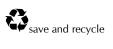
Central Reclamation, Phase III Quarterly EM&A Report No. 41 (August 2013 through October 2013)

Client	Civil Engineering Development Department, Hong Kong Hong Kong Island and Islands Development Office					
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Abbreviations & Acronyms

ACL Atkins China Limited

AL Action Level

CEDD Civil Engineering and Development Department

CRIII Central Reclamation Phase III

DO Dissolved Oxygen

EIA Environmental Impact Assessment

EIAO Environmental Impact Assessment Ordinance

EM&A Environmental Monitoring and Audit
EPD Environmental Protection Department

ER Engineer's Representatives

ET Environmental Team

IEC Independent Environmental Checker

LCSD Leisure and Cultural Services Department
LCSVO-JV Leighton China State Van Oord Joint Venture

LL Limit Level

PLA People's Liberation Army Forces Hong Kong

TDD Territory Development Department

TSP Total Suspended Particulates

SS Suspended Solids

WMP Waste Management Plan





Executive Summary

The Central Reclamation Phase III (CRIII) Works, Contract No. HK 12/02, was awarded to Leighton China State Van Oord Joint Venture (LCSVO-JV) by the Civil Engineering and Development Department (CEDD). (Previously called the Territory Development Department before merger with the Civil Engineering Department on 1st July 2004.)

The works under the Contract HK 12/02 commenced on 28th February 2003. Contract HK 16/03 for the CRIII Hinterland Drainage Improvement Works was awarded to Wang Kee Construction Co. Ltd., and works for this contract commenced on 17th December 2003.

Atkins China Limited (ACL) has been commissioned by CEDD as the Environmental Team (ET) to undertake the Environmental Monitoring and Audit (EM&A) programme described in the approved EM&A Manual for the CRIII Project. The noise and air monitoring works have been handed over to the ET of the Contract No. HK/2011/07. "Wanchai Development Phase II and Central-Wanchai Bypass Sampling, Field Measurement and Testing Works (Stage 2)" since May 2013. Therefore, noise and air monitoring data was obtained from the "Wan Chai Development Phase II and Central – Wan Chai Bypass and Island Eastern Corridor Link" project website.

This is the 41st quarterly EM&A Report for the works specified in Section 1.3 of the CRIII EIA Report. This report summarises the monitoring results and audit findings of the EM&A program during the reporting period from 1st August 2013 to 31st October 2013.

Environmental Monitoring and Audit Progress

Air quality and noise quality monitoring were conducted during this quarter. The post project water quality monitoring was completed on October 2011. Weekly environmental site inspections were also conducted during this reporting quarter.

Additional water quality monitoring for the "the water quality of embayment area between the eastern seawall and the Hong Kong Convention and Exhibition Centre (HKCEC) upon completion of eastern seawall", in accordance with the Environmental Permit No. EP-01/122/2003/D Condition 3.9, was completed on October 2011.

Exceedance of Action and Limit Levels

No exceedances in TSP level were recorded at the monitoring stations during this reporting quarter.

No exceedances in noise level was recorded at the monitoring station during this reporting quarter.

Complaint Log

There was no complaint received in relation to the environmental impact during the reporting period.

Notifications of Summons and Prosecutions

There were no notifications of summons and prosecutions received during this reporting quarter.



Site Inspection and Audit

Weekly environmental site inspections were carried out during this quarter. Minor deficiencies noted during the site inspections were rectified by the Contractor upon receipt of notification. The observations and findings are outlined below:

8 th August 2013
Nil.
17 th August 2013
Nil.
22 nd August 2013
Nil.
30 th August 2013
Nil.
5 th September 2013
Nil.
14 th September 2013
Nil.
19 th September 2013
Nil.
25 th September 2013
Nil.
30 th September 2013
Nil.
12 th October 2013
Nil.
16 th October 2013
Nil.
21st October 2013
Nil.
30 th October 2013



Nil.

1. INTRODUCTION

1.1 Basic Project Information

The Main Works Contract HK 12/02 for CRIII commenced on 28th February 2003 and was awarded to Leighton-China State-Van Oord Joint Venture (LCSVO-JV) for the construction of the CRIII Engineering Works. The main construction works that were identified in the EIA Report for the Project, requiring environmental monitoring and audit, have commenced.

