MONTHLY EM&A REPORT

ATAL-Degrémont-China State Joint Venture

Contract No. DC/2008/03 Design, Build and Operate Pillar Point Sewage Treatment Works: *Sixteenth Monthly EM&A Report*

March 2012

Environmental Resources Management

21/F Lincoln House 979 King's Road Taikoo Place Island East, Hong Kong Telephone: (852) 2271 3000 Facsimile: (852) 2723 5660 E-mail: post.hk@erm.com http://www.erm.com

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Contract No. DC/2008/03 Design, Build and Operate Pillar Point Sewage Treatment Works: *Sixteenth Monthly EM&A Report*

March 2012 Reference 0119806

For and on behalf of
ERM-Hong Kong, Limited
Approved by: Frank Wan
Signed: Marchart
Position: Partner
Certified by:
Certified by:
Date: 14 March 2012



AECOM 8/F Grand Central Plaza, Tower 2 138 Shatin Rural Committee Road Shatin, Hong Kong 香港新界沙田鄉事會路138號 新城市中央廣場第2座8樓 www.aecom.com

+852 3922 9000 tel +852 3922 9797 fax

Your Ref: 60017423/C/jwym/12031205

By Hand & By Fax (2833 9162)

Drainage Services Department Sewage Services Branch Harbour Area Treatment Scheme Division 5/F., Western Magistracy, 2A Pok Fu Lam Road, Hong Kong.

Attn: Mr. Kenley C.K. KWOK (T: 2159 3409)

12 March 2012

Dear Sir,

Contract No. DC/2008/03 Design, Build and Operate Pillar Point Sewage Treatment Works

Monthly EM&A Report for February 2012

Reference is made to Environmental Team (ET)'s draft of the Monthly EM&A Report for February 2012 provided by email dated 12 March 2012. We have no further comment.

We hereby verify the said Monthly EM&A Report as having complied with the requirement as set out in the EM&A Manual in accordance with the condition 3.6 of Environmental Permit No. EP-321/2008.

Should you have any queries, please feel free to contact the undersigned at 3922 9393.

Yours faithfully,

For and on behalf of AECOM Asia Co. Ltd.

Y T Tang Independent Environmental Checker

c.c. AECOM – Mr. Tim Lee ERM – Ms. Winnie Ko ATAL–Degremont–China State JV – Mr. C.Y. Fong (Fax No. 2317 7609) (Fax No. 2723 5660) (Fax No. 2811 3321)

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EXECUTIVE SUMMARY

The construction works of *DC/2008/03 of Design, Build and Operate Pillar Point Sewage Treatment Works (the Project)* commenced on 13 November 2010. This is the 16th monthly Environmental Monitoring and Audit (EM&A) report presenting the EM&A works carried out during the period from 1 to 29 February 2012 in accordance with the EM&A Manual.

Summary of Construction Works undertaken during the Reporting Month

Works undertaken in the reporting month include:

- Drainage pipe work at the Admin Building;
- Constructing foundation at the Sludge Dewatering Building;
- Constructing wall and water test at the P2 CEPT and PTW area;
- Constructing trench and wall at the Electrical Building No.1; and
- Excavating at the UV building.

Environmental Monitoring and Audit Progress

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

- 24-hour TSP Monitoring at each monitoring station (AM1 and AM2) 5 sets
- 1-hour TSP Monitoring at each monitoring station (AM1 and AM2) 15 sets

4 times

- Joint Environmental Site Inspection
- Landscape & Visual Monitoring once

Air Quality

5 sets of 24-hour TSP and 15 sets of 1-hr TSP measurements were carried out at each of the designated monitoring stations during the reporting period. No exceedance was recorded during the reporting period.

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). A total of 3,341 tonnes of public fill were delivered to the fill bank and 30 tones of inert C&D materials were reused on site. No plastic nor paper/cardboard packaging was recovered. However 150 kg of metals were sent to recyclers in the reporting period. 48.72 tonnes general refuse were disposed of in the reporting period. No chemical waste was disposed of in the reporting period.

Environmental Site Inspection

Four weekly joint environmental site inspections were carried out by the representatives of the Contractor, the SOR and the Environmental Team (ET). Details of the audit findings and implementation status of the mitigation measures are presented in *Section 7.1*.

Landscape & Visual

Review on landscape and visual mitigation measures was performed on 23 February 2012. Details of the audit findings and implementation status of the mitigation measures are presented in *Sections 3.2* and 7.2.

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:

- Drainage pipe work at the Admin Building;
- Constructing foundation and water tank at the Sludge Dewatering Building;
- Constructing wall and water test at the P2 CEPT and PTW area;
- Construction trench and wall at the Electrical Building No.1;
- Excavating at the UV Building; and
- Excavation and lateral support works at the Septic Waste Reception Station.

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

1 INRODUCTION

ERM-Hong Kong, Limited (ERM) was appointed by ATAL – Degrémont – China State Joint Venture (ADC-JV) (the Contractor) as the Environmental Team (ET) to undertake the Environmental Monitoring and Audit (EM&A) programme for the *Contract No. DC/2008/03 of Design, Build and Operate Pillar Point Sewage Treatment Works (the Project).*

1.1 PURPOSE OF THE REPORT

This is the 16th EM&A report which summarises the impact monitoring results and audit findings for the EM&A programme during the reporting period from **1** to 29 **February 2012**.

1.2 STRUCTURE OF THE REPORT

The structure of the report is as follows:

Section 1 : **Introduction** details the scope and structure of the report.

Section 2: Project Information

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

Section 3: Environmental Monitoring Requirements

summarises the environmental monitoring including monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequency, monitoring locations, Action and Limit Levels, Event/Action Plans, environmental mitigation measures as recommended in the approved EIA report, EP and relevant environmental requirements stated in the Contract Specification.

- Section 4 : **Implementation Status on Environmental Mitigation Measures** summarises the implementation of environmental protection measures during the reporting period.
- Section 5 : **Monitoring Results** summarises the monitoring results obtained in the reporting period.

Section 6 : **Waste Management** summarises the quantity of public fill and construction waste generated in the reporting period

Section 7: Environmental Site Inspection

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

Section 8: Environmental Non-conformance

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

Section 9: Further Key Issues

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

Section 10 : Review of the EM&A Data and Predictions

compares the monitoring data and waste quantity against predictions in the approved Project EIA report.

Section 11 : Conclusions

2.1 BACKGROUND

The existing Pillar Point Sewage Treatment Works (PPSTW) is located to the north of the Tuen Mun River Trade Terminal and is abutting the Lung Mun Road to its north. It is a preliminary treatment works with screening and grit removal processes with treated effluent discharged to the sea (North Western Water Control Zone) via a twin submarine outfall. The *Review of the Tuen Mun and Tsing Yi Sewerage Master Plan* (RTMTYSMP) commissioned in February 1999, recommended to expand the sewage treatment capacity and to upgrade the plant to chemically enhanced primary treatment (CEPT) with disinfection in order to cater for the projected ultimate population and planned developments in the Tuen Mun area, and to improve the effluent quality and hence to reduce pollution loadings to the receiving waters.

The upgrading of the PPSTW comprises the following works:

- expanding the treatment capacity of the existing PPSTW to cope with the increased peak wet-weather sewage flow in Tuen Mun area;
- upgrading the sewage treatment level of the existing PPSTW to incorporate chemical treatment with disinfection at minimum removal rates of 70%, 55% and 99.9% of suspended solids (SS), biochemical oxygen demand (BOD) and *E.coli*, respectively;
- upgrading existing septic waste reception facilities at PPSTW; and
- providing and upgrading ancillary facilities including the administration building, workshop, laboratory, odour control facilities, sludge handling and dewatering facilities, access roads and minor landscaping works within the STW for the operation and maintenance of the upgraded STW.

The potential environmental impacts of the Project have been studied in the "Upgrading of Pillar Point Sewage Treatment Works" (EIAO Register No: AEIAR-145/2008). The EIA was approved on 10 June 2008 under the Environmental Impact Assessment Ordinance (EIAO) and an Environmental Permit (EP-321/2008) for the works was granted on 17 November 2008. Under the requirements of Condition 3.1 of EP-322/2008, an EM&A programme as set out in the EM&A Manual is required to be implemented.

The construction works commenced on 13 November 2010 and are scheduled for completion by 2014.

2.2 GENERAL SITE DESCRIPTION

The open area adjacent to the existing PPSTW has been designated for the upgrading works. The layout of the upgrading works 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 in the reporting month and the upcoming 3 months is presented in *Annex L*.

Table 2.1 Summary of Construction Activities Undertaken in Reporting Period

Construction Activities Undertaken

- Drainage pipe works at the Admin Building;
- Constructing foundation at the Sludge Dewatering Building;
- Constructing wall and water test at the P2 CEPT and PTW area;
- Constructing trench and wall at the Electrical Building No. 1; and
- Excavating at the UV building.

2.4 PROJECT ORGANISATION AND MANAGEMENT STRUCTURE

The project organization chart and contact details are shown in *Annex C*.

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/	Reference	Validity Period	Remarks
Notification			
Environmental	EP-321/2008	Throughout the	Permit granted on 17
Permit		Contract	November 2008.
Notification of	Ref No. 308136	Throughout the	-
Construction Works		Contract	
under Air Pollution			
Control (Construction			
Dust) Regulation			
Water Discharge	WT00008027-	Till 31 December	Wastewater discharge
License	2010	2015	licence was issued by
			EPD on 7 December 2010.
Construction Noise	GW-RW031-12	28 January 2012 – 27	
Permit		July 2012	-
Chemical Waste	5213-421-A2620-	Throughout the	Licence approved on 28
Producer Registration	01	Contract	October 2010

ENVIRONMENTAL RESOURCES MANAGEMENT

3 ENVIRONMENTAL MONITORING REQUIREMENTS

3.1 AIR QUALITY MONITORING

3.1.1 Monitoring Location

The proposed air quality monitoring stations for the construction phase of the Project, as recommended in the approved EM&A Manual, are given in *Table 3.1* and shown in *Annex D*. The proposed locations (AM1 and AM2) have been agreed with the Drainage Services Department (DSD), Environmental Protection Department (EPD) and the Independent Environmental Checker (IEC).

Table 3.1Construction Phase Air Monitoring Locations

Monitoring ID	Air Quality Monitoring Station
AM1	Tuen Mun EMSD Servicing Vehicle Station
AM2	River Trade Terminal Office

3.1.2 Monitoring Parameter and Frequency

The construction phase air quality monitoring has been conducted at the designated monitoring stations in accordance with the requirements stipulated in the EM&A Manual. 1-hour and 24-hour TSP levels have been monitored at the frequency and duration stated in *Table 3.2*. The construction phase TSP monitoring has been conducted as per the schedule presented in *Annex E*.

Table 3.2 Construction Phase Air Quality Monitoring Parameters and Frequency

Parameter	Frequency
24-hour TSP	Once every 6 days
1-hour TSP	3 times every 6 days

3.1.3 Action and Limit Levels

The Action and Limit levels have been established and presented in *Table 3.3*.

Table 3.3Action and Limit Levels for Air Quality

Parameter	Air Monitoring Station	Action Level, µgm ⁻³	Limit Level, µgm ⁻³
24-hour TSP	AM1	183	260
	AM2	192	260
1-hour TSP	AM1	343	500
	AM2	383	500

3.1.4 Monitoring Equipment

Continuous 24-hour and 1-hour TSP monitoring were performed using High Volume Samplers (HVS) with appropriate sampling inlets installed, located at the designated monitoring stations.

The performance specification of HVS complied with the standard method "Determination of Suspended Particulate Matter in the Atmosphere (High Volume Method)" as stipulated in US EPA Standard Title 40, Code of Federation Regulations Chapter 1 (Part 50 Appendix B). Table 3.4 summarises the equipment that were deployed for the 24-hour and 1-hour TSP monitoring respectively.

Table 3.4TSP Monitoring Equipment

Monitoring Station	Monitoring Equipment (HVS and Calibrator)
24-hr and 1-hr TSP	
AM1	GMW GS-2310 (S/N 7580), CM-AIR-43 (S/N 9833620)
AM2	GMW GS-2310 (S/N 1252), CM-AIR-43 (S/N 9833620)

3.1.5 Monitoring Methodology

The setup locations of the HVSs at monitoring stations were listed in *Table 3.1*. All HVSs were free-standing with no obstruction.

The following criteria were considered in the installation of the HVSs:

- appropriate support to secure the samplers against gusty wind were provided at AM1 and AM2;
- a minimum of 2m separation from walls, parapets and penthouses was required for rooftop samplers;
- no furnace or incinerator flues were nearby;
- airflow around the sampler was unrestricted; and
- permission was obtained to set up the samplers and to gain access to the monitoring stations.

Preparation of Filter Papers

- glass fibre filters were labelled and sufficient filters that were clean and without pinholes were selected;
- all filters were equilibrated in the conditioning environment for 24 hours before weighing. The conditioning environment temperature was around 25°C and not variable by more than ± 3°C; the relative humidity (RH) was 40%; and
- SGS Hong Kong Ltd, a HOKLAS accredited laboratory, implements comprehensive quality assurance and quality control programmes.

Field Monitoring

- the power supply was checked to ensure that the HVSs were working properly;
- the filter holder and the area surrounding the filter were cleaned;
- the filter holder was removed by loosening the foul bolts and a new filter, with stamped number upward, on a supporting screen was aligned carefully;
- the filter was properly aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter;
- the swing bolts were fastened to hold the filter holder down to the frame. The pressure applied should be sufficient to avoid air leakage at the edges;
- then the shelter lid was closed and secured with the aluminium strip;
- the HVSs were warmed-up for about 5 minutes to establish runtemperature conditions;
- a new flowrate record sheet was set into the flow recorder;
- the flow rates of the HVSs were checked and adjusted to between 1.22 and 1.37 m³ min⁻¹ which were within the range specified in the EM&A Manual (ie 0.6 to 1.7 m³ min⁻¹);
- the programmable timer was set for a sampling period of 24 hours ± 1 hour, and the starting time, weather condition and the filter number were recorded;
- the initial elapsed time was recorded;
- at the end of sampling, the sampled filter was removed carefully and folder in half length so that only surfaces with collected particulate matter were in contact;
- it was then placed in a clean plastic envelope and sealed;
- all monitoring information was recorded on a standard data sheet; and
- filters were sent to SGS Hong Kong Ltd for analysis.

Maintenance and Calibration

- the HVSs and their accessories were maintained in good working condition, such as replacing motor brushes routinely and checking electrical wiring to ensure a continuous power supply; and
- the flow rate of each HVS with mass flow controller were calibrated using an orifice calibrator. Initial calibrations of the dust monitoring

equipments were conducted upon installation and prior to commissioning. Five-point calibration was carried out for HVSs using CM-AIR-43 Calibration Kit. HVSs are calibrated on a bi-monthly basis. The calibration records for the HVSs are given in *Annex G*.

Wind Data Monitoring

Average wind data (wind speed and wind direction) during the monitoring period were obtained from the meteorological station at Tuen Mun of the Hong Kong Observatory (HKO) and were presented in *Annex F*.

3.1.6 Event and Action Plan

The Event/Action Plan (EAP) for air quality monitoring is presented in *Annex H*.

3.2 LANDSCAPE AND VISUAL MONITORING

In accordance with the EM&A Manual, monthly landscape and visual monitoring is required to ensure that the design, implementation and maintenance of landscape and visual mitigation measures recommended in the approved EIA Report are fully achieved. The monitoring procedures and criteria as described in the EM&A Manual were adopted.

3.3 ENVIRONMENTAL MITIGATION MEASURES AND ENVIRONMENTAL REQUIREMENTS IN CONTRACT

All relevant environmental mitigation measures listed in the EIA Report and the EM&A Manual as well as the specific environmental requirements stated in Contract Specification are summarised in *Annex I*. A summary of the key environmental mitigation measures implemented as per the Contract Requirements is also presented in *Annex I*.

IMPLEMENTATION STATUS ON ENVIRONMENTAL PROTECTION REQUIREMENTS

4

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

5.1 AIR QUALITY

A total of 5 sets of 24-hour and 15 sets of 1-hour TSP measurements were taken at each of the monitoring stations (AM1 and AM2) during the reporting period. The monitoring data for 24-hour TSP and 1-hour TSP together with wind data and graphical presentations for the past 4 months are presented in *Annex F*. The weather conditions during the monitoring period were cloudy. The local impacts near the monitoring stations of AM1 and AM2 were mainly associated with vehicular emissions. No exceedance of Action and Limit Level of 1-hr and 24-hr TSP was recorded during the reporting period.

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 of 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 (*Annex J*). With reference to 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 6.1*. The public fill and construction waste generated from the Project have been disposed of at the Tuen Mun Area 38 Fill Bank and WENT Landfill, respectively. No plastic nor paper/ cardboard packing was sent to recyclers for recycling during the reporting period.

Table 6.1Quantities of Waste Generated from the Project

Quantity			
C&D Materials Disposed of at Public Fill (inert) ^(a)	C&D Materials Disposed of at Landfill (Non-inert) (Construction waste) ^{(b) (c)}	Chemical Waste ^(d)	
3,341 tonnes	48.72 tonnes	0 L	
	of at Public Fill (inert) ^(a)	C&D Materials Disposed of at Public Fill (inert) ^(a) C&D Materials Disposed of at Landfill (Non-inert) (Construction waste) ^{(b) (c)}	

(a) Inert C&D materials (public fill) include bricks, concrete, building debris, rubble and excavated soil. Total 3,371 tonnes of public fill were generated and were disposed of at the Tuen Mun Area 38 Fill Bank and 30 tonnes of inert C&D materials were reused on site.

- (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 are grouped into construction wastes as the materials were not disposed of with others at the public fill. 48.72 tonnes of general refuse is recorded in the reporting month. Construction wastes other than metals and paper/cardboard packaging were disposed of at WENT Landfill. No plastic nor paper/cardboard packaging but 150 kg of metals were recovered and sent to recyclers for recycling during the reporting period.
- (c) General refuse was disposed of at WENT by subcontractors.
- (d) Chemical waste was collected though the licensed chemical waste collector, Dunwell Ind. (Holdings) Ltd, with the waste collection licence number 7111-757-W0015-WC.

7 ENVIRONMENTAL INSPECTIONS

7.1 WEEKLY SITE AUDITS

Joint site inspections were conducted by representatives of the Contractor, SOR and the ET on 3, 10, 17 and 23 February 2012. The IEC was also present at the joint inspection on 10 February 2012. There was no non-compliance recorded during the site inspections.

Major observations during the reporting period were summarised as follows:

3 February 2012

- Retained tree no. T08 was observed damaged by a bloom crane at P2 near main haul road. The Contractor was reminded to remove the hanger on the tree immediately to avoid further damage to the tree. Also the Contractor was suggested to brief the workers to avoid damaging the trees during lifting works.
- It was found that construction material was placed inside the tree protection zone of retained tree no. T07 at P2 near the main haul road. The Contractor was reminded to remove the construction material immediately.
- General refuse and stagnant water were observed in some concreted pits at the CEPT work site. The Contractor was reminded to remove the general refuse and stagnant water within 3 working days.
- A dusty stockpile at the CEPT work site was observed not properly covered with tarpaulin sheet. The Contractor was reminded to properly cover the exposed stockpile within 3 working days to avoid generation of dust.
- Rusty water and mud were observed at drainage channel at the CEPT worksite. The Contractor was reminded to remove the mud and rusty water within 3 working days. Also the Contractor shall provide proper treatment to treat the site runoff before discharging it into the drainage channel. The sand bags provided inside the channel are not effective in removing the suspended solids in the runoff.

10 February 2012

- The drainage channel at P1 behind RE site office was blocked and stagnant water was observed. The Contractor was reminded to remove the stagnant water and the blockage within 3 working days.
- A pile of soil was observed under the tree N78 at P2. The root flare was covered by the pile of soil. The Contractor was reminded to remove the

pile of soil immediately and it should be noted that no construction material should be stored inside the tree protection zone.

- Retained trees along the east haul road at P2 were found damaged by the construction works. Broken branches were observed on the ground near the trees. Also there was no tree protection zone set-up for the retained trees. The Contractor was reminded to provide proper tree protection zones for the retained trees. The Contractor should brief the workers not to damage the trees during works.
- Construction material was observed inside the tree protection zone of retained tree no. T07 at P2 near the main haul road. The Contractor was reminded to remove the construction material immediately.
- The main haul road at the west of P2 was dry and dusty. The Contractor was reminded to clear the mud on the road and water the haul road more frequent to avoid generation of dust.
- The stockpile at P2 stockpiling area was observed not properly covered by tarpaulin sheet. The Contractor was reminded to properly cover the exposed stockpile within 3 working days to avoid generation of dust.

17 February 2012

- Construction materials were observed within the tree protection zones of retained trees no. T04 and the retained trees near Gate 3. The Contractor was reminded to remove the construction materials within 3 working days in order to protect the trees.
- Chemical bottles without drip trap were observed at the CEPT worksite. The Contractor was reminded to provide drip traps for the chemical bottles within 3 working days.

23 February 2012

- Stagnant water was observed inside trolleys and buckets. The Contractor was reminded to remove the stagnant water within 3 working days and suggested to turn the trolleys and buckets upside down if not in use to avoid accumulation of stagnant water.
- The dusty slope at the entrance of the stockpile area was observed not properly covered by tarpaulin sheet. The Contractor was reminded to properly cover the slope within 3 working days to avoid generation of dust.
- Algae were observed growing inside the wheel washing bay. The Contractor was reminded to clean the wheel washing bay within 3 working days and replace the water inside the wheel washing bay frequently.

Follow-up actions were undertaken as reported by the Contractor and observed in the next weekly site inspections conducted in the reporting period.

7.2 LANDSCAPE AND VISUAL MONITORING

In accordance with the EM&A Manual, monthly landscape and visual monitoring is required to ensure that the design, implementation and maintenance of landscape and visual mitigation measures recommended in the EIA Report are fully achieved. A review of landscape and visual mitigation measures was performed on 23 February 2012. It was confirmed that most of the necessary landscape and visual mitigation measures as summarised in *Annex I* were implemented by the Contractor. The major findings were summarised as follow:

23 February 2012

• Decay fungi were observed at the pruned branch of retained tree 369. The Contractor was reminded to provide within 3 working days necessary treatment after further diagnosed by their landscape sub-contractor to prevent the fungi from infecting other parts of the tree.

