

**Central Reclamation, Phase III  
Environmental Monitoring & Audit  
Monthly Report No. 126 – January 2014**

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	Page
<b>1. INTRODUCTION.....</b>	<b>1</b>
1.1 Basic Project Information.....	1
<b>2. Environmental Status.....</b>	<b>3</b>
2.1 Works Undertaken .....	3
2.2 Environmental Permits .....	3
2.3 Environmental Document Submission .....	3
2.4 Environmental Meetings.....	3
2.5 Environmental Monitoring Locations.....	3
<b>3. EM&amp;A Requirements .....</b>	<b>5</b>
3.1 Summary of Impact EM&A Requirements .....	5
3.2 Environmental Quality Performance Limits.....	5
3.3 Event Action Plan .....	5
3.4 Implementation of Environmental Measures.....	5
<b>4. Monitoring Results.....</b>	<b>8</b>
4.1 Impact Monitoring Schedule in January 2014.....	8
4.2 Monitoring Methodology.....	8
4.3 Monitoring Equipment .....	9
4.4 Impact Monitoring Results.....	9
<b>5. Environmental Complaints and Non-Compliance .....</b>	<b>12</b>
5.1 Environmental Exceedances .....	12
5.2 Environmental Complaint and Prosecution .....	13
5.3 Environmental Enquiries.....	13
5.4 Unusual Events.....	13
<b>6. Forecast and Schedule .....</b>	<b>14</b>
6.1 Key Engineering Works for the Coming Month.....	14
6.2 Monitoring Schedules for the Coming Months .....	14
6.3 Construction Programme for the Next 3 Months .....	14
<b>7. Conclusion.....</b>	<b>16</b>

**List of Annexes**

Annex A	Project Organisation / Contact Information
Annex B	Contractor’s Work Programme
Annex C	Location of Monitoring Stations
Annex D	Environmental Quality Performance Limits for Air and Noise Quality
Annex E	Event and Action Plan for Air and Noise Quality
Annex F	Air Quality Monitoring Results
Annex G	Graphical Representation of Air Quality Monitoring Results
Annex H	Noise Monitoring Results
Annex I	Graphical Representation of Noise Monitoring Results

**List of Tables**

Table 2.1 - Summary of Environmental Certification Sheet Submissions .....	3
Table 3.1 - Summary of Impact EM&A Requirements .....	5
Table 4.1 - Monthly Summary Waste Flow Table for January 2014 .....	9
Table 5.1 - Summary of Environmental Site Inspections .....	12

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
TSP	Total Suspended Particulates
SS	Suspended Solids
WMP	Waste Management Plan

*Not Used*

## **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 1<sup>st</sup> July 2004.).

The works under the Contract HK 12/02 commenced on 28<sup>th</sup> 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 17<sup>th</sup> 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 Environmental Team (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 126<sup>th</sup> Monthly EM&A Report for the works specified in Section 1.3 of the CRIII EIA Report. This report summarises the findings and results of the EM&A during the reporting month in January 2014.

### ***Environmental Monitoring and Audit Progress***

The monthly EM&A programme has been undertaken in accordance with the approved EM&A Manual. A summary of the monitoring activities performed in this reporting period is listed below:

- Continuous 24-hour noise monitoring was conducted throughout the monitoring period.
- 1-hour TSP monitoring was undertaken at Contractor HK/2012/08 Site Office and City Hall on 4<sup>th</sup>, 10<sup>th</sup>, 16<sup>th</sup>, 21<sup>st</sup>, 25<sup>th</sup> and 30<sup>th</sup> January 2014.
- 24-hour TSP monitoring was undertaken at Contractor HK/2012/08 Site Office on 3<sup>rd</sup>, 9<sup>th</sup>, 15<sup>th</sup>, 21<sup>st</sup>, 25<sup>th</sup> and 29<sup>th</sup> January 2014. Due to the problem of electricity supply, the 24-hour TSP was rescheduled from 20<sup>th</sup> January 2014 to 21<sup>st</sup> January 2014 and from 24<sup>th</sup> January 2014 to 25<sup>th</sup> January 2014.
- 24-hour TSP monitoring was undertaken at City Hall on 3<sup>rd</sup>, 9<sup>th</sup>, 15<sup>th</sup>, 20<sup>th</sup>, 24<sup>th</sup> and 29<sup>th</sup> January 2014.
- Air quality monitoring events at relocated monitoring station ACL2a (Contractor HK/2012/08 Site Office) have been commenced since 7<sup>th</sup> December 2013.
- 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.