This is the 41st quarterly EM&A Report for the works specified in Section 1.3 of the CRIII EIA Report. This report summarises the monitoring results and audit findings of the EM&A program during the reporting period from 1st August 2013 to 31st October 2013.

The Contractor's works programme for the quarter is provided in **Annex E**.

1.2 Project Organisation and Management Structure

Atkins China Limited (ACL) has been commissioned by CEDD as the Environmental Team (ET) to undertake the Environmental Monitoring and Audit (EM&A) programme described in the approved EM&A Manual and required under Clause 4 of the Variation of Further Environmental Permit (No. EP-01/122/2003/A) issued to Leighton-China State-Van Oord Joint Venture in December 2007 for the CRIII Project. A variation of the Further Environmental Permit for the Project (EP-01/122/2003/B) and (EP-01/122/2003/C) were granted on 26 May 2008 and 17 July 2009. This was then superseded by another variation of the Further Environmental Permit for the Project (EP-01/122/2003/D) granted on 1 September 2009. The noise and air monitoring works have been handed over to the ET of the Contract No. HK/2011/07. "Wanchai Development Phase II and Central-Wanchai Bypass Sampling, Field Measurement and Testing Works (Stage 2)" since May 2013. Therefore, noise and air monitoring data was obtained from the "Wan Chai Development Phase II and Central – Wan Chai Bypass and Island Eastern Corridor Link" project website. The CRIII Project Organisation is shown in *Annex A*.

1.3 Works Undertaken

The works undertaken in the project area requiring environmental monitoring and audit as identified in the EIA Report (not including Chai Wan Basin) during this reporting quarter include:

- Surface drainage behind GPO boundary wall complete.
- Modification to the junction of Road D8 and Road P2 complete
- Landscaping work behind GPO boundary wall tree planted
- Footpath construction adjacent to GPO complete





2. EM&A REQUIREMENTS

2.1 Summary of Impact EM&A Requirements

The EM&A programme requires environmental monitoring for air quality, noise, waster quality, waste management and landscape and visual aspects as specified in the CRIII Project EIA. The EM&A requirements for each issue area are described in subsequent sections including:

- All required monitoring parameters;
- Action and Limit Levels; and
- Event-Action Plans.

A summary of impact EM&A requirements is presented in *Table 2-1*.

Table 2.1 - Summary of Impact EM&A Requirements

Parameters	Descriptions	Locations	Frequencies	Duration
TOD	24-Hour TSP	2 Locations	Once every 6 days	During dust generating construction works
TSP	1-Hour TSP	2 Locations	Three times in every 6 days	During dust generating construction works
Noise	Leq (30 mins), Leq (15 mins), L10, L90,	1 Location	Continuous measurements	Two weeks before Construction and During Construction
Water Quality	Dissolved Oxygen; Salinity; Temp; Suspended Solids; Turbidity.	Since 11th January 2010 3 Locations (1)	3 times a week, Mid-ebb/flood tides	During Marine Works and for 4 weeks after completion of Marine Works
Waste	On-Site Waste Audit	Active Work Sites	Periodically	During Construction
	On-Site Waste Inspection	Active Work Sites		
Landscape and Visual	Audits to ensure effective implementation of mitigation measures			During Construction
General Site Conditions	Environmental Site Inspection	Works areas and areas affected by works	Periodically	During Construction

Note (1) Seawater Intake M01A, M04B and land based Monitoring Station "Culvert F" was monitored since 11th January 2010

2.2 Environmental Quality Performance Limits

Environmental Quality Performance Limits for air quality and noise quality have been established as part of the Baseline Monitoring Report and are provided in **Annex B**.

2.3 Event Action Plan

Event Action Plans for air quality and noise quality have been developed as part of the Baseline Monitoring Report and are provided in *Annex C*.





3. ENVIRONMENTAL STATUS

3.1 Implementation of Environmental Measures

The Contractor has implemented relevant mitigation measures listed in the EIA Report, EM&A Manual and Further Environmental Permit.

3.2 Environmental Monitoring Locations

Drawings showing the project area and locations of the monitoring stations are provided in **Annex D**.

3.3 Air Quality Monitoring Results

The graphical plot of air quality monitoring results for this reporting quarter is provided in **Annex F**.