The Contractor was reminded to implement the follow-up actions and that the status of the follow-up actions will be reviewed in the first weekly site inspections in the next reporting period.

Key landscape and visual mitigation measures implemented in the reporting period include:

- Set up of a temporary tree nursery;
- Control dust and erosion of exposed soil;
- Stockpiling of topsoil for future reuse;
- Maintain existing tree record inventory; and
- Re-use existing top soil for new planting areas.

8 ENVIRONMENTAL NON-CONFORMANCE

8.1.1 Summary of Monitoring Exceedance

No exceedances of Action and Limit Levels of 1-hr and 24-hr TSP were recorded during the reporting period.

8.1.2 Summary of Environmental Non-Compliance

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

8.1.3 Summary of Environmental Complaint

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

8.1.4 Summary of Environmental Summon and Successful Prosecution

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

9 FUTURE KEY ISSUES

9.1.1 Key Issues for the Coming Month

Works to be undertaken for the coming monitoring period are summarised in *Table 9.1*.

Table 9.1 Construction Works to be Undertaken in the Next Reporting Period

		Work	to	be	taken	
--	--	------	----	----	-------	--

- Drainage pipe work at Admin Building;
- Constructing foundation and water tank at the Sludge Dewatering Building;
- Constructing walls and water test at P2 CEPT and PTW area;
- Constructing trench and wall at the Electrical Building No.1;
- Excavating at the UV building; and
- Excavating and lateral support works at the Septic Waste Reception Station.

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

9.1.2 Monitoring Schedule for the Next Reporting Period

The tentative schedule of TSP monitoring for the next reporting period was presented in *Annex E*. Environmental monitoring will be conducted at the same monitoring locations in the next reporting period. The monitoring programme has been reviewed and was considered adequate to cater for the nature of works in progress.

9.1.3 Construction Programme for the Next Three Months

The most updated construction programme for the Project is presented in *Annex L*.

10.1 AIR QUALITY

Since the EIA has included only qualitative assessment of dust impact during construction phase, a comparison was made between the monitoring results from the start of the Project and the Hong Kong Air Quality Objectives (HKAQO) (see *Table 10.1*).

Table 10.1 Comparison of the HKAQO and Air Quality Monitoring Results

Monitoring Station	HKAQO, ugm ⁻³	Measured 24-hour TSP Monitoring Results, ugm ^{-3 (a) (b)}	
		Average	Range
AM1	260	73	59 - 100
AM2	260	80	60 - 102
Notes:			

(a) Only 24-hour TSP monitoring results were compared as there is no 1 hour TSP criterion in HKAQO.

(b) Average and range of data were calculated between the commencement of construction works and this reporting month.

The monitoring results show that the average and range of 24-hour TSP levels recorded since the commencement of the construction works have been well below the 24-hour TSP criterion in the HKAQO. Recommended mitigation measures in *Section 3.7.1.1* of EIA have been implemented throughout the construction period and were considered effective.

10.2 WASTE MANAGEMENT

The estimated amount of waste generated in this Project and the accumulated quantities of waste generated up to this reporting month are presented in *Table 10.2*. The amount of inert C&D material sent to public fills is larger than the estimated amount in EIA. With reference to the C&D Material Assessment (Contractor's General Submission (CSF) No.: DC200803/CSF/SAF/060026/A), the difference in quantity is mainly due to differences in excavation depths and excavation methods in the Contract Works and that assumed in the Reference Design. Recommended mitigation measures in *Sections 7.5.1.1* to *7.5.1.9* of the EIA will continue to be implemented during the construction stage.

Type of Material	Estimated Amount of Public Fill and Construction Waste in EIA (inert & non-inert)	Estimated Amount of Public Fill and Construction Waste in C&D Material Assessment (CSF No.: DC200803/CSF/SAF/0 60026/A) ^(c)	Accumulated Actual Amount of Public Fill and Construction Waste Recorded ^{(a) (b)} ^(d) (inert & non-inert)
Amount of C&D	61,489 m ³	77,600 m ³	81,747 m ³
Materials Arising			
Amount of C&D	-	-	3,164 m ³
Materials Reused on other site			
Amount of C&D	14,926 m ³	18,000 m ³	52 m ³
Materials Reused on site			
Amount of C&D	46,563m ³	59,600 m ³	78,531 m ³
Materials Sent to			
Public Fills			
General Refuse	Small	-	272.36 tonnes
Chemical Waste	Small	-	810 L

Table 10.2Quantity of Actual Amount of C&D Materials, General Wastes and Chemical
Wastes Generated and EIA Estimation

Notes:

(a) The actual amount of C&D Materials was recorded since the commencement of construction works.

(b) The density of soil and rock (bulked) is $1.8 \text{ tonnes}/\text{m}^3$.

(c) The estimated amount of C&D material generated from the Contract Works was revised in the C&D Material Assessment and submitted to the SO on 9 September 2010 (CSF No.: DC200803/CSF/SAF/060026/A) due to the new plant & facility layout.

(d) The waste flow data for April and May 2011 was updated in August 2011 based on SOR's comments and has been confirmed by the Contractor. The waste flow data for August, September and November 2011 were updated in October, November and December 2011 respectively based on Contractor's revised waste flow summary. Detail of changes is shown in Annex J.

10.3 CONCLUSION OF REVIEW

The EIA predictions and the monitoring results since the commencement of construction works have been reviewed. The EIA concluded that the Project would not cause adverse impacts to the environment, and the monitoring results have also indicated the same so far. Mitigation measures recommended in the EP, EIA and EM&A Manual will continue to be implemented throughout the construction phase of the Project.

CONCLUSIONS

11

This EM&A Report presents the EM&A programme undertaken during the reporting period from 1 to 29 February 2012 in accordance with EM&A Manual and requirements of EP (EP-321/2008).

No exceedance of Action and Limit Levels of 24-hour TSP and 1-hour TSP was recorded at the monitoring stations during the reporting period.

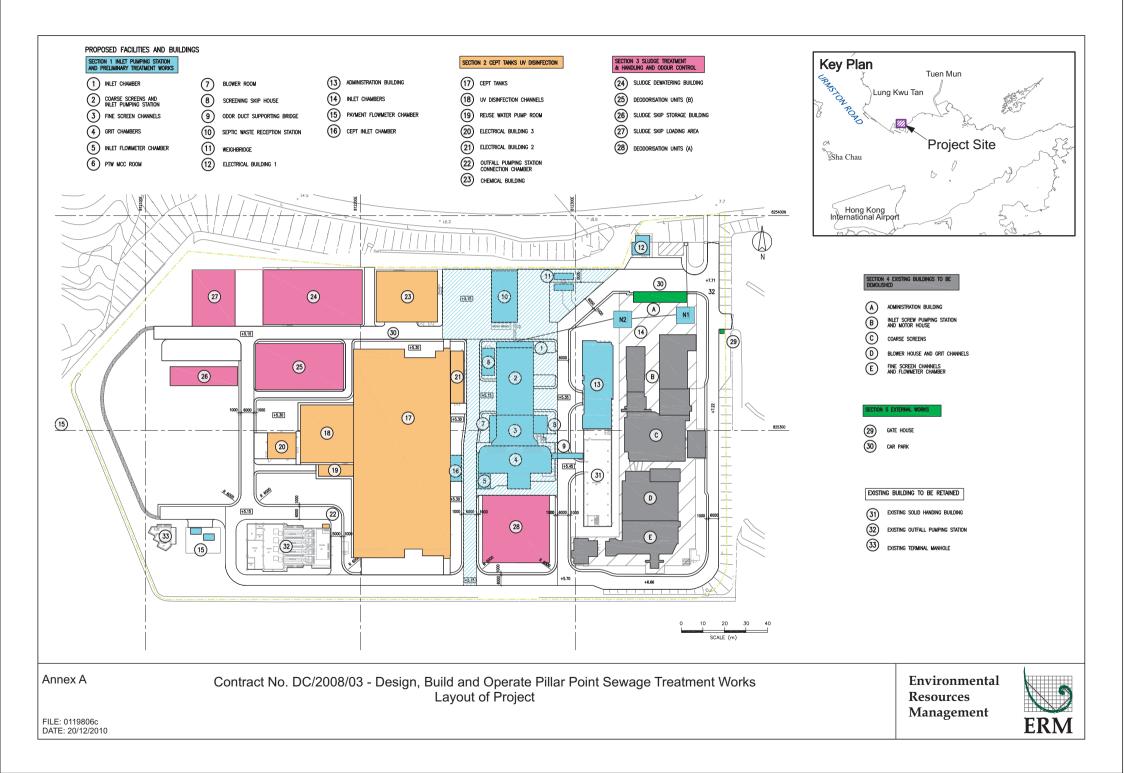
Monthly landscape and visual monitoring was conducted in the reporting period. Most of the necessary landscape and visual mitigation measures recommended in the EIA Report were implemented by the Contractor. Follow-up actions are required by the Contractor to improve protection measures on the retained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

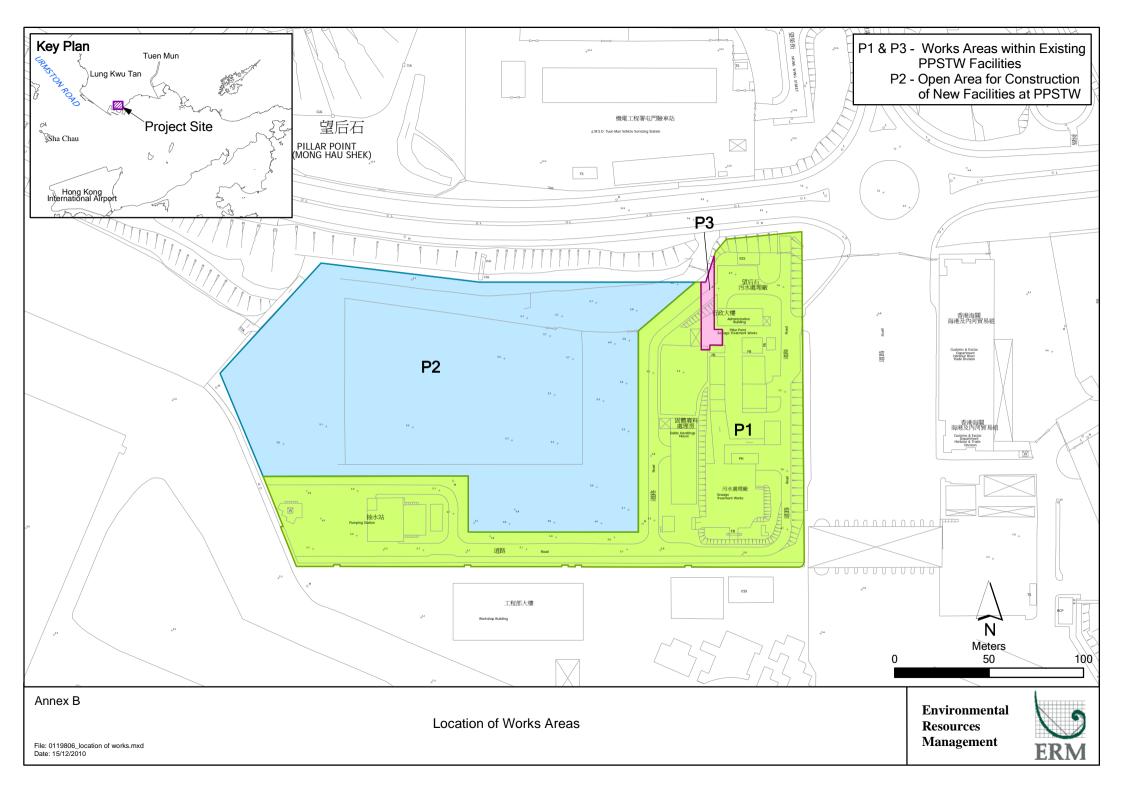
The ET will keep track of the EM&A programme to ensure compliance of environmental requirements and the proper implementation of all necessary mitigation measures in the coming periods. Annex A

Location of Project



Annex B

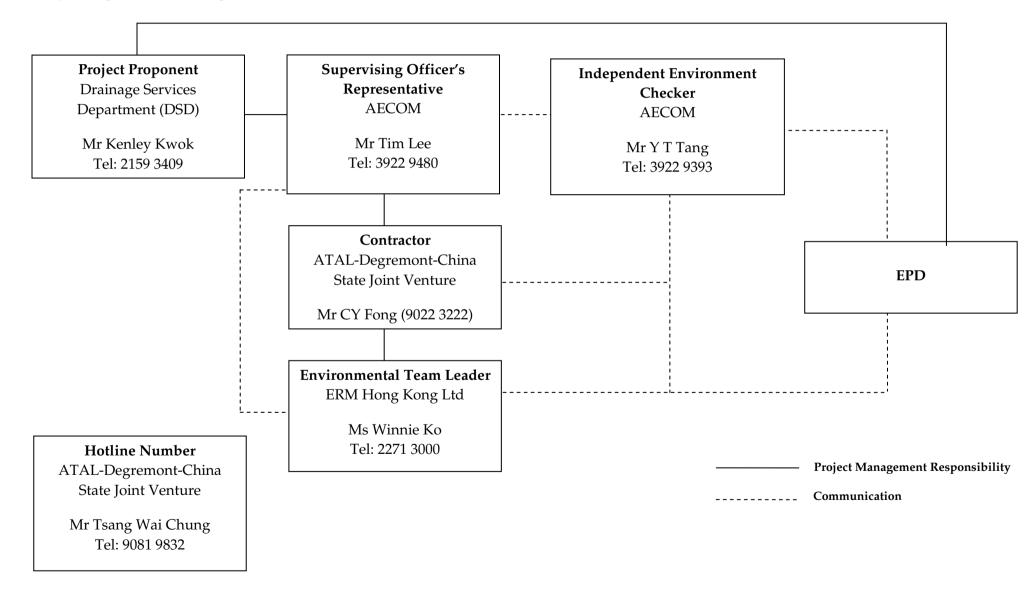
Works Location



Annex C

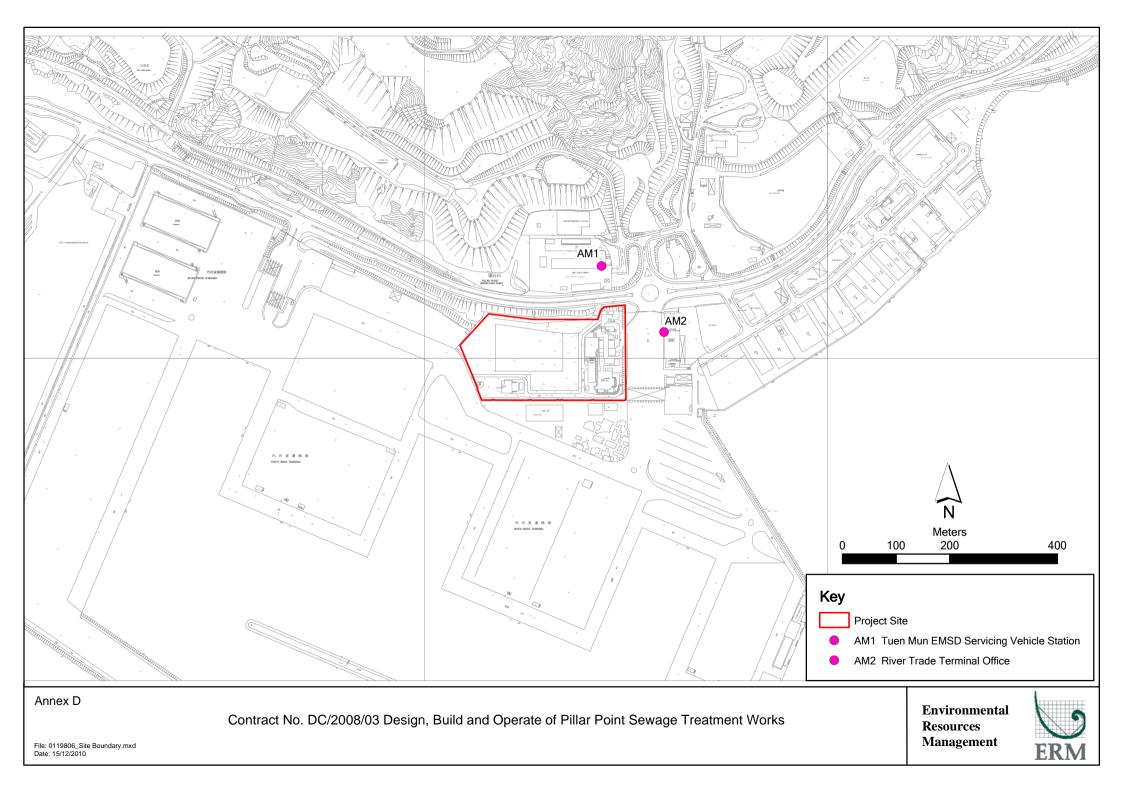
Project Organization Chart with Contact Details

<u>Project Organization During Construction Phase (with contact details)</u>



Annex D

Locations of Air Quality Monitoring Stations





AM1 - Tuen Mun EMSD Servicing Vehicle Station



AM2 - River Trade Terminal Office

Annex E

Monitoring Schedule of Reporting Month and Next Month

Contract No. DC/2008/03 - Design, Build and Operate Pillar Point Sewage Treatment Works (Tuen Mun EMSD Servicing Vehicle Station - AM1 & River Trade Terminal Office - AM2) February 2012

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1-Feb	2-Feb	3-Feb	4-Feb
				3X1-hr & 1X 24-hr TSP		
5-Feb	6-Feb	7-Feb	8-Feb	9-Feb	10-Feb	11-Feb
			3X1-hr & 1X 24-hr TSP			
12-Feb	13-Feb	14-Feb	15-Feb	16-Feb	17-Feb	18-Feb
		3X1-hr & 1X 24-hr TSP				
19-Feb	20-Feb	21-Feb	22-Feb	23-Feb	24-Feb	25-Feb
	3X1-hr & 1X 24-hr TSP					3X1-hr & 1X 24-hr TSP
26-Feb	27-Feb	28-Feb	29-Feb			

Contract No. DC/2008/03 - Design, Build and Operate Pillar Point Sewage Treatment Works (Tuen Mun EMSD Servicing Vehicle Station - AM1 & River Trade Terminal Office - AM2) March 2012

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1-Mar	2-Mar	3-Mar
					3X1-hr & 1X 24-hr TSP	
4-Mar	5-Mar	6-Mar	7-Mar	8-Mar	9-Mar	10-Mar
				3X1-hr & 1X 24-hr TSP		
11-Mar	12-Mar	13-Mar	14-Mar	15-Mar	16-Mar	17-Mar
			3X1-hr & 1X 24-hr TSP			
18-Mar	19-Mar	20-Mar	21-Mar	22-Mar	23-Mar	24-Mar
		3X1-hr & 1X 24-hr TSP				
25-Mar	26-Mar	27-Mar	28-Mar	29-Mar	30-Mar	31-Mar
	3X1-hr & 1X 24-hr TSP					3X1-hr & 1X 24-hr TSP

Annex F

24-hour and 1-hour TSP Monitoring Results

1-hour TSP Monitoring Results

Station AM1

*

				TSP					Wind Speed		
	Start	Finish	Weather	Concentration	Action Level	Limit Level	Site Conditions /	Temperature	*	Sampler	Filter
Date	Time	Time		(µg/m³)	(µg/m ³)	(µg/m³)	Observations / Remarks	(℃)	(m/s)	ID	ID
02-Feb-12	13:10	14:10	Cloudy	121	343	500	Construction work in progress	17	*	7580	3470
02-Feb-12	14:10	15:10	Cloudy	97	343	500	Construction work in progress	17.5	*	7580	3480
02-Feb-12	15:10	16:10	Cloudy	108	343	500	Construction work in progress	18	*	7580	3481
08-Feb-12	13:10	14:10	Cloudy	103	343	500	Construction work in progress	14	*	7580	3493
08-Feb-12	14:10	15:10	Cloudy	118	343	500	Construction work in progress	14.5	*	7580	3601
08-Feb-12	15:10	16:10	Cloudy	105	343	500	Construction work in progress	15	*	7580	3602
14-Feb-12	13:10	14:10	Cloudy	211	343	500	Construction work in progress	21	*	7580	3617
14-Feb-12	14:10	15:10	Cloudy	212	343	500	Construction work in progress	21.5	*	7580	3618
14-Feb-12	15:10	16:10	Cloudy	210	343	500	Construction work in progress	22.5	*	7580	3619
20-Feb-12	13:10	14:10	Cloudy	108	343	500	Construction work in progress	17	*	7580	3634
20-Feb-12	14:10	15:10	Cloudy	109	343	500	Construction work in progress	17	*	7580	3635
20-Feb-12	15:10	16:10	Cloudy	110	343	500	Construction work in progress	16.5	*	7580	3636
25-Feb-12	13:10	14:10	Cloudy	124	343	500	Construction work in progress	17	*	7580	3651
25-Feb-12	14:10	15:10	Cloudy	116	343	500	Construction work in progress	17	*	7580	3652
25-Feb-12	15:10	16:10	Cloudy	125	343	500	Construction work in progress	17	*	7580	3653
			Min.	97							

