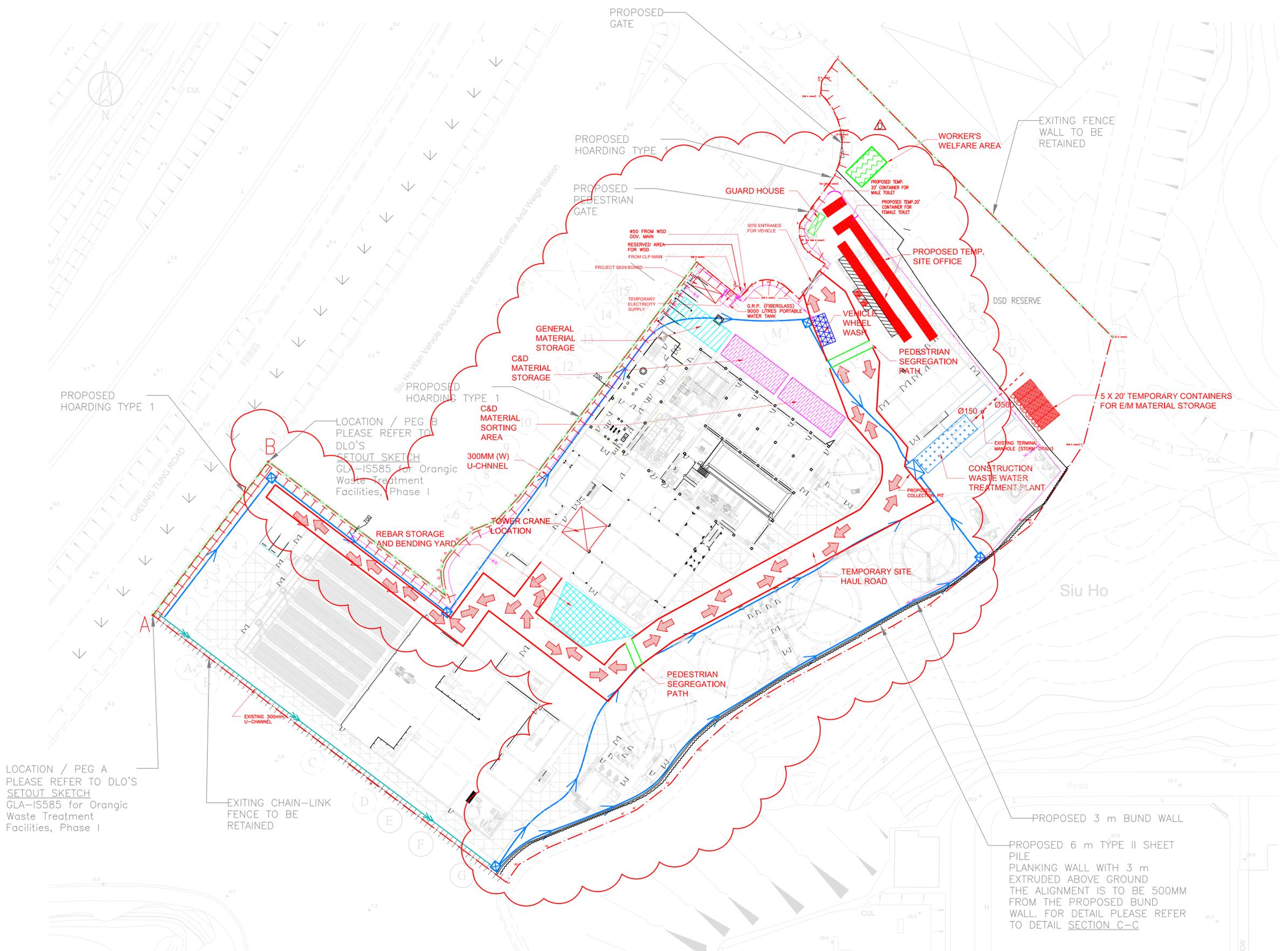
SCALE
 1:500@A1; 1:1000@A3

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	12	20-Nov-14	05-Dec-14	22-Apr-15	08-May-15	101	■ Prepare & submit Emergency Procedures Plan by ET to IEC & ER																																			
PL100210	IEC checks & verifies Emergency Procedures Plan	10	08-Dec-14	19-Dec-14	11-May-15	22-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	10	20-Nov-14	03-Dec-14	16-Dec-14	31-Dec-14	18	■ 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	10	20-Nov-14	03-Dec-14	24-Apr-15	08-May-15	103	■ 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																																			