***Exceedance of Action and Limit Levels***

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

No exceedances in noise level were recorded at City Hall during the reporting period.

***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 in relation to the environmental impact during the reporting period.

***Site Inspection and Audit***

Environmental site inspections for the CRIII project works area were undertaken on 3<sup>rd</sup>, 10<sup>th</sup>, 17<sup>th</sup>, 24<sup>th</sup> and 29<sup>th</sup> January 2014. The observations and findings of the site inspection are summarised as below:

**3<sup>rd</sup> January 2014**

Nil.

**10<sup>th</sup> January 2014**

Nil.

**17<sup>th</sup> January 2014**

Nil.

**24<sup>th</sup> January 2014**

Nil.

**29<sup>th</sup> January 2014**

Nil.

***Key Works for the Coming Month***

The key work under EP-01/122/2003/D was finished. The future works in the coming month (February 2014) are as follows:

- Minor modification works at completed footpath (arising from HyD inspection); and
- Minor modification works at Road P2/D7 pedestrian crossing.



## 1. INTRODUCTION

### 1.1 Basic Project Information

Civil Engineering and Development Department (CEDD) is the Project Proponent of the Central Reclamation Phase III Project (CRIII).

The Main Works Contract HK 12/02 for CRIII commenced on 28<sup>th</sup> February 2003 and was awarded to Leighton-China State-Van Oord Joint Venture (LCSVO-JV) for the construction of the CRIII Engineering Works. 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 17<sup>th</sup> 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 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**.

This is the 126<sup>th</sup> Monthly EM&A Report for the works specified in Section 1.3 of the CRIII EIA Report. This report summarises the findings and results of the EM&A during the reporting period in January 2014.

*Not Used*

## **2. ENVIRONMENTAL STATUS**

### **2.1 Works Undertaken**

Details of the main works in January 2014 were as follows:

- Installation of directional signs at Road P2 – completed;
- Remove two existing E&M drawpits at East Bound Road P2 near Road D8 – completed;  
and
- Additional surface drain at ACL CER office compound – completed.

### **2.2 Environmental Permits**

No environmental permits, licences, and/or notifications to EPD for this project during the reporting period.

### **2.3 Environmental Document Submission**

No submissions were provided to the ER during the reporting period.

A summary of Environmental Certification Sheet submissions during the reporting period is presented in **Table 2.1**.

**Table 2.1 - Summary of Environmental Certification Sheet Submissions**

No	Certification Subject	Letter Ref.	Date of Submission	Approved Status
1	Certification of Monthly Environmental Monitoring & Audit Report No.125, December 2013	3128/M45/200/OC14441/SO/TWC/fl	15 <sup>th</sup> January 2014	15 <sup>th</sup> January 2014

### **2.4 Environmental Meetings**

No environmental meeting was held in this reporting period.

### **2.5 Environmental Monitoring Locations**

The current environmental monitoring locations are shown in **Annex C**.

*Not Used*

### 3. EM&A REQUIREMENTS

#### 3.1 Summary of Impact EM&A Requirements

The EM&A programme requires environmental monitoring for air quality, noise, water quality, waste management, 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 3.1**.

**Table 3.1 - Summary of Impact EM&A Requirements**

Parameters	Descriptions	Locations	Frequencies	Duration
TSP	24-Hour TSP	2 Locations*	Once every 6 days	During dust generating construction works
	1-Hour TSP	2 Locations*	Three times in every 6 days	During dust generating construction works
Noise	$L_{eq}$ (30 mins), $L_{eq}$ (15 mins), $L_{10}$ , $L_{90}$ ,	1 Location	Continuous measurements	Two weeks before Construction and During Construction
Water Quality	The post project monitoring was completed in October 2011			
Waste	On-Site Waste Audit	Active Work Sites	Periodically	During Construction
	On-Site Waste Inspection			
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

Remark:

\* Air quality monitoring events at relocated monitoring station ACL2a (Contractor HK/2012/08 Site Office) were commenced since 7<sup>th</sup> December 2013.

#### 3.2 Environmental Quality Performance Limits

Environmental Quality Performance Limits for air and noise quality as provided in the Baseline Monitoring Report (Final) are shown in **Annex D**.