3.4 Noise Quality Monitoring Results

The graphical plot of noise monitoring results for this reporting quarter is provided in **Annex G**.

3.5 Water Quality Monitoring Results

The post project water quality monitoring was completed in October 2011.

Additional water quality monitoring for the "the water quality of embayment area between the eastern seawall and the Hong Kong Convention and Exhibition Centre (HKCEC) upon completion of eastern seawall", in accordance with the Environmental Permit No. EP-01/122/2003/D Condition 3.9, was completed in October 2011.

3.6 Solid and Liquid Waste Management Status

Solid and liquid waste management was implemented according to the Waste Management Plan during this reporting quarter.

3.7 Landscape and Visual Audit

As the works undertaken during this reporting quarter were mainly related to reclamation, buildings and infrastructure works, the landscape and visual impacts are considered to be minimal.





4. ENVIRONMENTAL COMPLAINT AND NON-COMPLIANCE

4.1 Environmental Exceedances

No exceedances in TSP level were recorded at the monitoring stations during this reporting quarter.

No exceedance in noise level was recorded at the monitoring station during this reporting quarter.

4.2 Non-Compliance

No non-compliance with regard to site environmental audit was recorded during the reporting period.

4.3 Summary of Actions Taken by the Contractor

The Contractor has implemented the following measures to prevent air and water quality impacts:

- Contractor has implemented their Drainage Management Plan to Control Site Run-off for the wet season – actions completed and underway include: repair and improvement of existing bunds/sandbags on the edge of the reclamation; installation of additional bunds; compaction of soil surface and paths where possible to prevent erosion, creation of drainage channels and soak pits;
- Provision of additional settlement tanks to remove suspended solids from discharge waters;
- Provision of catch pits to collect spill over from wheel washing facilities and increased frequency of cleaning of catch-pits; and
- Water browsing of haul roads and other areas of the site and covering of stockpiles.

4.4 Environmental Enquiries

No environmental enquiries were received during this reporting quarter.

4.5 Environmental Complaints and Prosecutions

No environmental complaints were received during this reporting quarter.

4.6 Record of Environmental Complaints and Summons & Prosecutions

There was no record of environmental complaints during this reporting quarter.

There were no notifications of summons and prosecutions during this reporting quarter.





5. CONCLUSION

During the environmental site inspections conducted within this reporting quarter, no non-compliances were noted and no notifications of summons and prosecutions were received during this reporting quarter.

There was no complaint received in relation to the environmental impact during the reporting period.

No exceedances in TSP level were recorded at the monitoring stations during this reporting quarter.

No exceedances in noise level was recorded at the monitoring station during this reporting quarter.

The post project water quality monitoring was completed on October 2011.

Additional water quality monitoring for the "the water quality of embayment area between the eastern seawall and the Hong Kong Convention and Exhibition Centre (HKCEC) upon completion of eastern seawall", in accordance with the Environmental Permit No. EP-01/122/2003/D Condition 3.9, was completed on October 2011.