Min.	97
Max.	212
Average	132

Wind Speed data is presented in the Meteorological Data table

1-hour TSP Monitoring Results

Station AM2

*

				TSP					Wind Speed		
	Start	Finish	Weather	Concentration	Action Level	Limit Level	Site Conditions /	Temperature	*	Sampler	Filter
Date	Time	Time		(µg/m ³)	(µg/m ³)	(µg/m³)	Observations / Remarks	(°°)	(m/s)	ID	ID
02-Feb-12	13:00	14:00	Cloudy	107	383	500	Construction work in progress	17	*	1252	3469
02-Feb-12	14:00	15:00	Cloudy	98	383	500	Construction work in progress	17.5	*	1252	3477
02-Feb-12	15:00	16:00	Cloudy	91	383	500	Construction work in progress	18	*	1252	3478
08-Feb-12	13:00	14:00	Cloudy	107	343	500	Construction work in progress	14	*	1252	3492
08-Feb-12	14:00	15:00	Cloudy	108	343	500	Construction work in progress	14.5	*	1252	3494
08-Feb-12	15:00	16:00	Cloudy	112	343	500	Construction work in progress	15	*	1252	3599
14-Feb-12	13:00	14:00	Cloudy	203	383	500	Construction work in progress	21	*	1252	3613
14-Feb-12	14:00	15:00	Cloudy	229	383	500	Construction work in progress	21.5	*	1252	3614
14-Feb-12	15:00	16:00	Cloudy	195	383	500	Construction work in progress	22.5	*	1252	3615
20-Feb-12	13:00	14:00	Cloudy	111	383	500	Construction work in progress	17	*	1252	3631
20-Feb-12	14:00	15:00	Cloudy	122	383	500	Construction work in progress	17	*	1252	3630
20-Feb-12	15:00	16:00	Cloudy	127	383	500	Construction work in progress	16.5	*	1252	3632
25-Feb-12	13:00	14:00	Cloudy	192	383	500	Construction work in progress	17	*	1252	3647
25-Feb-12	14:00	15:00	Cloudy	176	383	500	Construction work in progress	17	*	1252	3648
25-Feb-12	15:00	16:00	Cloudy	172	383	500	Construction work in progress	17	*	1252	3649
			Min	91							

Min.	91
Max.	229
Average	143

Wind Speed data is presented in the Meteorological Data table

Annex F - 24-hour and 1-hour TSP Monitoring Results

24-hour TSP Monitoring Results

Station AM1

Start		Finis	h	Weather	Filter V	Veight (g)	Elapsee Read		Sampling Time		v Rate (m	ı ³ /min)	TSP Conc.	Action Level	Limit Level	Observations / Remarks	Sampler	Filter
Date	Time	Date	Time		Initial	Final	Initial	Final	(hrs)	Initial	Final	Average	(µg/m ³)	(µg/m ³)	(µg/m ³)		ID	ID
02-Feb-12	16:10	03-Feb-12	16:10	Cloudy	2.7299	2.8608	12278.18	12302.18	24.00	1.24	1.24	1.24	73	183	260	Construction work in progress	7580	3482
08-Feb-12	16:10	09-Feb-12	16:10	Cloudy	2.7418	2.8661	12305.18	12329.18	24.00	1.24	1.24	1.24	70	183	260	Construction work in progress	7580	3603
14-Feb-12	16:10	15-Feb-12	16:10	Cloudy	2.6299	2.7918	12332.18	12356.18	24.00	1.24	1.24	1.24	91	183	260	Construction work in progress	7580	3620
20-Feb-12	16:10	21-Feb-12	16:10	Cloudy	2.6865	2.8114	12359.18	12383.18	24.00	1.24	1.24	1.24	70	183	260	Construction work in progress	7580	3637
25-Feb-12	16:10	26-Feb-12	16:10	Cloudy	2.6951	2.8258	12386.18	12410.18	24.00	1.24	1.24	1.24	73	183	260	Construction work in progress	7580	3654
												Min.	70					
												Max.	91					
												Average	75					

24-hour TSP Monitoring Results

Station AM2

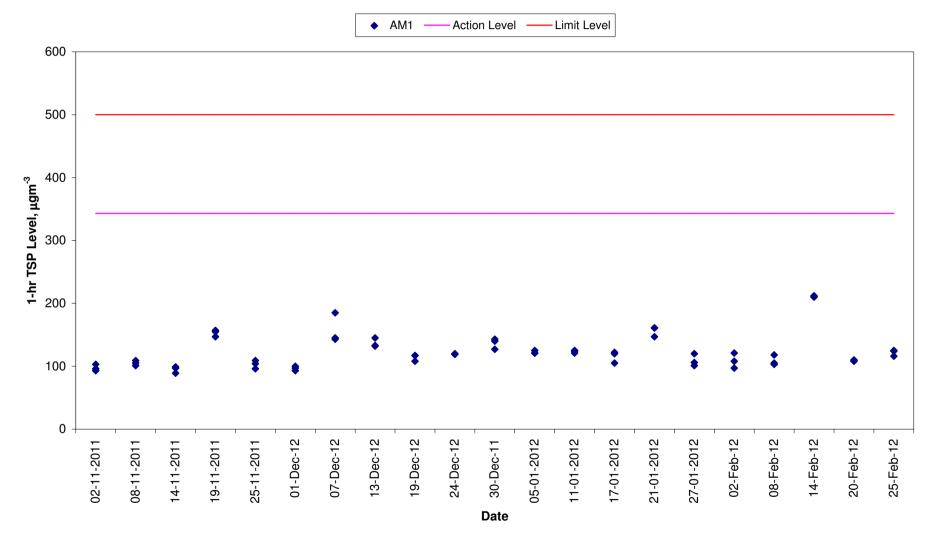
Start		Finis	h	Weather	Filter V	Veight (g)	Elapse Read	d Time ding	Sampling Time		/ Rate (m	n ³ /min)	TSP Conc.	Action Level	Limit Level	Observations / Remarks	Sampler	Filter
Date	Time	Date	Time		Initial	Final	Initial	Final	(hrs)	Initial	Final	Average	(µg/m ³)	(µg/m ³)	(µg/m ³)		ID	ID
02-Feb-12	16:00	03-Feb-12	16:00	Cloudy	2.7130	2.8393	20295.20	20319.20	24.00	1.23	1.23	1.23	71	192	260	Construction work in progress	1252	3479
08-Feb-12	16:00	09-Feb-12	16:00	Cloudy	2.7059	2.8394	20322.20	20346.20	24.00	1.23	1.23	1.23	75	192	260	Construction work in progress	1252	3600
14-Feb-12	16:00	15-Feb-12	16:00	Cloudy	2.7159	2.8779	20349.20	20373.20	24.00	1.23	1.23	1.23	91	192	260	Construction work in progress	1252	3616
20-Feb-12	16:00	21-Feb-12	16:00	Cloudy	2.7077	2.8344	20376.20	20400.20	24.00	1.23	1.23	1.23	72	192	260	Construction work in progress	1252	3633
25-Feb-12	16:00	26-Feb-12	16:00	Cloudy	2.6922	2.8338	20403.20	20427.20	24.00	1.23	1.23	1.23	80	192	260	Construction work in progress	1252	3650

Min.71Max.91Average78

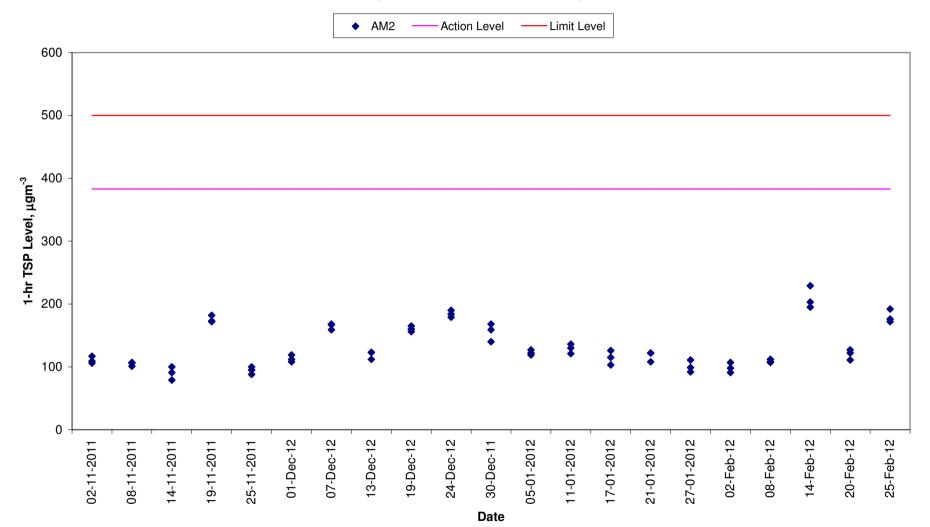
Meteorological Data Extracted from the Hong Kong Observatory

			Т	uen Mun Station		-
Date	Weather	Average Air Temperature (°C)	Average Relative Humiditiy (%)	Total Rainfall (mm)	Average Wind Speed (km/h)	Wind Direction
02-02-2012	Cloudy	16.3	71 - 85	0.0	10.5	S
03-02-2012	Cloudy	14.2	74 - 87	Trace	12.5	S
08-02-2012	Cloudy	11.8	75 - 92	0.7	12.5	N
09-02-2012	Cloudy	12.5	73 - 89	Trace	11.0	N
14-02-2012	Cloudy	19.8	80 - 96	0.3	10.5	S
15-02-2012	Cloudy	20.4	90 - 97	Trace	6.0	S
20-02-2012	Cloudy	14.6	65 - 82	0.0	5.5	S
21-02-2012	Cloudy	18.1	74 - 96	1.7	5.0	N
25-02-2012	Cloudy	16.4	94 - 98	Trace	9.0	SW
26-02-2012	Cloudy	12.8	77 - 95	Trace	10.5	N

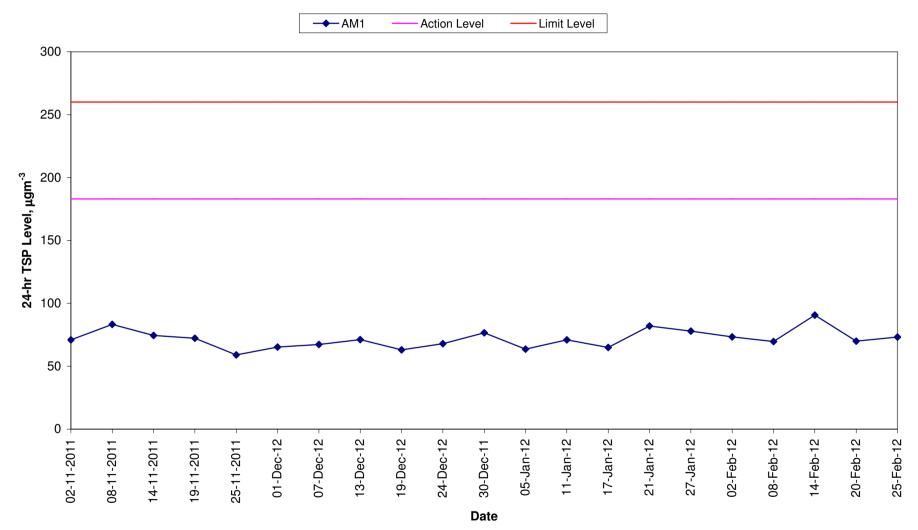
1-hr TSP Levels for the Past 4 Months AM1 (Tuen Mun EMSD Vehicle Servicing Station)



1-hr TSP Levels for the Past 4 Months AM2 (River Trade Terminal Office)

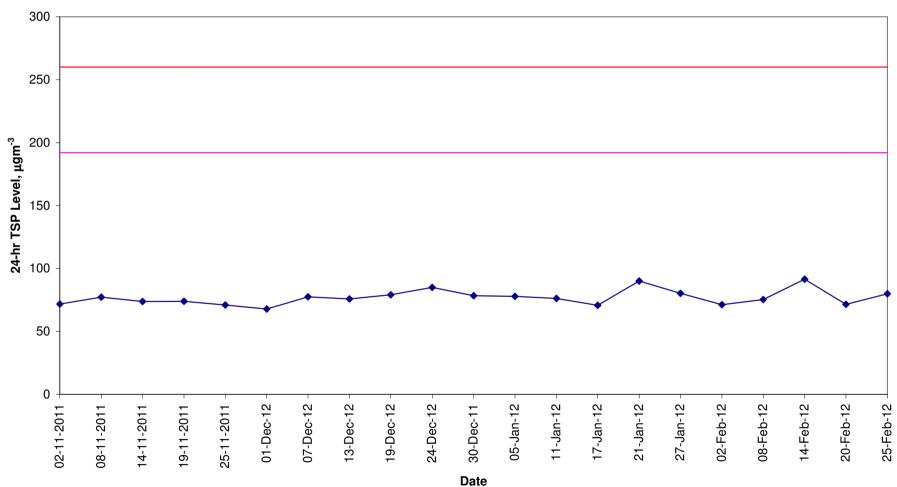


24-hr TSP Levels for the Past 4 Months AM1 (Tuen Mun EMSD Vehicle Servicing Station)



24-hr TSP Levels for the Past 4 Months AM2 (River Trade Terminal Office)





Annex G

Calibration Reports for HVSs

TSP Monitoring Equipment

Monitoring Station ID	Location	Monitoring Equipment		Last Calibration Date	Next Calibration Date
24-hr and 1-hr TSP		HVS	Calibrator		
AM1	Tuen Mun EMSD Vehicle Servicing Station	GMW GS-2310 (S/N 7580)	CM-AIR-43 (S/N 1785)	04 January 2012	04 March 2012
AM2	River Trade Terminal Office	GMW GS-2310 (S/N 1252)	CM-AIR-43 (S/N 1785)	04 January 2012	04 March 2012

High-Volume TSP Sampler 5-Point Calibration Record

Location Calibrated by Date	: : :	EMSD P.F.Yeung 04/01/2012
<u>Sampler</u> Model Serial Number	:	GMWS-2310 ACCU-VOL S/N 7580
Calibration Orfice and Stan	dard Calibration	Relationship
Serial Number	:	1785
Service Date	:	25 May 2011
Slope (m)	:	2.00506
Intercept (b)	:	-0.02062
Correlation Coefficient(r)	:	0.99999
Standard Condition		
Pstd (hpa)	:	1013
Tstd (K)	:	298.18
Calibration Condition		
Pa (hpa)	:	1022
Ta(K)	:	289

Resi	stance Plate	dH [green liquid]	Z	X=Qstd	IC	Y
		(inch water)		(cubic meter/min)		
1	18 holes	11.4	3.444	1.728	54	55.1
2	13 holes	9.6	3.160	1.586	48	49.0
3	10 holes	7.4	2.775	1.394	41	41.8
4	7 holes	4.6	2.188	1.101	30	30.6
5	5 holes	2.7	1.676	0.846	20	20.4

Sampler Calibration Relationship

Slope(m):<u>38.967</u> Intercept(b): <u>-12.500</u>

Correlation Coefficient(r): 0.9998

Checked by: <u>Magnum Fan</u>

Date: 10/01/2012

High-Volume TSP Sampler 5-Point Calibration Record

Location Calibrated by Date	:	River Trade P.F.Yeung 04/01/2012
<u>Sampler</u> Model		GMWS-2310 ACCU-VOL
Serial Number	:	S/N 1252
Calibration Orfice and Standa	ard Calibrati	on Relationship
Serial Number	:	1785
Service Date	:	25 May 2011
Slope (m)	:	2.00506
Intercept (b)	:	-0.02062
Correlation Coefficient(r)	:	0.99999
Standard Condition		
Pstd (hpa)	:	1013
Tstd (K)	:	298.18
Calibration Condition		

Pa (hpa)	:	1022			
Ta(ł	K)	:	289			
Res	istance Plate	dH [green liquid]	Z	X=Qstd	IC	Y
		(inch water)		(cubic meter/min)		
1	18 holes	11.0	3.383	1.697	64	65.3
2	13 holes	9.0	3.060	1.536	57	58.1
3	10 holes	7.0	2.699	1.356	49	50.0
4	7 holes	4.3	2.115	1.065	36	36.7
5	5 holes	2.7	1.676	0.846	26	26.5

Sampler Calibration Relationship

Slope(m):45.541 Intercept(b): -11.888 Correlation Coefficient(r): 0.9999

Checked by: Magnum Fan

Date: 10/01/2012

Annex H

Event/Action Plan for Air Quality Monitoring

Action Level/Limit Level	Environmental Team Leader (ETL)	Independent Environmental Checker (IEC)	Supervising Officer Representative (SOR)	Contractor
Action Level				
Exceedance for one sample	 Identify source, investigate the causes of complaint and propose remedial measures; Inform IEC and SOR; Repeat measurement to confirm findings; Increase monitoring frequency to daily. 	 Check monitoring data submitted by ET; Check Contractor's working method. 	• Notify Contractor and DSD.	 Rectify any unacceptable practice; Amend working methods if appropriate.
Exceedance for two or more consecutive samples	 Identify source; Inform IEC and SOR; Advise the SOR on the effectiveness of the proposed remedial measures; Repeat measurements to confirm findings; Increase monitoring frequency to daily; Discuss with IEC and Contractor on remedial actions required; If exceedance continues, arrange meeting with IEC and SOR; If exceedance stops, cease additional monitoring. 	 Check monitoring data submitted by ET; Check Contractor's working method; Discuss with ET and Contractor on possible remedial measures; Advise the ET on the effectiveness of the proposed remedial measures; Supervise Implementation of remedial measures. 	 Confirm receipt of notification of exceedance in writing; Notify Contractor and DSD; Ensure remedial measures properly implemented. 	 Submit proposals for remedial actions to IEC within three working days of notification; Implement the agreed proposals; Amend proposal if appropriate.

Table H1Event Action Plan for Air Quality Monitoring

ENVIRONMENTAL RESOURCES MANAGEMENT

Action Level/Limit Level	Environmental Team Leader (ETL)	Independent Environmental Checker (IEC)	Supervising Officer Representative (SOR)	Contractor
Limit Level				
Exceedance for one sample	 Identify source, investigate the causes of exceedance and propose remedial measures; Inform IEC, SOR, DSD and EPD; Repeat measurement to confirm finding; Increase monitoring frequency to daily; Assess effectiveness of Contractor's remedial actions and keep IEC, EPD, DSD and SOR informed of the results. 	on possible remedial measures;	 Confirm receipt of notification of exceedance in writing; Notify Contractor; Ensure remedial measures properly implemented. 	 Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC within three working days of notification; Implement the agreed proposals; Amend proposal if appropriate.
Exceedance for two or more consecutive samples	 Notify IEC, SOR, DSD and EPD; Identify source; Repeat measurement to confirm findings; Increase monitoring frequency to daily; Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; Arrange meeting with IEC and SOR to discuss the remedial actions to be taken; Assess effectiveness of Contractor's remedial actions and keep IEC, EPD, DSD and SOR informed of the results; If exceedance stops, cease additional monitoring. 	 Discuss amongst SOR, ET, and Contractor on the potential remedial actions; Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the SOR accordingly; Supervise the implementation of remedial measures. 	 Confirm receipt of notification of exceedance in writing; Notify Contractor; In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; Ensure remedial measures properly implemented; If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated. 	 Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC within three working days of notification; Implement the agreed proposals; Resubmit proposals if problem still not under control; Stop the relevant portion of works as determined by the SOR until the exceedance is abated.

ENVIRONMENTAL RESOURCES MANAGEMENT

Annex I

Implementation Schedule of Mitigation Measures

Annex I Summary of Mitigation Measures Implementation Schedule

Type of Impact	Environmental Protection Measures	Location/ Timing	Status
Summary of Envi	ronmental Mitigation Measures in the EIA and EM&A Manual	•	
Construction Pha	se		
Air Quality	Dust mitigation measures stipulated in <i>the Air Pollution Control</i> (<i>Construction Dust</i>) <i>Regulation</i> shall be incorporated to control Post emission. Notice shall be given to authority prior to commencing of work.	Work sites / during construction period	Δ . Notice of works commencement was submitted to EPD on 3 August 2010.
Water Quality	The practices outlined in ProPECC PN 1/94 Construction Site Drainage should be adopted. It is recommended to install perimeter channels in the works areas to intercept runoff as site boundary prior to the commencement of any earthwork. To prevent storm runoff from washing across exposed soil surfaces, intercepting channels should be provided. Drainage channels are also required to convey site runoff to sand/silt traps and oil interceptors. Provision of regular cleaning and maintenance can ensure the normal operation of these facilities throughout the construction period. Any practical options for the diversion and re-alignment of drainage should comply with both engineering and environmental requirements in order to ensure adequate hydraulic capacity of all drains.	Work site/During the construction period	
Water Quality	There is a need to apply to EPD for a discharge license under the WPCO for discharging effluent from the construction site. The discharge quality is required to meet the requirements specified in the discharge license. All the runoff and wastewater generated from the works areas should be treated so that it satisfies all the standards listed in the TM-DSS. Reuse and recycling of the treated effluent can minimize water consumption and reduce the effluent discharge volume. The beneficial uses of the treated effluent may include dust suppression, wheel washing and general cleaning. If monitoring of the treated effluent quality from the works areas is required during the construction phase of the Project, the monitoring should be carried out in accordance with the WPCO license which is under the ambit of regional office (RO) of EPD.	Work site/During the construction period	Δ. Discharge licence was awarded by EPD on 7 December 2010.
Water Quality	The construction programme should be properly planned to minimize soil excavation, if any, in rainy seasons. This prevents soil erosion from	Work site/During the construction period	Δ

Type of Impact	Environmental Protection Measures	Location/ Timing	Status
	exposed soil surfaces. Any exposed soil surfaces should also be properly protected to minimize dust emission. In areas where a large amount of exposed soil exists, earth bunds or sand bags should be provided. Exposed stockpiles should be covered with tarpaulin or impervious sheets at all times. The stockpiles of materials should be placed at locations away from any stream course so as to avoid releasing materials into the water bodies. Final surfaces of earthworks should be compacted and protected by permanent work. It is suggested that haul roads should be paved with concrete and the temporary access roads protected using crashed stone or gravel, wherever practicable. Wheel washing facilities should be provided at all site exists to ensure that earth, mud and debris would not be carried out of the works areas by vehicles.		
Water Quality	Good sites practices should be adopted to clean the rubbish and litter on the construction sites so as to prevent the rubbish and litter from spreading from the site area. It is recommended to clean the construction sites on a regular basis.	Work site/During the construction period	Δ
Water Quality	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 water collector should be deployed to clean the chemical toilets on a regular basis. The construction workers can also make use of the existing toilet facilities within the PPSTW as necessary.	Work site/During the construction period	N
Water Quality	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 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 the construction period	
Waste Management	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	Work site/During the construction period	\checkmark