#### 3.3 Event Action Plan

The Event Action Plans for air and noise quality as provided in the Baseline Monitoring Report (Final) are shown in **Annex E**.

#### 3.4 Implementation of Environmental Measures

The Contractor is required to implement mitigation measures listed in the EIA Report, EM&A Manual and Further Environmental Permit. During routine site inspections, the Contractor's

implementation of mitigation measures was reviewed. The Contractor has implemented their Drainage Management Plan and Silt Curtain Operation Plan for VEP (rev 1).

*Not Used*

## **4. MONITORING RESULTS**

### **4.1 Impact Monitoring Schedule in January 2014**

Regular site inspections were carried out to assess whether the project's environmental protection and pollution control measures are in compliance with the contract specifications. Inspections were carried out on 3<sup>rd</sup>, 10<sup>th</sup>, 17<sup>th</sup>, 24<sup>th</sup> and 29<sup>th</sup> January 2014.

Continuous 24-hour noise monitoring was conducted during this reporting period.

1-hour TSP monitoring was undertaken at Contractor HK/2012/08 Site Office and City Hall on 4<sup>th</sup>, 10<sup>th</sup>, 16<sup>th</sup>, 21<sup>st</sup>, 25<sup>th</sup> and 30<sup>th</sup> January 2014.

24-hour TSP monitoring was undertaken at Contractor HK/2012/08 Site Office 3<sup>rd</sup>, 9<sup>th</sup>, 15<sup>th</sup>, 21<sup>st</sup>, 25<sup>th</sup> and 29<sup>th</sup> January 2014. Due to the problem of electricity supply, the 24-hour TSP was rescheduled from 20<sup>th</sup> January 2014 to 21<sup>st</sup> January 2014 and from 24<sup>th</sup> January 2014 to 25<sup>th</sup> January 2014. 24-hour TSP monitoring was undertaken at City Hall on 3<sup>rd</sup>, 9<sup>th</sup>, 15<sup>th</sup>, 20<sup>th</sup>, 24<sup>th</sup> and 29<sup>th</sup> January 2014.

Air quality monitoring events at relocated monitoring station ACL2a (Contractor HK/2012/08 Site Office) have been commenced since 7<sup>th</sup> December 2013.

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

Additional water quality monitoring for 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.

### **4.2 Monitoring Methodology**

#### **4.2.1 Air Quality Monitoring**

Air quality monitoring was conducted in accordance with the methodology described in the EM&A Manual. The monitoring stations are located at the City Hall and the Contractor HK/2012/08 Site Office as shown in **Annex C**.

#### **4.2.2 Noise Monitoring**

Continuous 24-hour noise monitoring was conducted in accordance with the methodology described in the EM&A Manual in the reporting period. The noise monitoring station is located at the City Hall as shown in **Annex C**.

#### **4.2.3 Water Quality Monitoring**

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



### 4.3 Monitoring Equipment

#### 4.3.1 Air Quality

The details of the equipment used in the impact air monitoring programme could be referred to the monthly report of Contact No. HK/2011/07.

#### 4.3.2 Noise

The details of the equipment used in the impact noise monitoring programme could be referred to the monthly report of Contact No. HK/2011/07.

#### 4.3.3 Water Quality

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

### 4.4 Impact Monitoring Results

#### 4.4.1 Air Quality & Noise Monitoring Results

The air quality monitoring results at the Contractor HK/2012/08 Site Office and City Hall monitoring stations are presented in **Annex F**. Graphical representation of the air quality monitoring data is provided in **Annex G**.

The noise monitoring results at the City Hall monitoring station is provided in **Annex H**. Graphical representation of the noise monitoring data is provided in **Annex I**.

#### 4.4.2 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.

#### 4.4.3 Waste Management

**Table 4.1 - Monthly Summary Waste Flow Table for January 2014**

Month	Actual Quantities of Inert C&D Materials Generated Monthly				
	Total Quantity Generated	Broken Concrete	Reused in the Contract	Reused in other Projects	Reused as Public Fill
	(in '000 m <sup>3</sup> )				
January 2014	0	-	0	-	0
Month	Actual Quantities of C&D Materials Generated Monthly				
	Metals	Paper/cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000 kg)	(in '000 kg)	(in '000 kg)		(in '000 m <sup>3</sup> )

	<b>Actual Quantities of Inert C&amp;D Materials Generated Monthly</b>				
	<b>Total Quantity Generated</b>	<b>Broken Concrete</b>	<b>Reused in the Contract</b>	<b>Reused in other Projects</b>	<b>Reused as Public Fill</b>
<b>January 2014</b>	-	0	0	0	0

**Notes:**

- (1) The performance targets are given in PS Sub-clause 2(5) ( c ).
- (2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
- (3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material
- (4) Broken concrete for recycling into aggregates

**4.4.4 Landscape and Visual**

As major construction activities undertaken during the reporting period were paving works, the landscape and visual impacts are considered minimal.