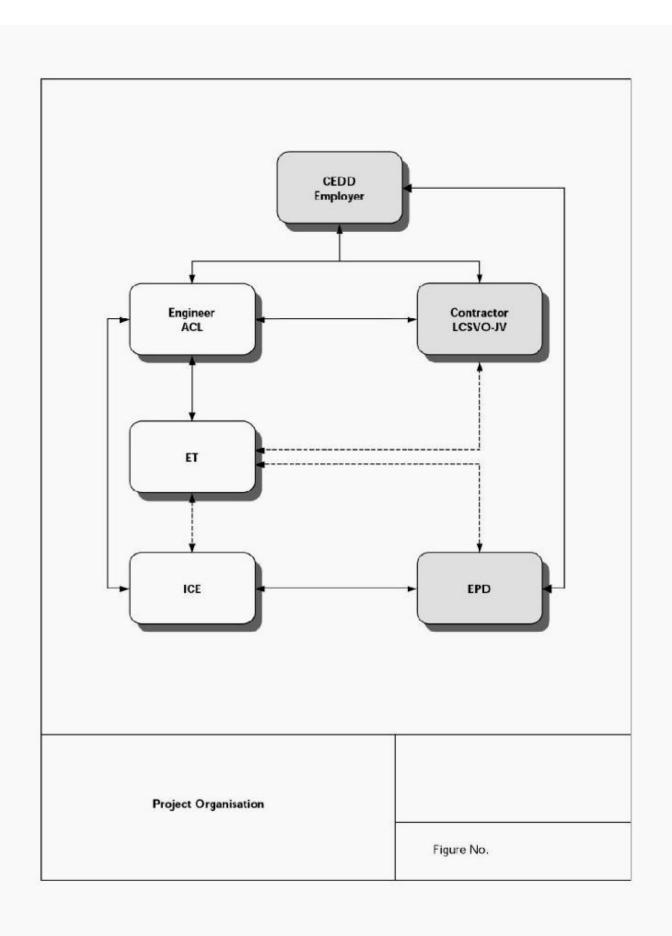




Annex A

Project Organisation/ Contact Information





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Annex B

Quality Performance Limits for Air and Noise Quality



Environmental Quality Performance Limits – Action & Limit Levels

Parameter	Station	Action Level	Limit Level
Air Quality			
1-Hour TSP Level in μg/m3	City Hall	460 μg/m3	500 μg/m3
1-Hour TSP Level in μg/m3	PLA	432 μg/m3	500 μg/m3
24-Hour TSP Level in μg/m3	City Hall	163 μg/m3	260 μg/m3
24-Hour TSP Level in μg/m3	PLA	154 μg/m3	260 μg/m3
Noise Quality			1
07:00-19:00 hrs on normal weekdays	City Hall	When one documented compliant is received	75dB(A)
07:00-23:00 hrs on holidays; and 19:00-23:00 hrs on all other days	City Hall	When one documented compliant is received	60/65/70* dB(A)
23:00-07:00 hrs of next day	City Hall	When one documented compliant is received	40/50/55* dB(A)