Type of Impact	Environmental Protection Measures	Location/ Timing	Status
	particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes.		
Waste Management	Any service shop and maintenance facilities should be located on hard standings within a bunded area, and stumps and oil interceptors should be provided. Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges.	Work site/During the construction period	<>
Waste Management	 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 the chemical wastes. General requirements are given as follows: Suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport. Chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents. Storage area should be selected at a safe location on site and 	Work site/During the construction period	
	adequate space should be allocated to the storage area.		
Waste Management	<i>Good Site Practices</i> Recommendations for good site practices during the construction activities include:	Work site/During the construction period	<>
	• Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site		
	• Training of site personnel in proper waste management and chemical handling procedures		
	• Provision of sufficient waste disposal points and regular collection of waste		
	• Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by		

Type of Impact	Environmental Protection Measures	Location/ Timing	Status
	 transporting wastes in enclosed containers Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors. Separation of chemical wastes for special handling and appropriate treatment at the Chemical Waste Treatment Facility. 		
Waste Management	 Waste Reduction Measures 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: Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal. Encourage collection of aluminium cans by providing separate labelled bins to enable this waste to be segregated from other general refuse generated by the work force Proper storage and site practices to minimise the potential for damage or contamination of construction materials. Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste. 	Work site/During planning & design stage, and construction stage	\checkmark
Waste Management	<i>General Refuse</i> General refuse should be stored in enclosed bins or compaction units separate from C&D material. A reputable waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D material. Preferably an enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.	Work site / During the construction period	\$
Waste Management	Construction and Demolition Material In order to minimise the impact resulting from collection and	Work site / During design stage & construction period	\checkmark

Type of Impact	Environmental Protection Measures	Location/ Timing	Status
	transportation of C&D material for off-site disposal, the excavated material generated from site formation works for the proposed new facilities and units at the STW should be reused on-site as far as practicable. The surplus excavated material should be disposed of at the designated public fill reception facility, as agreed with the Secretary of the Public Fill Committee, for other beneficial uses.		
Waste Management	 Mitigation measures and good site practices should be followed to control potential environmental impact from handling and transportation of C&D material. The mitigation measures include: Where it is unavoidable to have transient stockpiles of C&D material pending collection for disposal, the transient stockpiles shall be located away from waterfront or storm drains as far as possible. Open stockpiles of construction materials or construction wastes onsite should be covered with tarpaulin or similar fabric. Skip hoist for material transport should be totally enclosed by impervious sheeting. 	Work site / During design stage & construction period	<>
	 Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving a construction site The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores. The load of dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure dust materials do not leak from the vehicle. 		
	 All dusty materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet. The height from which excavated materials are dropped should be controlled to a minimum practical height to limit fugitive dust generation from unloading. 		
Waste Management	When disposing C&D material at a public filling facility, it shall be noted that the material shall only consist of earth, building debris and broken rock and concrete. The material shall be free from marine mud,	Work site/During design stage & construction period	\checkmark

Type of Impact	Environmental Protection Measures	Location/ Timing	Status
Waste Management	 household refuse, plastic, metals, industrial and chemical waste, animal and vegetable matter, and other material considered to be unsuitable by the Filling Supervisor. In order to monitor the disposal of the surplus C&D material at the designed public fill reception facility and to control fly tipping, a trip-ticket system should be included as one of the contractual requirements and implemented by an Environmental Team undertaking the Environmental Monitoring and Audit work with reference to the ETWB TCW No. 31/2004 "Trip Ticket System for Disposal of Construction and Demolition Materials" as attached in Appendix 7-1. An Independent Environmental Checker should be responsible for auditing the results of the system. <i>Chemical Waste</i> If chemical wastes are produced at the construction site, the Contractor would be required to register with the 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 waste 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, corrosive, etc. The Contractor shall use a licensed collector to transport and dispose of the chemical wastes, to either the Chemical Waste Treatment Centre, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation. 	Work site / During the construction period	
Landscape & Visual	Temporary Tree NurseriesTemporary tree nurseries may be set up for the transplanted tree and proposed trees at an early stage to allow small trees to grow during the construction periods. By the time when planting area becomes available, trees mature and increase in trunk & spread size. They will require minimal pruning and suffer much less damage during transplanting when comparing the travel distance from an on-site nursery to an off-site nursery.	Work site/During design stage & construction period	√. A tree nursery has been set up off-site near the site office.

Type of Impact	Environmental Protection Measures	Location/ Timing	Status
	Besides, these trees may also be positioned as visual mitigation during the construction period.		
Landscape & Visual	No-intrusion Zone To maximize protection to existing trees and ground vegetation, construction contracts may designate "No-intrusion Zone" to various areas within the site boundary with rigid and durable fencing for each individual no-intrusion zone. The contractor should close monitor and restrict the site working staff not to enter the "no-intrusion zone", even for non-direct construction activities and storage of equipment.	Work site/During design stage & construction period	<>
Landscape & Visual	Hoarding Hoarding or boundary fencing for construction shall be considered. It should be sensitively designed, subtle, camouflaged and more 'permeable' so that they fit into the existing environment when looking from outside.	Work site/During design stage & construction period	\checkmark
Landscape & Visual	Dust and Erosion Control for Exposed Soil Excavation works and demolition of existing building blocks and which will be highly visible form surrounding areas should be well planned and with precautions to suppress dust. Exposed soil shall be covered or 'camouflaged' and watered often. Areas that are expected to be left with bare soil for a long period of time after excavation shall be properly covered with suitable protective fabric. Silt and erosion shall be controlled by ground barriers around the slope cutting area.	Work site/During design stage & construction period	\$
Landscape & Visual	Existing Tree Record Inventory All retained trees should be record photographically at the commencement of the Contract, and carefully protected during the construction period. Detailed tree protection specification shall be allowed and included in the Contract Specification, which specifying the	Work site/During design stage & construction period	\checkmark

Type of Impact	Environmental Protection Measures	Location/ Timing	Status
	tree protection requirement, submission and approval system, and the tree monitoring system.		
Landscape & Visual	Construction Light All security floodlights for construction sites shall be equipped with adjustable shield, frosted diffusers and reflective covers, and be carefully controlled to minimize light pollution and night-time glare to nearby residences and GIC users. The Contractor shall consider other security measures which shall minimize the visual impacts.	Work site / During design stage & construction period	√
Landscape & Visual	Tree Transplanting Apart from the 18 numbers of <i>"Leucaena leucocephala"</i> , which are proposed to be felled in accordance with ETWB TCW No. 3/2006, all the affected trees shall be transplanted. Where practicable, trees shall be directly transplanted to permanent on-site locations. The location of the transplanted tree is shown in Figure 8.9.1 .	Work site / During design stage & construction period	Δ . Tree transplantation in progress.
Landscape & Visual	Tree Compensation Ratio The total number of compensatory trees planted in the project area shall not be less than 1:1 ratios by new trees. Required numbers and locations of compensatory trees shall be determined and agreed with Government during the tree felling application process under ETWCTC 3/2006. Compensatory trees shall be at least heavy standard size to create "immediate" greening effect. 81 numbers of " <i>Cassia surattensis</i> " will be provided as the additional compensatory planting for loss of greenery in the area due to removal of the affected trees. The location of the additional compensatory planting is shown in Figure 8.9.1 .	Work site / During design stage & construction period	N/A
Landscape & Visual	Re-use of Existing Soil and Advance formation of Planting AreaExisting topsoil shall be re-used where possible for new planting areaswithin the project. Advance formation of planting area and earlyimplementation of the plating works can minimize adverse impact ontrees. The construction program shall consider using the soil removed	Work site / During design stage & construction period	\checkmark

Type of Impact	Environmental Protection Measures	Location/ Timing	Status
	from one phase for backfilling another. Suitable storage ground, gathering ground and mixing ground may be set up on-site as necessary.		
Landscape & Visual	Establishment Period 12 month establishment period for the soft landscape works will be allowed in the main contract. Most construction contracts in Hong Kong require the Contractor to carry out routine horticultural operations, including watering, pruning, weeding, pest control, replacement of dead plants etc. to ensure healthy establishment of new planting during a 12 month establishment period. This period also serves as a kind of warranty / guarantee on the quality of the plants supplied and installed by the Contractor. Monthly monitoring during the first year of establishment period is recommended.	Work site/During operation period	N/A. To be implemented during operation phase of Project.
Landscape & Visual	Re-instatement of excavated Area All excavated area and disturbed area for utilities diversion, temporary road diversion, and pipeline woks will be reinstated to former conditions, subject to applicable Government Standards.	Work site / During design stage & operation period	N/A. To be implemented during operation phase of Project.
Landscape & Visual	Appearance and Greening for the proposed structures Compatible design, construction materials and surface finishes of the proposed structure should match with the nearby existing external appearance of PPSTW buildings for achieving visual uniformity. Finishing materials shall have due consideration to form, basic color, color/tone variation, micro-and macro-texture, and reflectivity/light absorbance to avoid glare. Planting, such as turf, low groundcovers and climbers, may also be planted on top of these elements to provide greening and aesthetic effect.	Work site / During design stage & operation period	N/A. To be implemented during operation phase of Project.
Summary of Key	Environmental Mitigation Measures in Contract Requirements	1	<u> </u>
Air Quality	Only Ultra-low-sulphur diesel (ULSD) should be used for all diesel- operated plants and equipments on site	Work sites / during construction period	1
Air Quality and Noise	Plants and equipments of good operation conditions should be used on site.	Work sites / during construction period	\checkmark
Noise	No diesel hammers should be used for piling works	Work sites / during construction period	\checkmark

Type of Impact	Environmental Protection Measures	Location/ Timing	Status
Noise	Construction Noise Permits (CNP) should be applied for works conducted outside non-restricted hours.	Work sites / during construction period	\checkmark
Noise	Quiet construction equipments and the quietest practicable working methodologies should be adopted for works whenever feasible. Noise labels should be provided for air compressors. Hoods and cover panels of generators and air compressors should be closed during operation. Noise labels should be provided for air compressors and hand-held percussive breakers.	Work sites / during construction period	\checkmark
Waste Management	Temporary works construction on site should minimize the use of timber to reduce the quantity of C&D waste generated during works period.	Work sites / during construction period	\checkmark
Landscape and Visual	Retained or to-be-transplanted trees on site should be properly protected from physical damages and soil compacts with temporary fencing or hessian armouring whenever feasible.	Work sites / during construction period	\diamond

Remark:

- $\sqrt{}$ Compliance of Mitigation Measures
- <> Compliance of Mitigation but need improvement
- x Non-compliance of Mitigation Measures
- Non-compliance of Mitigation Measures but rectified by ATAL-Degrémont-China State JV
- Δ Deficiency of Mitigation Measures but rectified by ATAL-Degrémont-China State JV
- N/A Not Applicable in Reporting Period

Annex J

Waste Flow Table

Monthly Summary Waste Flow Table

	Ac	tual Quantities of Ine	ert C&D Materials	(Public Fill) Generat	ed	Actu	al Quantities of Non-i	inert C&D Materials	s (Construction Wast	e) Generated
Month	Total Quantity Generated	Rocks & Broken Concrete	Reused in the Contract	Reused in other Projects	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
Nov 2010	2,248	0	0	0	2,248	60	100	0	0	18.05 (see Note 4)
Dec 2010	11,314 (see Note 4)	0	0	0	11,314	100	120	20	0	28.4 (see Note 4)
Jan 2011	58,383 (see Note 4)	0	0	0	58,383	250	280	60	0	4.59 (see Note 4)
Sub-total	71,945	0	0	0	71,945	410	500	80	0	51.04
Feb 2011	12,855	0	0	0	12,855	100	150	50	0	2.43 (see Note 4)
Mar 2011	22,859	0	0	0	22,859	150	180	55	0	9.02
Apr 2011	8,547 (see Note 7)	0	0	5,684(see Note 5, 7)	2,863 (see Note 7)	50	30	15	0	5.78
Sub-total	44,261	0	0	5,684	38,577	300	360	120	0	17.23
May 2011	6,293 (see Note 7)	0	0	11 (see Note 5, 7)	6,282 (see Note 7)	45	25	10	360 (see Note 7)	8.83
Jun 2011	4,587 (see Note 7)	0	0	0 (see Note 7)	4,587 (see Note 7)	40	30	15	0	7.10
Jul 2011	523	0	0	0	523	15	5	10	0	7.20
Sub-total	11,403	0	0	11	11,392	100	60	35	360	23.13
Aug 2011	571 (see Note 11)	0	0	0	571 (see Note 11)	0	0	15	450 (see Note 8)	6.12
Sept 2011	235	0	0	0	235	20	0	0	0	12.15 (see Note 9)
Oct 2011	5,705 (see Note 10)	0	0	0	5,705 (see Note 10)	100	0	0	0	2.98
Sub-total	6,511	0	0	0	6,511	120	0	15	450	21.25
Nov 2011	6,294	0	0	0	6,294	50	0	0	0	44.84
Dec 2011	3,011	0	0	0	3,011	20	0	0	0	17.14
Jan 2012	349	0	64	0	285	20	150	0	0	49.01
Sub-total	9,654	0	64	0	9,590	90	150	0	0	110.99
Feb 2012	3,371		30	0	3,341	150	0	0	0	48.72

Total	147,145	0	94	5,695	141,356	1,170	1,070	250	810	272.36
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- 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 WENT by subcontractors.
 - (4) The waste flow data for November and December 2010, January and February 2011 was updated in March 2011based on SOR's comments and has been confirmed by the Contractor.
 - (5) The inert C&D materials were reused in the Contract No. EP/SP/58/08 at Tuen Mun Tsang Tsui.
 - (6) Chemical waste was collected though the licensed chemical waste collector, Dunwell Ind. (Holdings) Ltd, with the waste collection licence number 7111-757-W0015-WC.
 - (7) The waste flow data for April, May and June 2011 was updated in August 2011 based on SOR's comments and has been confirmed by the Contractor.
 - (8) The waste flow data of chemical waste for August 2011 was updated in October 2011 based on Contractor's revised waste flow summary.
 - (9) The waste flow data of general refuse for September 2011 was updated in November 2011 based on Contractor's revised waste flow summary.
 - (10) The waste flow data of C&D material for October 2011 was updated in December 2011 based on Contractor's revised waste flow summary.
 - (11) The waste flow data of C&D material for August 2011 was updated in January 2011 based on SOR's comments and has been confirmed by the Contractor.

Annex K

Environmental Complaint, Environmental Summon and Presecution Log

Reporting Month	Number of Complaints in Reporting Month	Number of Summons/Prosecutions in Reporting Month
November 2010	0	0
December 2010	0	0
January 2011	0	0
February 2011	0	0
March 2011	0	0
April 2011	0	0
May 2011	0	0
June 2011	0	0
July 2011	0	0
August 2011	0	0
September 2011	0	0
October 2011	0	0
November 2011	0	0
December 2011	0	0
January 2012	0	0
February 2012	0	0
Overall Total	0	0

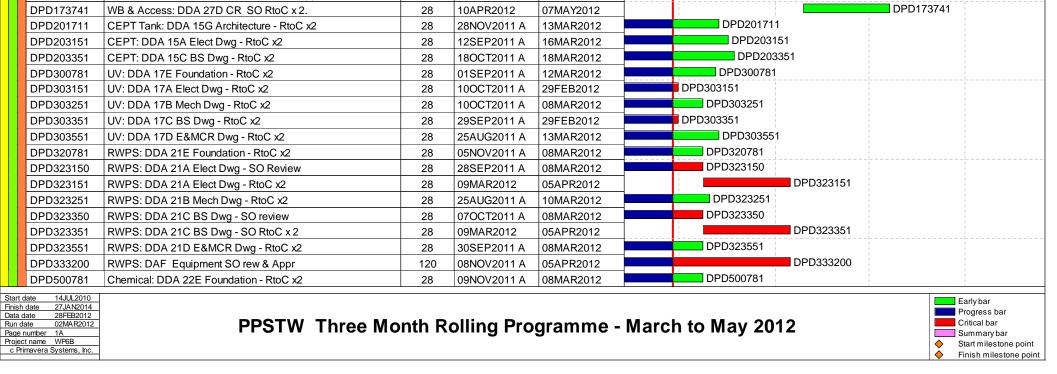
Annex K Cumulative Complaint and Summons/Prosecutions Log

Annex L

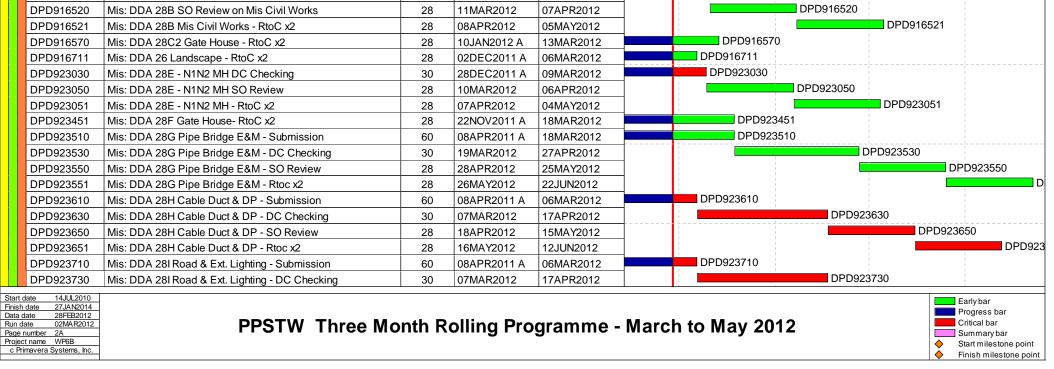
Construction Programme of the Project

ATAL - Degremont - China State Joint Venture

Activity	Description	Original		Early	FEB	2012 MAR APR	MAY JUN
ID		Duration	Start	Finish	13 20	MAR APR 27 05 12 19 26 02 09 16 23 30 07	
liminaries							
eneral Requirer							
Contract Prelim PLW005310	Operation Plan - Submission	66	14 11 2011 4	10MAR2012		PLW005310	
PLW005310 PLW005320	Operation Plan - Submission Operation Plan - Approval	66 90	14JUL2011 A 11MAR2012	08JUN2012		1 20003310	PLW0053
	Checking of Permanent Works			0030112012			
Ibmission and (
Submission and	d Approval						
DPD010361	DDA1: Design Memorandum - RtoC x 2	28	23SEP2011 A	05MAR2012		DPD010361	
DPD030360	DDA3: Hydraulic Design SO review	28	28DEC2011 A	09MAR2012		DPD030360	
DPD030361	DDA3: Hydraulic Design RtoC x 2	28	10MAR2012	06APR2012		DPD030361	
DPD040360	DDA4: Plant Layout Drawing- SO review	28	01DEC2011 A	29FEB2012		DPD040360	
DPD040361 DPD050330	DDA4: Plant Layout Drawing- RtoC x2 DDA5: Utilities- DC Checking	28	01MAR2012 19DEC2011 A	28MAR2012 08MAR2012		DPD050330	
DPD050330 DPD050340	DDA5: Utilities- DC Cert	0	19DEC2011A	08MAR2012		◆ DPD050340	
DPD050350	DDA5: Utilities-submit to SO	0	09MAR2012	00101/41(2012		DPD050350	
DPD050360	DDA5: Utilities- SO review	56	12MAR2012	06MAY2012		DP	PD050360
DPD050370	DDA5: Utilities- SO Approval	0		06MAY2012			PD050370
DPD063140	DDA6: HAZOP Report- DC check final package	30	29NOV2010 A	05MAR2012		DPD063140	
DPD063175	DDA6: HAZOP Report- SO rew. Final Package	28	06MAR2012	02APR2012		DPD063175	
DPD072361	DDA7B: Control Philosophy RtoC x2	28	22DEC2011 A	10MAR2012		DPD072361	
DPD073361	DDA7C-G: SCADA system design- RtoC x2	28	17JAN2012 A	10MAR2012		DPD073361	
DPD074330	DDA7H-N-: SCADA Detail design- DC Checking	30	10JAN2012 A	12MAR2012		DPD074330	·
DPD074360 DPD074361	DDA7H-N-: SCADA Detail design- SO review	28	16MAR2012 13APR2012	12APR2012 10MAY2012		DPD074360	DPD074361
DPD074361 DPD077361	DDA7H-N-: SCADA Detail design- RtoC x2 DDA8B: Odour Duct design- RtoC x2	28	12DEC2011 A	10MA 12012		DPD077361	JF D074301
DPD077710	DDA8D: Oddar Data design: Ride 22 DDA8C: Pipe/Duct Supp. design- prep. Submission	60	12DEC2011 A	06MAR2012		DPD077710	
DPD077730	DDA8C: Pipe/Duct Supp. design- DC Checking	30	07MAR2012	17APR2012		DPD077730	
DPD077760	DDA8C: Pipe/Duct Supp. design- SO review	28	18APR2012	15MAY2012			DPD077760
DPD077761	DDA8C: Pipe/Duct Supp. design- RtoC x2	28	16MAY2012	12JUN2012			DPD0
DPD081161	DDA9A-D: Elect. sys design- RtoC x2	28	24AUG2011 A	10MAR2012		DPD081161	
DPD081561	DDA9E: UPS sys- RtoC x2	28	25AUG2011 A	12MAR2012		DPD081561	
DPD081761	DDA9F: E&L sys- RtoC x2	28	19AUG2011 A	03MAR2012		DPD081761	·
DPD084310	DDA9K: Renewable Energy Design- prep. Submission	90	18MAY2011 A	07MAR2012		DPD084310	
DPD084330	DDA9K: Renewable Energy Design- DC Checking	30	08MAR2012	18APR2012		DPD084330	
DPD084360	DDA9K: Renewable Energy Design- SO review	28	22APR2012	19MAY2012			DPD084360
DPD084361 DPD084500	DDA9K: Renewable Energy Design- RtoC x2	28	20MAY2012 04JUL2011 A	16JUN2012 12MAR2012		DPD084500	DPI
DPD084500 DPD084510	DDA9L Elect Typ. Inst. Drg - prep Submission DDA9L Elect Typ. Inst. Drg - DC Checking	30 28	13MAR2012	09APR2012		DPD084510	
DPD084520	DDA9L Elect Typ. Inst. Drg - DC Cert	0	1300/412012	09APR2012		◆ DPD084520	
DPD084530	DDA9L Elect Typ. Inst. Drg - Submit to SO	0	10APR2012			♦ DPD084530	
DPD084540	DDA9L Elect Typ. Inst. Drg - SO Review	28	10APR2012	07MAY2012		DF	PD084540
DPD084550	DDA9L Elect Typ. Inst. Drg - RtoC x2	28	08MAY2012	04JUN2012			DPD084550
DPD084560	DDA9L Elect Typ. Inst. Drg - SO Consent Granted	0		04JUN2012			♦ DPD08456
DPD085200	DDA10F BS Installation Drg - prep Submission	30	15JUN2011 A	12MAR2012		DPD085200	
DPD085210	DDA10F BS Installation Drg - DC Checking	28	13MAR2012	09APR2012		DPD085210	
DPD085220	DDA10F BS Installation Drg - DC Cert	0		09APR2012		 ♦ DPD085220 ♦ DPD085230 	
DPD085230 DPD085240	DDA10F BS Installation Drg - Submit to SO DDA10F BS Installation Drg - SO Review	0 28	10APR2012 10APR2012	07MAY2012		· · · · · · · · · · · · · · · · · · ·	PD085240
DPD085240 DPD085250	DDA10F BS Installation Drg - RtoC x2	28	08MAY2012	04JUN2012			D003240 DPD085250
DPD085260	DDA10F BS Installation Drg - SO Consent Granted	0	00000000000	04JUN2012			♦ DPD08526
DPD090310	DDA11: T&C Plan- prep. Submission	90	01APR2011 A	10MAR2012		DPD090310	
DPD090330	DDA11: T&C Plan- DC Checking	30	12MAR2012	20APR2012		DPD090330	
DPD090360	DDA11: T&C Plan- SO review	28	24APR2012	21MAY2012			DPD090360
DPD090361	DDA11: T&C Plan- RtoC x2	28	22MAY2012	18JUN2012			DI
DPD103151	PTW: DDA 13A Elect Dwg - RtoC x2	28	27JUL2011 A	06MAR2012		DPD103151	
DPD103351	PTW: DDA 13C BS Dwg - RtoC x2	28	27JUL2011 A	10MAR2012		DPD103351	
DPD150781	Septic: DDA14E Foundation - RtoC x2	28	28NOV2011 A	08MAR2012		DPD150781	
DPD153151	Septic: DDA14A Elect Dwg - RtoC x2	28	23AUG2011 A	18MAR2012		DPD153151	
DPD153251	Septic: DDA14B Mech Dwg - RtoC x2	28	09AUG2011 A	08MAR2012		DPD153251 DPD153351	
DPD153351 DPD153551	Septic: DDA14C BS Dwg - SO RtoC x 2 Septic: DDA14D EMCR Dwg - RtoC x2	28	28SEP2011 A 24AUG2011 A	18MAR2012 18MAR2012		DPD153351	
DPD153551 DPD173610	WB & Access: DDA 27A E&M Submission	50	24A0G2011 A 21MAR2011 A	03MAR2012		DPD173610	
DPD173610 DPD173620	WB & Access: DDA 27A E&M DC Checking	30	05MAR2011A	13APR2012		DPD173620	
DPD173640	WB & Access: DDA 27A E&M SO Rew & Appr.	28	14APR2012	11MAY2012			DPD173640
DPD173641	WB & Access: DDA 27A E&M SO RtoC x 2.	28	12MAY2012	08JUN2012			DPD173
DPD173720	WB & Access: DDA 27D CR DC Checking	30	08JUL2011 A	12MAR2012		DPD173720	
DPD173740	WB & Access: DDA 27D CR SO Rew & Appr.	28	13MAR2012	09APR2012		DPD173740	
DD1727/1		20	104002012	07140 22012			PD173741