*Not Used*

## **5. ENVIRONMENTAL COMPLAINTS AND NON-COMPLIANCE**

### **5.1 Environmental Exceedances**

The number of exceedances for air quality and noise quality are presented in the following sections.

#### **5.1.1 Air Quality**

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

#### **5.1.2 Noise Impact**

No exceedances in noise level were recorded at City Hall during the reporting period.

#### **5.1.3 Waste Management**

No non-compliances with regard to waste management were recorded in the reporting period.

#### **5.1.4 Landscape and Visual Impact**

No non-compliances with regard to landscape and visual impacts were recorded in the reporting period.

#### **5.1.5 Site Environmental Audit**

No non-compliances with regard to site environmental audit were recorded for the reporting period.

A summary of findings from site inspections conducted during the reporting period is provided in **Table 5.1**.

**Table 5.1 - Summary of Environmental Site Inspections**

<b>Date of Inspection</b>	<b>Observations</b>	<b>Action(s)</b>
3 <sup>rd</sup> January 2014	Nil	N.A.
10 <sup>th</sup> January 2014	Nil	N.A.
17 <sup>th</sup> January 2014	Nil	N.A.
24 <sup>th</sup> January 2014	Nil	N.A.
29 <sup>th</sup> January 2014	Nil	N.A.

## **5.2 Environmental Complaint and Prosecution**

There were no notification of prosecutions and complaint received during the reporting period.

## **5.3 Environmental Enquiries**

No environmental enquiries were received during the reporting period.

## **5.4 Unusual Events**

No unusual events were recorded during the reporting period.

## **6. FORECAST AND SCHEDULE**

### **6.1 Key Engineering Works for the Coming Month**

The key work under EP-01/122/2003/D was finished. The future works in the coming month (February 2014) are as follows:

- Minor modification works at completed footpath (arising from HyD inspection); and
- Minor modification works at Road P2/D7 pedestrian crossing.

### **6.2 Monitoring Schedules for the Coming Months**

Based on the Contractor's construction programme, no major works will be undertaken after 31 January 2014. Therefore, no environmental monitoring and audit works have been scheduled after 31 January 2014.

### **6.3 Construction Programme for the Next 3 Months**

No major works will be undertaken after 31 January 2014. The latest Contractor's works programme (Sep 2013 to Jan 2014) is provided in **Annex B**.

*Not Used*

## **7. CONCLUSION**

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

Air quality monitoring events at relocated monitoring station ACL2a (Contractor HK/2012/08 Site Office) have been commenced since 7<sup>th</sup> December 2013.

No exceedances in noise level were recorded at City Hall during the reporting period.

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

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

Environmental site inspections for the CRIII project works area were undertaken on 3<sup>rd</sup>, 10<sup>th</sup>, 17<sup>th</sup>, 24<sup>th</sup> and 29<sup>th</sup> January 2014.. The observations and findings of the site inspection are summarised as below:

### **3<sup>rd</sup> January 2014**

Nil.

### **10<sup>th</sup> January 2014**

Nil.

### **17<sup>th</sup> January 2014**

Nil.

### **24<sup>th</sup> January 2014**

Nil.

### **29<sup>th</sup> January 2014**



*Not Used*

***Annex A***

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***Project Organisation /  
Contact Information***

***Annex B***

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***Contractor's Work Programme***

***Annex C***

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***Location of Monitoring Stations***

***Annex D***

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***Environmental Quality Performance  
Limits for Air and Noise Quality***

***Annex E***

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***Event and Action Plan for  
Air and Noise Quality***

***Annex F***

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***Air Quality Monitoring Results***

***Annex G***

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***Graphical Representation of  
Air Quality Monitoring Results***



***Annex H***

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***Noise Monitoring Results***

***Annex I***

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***Graphical Representation of  
Noise Monitoring Results***