Annex C

Event Action Plans for Air and Noise Quality



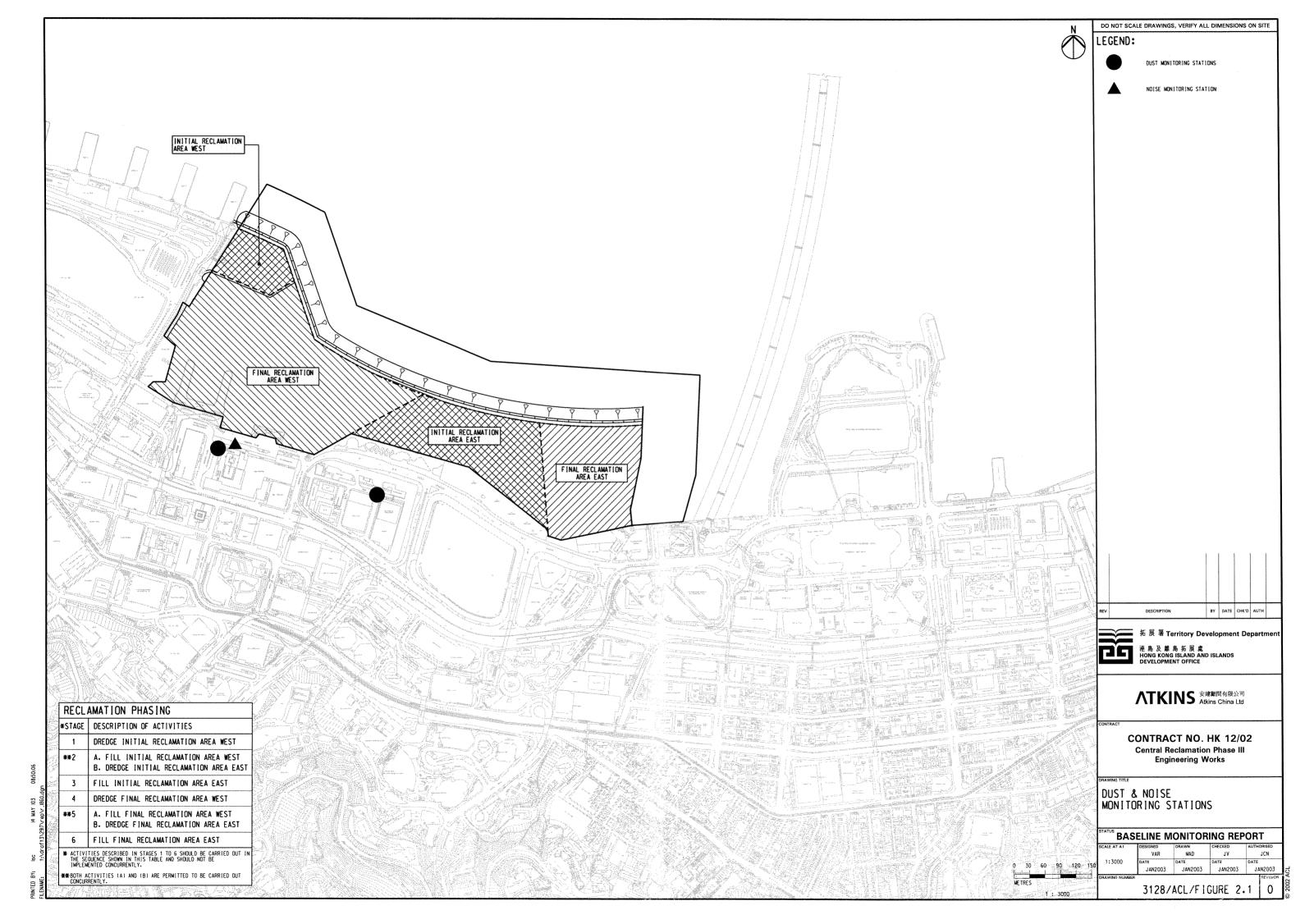
Event and Action Plan for Air Quality										
Event	Action									
	ET Leader	IC(E)	ER	Contractor						
Action Level - Exceedance for one sample	Identify source Inform IC(E) and ER Repeat measurement to confirm finding Increase monitoring frequency to daily	Check monitoring data submitted by ET Check Contractor's working method	Notify Contractor	Rectify any unacceptable practice Amend working methods if appropriate						
Action Level - Exceedance for two or more consecutive samples	Identify source Inform IC(E) and ER Repeat measurement to confirm finding Increase monitoring frequency to daily Discuss with IC(E) and Contractor on remedial actions If exceedance continues, arrange meeting with IC(E) and ER 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 ER on the effectiveness of the proposed remedial measures Supervise the implementation of remedial measures	Confirm receipt of notification of failure in writing Notify Contractor Ensure remedial measures properly implemented	Submit proposals for remedial actions to IC(E) within 3 working days of notification Implement the agreed proposals Amend proposal if appropriate						
Limit Level - Exceedance for one sample	Identify source Inform ER and EPD Repeat measurement to confirm findings Increase monitoring frequency to daily Assess effectiveness of Contractor's remedial actions and keep IC(E), EPD and ER informed of the results	Check monitoring data submitted by ET Check Contractor's working method Discuss with ET and Contractor on possible remedial measures Advise the ER on the effectiveness of the proposed remedial measures Supervise the implementation of remedial measures	Confirm receipt of notification of failure in writing Notify Contractor Ensure remedial measures properly implemented	Take immediate action to avoid further exceedance Submit proposal for remedial actions to IC(E) within 3 working days of notification Implement the agreed measures						
Limit Level - Exceedance for two or more consecutive samples	Notify IC(E), ER, Contractor and EPD Identify source Repeat measurements 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 IC(E) and ER to discuss the remedial actions to be taken Assess effectiveness of Contractor's remedial actions and keep IC(E), EPD and ER informed of the results If exceedance stops, cease additional monitoring	Discuss amongst ER, ET, and Contractor on the potential remedial actions Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly Supervise the implementation of remedial measures	Confirm receipt of notification of failure in writing Notify Contractor In consultation with the IC(E), 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 IC(E) within 3 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 ER until the exceedance is abated						