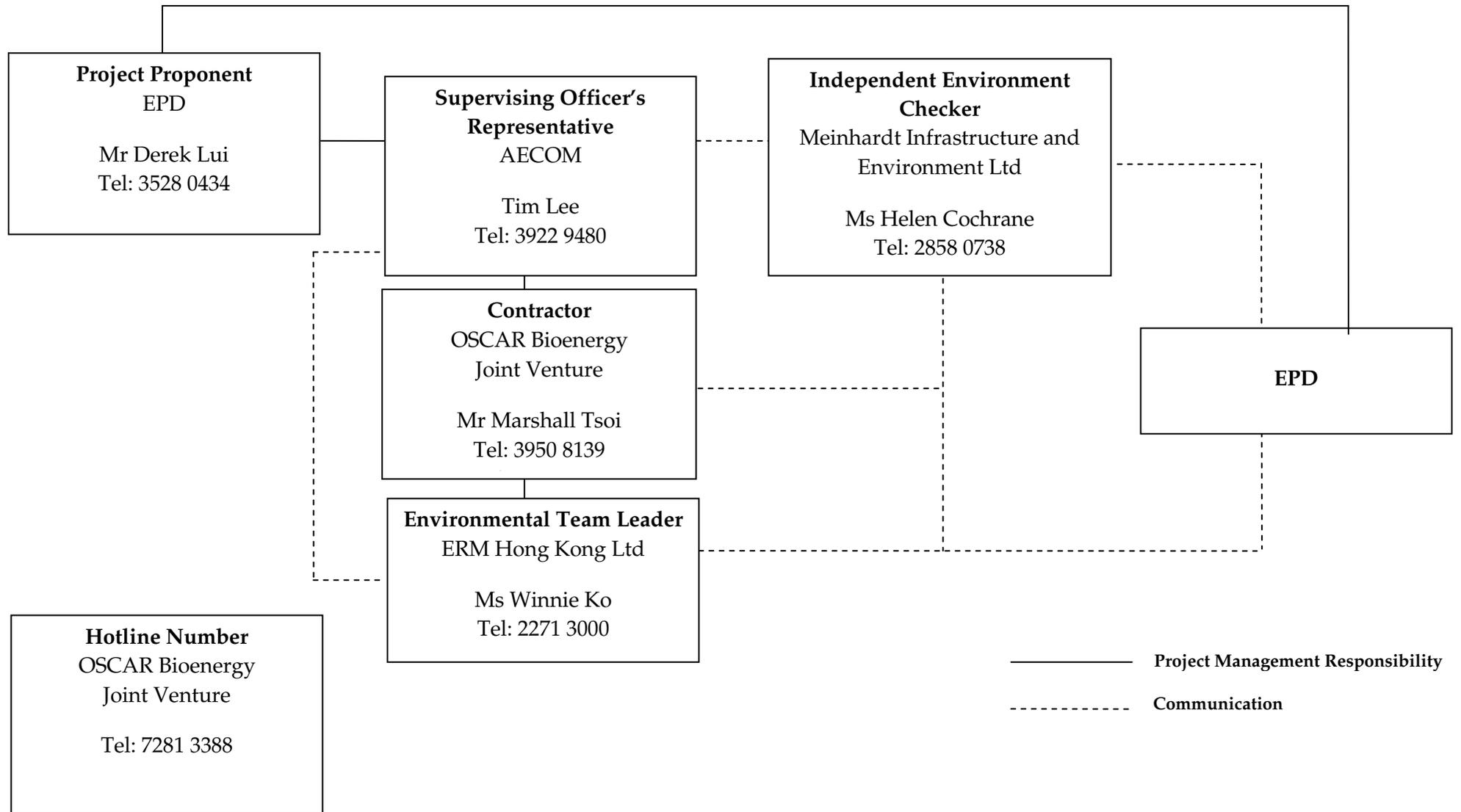
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	2015												2016												2017									
								Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr				
Training of Operation & 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	23-Feb-17	47	■ 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						
DP100170	JV Process Layout Plan	7	20-Nov-14	28-Nov-14	26-Nov-14	04-Dec-14	4	JV Process Layout Plan																																			
DP100180	Organic Waste Treatment Systems Layout	7	20-Nov-14	28-Nov-14	26-Nov-14	04-Dec-14	4	Organic Waste Treatment Systems Layout																																			
DP100190	Biogas Process Layout	7	20-Nov-14	28-Nov-14	26-Nov-14	04-Dec-14	4	Biogas Process Layout																																			
DP100200	Wastewater Process Layout	7	20-Nov-14	28-Nov-14	26-Nov-14	04-Dec-14	4	Wastewater Process Layout																																			
DP100210	Waste Air Process Layout	7	20-Nov-14	28-Nov-14	26-Nov-14	04-Dec-14	4	Waste Air Process Layout																																			
DP100220	Completion of Process Layout	0		28-Nov-14		04-Dec-14	4	◆ Completion of Process Layout																																			
Waste Receiving, Pre-treatment & Administration Building #1		9	01-Dec-14	11-Dec-14	05-Dec-14	18-Dec-14	5																																				
		9	01-Dec-14	11-Dec-14	05-Dec-14	18-Dec-14	5																																				
		9	01-Dec-14	11-Dec-14	05-Dec-14	18-Dec-14	5																																				
DP110110	Waste Reception Area Layout	9	01-Dec-14	11-Dec-14	08-Dec-14	18-Dec-14	5	■ Waste Reception Area Layout																																			
DP110120	Pre-treatment System Layout	9	01-Dec-14	11-Dec-14	08-Dec-14	18-Dec-14	5	■ Pre-treatment System Layout																																			
DP110130	Wastewater Treatment System Layout	9	01-Dec-14	11-Dec-14	08-Dec-14	18-Dec-14	5	■ Wastewater Treatment System Layout																																			
DP110140	Administration Building Layout	9	01-Dec-14	11-Dec-14	08-Dec-14	18-Dec-14	5	■ Administration Building Layout																																			
DP110150	Centralized Air Pollution Control System Layout	9	01-Dec-14	11-Dec-14	05-Dec-14	17-Dec-14	4	■ Centralized Air Pollution Control System Layout																																			
DP110160	Completion of Pre-Treatment Building Layout	0		11-Dec-14		18-Dec-14	5	◆ Completion of Pre-Treatment Building Layout																																			
Composting & Maturation Building #2		9	01-Dec-14	11-Dec-14	08-Dec-14	18-Dec-14	5																																				
		9	01-Dec-14	11-Dec-14	08-Dec-14	18-Dec-14	5																																				
		9	01-Dec-14	11-Dec-14	08-Dec-14	18-Dec-14	5																																				
DP210110	Composting Tunnel Layout	9	01-Dec-14	11-Dec-14	08-Dec-14	18-Dec-14	5	■ Composting Tunnel Layout																																			
DP210120	Maturation Area & Facilities Layout	9	01-Dec-14	11-Dec-14	08-Dec-14	18-Dec-14	5	■ Maturation Area & Facilities Layout																																			
DP210130	Digestate Dewatering System Layout	9	01-Dec-14	11-Dec-14	08-Dec-14	18-Dec-14	5	■ Digestate Dewatering System Layout																																			
DP210140	Completion of Composting Building Layout	0		11-Dec-14		18-Dec-14	5	◆ Completion of Composting Building Layout																																			
Auxiliary Buildings & Facilities Layout #3		46	01-Dec-14	05-Feb-15	08-Dec-14	09-Feb-15	2																																				
		46	01-Dec-14	05-Feb-15	08-Dec-14	09-Feb-15	2																																				
		46	01-Dec-14	05-Feb-15	08-Dec-14	09-Feb-15	2																																				
DP310110	Anaerobic Digestion Treatment System Layout	9	01-Dec-14	11-Dec-14	08-Dec-14	18-Dec-14	5	■ Anaerobic Digestion Treatment System Layout																																			