Activity ID	Description	Original Duration		Early Finish	2012 FEB MAR APR MAY J
					13 20 27 05 12 19 26 02 09 16 23 30 07 14 21 28 04 1
DPD500788	Chemical: DDA 22F Structure - RtoC x2	28	09NOV2011 A	08MAR2012	DPD500788
DPD501511	Chemical: DDA 22H Architectural - RtoC x2	28	12NOV2011 A	04MAR2012	DPD503151
DPD503151	Chemical: DDA 22A Elect Dwg - RtoC x2	28	29OCT2011 A	08MAR2012	
DPD503251	Chemical: DDA 22B Mech Dwg - RtoC x2	28	30JUL2011 A	03MAR2012	DPD503251
DPD503330	Chemical: DDA 22C BS Dwg - DC Checking	30	30AUG2011 A	12MAR2012	DPD503350
DPD503350	Chemical: DDA 22C BS Dwg - SO Review	28	13MAR2012	09APR2012	
DPD503351	Chemical: DDA 22C BS Dwg - RtoC x2	28	10APR2012	07MAY2012	DPD503351
DPD503551	Chemical: DDA 22D E&MCR Dwg - SO rtoC x 2	28	04NOV2011 A	22MAR2012	DPD503551
DPD513200	Chemical: Chemical Dosing Equipment Approval	150	01JUN2011 A	18MAR2012	DPD513200
DPD600741	Sludge: DDA 16E Foundation - Rtoc x2	28	16NOV2011 A	19MAR2012	DPD600741
PD600981	Sludge: DDA 16F Structural - RtoC x2	28	18NOV2011 A	16MAR2012	DPD600981
PD601330	Sludge: DDA 16H Architectural - RtoC x2	28	210CT2011 A	28MAR2012	DPD601330
PD603151	Sludge: DDA 16A Elect Dwg - RtoC x2	28	10SEP2011 A	08MAR2012	DPD603151
PD603251	Sludge: DDA 16B Mech Dwg - RtoC x2	28	30JUL2011 A	08MAR2012	DPD603251
PD603351	Sludge: DDA 16C BS Dwg - RtoC x2	28	07SEP2011 A	08MAR2012	DPD603351
PD603551	Sludge: DDA 16D E&MCR Dwg - RtoC x2	28	25AUG2011 A	18MAR2012	DPD603551
PD700781	DOU: DDA 18E Foundation - Rtoc x2	28	03NOV2011 A	18MAR2012	DPD700781
PD701005	DOU: DDA 18G Checker Cert on Architecture	28	09NOV2011 A	04MAR2012	DPD701005
PD701010	DOU: DDA 18G SO Review on Architecture	28	05MAR2012	01APR2012	DPD701010
PD701011	DOU: DDA 18G Architecture - RtoC x2	28	02APR2012	29APR2012	DPD701011
PD703151	DOU: DDA 18A Elect Dwg - RtoC x2	28	03DEC2011 A	12MAR2012	DPD703151
PD703251	DOU: DDA 18B Mech Dwg - RtoC x2	28	02SEP2011 A	18MAR2012	DPD703251
PD703351	DOU: DDA 18C BS Dwg - RtoC x2	28	120CT2011 A	18MAR2012	DPD703351
PD703551	DOU: DDA 18D E&MCR Dwg - RtoC x2	28	24AUG2011 A	18MAR2012	DPD703551
PD803351	Admin Bldg: DDA 23C BS Dwg - RtoC x2	28	23SEP2011 A	28FEB2012	DPD803351
PD803551	Admin Bldg: DDA 23B E&MCR Dwg - RtoC x2	28	23SEP2011 A	12MAR2012	DPD803551
PD902851	Elect Bldg 1: DDA 19A Elect Dwg - RtoC x2	28	22SEP2011 A	10MAR2012	DPD902851
PD902881	Elect Bldg 1: DDA 19C BS Dwg - RtoC x2	28	26SEP2011 A	10MAR2012	DPD902881
PD902895	Elect Bldg 1: DDA 19D E&M CR Dwg - SO rew & Appr	28	22NOV2011 A	28FEB2012	DPD902895
PD902896	Elect Bldg 1: DDA 19D E&M CR Dwg - RtoC x 2	26	28FEB2012	24MAR2012	DPD902896
PD902930	Elect Bldg 1: Elec Equipment SO Rew. & Appr	80	14MAR2011 A	12MAR2012	DPD902930
PD903461	EB3/MCCs: DDA 20E Foundation - RtoC x2	28	09NOV2011 A	06MAR2012	DPD903461
PD903851	EB3/MCCs: DDA 20A Elect Dwg - RtoC x2	28	24DEC2011 A	17MAR2012	DPD903851
PD903870	EB3/MCCs: DDA 20C BS Dwg - DC Checking	30	16AUG2011 A	05MAR2012	DPD903870
PD903880	EB3/MCCs: DDA 20C BS Dwg - SO Review	28	06MAR2012	02APR2012	DPD903880
PD903881	EB3/MCCs: DDA 20C BS Dwg - RtoC x2	28	03APR2012	30APR2012	DPD903881
PD903896	EB3/MCCs: DDA 20D E&M CR Dg - RtoC x2	28	12SEP2011 A	08MAR2012	DPD903896
PD903940	EB3/MCCs: ElecEquip't Checking & Appr	90	14MAR2011 A	05MAR2012	DPD903940
PD903954	Refurbish: AIP 22A E&M GA Drg - SO Rew & Appr.	28	07FEB2011 A	26MAR2012	DPD903954
PD904001	Refurbish: DDA 25 E SHB Submission	35	18APR2011 A	05MAR2012	DPD904001
PD904005	Refurbish: DDA 25 E Checker Cert on SHB	28	06MAR2012	02APR2012	DPD904005
PD904010	Refurbish: DDA 25 E SO Review SHB	28	03APR2012	30APR2012	DPD904010
PD904011	Refurbish: DDA 25 E SHB - RtoC x2	28	01MAY2012	28MAY2012	DPD9040
PD904160	Refurbish: DDA 25A~D E&M - Submission	60	17JAN2011 A	08MAR2012	DPD904160
PD904170	Refurbish: DDA 25A~D E&M - DC Checking	30	09MAR2012	19APR2012	DPD904170
PD904180	Refurbish: DDA 25A~D E&M - SO Review	28	20APR2012	29MAY2012	DPD904
PD904181	Refurbish: DDA 25A~D E&M - RtoC x2	28	30MAY2012	06JUL2012	
PD904711	Flowmeter C: DDA 24E&F Fdn/Struct - RtoC x2	28	19DEC2011 A	13MAR2012	DPD904711
PD904831	Flowmeter C: DDA 24B~D E&M Dwg - RtoC x2	28	23NOV2011 A	08MAR2012	DPD904831
PD916280	Mis: DDA 28A SO Review on Ext Civil Works	28	10DEC2011 A	08MAR2012	DPD916280
PD916281	Mis: DDA 28A Ext Civil Works - RtoC x2	28	29MAR2012	25APR2012	DFD916281
PD916306	Mis: DDA 28B2 Sitewide Drainage RtoC x2	28	12DEC2011 A	13MAR2012	DPD916306
PD916312	Mis: DDA 28B1 Checker Cert on MH & Pipe Works	28	100CT2011 A	13MAR2012	DPD916312
PD916312	Mis: DDA 28B1 SO Review on MH & Pipe Works	28	14MAR2012	10APR2012	DPD916314
PD916314 PD916316	Mis: DDA 28B1 MH & Pipe Works RtoC x2	28	11APR2012	08MAY2012	DPD916316
PD916316 PD916410	Mis: DDA 28B3 Watermain Submission	35	12DEC2011 A	09MAR2012	DPD916410
PD916410 PD916412	Mis: DDA 28B3 Watermain Submission Mis: DDA 28B3 Checker Cert on Watermain	28	10MAR2012	06APR2012	DPD916412
	Mis: DDA 28B3 Checker Cert on Watermain Mis: DDA 28B3 SO Review on Watermain	28			DPD916412
PD916414		28	07APR2012	04MAY2012	DPD910414
PD916416	Mis: DDA 28B3 Watermain RtoC x2		05MAY2012	01JUN2012	DPD916420
PD916420	Mis: DDA 28C1 Boundary Wall Submission	35	05DEC2011 A	09MAR2012	DPD916420
PD916421	Mis: DDA 28C1 Checker Cert on Boundary Wall	28	10MAR2012	06APR2012	
PD916422	Mis: DDA 28C1 SO Review on Boundary Wall	28	07APR2012	04MAY2012	DPD916422
PD916423	Mis: DDA 28C1 Boundary Wall RtoC x2	28	05MAY2012	01JUN2012	DPD9
PD916425	Mis: DDA 28C3 Pipe Bridge Submission	35	01DEC2011 A	09MAR2012	DPD916425
PD916426	Mis: DDA 28C3 Checker Cert on Pipe Bridge	28	10MAR2012	06APR2012	DPD916426
PD916427	Mis: DDA 28C3 SO Review on Pipe Bridge	28	07APR2012	04MAY2012	DPD916427
PD916428	Mis: DDA 28C3 Pipe Bridge RtoC x2	28	05MAY2012	01JUN2012	DPD9
PD916510	Mis: DDA 28B Checker Cert Mis Civil Works	28	22SEP2011 A	08MAR2012	DPD916510
PD916520	Mis: DDA 28B SO Review on Mis Civil Works	28	11MAR2012	07APR2012	DPD916520



Contract No. DC/2008/03 ATAL - Degremont - China State Joint Venture Design, Build and Operate Pillar Point Sewage Treatment Works 2012 Description Original Early Activity Early FEB MAR APR MAY JUN 13 20 27 105 12 19 26 02 09 16 23 30 07 14 21 28 04 11 18 2 ID Duration Start Finish 18APR2012 DPD923750 DPD923750 28 15MAY2012 Mis: DDA 28I Road & Ext. Lighting - SO Review 12JUN2012 DPD923 16MAY2012 DPD923751 Mis: DDA 28I Road & Ext. Lighting - Rtoc x2 28 DPD926810 DPD926810 Mis: Solid Handling Bldg Eq. Submission 18JAN2011 A 11MAR2012 60 DPD926830 08MAR2012 DPD926830 Mis: Guard House Equipment Submission 60 18JAN2011 A DPD926840 DPD92684 Mis: E&M Equipment Checking and Approval 90 12MAR2012 09JUN2012 DPD927010 DPD927010 WB at Egress: DDA 27G&H - Structure Submission 30 01DEC2011 A 09MAR2012 DPD927020 DPD927020 10MAR2012 12APR2012 WB at Egress: DDA 27G&H - DC Check on Structure 28 DPD927030 WB at Egress: DDA 27G&H -SO Comment on Structure DPD927030 17APR2012 19MAY2012 28 DPD927040 WB at Egress: DDA 27G&H -Structure RtoC x2 21MAY2012 23JUN2012 28 DPD928130 DPD928130 CLP Sub: AIP26B - Structure Design Submission 28NOV2011 A 13MAR2012 35 DPD928140 DPD928140 CLP Sub: AIP26B - Checker Cert on Structure 28 14MAR2012 10APR2012 DPD928150 CLP Sub: AIP26B - SO Approval on Structure 28 11APR2012 08MAY2012 DPD928150 CLP Sub: DDA29A - E&M GA & CR Drg Subm 13MAR2012 DPD928160 DPD928160 30 30NOV2011 A 10APR2012 DPD928170 DPD928170 CLP Sub: DDA29A - E&M GA & CR Drg DC Check 28 14MAR2012 DPD928180 CLP Sub: DDA29A - E&M GA & CR Drg SO Review DPD928180 28 11APR2012 08MAY2012 CLP Sub: DDA29A - E&M GA & CR Drg RtoC x2 05JUN2012 DPD928190 DPD928190 28 09MAY2012 DPD928200 CLP Sub: DDA29E - Foundation Submission 28 15DEC2011 A 22MAR2012 DPD928200 CLP Sub: DDA29E - DC Check on Foundation DPD928210 DPD928210 28 23MAR2012 19APR2012 DPD928220 DPD928220 CLP Sub: DDA29E - SO Comment on Foundation 17MAY2012 28 20APR2012 DPD92 DPD928230 CLP Sub: DDA29E - Foundation RtoC x2 14JUN2012 28 18MAY2012 DPD928300 DPD928300 CLP Sub: DDA29F - Structure Submission 22MAR2012 28 15DEC2011 A DPD928310 DPD928310 CLP Sub: DDA29F - DC Check on Structure 28 23MAR2012 19APR2012 DPD928320 DPD928320 CLP Sub: DDA29F - SO Comment on Structure 28 20APR2012 17MAY2012 DPD92 DPD928330 CLP Sub: DDA29F - Structure RtoC x2 28 18MAY2012 14JUN2012 DPD928400 DPD928400 CLP Sub: DDA29G - Architecture Submission 28 15DEC2011 A 22MAR2012 DPD928410 DPD928410 CLP Sub: DDA29G - DC Check on Architecture 28 23MAR2012 19APR2012 DPD928420 CLP Sub: DDA29G - SO Comment on Architecture DPD928420 20APR2012 17MAY2012 28 DPD92 DPD928430 CLP Sub: DDA29G - Architecture RtoC x2 18MAY2012 14JUN2012 28 Statutory Submission Submission and Approval SS0100050 29NOV2010 A 23MAR2012 SS0100050 DSD & ASD - GBP Submission and Approval 60 SS0100400 SS0100400 06JUN2011 A 27APR2012 EPD - Sewage Discharge License Approval 90 SS0100410 EPD - Approval for Sewage Discharge SS0100410 0 27APR2012 SS0110700 SS0110700 WSD & ASD- Approve Water Supply /Plumbing issue 29NOV2010 A 02APR2012 80 SS0110810 EPD - Register of Changes under Environ. Permit 13SEP2010 A SS0110810 27MAR2012 100 SS0121000 VCAB Submission and Approval 13SEP2010 A 30APR2012 SS0121000 300 SS0122100 SS0122100 ArchSD Submission and Approval (Stage 1) 150 13SEP2010 A 03MAR2012 05MAR2012 SS0122200 ArchSD Submission and Approval (Stage 2) 120 31JUL2012 **Civil and Structural Works** Chemically Enhanced Primary Treatement System **Building and Structures** CCC204615A Bay 1 Zone 1: Wall 14, 23 & 21B 13JAN2012 A 07MAR2012 CCC204615A 18 CCC204630A Bay 1 Zone 1: RW14, RW23 & RW21B - Formwork 24FEB2012 A 05MAR2012 CCC204630A 12 CCC204640A CCC204640A Bay 1 Zone 1: RW14, RW23 & RW21B - Cleaning 06MAR2012 06MAR2012 1 CCC204650A CCC204650A Bay 1 Zone 1: RW14, RW23 & RW21B - Concreting 07MAR2012 07MAR2012 1 CCC204660A CCC204660A Bay 1 Zone 1: RW14, RW23 & RW21B - Remove Fwk 3 11MAR2012 13MAR2012 CCC204665A CCC204665A Bay 1 Zone 1: Water Test 06APR2012 23APR2012 18 CCC204730A CCC204730A Bay 1 Zone 1: RW11, RW34 & +2.3 Slab- Platform 2 21MAR2012 22MAR2012 CCC204732A CCC204732A Bay 1 Zone 1: East Wall 13 23MAR2012 04APR2012 CCC204735A CCC204735A | Bay 1 Zone 1: RW11, RW34 & +2.3 Slab- Slab Fwk 4 23MAR2012 26MAR2012 CCC204740A CCC204740A Bay 1 Zone 1: RW11, RW34 & +2.3 Slab- Rebar 3 27MAR2012 29MAR2012 CCC204750A CCC204750A Bay 1 Zone 1: RW11, RW34 & +2.3 Slab- Formwork 4 30MAR2012 02APR2012 03APR2012 CCC204760A CCC204760A Bay 1 Zone 1: RW11, RW34 & +2.3 Slab- Cleaning 03APR2012 1 04APR2012 04APR2012 CCC204770A CCC204770A Bay 1 Zone 1: RW11, RW34 & +2.3 Slab- Concreting 1 19APR2012 CCC204780A 21APR2012 CCC204780A Bay 1 Zone 1: RW11, RW34 & +2.3 Slab- Remove Fwk 3 CCC204790A 01MAR2012 03MAR2012 CCC204790A Bay 1 Zone 1: RW15, 22 & 24 - Platform 3 CCC204800A 09MAR2012 CCC204800A Bay 1 Zone 1: RW15, 22 & 24 - Internal Formwork 6 04MAR2012 CCC204810A CCC204810A Bay 1 Zone 1: RW15, 22 & 24 - Rebar 4 10MAR2012 13MAR2012 CCC204820A 14MAR2012 19MAR2012 CCC204820A Bay 1 Zone 1: RW15, 22 & 24 - Formwork 6 CCC204830A CCC204830A Bay 1 Zone 1: RW15, 22 & 24 - Cleaning 20MAR2012 20MAR2012 1 CCC204840A Bay 1 Zone 1: RW15, 22 & 24 - Concreting CCC204840A 24MAR2012 24MAR2012 1 CCC204850A Bay 1 Zone 1: RW15, 22 & 24 - Remove Formwork CCC204850A 3 06APR2012 08APR2012 CCC204860A CCC204860A Bay 1 Zone 1: Wall above 2.3 & 4.16 - Platform 3 04APR2012 06APR2012 07APR2012 CCC204862A CCC204862A Bay 1 Zone 1: Inlet Chanel 16 22APR2012 CCC204865A Bay 1 Zone 1: Inlet Channel - Rebar 6 07APR2012 12APR2012 CCC204865A CCC204870A CCC204870A Bay 1 Zone 1: Inlet Channel - Formwork 9 13APR2012 21APR2012 CCC204880A Bay 1 Zone 1: Inlet Channel - Cleaning 22APR2012 22APR2012 CCC204880A 1 CCC204885A CCC204885A Bay 1 Zone 1: Inlet Channel - Concrete 23APR2012 23APR2012