Event and Action Plan for Noise Quality											
Event	Action	Action									
	ET Leader	IC(E)	ER	Contractor							
Action Level is reached	Notify IC(E) and Contractor Carry out investigation Report the results of the investigation to the IC(E) and Contractor Discuss with the Contractor and formulate remedial measures	Discuss amongst ER, ET and Contractor on the potential remedial actions Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly Supervise the implementation of remedial measures	Confirm receipt of notification of failure in writing Notify Contractor Require Contractor to propose remedial measures for the analyzed noise problem Ensure remedial measures are properly implemented	Submit noise mitigation proposal to IC(E) Implement noise mitigation proposals							
Limit Level is reached	Notify IC(E), ER, EPD and Contractor Identify source Repeat measurement to confirm findings Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented Inform IC(E), ER and EPD the causes & actions taken for the exceedances Assess effectiveness of Contractor's remedial actions and keep IC(E), EPD and ER informed of the results If exceedance stops cease additional monitoring	Discuss amongst ER, ET and Contractor on the potential remedial actions Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly Supervise the implementation of remedial measures	Confirm receipt of notification of failure in writing Notify Contractor Require Contractor to propose remedial measures for the analyzed noise problem Ensure remedial measures are properly implemented If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion or work until the exceedance is abated	Take immediate action to avoid further exceedance Submit proposals for remedial actions to IC(E) within 3 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 ER until the exceedance is abated							

Annex D

Monitoring Stations Locations





Annex E

Contractor's Work Programme



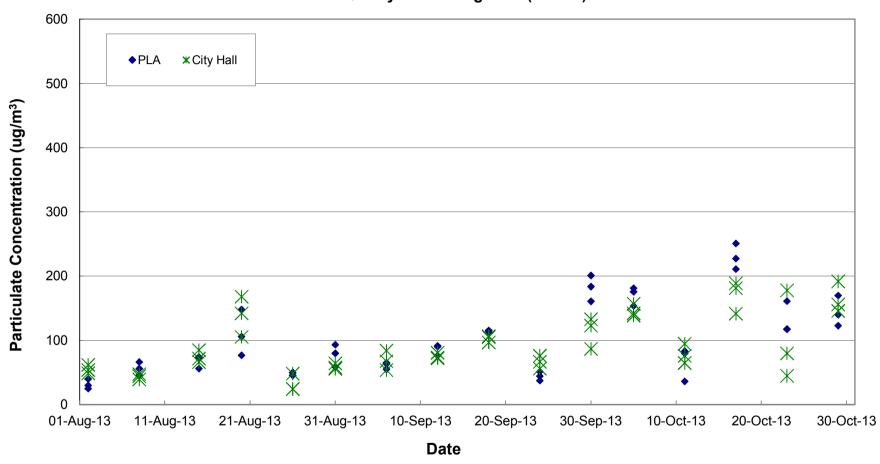
			2013										
			Se	ер			С	ct			N	OV	
Activity	Status	1	2	3	4	1	2	3	4	1	2	3	4
Area C													
Chain link fence													
Trapezoid channel	In progress												
Area outside GPO boundary wall													
Paving work	Complete												
Soft landscape	In progress												
Site 5 car park area (VO)													
Construction of remaing run-in	In progress												

Annex F

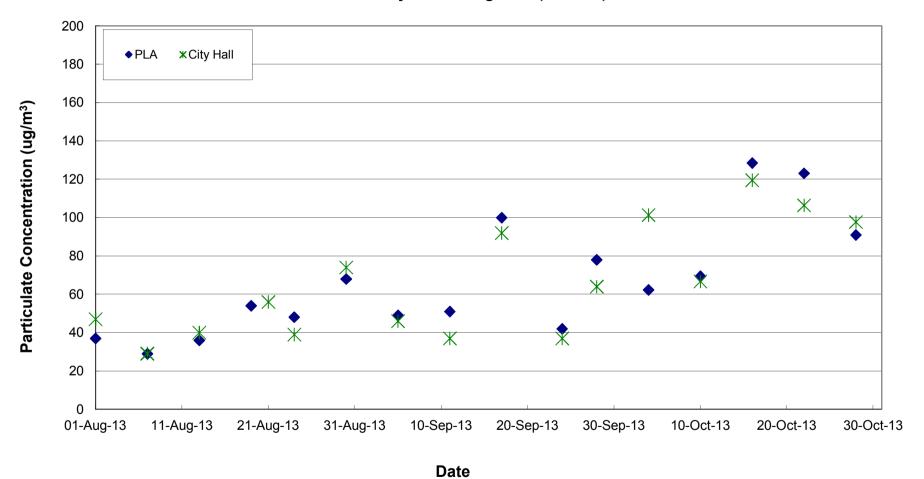
Graphical Representation of Air Quality Monitoring Results



Air Quality Monitoring Data (1-hour)



Air Quality Monitoring Data (24-hour)



Annex G

Graphical Representation of Noise Monitoring Results