DP310120	Biogas Cleaning and Storage System Layout	9	01-Dec-14	11-Dec-14	08-Dec-14	18-Dec-14	5	■ Biogas Cleaning and Storage System Layout																																			
DP310130	Heat Recovery and Power Generation System Layout	9	01-Dec-14	11-Dec-14	08-Dec-14	18-Dec-14	5	■ Heat Recovery and Power Generation System Layout																																			
DP310140	Weighbridge System Layout	9	01-Dec-14	11-Dec-14	08-Dec-14	18-Dec-14	5	■ Weighbridge System Layout																																			
DP310150	Switchgear Room & Facilities Layout	9	01-Dec-14	11-Dec-14	08-Dec-14	18-Dec-14	5	■ Switchgear Room & Facilities Layout																																			
DP310160	Continuous Emission Monitoring System Layout	9	01-Dec-14	11-Dec-14	08-Dec-14	18-Dec-14	5	■ Continuous Emission Monitoring System Layout																																			
DP310170	Completion of Auxiliary Buildings Layout	0		11-Dec-14		18-Dec-14	5	◆ Completion of Auxiliary Buildings Layout																																			
DP310180	Piled Foundation	10	23-Jan-15	05-Feb-15	27-Jan-15	09-Feb-15	2	■ Piled Foundation																																			
General		56	01-Dec-14	23-Feb-15	18-Dec-14	11-Mar-15	12																																				
		56	01-Dec-14	23-Feb-15	18-Dec-14	11-Mar-15	12																																				
		56	01-Dec-14	23-Feb-15	18-Dec-14	11-Mar-15	12																																				
DP100510	Topographic Survey	14	06-Jan-15	23-Jan-15	21-Jan-15	09-Feb-15	11	■ Topographic Survey																																			
DP100520	Completion of Design Layout	0		11-Dec-14		18-Dec-14	5	◆ Completion of Design Layout																																			
DP100530	Completion of Design Preparation	0		23-Jan-15		09-Feb-15	11	◆ Completion of Design Preparation																																			
DP100540	Frozen E&M Equipment Loading and General Layout	5	01-Dec-14	05-Dec-14	05-Mar-15	11-Mar-15	63	■ Frozen E&M Equipment Loading and General Layout																																			
DP100550	Finalized E&M Equipment Detail	42	19-Dec-14	23-Feb-15	09-Jan-15	11-Mar-15	12	■ Finalized E&M Equipment Detail																																			
Ground Investigation (including Natural Terrain Hazards)		94	20-Nov-14	16-Mar-15	25-Nov-14	14-Apr-16	318																																				
		94	20-Nov-14	16-Mar-15	25-Nov-14	14-Apr-16	318																																				
		94	20-Nov-14	16-Mar-15	25-Nov-14	14-Apr-16	318																																				
DP100560	Prepare & submit GI Plan to IC & ER	10	20-Nov-14	03-Dec-14	25-Nov-14	08-Dec-14	3	■ Prepare & submit GI Plan to IC & ER																																			
DP100570	IC certifies GI Plan	10	04-Dec-14	17-Dec-14	09-Dec-14	22-Dec-14	3	■ IC certifies GI Plan																																			
DP100580	ER Consents to GI Plan	0		05-Jan-15		08-Jan-15	3	◆ ER Consents to GI Plan																																			
DP100590	Mobilization and Appointment of GI Sub-Contractor	21	20-Nov-14	13-Dec-14	08-Dec-14	03-Jan-15	15	■ Mobilization and Appointment of GI Sub-Contractor																																			
DP100600	Fieldwork (Including Predrilling and works at Natural Terrain Unit 4)	35	06-Jan-15	14-Feb-15	09-Jan-15	18-Feb-15	3	■ Fieldwork (Including Predrilling and works at Natural Terrain Unit 4)																																			
DP100610	Preliminary Fieldwork Report for AD Tanks Piling Design	3	20-Jan-15	22-Jan-15	23-Jan-15	26-Jan-15	3	■ Preliminary Fieldwork Report for AD Tanks Piling Design																																			
DP100620	Final Fieldwork Report and Geotechnical Interpretative Report	8	16-Feb-15	27-Feb-15	28-Feb-15	09-Mar-15	8	■ Final Fieldwork Report and Geotechnical Interpretative Report																																			
DP100655	Fieldwork (Natural Terrain - if required)	8	07-Mar-15	16-Mar-15	06-Apr-16	14-Apr-16	318	■ Fieldwork (Natural Terrain - if required)																																			
Plate Load Test		39	06-Jan-15	23-Feb-15	20-Jan-15	02-Jun-15	79																																				