Activity ID	Description	Original Duration		Early Finish	2012 FEB MAR APR MAY JUN 13 20 27 05 12 19 26 02 09 16 23 30 07 14 21 28 04 11 1
	Bay 1 Zone 2: RW11, 34 &+2.3 Slab - Fwk	4	30MAR2012	02APR2012	CCC212470A
	Bay 1 Zone 2: RW11, 34 &+2.3 Slab - Cleaning	1	03APR2012	03APR2012	CCC212480A
	Bay 1 Zone 2: RW11, 34 &+2.3 Slab - Concrete	1	04APR2012	04APR2012	CCC212490A
	Bay 1 Zone 2: RW11, 34 &+2.3 Slab - Remove Fwk	4	19APR2012	22APR2012	CCC212500A
	Bay 1 Zone 2: RW15 - Platform Bay 1 Zone 2: RW15 - Internal Formwork	3	21MAR2012 24MAR2012	23MAR2012 27MAR2012	CCC212510A
	Bay 1 Zone 2: RW15 - Rebar	3	28MAR2012	30MAR2012	CCC212530A
	Bay 1 Zone 2: RW15 - External Formwork	4	31MAR2012	03APR2012	CCC212540A
	Bay 1 Zone 2: RW15 - Cleaning	1	04APR2012	04APR2012	CCC212550A
CCC212560A	Bay 1 Zone 2: RW15 - Concreting	1	05APR2012	05APR2012	CCC212560A
	Bay 1 Zone 2: RW15 - Remove Fwk	4	09APR2012	12APR2012	CCC212570A
	Bay 1 Zone 2: Wall above +2.3 & +4.16 - Platform	4	10APR2012	13APR2012	CCC212580A
	Bay 1 Zone 2: Inlet Channel	17	14APR2012	30APR2012	CCC212590A
	Bay 1 Zone 2: Inlet Channel - Rebar	6	14APR2012	19APR2012	CCC212600A
	Bay 1 Zone 2: Inlet Channel - Formwork Bay 1 Zone 2: Inlet Channel - Cleaning	9	20APR2012 29APR2012	28APR2012 29APR2012	CCC212630A
	Bay 1 Zone 2: Inlet Channel - Concrete	1	30APR2012	30APR2012	CCC212640A
	Bay 1 Zone 2: Inlet Channel - Remove Fwk	3	05MAY2012	07MAY2012	CCC212650A
	Bay 1 Zone 2: Inlet Channel Water Test	20	08MAY2012	27MAY2012	CCC212660A
CCC212790A	Bay 1 Zone 2: Support	4	01MAY2012	04MAY2012	CCC212790A
CCC212800A	Bay 1 Zone 2: Soffit Formwork	12	05MAY2012	16MAY2012	CCC212800A
CCC212810A	Bay 1 Zone 2: Rebar	9	17MAY2012	25MAY2012	CCC212810A
	Bay 1 Zone 2: Cleaning	1	26MAY2012	26MAY2012	CCC212820A
	Bay 1 Zone 2: Concreting to Floor Slab	1	27MAY2012	27MAY2012	CCC212830A
	Bay 1 Zone 1&2: Backfill below Inlet Channel Bay 1 Zone 1&2: Backfill to Inlet Channel	30	13APR2012 28MAY2012	12MAY2012 14JUN2012	
	Bay 2 Zone 1: Outlet Channel Water Test	24	05APR2012	28APR2012	CCC213320A
	Bay 2 Zone 1: Water Test	32	15FEB2012 A	15MAR2012	CCC213510A
	Bay 2 Zone 1: Erect Support	4	16MAR2012	19MAR2012	CCC213610A
	Bay 2 Zone 1: Formwork to Beam and Slab	7	20MAR2012	26MAR2012	CCC213620A
	Bay 2 Zone 1: Rebar	5	27MAR2012	31MAR2012	CCC213630A
	Bay 2 Zone 1: Cleaning	1	31MAR2012	31MAR2012	CCC213640A
	Bay 2 Zone 1: Concreting to Beam Slab at +3.4	1	01APR2012	01APR2012	CCC213650A
	Bay 2 Zone 1: Erect Support to Floor Slab	2	02APR2012	03APR2012	
	Bay 2 Zone 1: Internal Formwork	5	04APR2012	08APR2012	CCC213670A
	Bay 2 Zone 1: Rebar to Floor Slab and Wall Bay 2 Zone 1: External Formwork	4	09APR2012 13APR2012	12APR2012 17APR2012	CCC213680A
	Bay 2 Zone 1: External Formwork Bay 2 Zone 1: Cleaning	1	13APR2012 18APR2012	17APR2012 18APR2012	CCC213890A
	Bay 2 Zone 1: Concreting to Floor Slab at +5.6	1	19APR2012	19APR2012	CCC213710A
	Bay 2 Zone 1: Remove Temp Support / Formwork	8	04MAY2012	11MAY2012	CCC213720A
	Bay 2 Zone 1: Mass Concrete Infill	28	12MAY2012	08JUN2012	CCC2
CCC214360A	Bay 2 Zone 2: Outlet Channel Water Test	24	05APR2012	28APR2012	CCC214360A
CCC214400A	Bay 2 Zone 2: Water Test	20	16MAR2012	04APR2012	CCC214400A
	Bay 2 Zone 2: Erect Support	4	05APR2012 *	08APR2012	CCC214540A
	Bay 2 Zone 2: Formwork to Beam and Slab	7	09APR2012	15APR2012	
	Bay 2 Zone 2: Rebar	5	16APR2012	20APR2012	CCC214560A CCC214570A
	Bay 2 Zone 2: Cleaning Bay 2 Zone 2: Concreting to Beam Slab at +3.4	1	20APR2012 21APR2012	20APR2012 21APR2012	CCC214580A
	Bay 2 Zone 2: Erect Support to Floor Slab	2	22APR2012	23APR2012	CCC214590A
	Bay 2 Zone 2: Internal Formwork	5	24APR2012	28APR2012	CCC214600A
	Bay 2 Zone 2: Rebar to Floor Slab and Wall	4	29APR2012	02MAY2012	CCC214610A
CCC214620A	Bay 2 Zone 2: External Formwork	5	03MAY2012	07MAY2012	CCC214620A
	Bay 2 Zone 2: Cleaning	1	08MAY2012	08MAY2012	CCC214630A
	Bay 2 Zone 2: Concreting to Floor Slab at +5.6	1	09MAY2012	09MAY2012	CCC214640A
	Bay 2 Zone 2: Remove Temp Support / Formwork	8	24MAY2012	31MAY2012	CCC21465
	Bay 2 Zone 2: Mass Concrete Infill Bay 2 Zone 1 & 2: Backfill at Outlet Channel	28	01JUN2012	28JUN2012	CCC214690A
	Bay 2 Zone 1 & 2: Backfill at Outlet Channel Bay 3 Zone 3: RW12, RW13 & RW8A - Platform	20	29APR2012 28FEB2012	18MAY2012 02MAR2012	CCC214790A
	Bay 3 Zone 3: RW12, RW13 & RW8A - Flattonn Bay 3 Zone 3: RW12, RW13 & RW8A - Steel Fixing	5	03MAR2012	07MAR2012	CCC214800A
	Bay 3 Zone3: RW12, RW13 & RW8A - Formwork	10	08MAR2012	17MAR2012	CCC214810A
	Bay 3: RW12, RW13 & RW8A - Cleaning	1	18MAR2012	18MAR2012	CCC214820A
	Bay 3 Zone 3: RW12, RW13 & RW8A - Concrete	1	19MAR2012	19MAR2012	CCC214830A
	Bay 3 Zone 3: RW12, RW13 & RW8A - Remove Fwk	3	21MAR2012	23MAR2012	CCC214840A
	Bay 3 Zone 3: RW8B, RW9 & RW14 - Platform	3	06APR2012	08APR2012	
	Bay 3 Zone 3: RW8B, RW9 & RW14 - Rebar	4	09APR2012	12APR2012	CCC214870A
	Bay 3 Zone 3: RW8B, RW9 & RW14 - Formwork	8	13APR2012	20APR2012	CCC214880A
	Bay 3 Zone 3: RW8B, RW9 & RW14 - Cleaning Bay 3 Zone 3: RW8B, RW9 & RW14 - Concreting	1	21APR2012 22APR2012	21APR2012 22APR2012	CCC214890A
	Bay 3 Zone 3: RW8B, RW9 & RW14 - Concreting Bay 3 Zone 3: RW8B, RW9 & RW14 - Remove Formwork	3	23APR2012 23APR2012	25APR2012	CCC214910A
	Bay 3 Zone 3: Water Test	18	26APR2012	13MAY2012	CCC214920A
	Bay 3 Zone 3: -0.76 Slab - Platform	2	22MAR2012	23MAR2012	CCC214930A
CCC214940A	Bay 3 Zone 3: -0.76 Slab - Formwork	6	24MAR2012	29MAR2012	CCC214940A
CCC214950A	Bay 3 Zone 3: -0.76 Slab - Rebar	6	30MAR2012	04APR2012	CCC214950A
	Bay 3 Zone 3: -0.76 Slab - Cleaning	1	04APR2012	04APR2012	CCC214960A
	Bay 3 Zone 3: -0.76 Slab - Concreting	1	05APR2012	05APR2012	CCC214970A
	Bay 3 Zone 3: -0.76 Slab - Remove Formwork	3	20APR2012	22APR2012	CCC214980A
	Bay 3 Zone 3: RW10,11, 34 &+2.3 Slab - Platform Bay 3 Zone 3: RW10, 11, 34 &+2.3 Slab - Slab Fwk	2	26APR2012 28APR2012	27APR2012 01MAY2012	CCC214990A
	Bay 3 Zone 3: RW10, 11, 34 &+2.3 Slab - Slab F WK Bay 3 Zone 3: RW10, 11, 34 &+2.3 Slab - Rebar	3	02MAY2012	04MAY2012	CCC215000A
	Bay 3 Zone 3: RW10, 11, 34 & +2.3 Slab - Fwk	4	05MAY2012	08MAY2012	CCC215020A
	Bay 3 Zone 3: RW10, 11, 34 &+2.3 Slab - Cleaning	1	09MAY2012	09MAY2012	CCC215030A
	Bay 3 Zone 3: RW10, 11, 34 &+2.3 Slab - Concrete	1	10MAY2012	10MAY2012	CCC215040A
	Bay 3 Zone 3: RW10, 11,34 &+2.3 Slab -Remove Fwk	4	25MAY2012	28MAY2012	CCC215050A
CCC215060A	Bay 3 Zone 3: RW16A & RW16 - Platform	4	28FEB2012	02MAR2012	CCC215060A
	Bay 3 Zone 3: RW16A & RW16 - Internal Fwk	6	03MAR2012	08MAR2012	CCC215070A
CCC215080A	Bay 3 Zone 3: RW16A & RW16 - Rebar	5	09MAR2012	13MAR2012	CCC215080A
e 14JUL2010					Early bar
te 27JAN2014					Progress bar
e 28FEB2012 e 02MAR2012	DDQTIAL THRAA M	onth D	olling Dra	arammo	- March to May 2012

ID	Description	Original Duration		Early Finish	FEB 13 20	MAR 27 05 12 19 26	2012 APR 02 09 16 23	MAY 30 07 14 21 2	JUN 8 04 11 18
	Bay 3 Zone 3: RW16A & RW16 - External Fwk	6	14MAR2012	19MAR2012		CCC21	5090A		
	Bay 3 Zone 3: RW16A & RW16 - Cleaning	1	20MAR2012	20MAR2012	_				
	Bay 3 Zone 3: RW16A & RW16 - Concreting	1	21MAR2012 25MAR2012	21MAR2012 28MAR2012	_		15110A CC215120A		
	Bay 3 Zone 3: RW16A & +4.16 Slab - Remove Fwk Bay 3 Zone 3: Inlet Channel - Platform	4	11MAY2012	14MAY2012			00213120A	CCC2151	30A
	Bay 3 Zone 3: Inlet Channel - Rebar	6	15MAY2012	20MAY2012	-				
	Bay 3 Zone 3: Inlet Channel - Fwk	9	21MAY2012	29MAY2012					CCC215150A
CC215160A	Bay 3 Zone 3: Inlet Channel - Cleaning	1	30MAY2012	30MAY2012		1		[CCC215160
	Bay 3 Zone 3: Inlet Channel - Concreting	1	31MAY2012	31MAY2012		1 1 1			CCC215165
	Bay 3 Zone 3: Inlet Channel - Remove Fwk	3	04JUN2012	06JUN2012	_				CCC215
	Bay 3 Zone 3: Support	4	06JUN2012	09JUN2012	_	CCC215370A			CCC2
	Bay 3 Zone 4: RW12, RW13 & RW8A - Platform Bay 3 Zone 4: RW12, RW13 & RW8A - Steel Fixing	6	05MAR2012 09MAR2012	08MAR2012	-	CCC215370A	2 ΩΔ		
	Bay 3 Zone 4: RW12, RW13 & RW8A - Steer Fixing	10	15MAR2012	24MAR2012	-	1	C215390A		
	Bay 3 Zone 4: RW12, RW13 & RW8A - Cleaning	1	25MAR2012	25MAR2012			C215400A		- L
	Bay 3 Zone 4: RW12, RW13 & RW8A - Concrete	1	26MAR2012	26MAR2012		Ico	C215410A		
CCC215420A	Bay 3 Zone 4: RW12, RW13 & RW8A - Remove Fwk	3	27MAR2012	29MAR2012			CCC215420A		
CCC215440A	Bay 3 Zone 4: RW8B, RW9 & RW14 - Platform	3	29APR2012	01MAY2012				CCC215440A	
	Bay 3 Zone 4: RW8B, RW9 & RW14 - Rebar	6	02MAY2012	07MAY2012		, , ,		CCC215450A	
	Bay 3 Zone 4: RW8B, RW9 & RW14 - Formwork	8	08MAY2012	15MAY2012	_			CCC215	1
	Bay 3 Zone 4: RW8B, RW9 & RW14 - Cleaning Bay 3 Zone 4: RW8B, RW9 & RW14 - Concreting	1	16MAY2012 17MAY2012	16MAY2012 17MAY2012	_	1			1
	Bay 3 Zone 4: RW8B, RW9 & RW14 - Concreting Bay 3 Zone 4: RW8B, RW9 & RW14 - Remove Fwk	1 3	17MA 12012 18MA 12012	20MAY2012	-			1	215490A
	Bay 3 Zone 4: Water Test	18	21MAY2012	07JUN2012	-		1		CCC21
	Bay 3 Zone 4: -0.76 Slab - Platform	2	14APR2012	15APR2012		**	CCC21	5510A	
CCC215520A	Bay 3 Zone 4: -0.76 Slab - Formwork	6	16APR2012	21APR2012				C215520A	
	Bay 3 Zone 4: -0.76 Slab - Rebar	6	22APR2012	27APR2012	_			CCC215530A	1
	Bay 3 Zone 4: -0.76 Slab - Cleaning	1	27APR2012	27APR2012	_			CCC215540A	
	Bay 3 Zone 4: -0.76 Slab - Concreting	1	28APR2012	28APR2012		, , ,	I	CCC215550A	5604
	Bay 3 Zone 4: -0.76 Slab - Remove Formwork Bay 3 Zone 4: RW10, 11, 34 &+2.3 Slab - Platform	3	13MAY2012 18MAY2012	15MAY2012 20MAY2012	-				560A 215570A
	Bay 3 Zone 4: RW10, 11, 34 &+2.3 Slab - Platform Bay 3 Zone 4: RW10, 11, 34 &+2.3 Slab - Slab Fwk	4	21MAY2012	24MAY2012	-				C215580A
	Bay 3 Zone 4: RW10, 11, 34 & +2.3 Slab - Slab - Rebar	3	25MAY2012	27MAY2012	-				CC215590A
	Bay 3 Zone 4: RW10, 11, 34 & +2.3 Slab - Fwk	6	28MAY2012	02JUN2012					CCC2156
	Bay 3 Zone 4: RW10, 11, 34 &+2.3 Slab - Cleaning	1	03JUN2012	03JUN2012		· · · · · · · · · · · · · · · · · · ·			CCC2156
CCC215620A	Bay 3 Zone 4: RW10, 11, 34 &+2.3 Slab - Concrete	1	04JUN2012	04JUN2012	_		- -		CCC215
	Bay 3 Zone 4: RW16 & RW16A - Platform	4	22MAR2012	25MAR2012	_		C215640A		
	Bay 3 Zone 4: RW16 & RW16A - Internal Fwk	6	26MAR2012	31MAR2012	_		CCC215650A		
	Bay 3 Zone 4: RW16 & RW16A - Rebar	5	01APR2012	05APR2012		· · · · · · · · · · · · · · · · · · ·	CCC215660A		
	Bay 3 Zone 4: RW16 & RW16A - External Fwk Bay 3 Zone 4: RW16 & RW16A - Cleaning	6	06APR2012 12APR2012	11APR2012	_		CCC2158	1	
	Bay 3 Zone 4: RW16 & RW16A - Cleaning Bay 3 Zone 4: RW16 & RW16A - Concreting	1	12APR2012 13APR2012	12APR2012 13APR2012	-		CCC2156		1
	Bay 3 Zone 4: RW16 & RW16A - Concreting Bay 3 Zone 4: RW16 & RW16A - Remove Fkk	4	17APR2012	20APR2012	-			215700A	
	Bay 3 Zone 4: Inlet Channel - Platform	3	04JUN2012	06JUN2012	-				CCC21
	Bay 3 Zone 4: Inlet Channel - Rebar	6	07JUN2012	12JUN2012					
	Bay 4 Zone 3: Outlet Channel Wall/Roof - Rem Fwk	5	11MAR2012	15MAR2012		CCC2162	60A		
	Bay 4 Zone 3: Outlet Channel Water Test	24	29APR2012	22MAY2012	_				216265A
	Bay 4 Zone 3: RW3a, 6,7 & 4a - Remove Fwk	3	01MAR2012	03MAR2012	_	CCC216300A			
	Bay 4 Zone 3: RW5 - Platform	2	04MAR2012	05MAR2012		CCC216310A			
	Bay 4 Zone 3: RW5 - Steel Fixing Bay 4 Zone 3: RW5 - Formwork	6	06MAR2012 10MAR2012	09MAR2012 15MAR2012	-	CCC216320A	1		
	Bay 4 Zone 3: RW5 - Cleaning	1	16MAR2012	16MAR2012	-	CCC2163	I		
	Bay 4 Zone 3: RW5 - Concrete	1	17MAR2012	17MAR2012	-	I CCC216	I		
	Bay 4 Zone 3: RW5 - Remove Fwk	2	21MAR2012	22MAR2012		1	216360A		
	Bay 4 Zone 3: RW3B & 4B - Platlform	2	18MAR2012	19MAR2012		CCC21			
	Bay 4 Zone 3: RW3B & 4B - Formwork	6	20MAR2012	25MAR2012	_	1	C216380A		
	Bay 4 Zone 3: RW3B & 4B - Cleaning	1	26MAR2012	26MAR2012	_	1	C216390A		
	Bay 4 Zone 3: RW3B & 4B - Concrete	1	27MAR2012	27MAR2012	_	1	CC216400A		
	Bay 4 Zone 3: RW3B & 4B - Remove Fwk	4	31MAR2012 04APR2012	03APR2012		+	CCC216410A	CCC216420A	
	Bay 4 Zone 3: Water Test Bay 4 Zone 3: Erect Support	24	04APR2012 28APR2012	27APR2012 01MAY2012	-			CCC216420A	
	Bay 4 Zone 3: Formwork to Beam and Slab	7	02MAY2012	08MAY2012	-		•	CCC216450A	N I I I I I I I I I I I I I I I I I I I
	Bay 4 Zone 3: Rebar	5	09MAY2012	13MAY2012	-			CCC2164	
	Bay 4 Zone 3: Cleaning	1	13MAY2012	13MAY2012				CCC2164	70A
CC216480A	Bay 4 Zone 3: Concreting to Beam Slab at +3.4	1	14MAY2012	14MAY2012				CCC2164	1
	Bay 4 Zone 3: Erect Support to Floor Slab	2	15MAY2012	16MAY2012	_		1	CCC216	
	Bay 4 Zone 3: Internal Formwork	5	17MAY2012	21MAY2012	_				216500A
	Bay 4 Zone 3: Rebar to Floor Slab and Wall	4	22MAY2012	25MAY2012	_				CC216510A CCC216520
	Bay 4 Zone 3: External Formwork Bay 4 Zone 3: Cleaning	5	26MAY2012 31MAY2012	30MAY2012 31MAY2012					CCC216520
	Bay 4 Zone 3: Cleaning Bay 4 Zone 3: Concreting to Floor Slab at +5.6	1	01JUN2012	01JUN2012	-				CCC21655
	Bay 4: Outlet Channel Wall & Roof - Remove Fwk	5	11MAR2012	15MAR2012	-	CCC2168	50A		
	Bay 4 Zone 4: Outlet Channel Water Test	24	29APR2012	22MAY2012					216855A
	Bay 4 Zone 4: RW3*A, 6 & 7 - Remove Fwk	3	02MAR2012	04MAR2012		CCC216990A	 		
	Bay 4 Zone 4: RW3*B - Platform	2	23MAR2012	24MAR2012	_		C217000A		
	Bay 4 Zone 4: RW3*B - Formwork	4	25MAR2012	28MAR2012	_		CC217010A		
	Bay 4 Zone 4: RW3*B - Cleaning	1	29MAR2012	29MAR2012	_	1	CCC217020A		
	Bay 4 Zone 4: RW3*B - Concrete	1	30MAR2012	30MAR2012	-	1	CCC217030A		
	Bay 4 Zone 4: RW3*B - Remove Fwk Bay 4 Zone 4: RW5 - Platform	2	02APR2012 05MAR2012	03APR2012 06MAR2012		CCC217050A	- 00021704UA		
	Bay 4 Zone 4: RW5 - Steel Fixing	4	07MAR2012	10MAR2012	-	CCC217060/	Å		
	Bay 4 Zone 4: RW5 - Formwork	6	11MAR2012	16MAR2012	-	CCC2170	1		
	Bay 4 Zone 4: RW5 - Cleaning	1	17MAR2012	17MAR2012	1	CCC217	1		
	Bay 4 Zone 4: RW5 - Concrete	1	18MAR2012	18MAR2012		CCC21	7090A	 	í
CCC217100A	Bay 4 Zone 4: RW5 - Remove Fwk	2	21MAR2012	22MAR2012			217100A		
000170004	Bay 4 Zone 4: Water Test	24	27MAY2012	19JUN2012					1
JCC217200A									
14JUL2010 e 27JAN2014									Earlybar Progress bar