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	√

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	<p><u>Sewage Effluent</u></p> <p>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.</p>	Work site/During the construction period	√
5.52	4.5	<p>Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment during the construction phase of the project. Regular environmental audit on the construction site can provide an effective control of any malpractices and can achieve continual improvement of environmental performance on site.</p>	Work Site / During Construction Period	√
5.53	4.5	<p><u>Nullah Decking</u></p> <p>To minimize the potential water quality impacts from the nullah reconstruction works, the practices outlined below should be adopted where applicable:</p> <ul style="list-style-type: none"> • 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	N/A

D. Waste Management

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location/ Timing	Status
6.41	5.4	<p><u>Good Site Practices</u> 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> 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> 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></p> <p>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></p> <p>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	<>
<i>E. Landscape and Visual</i>				
7.99 &	Table 6.1	<u>Construction Phase</u>	Work site/During Design &	<>

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location/ Timing	Status
Table 7.7		<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 	Construction Stages	
<i>F. Noise</i>				
8.25	7.3	<p>Good Site Practice:</p> <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					Actual Quantities of Non-inert C&D Materials (Construction Waste) Generated				
	Total Quantity Generated	Reused in the Contract	Reused in other Projects	Hard Rocks & Large Broken Concrete	Disposed as Public Fill	Metals (see Note 1)	Paper/ cardboard packaging (see Note 1)	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse (see Note 3)
	tonne	tonne	tonne	tonne	tonne	kilogram	kilogram	kilogram	Litre	tonne
May 2015	29.58	0.00	0.00	0.00	29.58	0.00	0.00	0.00	0.00	0.00
June 2015	2226.90	0.00	0.00	0.00	2226.90	0.00	0.00	0.00	0.00	9.66
July 2015	2832.27	0.00	0.00	0.00	2832.27	0.00	0.00	0.00	0.00	33.68
Total	5088.75	0.00	0.00	0.00	5088.75	0.00	0.00	0.00	0.00	43.34

- 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
July 2015	0	0
Overall Total	0	0