Activity ID	Description	Original Duration		Early Finish	FEB 13 20 2	MAR 27 05 12 19 26	2012 APR 02 09 16 23	MAY 30 07 14 21 28	JUN 3 04 11 18
	Bay 4 Zone 4: Erect Support	4	31MAR2012	03APR2012			CCC217320A		
	Bay 4 Zone 4: Formwork to Beam and Slab Bay 4 Zone 4: Rebar	7	04APR2012 11APR2012	10APR2012 15APR2012	-		CCC21733		
	Bay 4 Zone 4: Rebar Bay 4 Zone 4: Cleaning	5 1	15APR2012	15APR2012 15APR2012					
	Bay 4 Zone 4: Concreting to Beam Slab at +3.4	1	16APR2012	16APR2012			CCC21		
	Bay 4 Zone 4: Erect Support to Floor Slab	2	17APR2012	18APR2012				17370A	
	Bay 4 Zone 4: Internal Formwork	5	19APR2012	23APR2012				C217380A	
C217390A	Bay 4 Zone 4: Rebar to Floor Slab and Wall	4	24APR2012	27APR2012		· ·		CCC217390A	
	Bay 4 Zone 4: External Formwork	5	28APR2012	02MAY2012	_		l	CCC217400A	
	Bay 4 Zone 4: Cleaning	1	03MAY2012	03MAY2012	_			CCC217410A	
	Bay 4 Zone 4: Concreting to Floor Slab at +5.6	1	04MAY2012	04MAY2012	_			CCC217420A	000474004
	Bay 4 Zone 4: Remove Temp Support / Formwork	8	19MAY2012	26MAY2012	_	CCC217930A			CC217430A
	Bay 5: Outlet Channel Wall & Roof - Steel Bay 5: Outlet Channel Wall & Roof - Ext Fwk	6	28FEB2012 07MAR2012	06MAR2012 12MAR2012		CCC217930A	Δ		
	Bay 5: Outlet Channel Wall & Roof - Cleaning	1	13MAR2012	13MAR2012	_	CCC21795			
	Bay 5: Outlet Channel Wall & Roof - Concreting	1	14MAR2012	14MAR2012	_	CCC21796			
	Bay 5: Outlet Channel Wall & Roof - Remove Fwk	3	29MAR2012	31MAR2012			CCC217970A		
	Bay 5: Outlet Channel Water Test	24	29APR2012	22MAY2012					217980A
C218110A	Bay 5: Erect Support	4	09APR2012	12APR2012			CCC2181	10A	1
C218120A	Bay 5: Formwork to Beam and Slab	7	13APR2012	19APR2012				1	
C218130A	Bay 5: Rebar	5	20APR2012	24APR2012				CC218130A	
C218140A	Bay 5: Cleaning	1	24APR2012	24APR2012				CC218140A	
	Bay 5: Concreting to Beam Slab at +3.4	1	25APR2012	25APR2012		+		CC218150A	
	Bay 5: Erect Support to Floor Slab	2	29APR2012	30APR2012	_			CCC218160A	
	Bay 5: Internal Formwork	5	01MAY2012	05MAY2012	_			CCC218170A	1
	Bay 5: Rebar to Floor Slab and Wall	4	06MAY2012	09MAY2012	_			CCC218180/	1
	Bay 5: External Formwork Bay 5: Cleaning	5	10MAY2012 15MAY2012	14MAY2012 15MAY2012	\dashv			CCC2181	
	Bay 5: Cleaning Bay 5: Concreting to Floor Slab at +5.6	1	15MAY2012 16MAY2012	15MAY2012 16MAY2012				CCC218	
	Bay 5: Concreting to Floor Slab at +5.6 Bay 5: Remove Temp Support / Formwork	8	31MAY2012	07JUN2012	\neg				
	Bay 5: Kernove Temp Support / Formwork Bay 5: Water Test West	24	16MAR2012	07JUN2012 08APR2012	-		CCC218230	A	000210
	Bay 5: RW12, RW13 & RW31 - Platform	5	25FEB2012 A	28FEB2012		CCC218320A			
	Bay 5: Wall 12, 13 & 31	17	29FEB2012	16MAR2012	_	CCC2183	330A		
	Bay 5: RW12, RW13 & RW31 - Steel Fixing	5	29FEB2012	04MAR2012		CCC218340A			
	Bay 5: RW12, RW13 & RW31 - Formwork	10	05MAR2012	14MAR2012		CCC21835	50A		
	Bay 5: RW12, RW13 & RW31 - Cleaning	1	15MAR2012	15MAR2012		CCC2183	60A		
	Bay 5: RW12, RW13 & RW31 - Concrete	1	16MAR2012	16MAR2012		CCC2183	370A		
	Bay 5: RW12, RW13 & RW31 - Remove Formwork	3	20MAR2012	22MAR2012			218380A		
C218390A	Bay 5: -0.76 Slab - Spport	2	07APR2012	08APR2012			CCC218390	A	1
C218400A	Bay 5: Floor Slab at -0.76	9	09APR2012	17APR2012			CCC2	18400A	
C218410A	Bay 5: -0.76 Slab - Formwork	5	09APR2012	13APR2012			CCC2184	410A	
C218420A	Bay 5: -0.76 Slab - Rebar	3	14APR2012	16APR2012			CCC21	1	
C218430A	Bay 5: -0.76 Slab - Cleaning	1	16APR2012	16APR2012		· ·	CCC21		
	Bay 5: -0.76 Slab - Concreting	1	17APR2012	17APR2012			CCC2	1	
	Bay 5: -0.76 Slab - Remove Formwork	4	02MAY2012	05MAY2012	_			CCC218450A	
	Bay 5: RW11, RW34 & +2.3 Slab- Platform	3	18APR2012	20APR2012				218460A	
	Bay 5: Wall 11, 34 & Slab at +2.3	15	21APR2012	05MAY2012	_			CCC218470A	
	Bay 5: RW11, RW34 & +2.3 Slab- Slab Formwork	4	21APR2012 25APR2012	24APR2012 28APR2012		· · · · · · · · · · · · · · · · · · ·		CCC218480A	
	Bay 5: RW11, RW34 & +2.3 Slab- Rebar Bay 5: RW11, RW34 & +2.3 Slab- Formwork	6	29APR2012	04MAY2012	_			CCC218500A	
	Bay 5: RW11, RW34 & +2.3 Slab- Cleaning	1	04MAY2012	04MAY2012	_			CCC218510A	
	Bay 5: RW11, RW34 & +2.3 Slab- Concreting	1	05MAY2012	05MAY2012				CCC218520A	
1	Bay 5: RW11, RW34 & +2.3 Slab- Remove Formwork	4	20MAY2012	23MAY2012					C218530A
	Bay 5: RW14, 32, 26, 33, 27 & 28 - Platform	2	17MAR2012	18MAR2012		CCC218	3540A	 	
	Bay 5: Wall 14, 32, 26, 33, 27 & 28	19	19MAR2012	06APR2012			CCC218550A	L I	
C218560A	Bay 5: RW14, 32, 26, 33, 27 & 28 - Rebar	6	19MAR2012	24MAR2012			218560A		
C218570A	Bay 5: RW14, 32, 26, 33, 27 & 28 - Formwork	11	25MAR2012	04APR2012			CCC218570A		
C218580A	Bay 5: RW14, 32, 26, 33, 27 & 28 - Cleaning	1	05APR2012	05APR2012			CCC218580A	, 	
	Bay 5: RW14, 32, 26, 33, 27 & 28 - Concrete	1	06APR2012	06APR2012			CCC218590A		-
	Bay 5: RW14, 32, 26, 33, 27 & 28 - Remove Fwk	3	10APR2012	12APR2012	_		CCC2186		
	Bay 5: Water Test East	18	24MAY2012	10JUN2012	_				CCC2
	Bay 5: Wall above +2.3 & +4.16 Slab - Platform	2	18APR2012	19APR2012	_			218620A	
	Bay 5: East Inlet Channel Wall	16	20APR2012	05MAY2012		· · · · · · · · · · · · · · · · · · ·		CC218630A	
1	Bay 5: Inlet Channel - Rebar	6	20APR2012	25APR2012	\dashv			CC218640A CCC218650A	
	Bay 5: Inlet Channel - Formwork Bay 5: Inlet Channel - Concreting	9	26APR2012 05MAY2012	04MAY2012 05MAY2012	\neg		_	CCC218650A	1 1 1
	Bay 5: Inlet Channel - Concreting Bay 5: Inlet Channel - Remove Fwk	3	20MAY2012	22MAY2012	\neg				218670A
	Bay 5: Support	6	06MAY2012	11MAY2012	\dashv			CCC218710	
	Bay 5: Soffit Formwork	12	12MAY2012	23MAY2012		1			
	Bay 5: Rebar	10	24MAY2012	02JUN2012					CCC21873
	Bay 5: Cleaning	1	03JUN2012	03JUN2012					CCC21874
	Bay 5: Concreting to Floor Slab	1	04JUN2012	04JUN2012					CCC2187
	Chamber: RW18, RW17A & RW17 - Platform	3	28FEB2012 A	01MAR2012		CCC220010A			
	Chamber: RW18, RW17A & RW17 - Rebar	8	02MAR2012	09MAR2012		CCC220020A			1
C220030A	Chamber: RW18, RW17A & RW17 - Formwork	10	10MAR2012	19MAR2012		CCC22			
	Chamber: RW18, RW17A & RW17 - Cleaning	1	20MAR2012	20MAR2012		CCC22			
	Chamber: RW18, RW17A & RW17 - Concreting	1	21MAR2012	21MAR2012	_	1	20050A		
	Chamber: RW18, RW17A & RW17 - Remove Formwork	3	22MAR2012	24MAR2012		• +	220060A		; ;
	Chamber: +1.3 Slab - Platform	2	25MAR2012	26MAR2012	_	1	C220070A		
	Chamber: +1.3 Slab - Slab Formwork	6	27MAR2012	01APR2012	_		CCC220080A		
	Chamber: +1.3 Slab - Rebar	6	02APR2012	07APR2012	_		CCC220090/	1	
	Chamber: +1.3 Slab - Kicker	1	08APR2012	08APR2012	_		CCC220100	1	
	Chamber: +1.3 Slab - Cleaning	1	09APR2012	09APR2012		**	CCC22011		
	Chamber: +1.3 Slab - Concreting	1	10APR2012	10APR2012	_			1	
	Chamber: +4.16 Slab - Remove Formwork	3	11APR2012	13APR2012	_				1
	Chamber: +4.16 Slab - Platform	2	14APR2012	15APR2012			CCC22	J 140A	1
14JUL2010									arlybar
27JAN2014								· · · · · · · · · · · · · · · · · · ·	
27JAN2014 28FEB2012 02MAR2012	PPSTW Three M	lonth D	ollina Pro	nurammo	. Maro	h to May 20	12		Progress bar Critical bar

Activity	Description	Original	Early	Early	2012
ID		Duration		Finish	FEB MAR APR MAY JUN 13 20 27 05 12 19 26 02 09 16 23 30 07 14 21 28 04 11 18
CCC220150A	Chamber: +4.16 Slab - Slab Formwork	4	16APR2012	19APR2012	CCC220150A
CCC220160A	Chamber: +4.16 Slab - Rebar	4	20APR2012	23APR2012	CCC220160A
CCC220170A	Chamber: +4.16 Slab - Formwork	4	24APR2012	27APR2012	CCC220170A
CCC220180A	Chamber: +4.16 Slab - Cleaning	1	27APR2012	27APR2012	CCC220180A
CCC220190A	Chamber: +4.16 Slab - Concreting	1	28APR2012	28APR2012	CCC220190A
CCC220200A	Chamber: +4.16 Slab - Remove Formwork	3	29APR2012	01MAY2012	CCC220200A
CCC220210A	Chamber: Wall and Roof - Platform	2	02MAY2012	03MAY2012	CCC220210A
CCC220220A	Chamber: Wall and Roof - Slab Formwork	4	04MAY2012	07MAY2012	CCC220220A
CCC220230A	Chamber: Wall and Roof - Rebar	4	08MAY2012	11MAY2012	CCC220230A
CCC220240A	Chamber: Wall and Roof - Formwork	4	12MAY2012	15MAY2012	CCC220240A
CCC220250A	Chamber: Wall and Roof - Cleaning	1	15MAY2012	15MAY2012	I CCC220250A
CCC220260A	Chamber: Wall and Roof - Concreting	1	16MAY2012	16MAY2012	CCC220260A
	Chamber: Wall and Roof - Remove Formwork	3	31MAY2012	02JUN2012	CCC220270A
New Preliminary T Building and Stru					
CCC110165	PTWN: Wall Stem Grid 1 to 4 up +2 to +5.45	66	15MAR2012	19MAY2012	CCC110165
CCC110180A	PTWN: Water Test	24	20FEB2012 A	14MAR2012	CCC110180A
	PTWN: Remaining External Wall	20	23MAR2012	11APR2012	CCC110210A
CCC110215A	PTWN: Remove fwk and Clearance	6	12APR2012	17APR2012	CCC110215A
CCC110213A	PTWN: Mass Concrete Infill	7	20MAR2012	26MAR2012	CCC110220A
CCC110220A	PTWN: Temp Support to Slab at +2 Grid 4 to 6	3	12APR2012	14APR2012	CCC110230A
CCC110240A	PTWN: Remain Floor Slab at +2.0 Grid 4 to 6	15	03APR2012 *	17APR2012	CCC110240A
CCC110250A	PTWN: Remove Temp Support below +2.0	6	06MAY2012	11MAY2012	CCC110250A
CCC110255A	PTWN: Water Test to Partition Wall	20	12MAY2012	31MAY2012	CCC110255A
CCC110258A	PTWN: Remain Liquid Membrane below +2	10	01JUN2012	10JUN2012	
CCC110280A	PTWN: Backfilling to +0.9	18	15MAR2012	01APR2012	CCC110280A
CCC111260A	PTWN: Temp Support to Roof at +5.45 Grid 4 to 6	3	18APR2012	20APR2012	CCC111260A
CCC111270A	PTWN: Roof Slab Grid 4 to 6	15	21APR2012	05MAY2012	CCC111270A
CCC111280A	PTWN: Remove Temp Support for Roof, Grid 4 to 6	6	20MAY2012	25MAY2012	CCC111280A
CCC111310A	PTWN: Backfilling to Grd Level	18	18APR2012	05MAY2012	CCC111310A
CCC111320A	PTWN: Painting and Liquid Membrane below +2	12	12MAY2012	23MAY2012	CCC111320A
CCC111325A	PTWN: Screeding, Tiles & Painting at +2	14	26MAY2012	08JUN2012	CCC1113
CCC111340A	PTWN: RW17, 18, 19 and 20	14	15MAR2012	28MAR2012	CCC111340A
CCC111350A	PTWN: RW13 to 16 and RW21 to 24	18	29MAR2012	15APR2012	CCC111350A
CCC111360A	PTWN: Mass Concrete Infill	8	16APR2012	23APR2012	CCC111360A
CCC111370A	PTWN: Floor Slab at +2.0 Grid 1 to 4	12	24APR2012	05MAY2012	CCC111370A
CCC111380A	PTWN: Wall & Roof +2.0 to 5.45 Grid 1 to 4	14	06MAY2012	19MAY2012	CCC111380A
CCC111390A	PTWN: Remove Temp Support	6	02JUN2012	07JUN2012	CCC1113
CCC111410A	PTWN: Screeding and Skirting for Staircases	12	26MAY2012	06JUN2012	CCC11141
CCC111420A	PTWN: Waterproofing Membrane /Screeding at +5.45	14	29MAY2012	11JUN2012	CCC11
CCC112175	PTWN: Remaining Backfill +0.9 to +5.4	30	20MAY2012	18JUN2012	
CCC112218	PTWS: Grit Chamber Base	40	17JAN2012 A	09MAR2012	CCC112218
CCC112230A	PTWS: Grit Chamber Pit 3	20	27JAN2012 A	02MAR2012	CCC112230A
CCC112235A	PTWS: Grit Chamber Pit 4	20	02FEB2012 A	09MAR2012	CCC112235A
CCC112240A	PTWS: Remove Formwork and Clearance	2	10MAR2012	11MAR2012	CCC112240A
CCC112250A	PTWS: Backfill to Raft Foundation	18	12MAR2012	29MAR2012	CCC112250A
CCC112255A	PTWS: Formation and Blinding	3	30MAR2012	01APR2012	CCC112255A
CCC112260A	PTWS: Raft Cone 1	8	02APR2012	09APR2012	CCC112260A
CCC112270A	PTWS: Raft Cone 2	8	07APR2012	14APR2012	CCC112270A
	PTWS: Raft Cone 3	8	12APR2012	19APR2012	CCC112280A
CCC112290A	PTWS: Raft Cone 4	8	17APR2012	24APR2012	CCC112290A
CCC112300A	PTWS: Grit Chamber Wall 1 & 2	12	18APR2012	29APR2012	CCC112300A
CCC112305A	PTWS: Water Test to Grit Chamber 1 & 2	18	30APR2012	17MAY2012	CCC112305A
CCC112310A	PTWS: Grit Chamber Wall 3 & 4	12	26APR2012	07MAY2012	CCC112310A
CCC112315A	PTWS: Water Test to Grit Chamber 3 & 4	18	08MAY2012	25MAY2012	CCC112315A
CCC112320A	PTWS: RW14, 15e, 15h, 16e & 16h	10	08MAY2012	17MAY2012	CCC112320A
CCC112330 CCC112340	PTWS: Outlet Chamber Base PTWS: Outlet Chamber Lower Wall	10	03MAR2012 13MAR2012	12MAR2012 22MAR2012	CCC112330
	PTWS: Outet Chamber Lower Wall PTWS: Remove Formwork and Clearance	10	13MAR2012 23MAR2012	22MAR2012 24MAR2012	CCC112340
CCC112350 CCC112360	PTWS: Remove Formwork and Clearance PTWS: Outlet Chamber Wall		05APR2012	24MAR2012 22APR2012	CCC112350
CCC112360 CCC112370		18	30APR2012	11MAY2012	CCC112370
	PTWS: RW8, 17f & 10	12	1		CCC112370
CCC112380 CCC112390	PTWS: RW9, 18f & 13 PTWS: Pipe /Duct Trench	12	08MAY2012 20MAY2012	19MAY2012 29MAY2012	CCC112380
CCC112390 CCC112400	PTWS: Pipe/Duci Trench PTWS: Roof Slab 1	10	18MAY2012	31MAY2012	CCC112390
CCC112400 CCC112410	PTWS: Roof Slab 2	14	26MAY2012	08JUN2012	CCC112400
CCC112410 CCC112415	PTWS: Kool Slab 2 PTWS: Water Test to Outlet Chamber	14	01JUN2012	18JUN2012	
CCC112415 CCC114100A	PTWS: Water Test to Outlet Chamber PTWS: Fill Formation of Fine Screen Chamber	34	15MAR2012	18JUN2012 17APR2012	CCC114100A
CCC114100A	PTWS: Fine Screen Chamber Base	10	18APR2012	27APR2012	CCC114120A
	PTWS: Fine Screen Chamber Wall and Roof	18	28APR2012	15MAY2012	CCC114130A
500114130A		10			



uilding and Str CC150110 CC150120 CC150130 CC150140 CC150142 CC150143 iliary Building uilding and Str	SDB: Install Temporary Strut at +4.0 SDB: Excavation for North Part SDB: Northern Raft Foundation - 1500mm thk SDB: Northern Holding Tanks (Bottom Pour) SDB: Infill Concrete bet Northern Tank / ELS SDB: Remove Strut at +4.0	6			
CC600290 CC600300 CC600320 CC600350 CC600350 CC600360 tic Waste Coll iilding and Str CC150110 CC150120 CC150140 CC150142 CC150143 liary Building iilding and Str	SDB: Northern Raft Foundation - 1500mm thk SDB: Norhtern Holding Tanks (Bottom Pour) SDB: Infill Concrete bet Northern Tank / ELS		16MAR2012	22MAR2012	CCC600270
C600300 C600310 C600320 C600350 C600360 CWaste Coll ding and Str C150110 C150120 C150140 C150142 C150143 any Building ding and Str	SDB: Norhtern Holding Tanks (Bottom Pour) SDB: Infill Concrete bet Northern Tank / ELS	10	23MAR2012	03APR2012	CCC600280
C600310 C600320 C600350 C600360 Waste Coll Jing and Str C150110 C150120 C150130 C150142 C150142 C150143 ary Building Jing and Str	SDB: Infill Concrete bet Northern Tank / ELS	15	05APR2012	25APR2012	CCC600290
C600320 C600350 C600360 Waste Coll Jing and Str C150110 C150120 C150130 C150140 C150142 C150143 ary Building Jing and Str		14	26APR2012	12MAY2012	CCC600300
C600350 C600360 Waste Coll ding and Str C150110 C150120 C150130 C150140 C150142 C150143 ary Building ding and Str	SDB: Remove Strut at +4.0	8	14MAY2012	22MAY2012	CCC600310
C600360 c Waste Coll ding and Str C150110 cC150120 cC150140 cC150142 cC150143 ary Building ding and Str		6	24MAY2012	31MAY2012	CCC60
C Waste Coll ding and Str C150110 C150120 C150130 C150140 C150142 C150143 ary Building ding and Str	SDB: Excavation - Stage 2	10	01JUN2012	12JUN2012	
C Waste Coll ding and Str C150110 C150120 C150130 C150140 C150142 C150143 ary Building ding and Str	SDB: Construct Column C2	6	01JUN2012	07JUN2012	
C150110 C150120 C150130 C150140 C150142 C150143 ary Building ding and Str	ection Facilities				
C150120 C150130 C150140 C150142 C150143 ary Building ding and Str	uctures				
C150130 C150140 C150142 C150143 ary Building ding and Str	Septic: Temp Earth Lateral Support	12	25FEB2012 A	12MAR2012	CCC150110
C150140 C150142 C150143 ary Building ding and Str	Septic: Excavation	8	13MAR2012	21MAR2012	CCC150120
C150142 C150143 ary Building ding and Str	Septic: Inlet Chamber	14	08MAY2012	24MAY2012	CCC150130
C150142 C150143 ary Building ding and Str	Septic: Backfilling at Inlet Chamber	6	25MAY2012	01JUN2012	
C150143 ary Building ding and Str	Septic: Verticle Blinding at Equalization Tank	12	19MAY2012	04JUN2012	
ary Building ding and Str	Septic: Backfill and Formation to Raft	12	05JUN2012	18JUN2012	
ding and Str			0000112012	1000112012	
-	uctures				
C320110	RWPS: Retention Pit	15	07JUN2012	23JUN2012	
C500110	Chemical Bldg: Excavation	12	02MAY2012	15MAY2012	CCC500110
C500120	Chemical Bldg: Raft Fdn - 750 thk, On-Grade Slab	14	16MAY2012	02JUN2012	
C500120	Chemical Bldg: Walls & Columns	20	04JUN2012	26JUN2012	
C800130	Admin Bldg: Underground Drainage Work	30	13FEB2012 A	18MAR2012	CCC800140
					CCC800140
C800160	Admin Bldg: Beams & Slab at G/F	29	19MAR2012	16APR2012	
C800200	Admin Bldg: Water Tank - Roof Slab & Beams	10	17APR2012	26APR2012	CCC800200
C800220	Admin Bldg: Walls & Columns - G/F to 1/F	15	24APR2012	08MAY2012	CCC800220
C800230	Admin Bldg: Beams & Slab at 1/F	11	12MAY2012	22MAY2012	CCC800230
C800240	Admin Bldg: Walls & Columns - 1/F to R/F	14	23MAY2012	05JUN2012	
C910115	Elect Bldg 1: Demolish Part of Extg Tx Room	6	07MAR2012	13MAR2012	CCC910115
C910120	Elect Bldg 1: Fdn-Cable Trench & On-Grade Slab	21	13FEB2012 A	06MAR2012	CCC910120
C910130	Elect Bldg 1: Walls - G/F to R/F	24	14MAR2012	11APR2012	CCC910130
C910140	Elect Bldg 1: Roof Slab	12	12APR2012	28APR2012	CCC910140
C910145	Elect Bldg 1: Demolish Brickwall of Extg Tx Room	12	30APR2012	14MAY2012	CCC910145
C910150	Elect Bldg 1: Remove Temp Support	6	17MAY2012	24MAY2012	CCC910150
	Elect Bldg 1: ABWF Work	34	25MAY2012	05JUL2012	
C930110	Elect Bldg 3: Excavation	6	16MAR2012	22MAR2012	CCC930110
					CCC930120
C930120	Elect Bldg 3: Fdn-Cable Trench &On-Grade Slab	12	23MAR2012	06APR2012	
C930130	Elect Bldg 3: Walls - G/F to R/F	12	07APR2012	24APR2012	CCC930130
C930140	Elect Bldg 3: Roof Slab	12	25APR2012	09MAY2012	CCC930140
C930150 r Control Fac	Elect Bldg 3: Remove Formwork	24	10MAY2012	08JUN2012	C
Iding and Str CC710110 ellaneous Wo	Vorks	380	23APR2012	03AUG2013	
CC710110 ellaneous Wo cellaneous V CM101800	Installation of Sitewide Drainage				
CC710110 ellaneous Wo cellaneous V CM101800 CM102000	Installation of Sitewide Sewerage	380	17APR2012	29JUL2013	
CC710110 ellaneous Wo cellaneous V CM101800 CM102000 CM102020 CM102100 /orks	Installation of Sitewide Sewerage Pipe Line bet N2 to PTW and Manholes N2 & N3 Laying Pipe Ducts, Trenches and Utilities				
CC710110 ellaneous Wo cellaneous V CM101800 CM102000 CM102020 CM102100 /orks urement and lding and Str /W110110	Installation of Sitewide Sewerage Pipe Line bet N2 to PTW and Manholes N2 & N3 Laying Pipe Ducts, Trenches and Utilities Installation uctures Coarse Screen: Equipment Manufacturing and Test	380 150 330 	17APR2012 31MAR2012 26APR2012 21NOV2011 A	29JUL2013 03OCT2012 21MAR2013 227APR2012	EMW110110
C710110 Cellaneous Wo Cellaneous V M101800 M102000 M102020 M102100 Corks Irement and ding and Str IW110110 IW110120	Installation of Sitewide Sewerage Pipe Line bet N2 to PTW and Manholes N2 & N3 Laying Pipe Ducts, Trenches and Utilities Installation uctures Coarse Screen: Equipment Manufacturing and Test Coarse Screen: Delivery of E&M Equipment On Site	380 150 330 	17APR2012 31MAR2012 26APR2012 21NOV2011 A 28APR2012	29JUL2013 03OCT2012 21MAR2013 27APR2012 11JUN2012	
C710110 C710110 Cellaneous WC C101800 C10200 C10200 C	Installation of Sitewide Sewerage Pipe Line bet N2 to PTW and Manholes N2 & N3 Laying Pipe Ducts, Trenches and Utilities Installation uctures Coarse Screen: Equipment Manufacturing and Test Coarse Screen: Delivery of E&M Equipment On Site Inlet Pump St: E&M Equipment Procurement	380 150 330 	17APR2012 31MAR2012 26APR2012 21NOV2011 A 28APR2012 21NOV2011 A	29JUL2013 03OCT2012 21MAR2013 27APR2012 11JUN2012 27APR2012	EMW120210
C710110 Ilaneous Wc cellaneous V M101800 M102000 M102020 M102100 orks rement and ding and Str W110110 W110120 W120210 W120220	Installation of Sitewide Sewerage Pipe Line bet N2 to PTW and Manholes N2 & N3 Laying Pipe Ducts, Trenches and Utilities Installation uctures Coarse Screen: Equipment Manufacturing and Test Coarse Screen: Delivery of E&M Equipment On Site Inlet Pump St: E&M Equipment Procurement Inlet Pump St: Delivery of E&M Equipment On Site	380 150 330 	17APR2012 31MAR2012 26APR2012 21NOV2011 A 28APR2012 21NOV2011 A 28APR2012	29JUL2013 03OCT2012 21MAR2013 227APR2012 11JUN2012 27APR2012 08JUN2012	EMW120210
C710110 cellaneous Wc cellaneous V M101800 M102000 M102020 M102100 corks rement and ding and Str W110110 W110120 W120210 W120210 W12020	Installation of Sitewide Sewerage Pipe Line bet N2 to PTW and Manholes N2 & N3 Laying Pipe Ducts, Trenches and Utilities Installation uctures Coarse Screen: Equipment Manufacturing and Test Coarse Screen: Delivery of E&M Equipment On Site Inlet Pump St: E&M Equipment Procurement Inlet Pump St: Delivery of E&M Equipment On Site Fine Screen: E&M Equipment Procurement	380 150 330 	17APR2012 31MAR2012 26APR2012 21NOV2011 A 28APR2012 21NOV2011 A 28APR2012 21NOV2011 A	29JUL2013 03OCT2012 21MAR2013 227APR2012 11JUN2012 27APR2012 08JUN2012 06JUN2012	EMW120210
C710110 Ilaneous Wc cellaneous V M101800 M102000 M102020 M102100 orks rement and ding and Str W110110 W110120 W120210 W120220 W130100 W130320	Installation of Sitewide Sewerage Pipe Line bet N2 to PTW and Manholes N2 & N3 Laying Pipe Ducts, Trenches and Utilities Installation Inst	380 150 330 150 150 150 180 45 180 42 180 42	17APR2012 31MAR2012 26APR2012 21NOV2011 A 28APR2012 21NOV2011 A 28APR2012 21NOV2011 A 23MAY2012	29JUL2013 03OCT2012 21MAR2013 21MAR2013 27APR2012 11JUN2012 27APR2012 08JUN2012 06JUN2012 03JUL2012	EMW120210
C710110 llaneous Wo cellaneous V M101800 M102000 M102020 M102100 orks rement and ding and Str W110110 W110120 W120210 W120220 W120220 W130100 W130320 W140410	Installation of Sitewide Sewerage Pipe Line bet N2 to PTW and Manholes N2 & N3 Laying Pipe Ducts, Trenches and Utilities Installation Uctures Coarse Screen: Equipment Manufacturing and Test Coarse Screen: Delivery of E&M Equipment On Site Inlet Pump St: E&M Equipment Procurement Inlet Pump St: Delivery of E&M Equipment On Site Fine Screen: E&M Equipment Procurement Fine Screen: Delivery of E&M Equipment On Site Grit: E&M Equipment Procurement	380 150 330 150 150 150 150 45 180 42 180 42 180 42 180	17APR2012 31MAR2012 26APR2012 21NOV2011 A 28APR2012 21NOV2011 A 28APR2012 21NOV2011 A 23MAY2012 21NOV2011 A	29JUL2013 03OCT2012 21MAR2013 21MAR2013 27APR2012 11JUN2012 27APR2012 08JUN2012 08JUN2012 06JUN2012 03JUL2012 06MAY2012	EMW120210
C710110 llaneous Wo cellaneous V M101800 M102000 M102020 M102100 orks rement and ding and Str W110110 W110120 W120210 W120220 W120220 W130100 W130320 W140410 W140420	Installation of Sitewide Sewerage Pipe Line bet N2 to PTW and Manholes N2 & N3 Laying Pipe Ducts, Trenches and Utilities Installation Inst	380 150 330 150 150 150 180 45 180 42 180 42	17APR2012 31MAR2012 26APR2012 21NOV2011 A 28APR2012 21NOV2011 A 28APR2012 21NOV2011 A 23MAY2012 21NOV2011 A 07MAY2012	29JUL2013 03OCT2012 21MAR2013 21MAR2013 27APR2012 11JUN2012 27APR2012 08JUN2012 08JUN2012 06JUN2012 06JUN2012 06MAY2012 17JUN2012	EMW120210
C710110 llaneous Wo cellaneous V M101800 M102000 M102020 M102100 orks rement and ding and Str W110110 W110120 W120210 W120220 W120220 W130100 W130320 W140410 W140420	Installation of Sitewide Sewerage Pipe Line bet N2 to PTW and Manholes N2 & N3 Laying Pipe Ducts, Trenches and Utilities Installation Uctures Coarse Screen: Equipment Manufacturing and Test Coarse Screen: Delivery of E&M Equipment On Site Inlet Pump St: E&M Equipment Procurement Inlet Pump St: Delivery of E&M Equipment On Site Fine Screen: E&M Equipment Procurement Fine Screen: Delivery of E&M Equipment On Site Grit: E&M Equipment Procurement	380 150 330 150 150 150 150 45 180 42 180 42 180 42 180	17APR2012 31MAR2012 26APR2012 21NOV2011 A 28APR2012 21NOV2011 A 28APR2012 21NOV2011 A 23MAY2012 21NOV2011 A	29JUL2013 03OCT2012 21MAR2013 21MAR2013 27APR2012 11JUN2012 27APR2012 08JUN2012 08JUN2012 06JUN2012 03JUL2012 06MAY2012	EMW120210 EMW120210 EMW120210 EMW140410
C710110 llaneous Wo cellaneous V M101800 M102000 M102020 M102100 orks rement and ding and Str W110110 W110120 W120210 W120220 W130100 W130320 W140410 W140420 W152100	Installation of Sitewide Sewerage Pipe Line bet N2 to PTW and Manholes N2 & N3 Laying Pipe Ducts, Trenches and Utilities Installation uctures Coarse Screen: Equipment Manufacturing and Test Coarse Screen: Delivery of E&M Equipment On Site Inlet Pump St: E&M Equipment Procurement Inlet Pump St: Delivery of E&M Equipment On Site Fine Screen: E&M Equipment Procurement Fine Screen: Delivery of E&M Equipment On Site Grit: E&M Equipment Procurement Grit: Delivery of E&M Equipment On Site	380 150 330 150 150 150 180 45 180 42 180 42 180 42 180 42	17APR2012 31MAR2012 26APR2012 21NOV2011 A 28APR2012 21NOV2011 A 28APR2012 21NOV2011 A 23MAY2012 21NOV2011 A 07MAY2012	29JUL2013 03OCT2012 21MAR2013 21MAR2013 27APR2012 11JUN2012 27APR2012 08JUN2012 08JUN2012 06JUN2012 06JUN2012 06MAY2012 17JUN2012	EMW120210
C710110 llaneous Wo cellaneous V M101800 M102000 M102020 M102100 orks rement and ding and Str W110110 W110120 W120210 W120210 W120220 W130100 W130320 W140410 W140420 W152100 W200100	Installation of Sitewide Sewerage Pipe Line bet N2 to PTW and Manholes N2 & N3 Laying Pipe Ducts, Trenches and Utilities Installation uctures Coarse Screen: Equipment Manufacturing and Test Coarse Screen: Delivery of E&M Equipment On Site Inlet Pump St: E&M Equipment Procurement Inlet Pump St: Delivery of E&M Equipment On Site Fine Screen: E&M Equipment Procurement Fine Screen: Delivery of E&M Equipment On Site Grit: E&M Equipment Procurement Grit: Delivery of E&M Equipment On Site Septic Station: Delivery of E&M Equipment	380 150 330 180 45 180 42 180 42 180 42 180 42 180 42 180	17APR2012 31MAR2012 26APR2012 21NOV2011 A 28APR2012 21NOV2011 A 28APR2012 21NOV2011 A 23MAY2012 21NOV2011 A 07MAY2012 18APR2012	29JUL2013 03OCT2012 21MAR2013 21MAR2013 27APR2012 11JUN2012 27APR2012 08JUN2012 06JUN2012 06JUN2012 03JUL2012 17JUN2012 14OCT2012	EMW120210 EMW120210 EMW120210 EMW140410
C710110 Ilaneous Wo cellaneous V M101800 M102000 M102020 M102100 orks rement and Jing and Str W110110 W110120 W120210 W120210 W130100 W130320 W140410 W140420 W152100 W200830	Installation of Sitewide Sewerage Pipe Line bet N2 to PTW and Manholes N2 & N3 Laying Pipe Ducts, Trenches and Utilities Installation uctures Coarse Screen: Equipment Manufacturing and Test Coarse Screen: Delivery of E&M Equipment On Site Inlet Pump St: E&M Equipment Procurement Inlet Pump St: Delivery of E&M Equipment On Site Fine Screen: Delivery of E&M Equipment On Site Fine Screen: Delivery of E&M Equipment On Site Grit: E&M Equipment Procurement Grit: Delivery of E&M Equipment On Site Septic Station: Delivery of E&M Equipment CEPT: E&M Equipment Procurement	380 150 330 180 45 180 42 180 42 180 42 180 42 180 42 180 150	17APR2012 31MAR2012 26APR2012 21NOV2011 A 28APR2012 21NOV2011 A 28APR2012 21NOV2011 A 23MAY2012 21NOV2011 A 07MAY2012 18APR2012	29JUL2013 03OCT2012 21MAR2013 21MAR2013 27APR2012 11JUN2012 27APR2012 08JUN2012 06JUN2012 06JUN2012 06JUN2012 17JUN2012 14OCT2012 07JUN2012	EMW120210 EMW120210 EMW120210
C710110 Ilaneous Wc cellaneous V M101800 M102000 M102020 M102100 orks rement and Jing and Str W110110 W110120 W120210 W120220 W130100 W130320 W140410 W140420 W152100 W200100 W200100	Installation of Sitewide Sewerage Pipe Line bet N2 to PTW and Manholes N2 & N3 Laying Pipe Ducts, Trenches and Utilities Installation Uctures Coarse Screen: Equipment Manufacturing and Test Coarse Screen: Delivery of E&M Equipment On Site Inlet Pump St: E&M Equipment Procurement Inlet Pump St: Delivery of E&M Equipment On Site Fine Screen: Delivery of E&M Equipment On Site Fine Screen: Delivery of E&M Equipment On Site Grit: E&M Equipment Procurement Fine Screen: Delivery of E&M Equipment On Site Grit: E&M Equipment Procurement Grit: Delivery of E&M Equipment On Site Septic Station: Delivery of E&M Equipment CEPT: E&M Equipment Procurement CEPT: Hand over for Lifting Appliance (bay12345) CEPT: Scrapper Installation	380 150 330 180 45 180 42 180 42 180 42 180 42 180 42 180 42 180 42 180 42 180 120	17APR2012 31MAR2012 26APR2012 21NOV2011 A 28APR2012 21NOV2011 A 28APR2012 21NOV2011 A 23MAY2012 21NOV2011 A 07MAY2012 18APR2012 21NOV2011 A 23FEB2012	29JUL2013 03OCT2012 21MAR2013 21MAR2013 27APR2012 11JUN2012 27APR2012 08JUN2012 06JUN2012 06JUN2012 06JUN2012 17JUN2012 14OCT2012 07JUN2012 22MAY2012 25JUL2012	EMW120210 EMW120210 EMW120210
C710110 Ilaneous Wc sellaneous V M101800 M102000 M102020 M102100 orks rement and ding and Str W110110 W120210 W120210 W120220 W130100 W130320 W140410 W140420 W152100 W200100 W200830 W201100 W301100	Installation of Sitewide Sewerage Pipe Line bet N2 to PTW and Manholes N2 & N3 Laying Pipe Ducts, Trenches and Utilities Installation Uctures Coarse Screen: Equipment Manufacturing and Test Coarse Screen: Delivery of E&M Equipment On Site Inlet Pump St: E&M Equipment Procurement Inlet Pump St: Delivery of E&M Equipment On Site Fine Screen: Delivery of E&M Equipment On Site Fine Screen: Delivery of E&M Equipment On Site Grit: E&M Equipment Procurement Fine Screen: Delivery of E&M Equipment On Site Grit: E&M Equipment Procurement Grit: Delivery of E&M Equipment On Site Septic Station: Delivery of E&M Equipment CEPT: E&M Equipment Procurement CEPT: Hand over for Lifting Appliance (bay12345) CEPT: Scrapper Installation UV: E&M Equipment Procurement	380 150 330 150 330 180 45 180 42 180 42 180 42 180 42 180 42 180 42 180 42 180 42 180 150 0 120 180	17APR2012 31MAR2012 26APR2012 21NOV2011 A 28APR2012 21NOV2011 A 28APR2012 21NOV2011 A 23MAY2012 21NOV2011 A 07MAY2012 18APR2012 21NOV2011 A 23FEB2012 01MAR2012	29JUL2013 03OCT2012 21MAR2013 21MAR2013 27APR2012 11JUN2012 27APR2012 08JUN2012 06JUN2012 06JUN2012 06JUN2012 17JUN2012 14OCT2012 14OCT2012 22MAY2012 25JUL2012 27AUG2012	EMW120210 EMW120210 EMW120210
C710110 llaneous Wc cellaneous V M101800 M102000 M102020 M102100 orks rement and ding and Str W110110 W120210 W120210 W120220 W130100 W130320 W140410 W140420 W152100 W200100 W200100 W200830 W201100 W301100 W322200	Installation of Sitewide Sewerage Pipe Line bet N2 to PTW and Manholes N2 & N3 Laying Pipe Ducts, Trenches and Utilities Installation Procurement Installation Insta	380 150 330 150 330 180 45 180 42 180 42 180 42 180 42 180 42 180 42 180 42 180 150 0 120 180 210	17APR2012 31MAR2012 26APR2012 26APR2012 21NOV2011 A 28APR2012 21NOV2011 A 28APR2012 21NOV2011 A 23MAY2012 21NOV2011 A 07MAY2012 18APR2012 21NOV2011 A 28FEB2012 01MAR2012 06APR2012	29JUL2013 03OCT2012 21MAR2013 21MAR2013 27APR2012 11JUN2012 27APR2012 08JUN2012 06JUN2012 03JUL2012 03JUL2012 17JUN2012 14OCT2012 14OCT2012 22MAY2012 25JUL2012 25JUL2012 27AUG2012	EMW120210 EMW120210 EMW120210
C710110 laneous Wo cellaneous V M101800 M102000 M102020 M102100 orks rement and Jing and Str W110110 W120210 W120210 W120220 W130100 W130320 W140410 W140420 W152100 W200100 W200100 W201100 W302200 W501000	Installation of Sitewide Sewerage Pipe Line bet N2 to PTW and Manholes N2 & N3 Laying Pipe Ducts, Trenches and Utilities Installation uctures Coarse Screen: Equipment Manufacturing and Test Coarse Screen: Delivery of E&M Equipment On Site Inlet Pump St: E&M Equipment Procurement Inlet Pump St: Delivery of E&M Equipment On Site Fine Screen: Delivery of E&M Equipment On Site Fine Screen: Delivery of E&M Equipment On Site Grit: E&M Equipment Procurement Grit: Delivery of E&M Equipment On Site Septic Station: Delivery of E&M Equipment CEPT: E&M Equipment Procurement CEPT: Hand over for Lifting Appliance (bay12345) CEPT: Scrapper Installation UV: E&M Equipment Procurement RWPS: E&M Equipment Procurement Chemical: E&M Equipment Procurement	380 150 330 150 330 180 45 180 42 180 42 180 42 180 42 180 42 180 42 180 120 180 120 180 210 150	17APR2012 31MAR2012 26APR2012 26APR2012 21NOV2011 A 28APR2012 21NOV2011 A 28APR2012 21NOV2011 A 23MAY2012 21NOV2011 A 07MAY2012 18APR2012 21NOV2011 A 28FEB2012 01MAR2012 06APR2012 19MAR2012	29JUL2013 03OCT2012 21MAR2013 21MAR2013 27APR2012 11JUN2012 27APR2012 08JUN2012 06JUN2012 06JUN2012 06JUN2012 17JUN2012 14OCT2012 14OCT2012 22MAY2012 25JUL2012 27AUG2012	EMW120210 EMW120210 EMW140410 EMW140410 EMW140410 EMW200830
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