

## TABLE OF CONTENTS

	Page
EXECUTIVE SUMMARY	1
行政摘要	3
1 INTRODUCTION	5
2 ENVIRONMENTAL MONITORING AND AUDIT REQUIREMENTS	8
3 NOISE MONITORING	9
4 WATER QUALITY MONITORING	10
5 LAND CONTAMINATION MONITORING	10
6 ENVIRONMENTAL SITE INSPECTION AND AUDIT	12
7 SUMMARY AND REVIEW OF NON-COMPLIANCE (EXCEEDANCES) OF THE ENVIRONMENTAL QUALITY	14
8 ENVIRONMENTAL COMPLAINTS, NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS	14
9 REVIEW OF THE VALIDITY OF THE EIA/ERR PREDICTION	14
10 REVIEW OF ENVIRONMENTAL IMPLEMENTATION STATUS	14
11 REVIEW OF EM&A PROGRAMME	14
12 CONCLUSIONS	15

### List of Tables

Table 1.1	Contact Information of Key Personnel
Table 2.1	Locations of Impact Noise Monitoring Stations
Table 2.2	Noise Monitoring Parameters, Frequency and Duration
Table 3.1	Summary of Number of Exceedances for Construction Impact Noise Monitoring

### Figures

Figure 1	Site Location Plan
Figure 2	Noise Monitoring Locations
Figure 3	Environmental Complaint Handling Procedure
Figure 4	Locations of Contamination Zones
Figure 5	Locations of Confirmatory Sampling (Zones R5 & R6)
Figure 6	Locations of Confirmatory Sampling (Zones R1 & R7)
Figure 7	Locations of Confirmatory Sampling (Zones R2 & R3)
Figure 8	Locations of Confirmatory Sampling (Zones R4 & R8)
Figure 9	Locations of Confirmatory Sampling (Zone A1)
Figure 10	Locations of Confirmatory Sampling (Zones A2, A3, A4 & A5)
Figure 11	Locations of Confirmatory Sampling (Zones T32C, T32D, T32E, T35C & T36A)
Figure 12	Locations of Confirmatory Sampling (Zones T19A, T22BA, T22BB)
Figure 13	Locations of Confirmatory Sampling (Zone T32E)
Figure 14	Locations of Confirmatory Sampling (Zone T35C)

### List of Appendices

Appendix A	Project Organization Structure
Appendix B	Implementation Schedule of Environmental Mitigation Measures (EMIS)
Appendix C	Summary of Action and Limit Levels
Appendix D	Graphical Presentation of Impact Daytime Construction Noise Monitoring Results
Appendix E	Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions

## EXECUTIVE SUMMARY

The proposed “Yau Tong Bay – Decommissioning of Shipyard Sites” (hereinafter referred to as “the Project”) is a Designated Project under the Environmental Impact Assessment Ordinance (Cap. 499) Schedule 2 and is governed by the Environmental Permit No. EP-409/2010. The Project aims to demolish the past and existing shipyards and their building structures and marine structures and decontaminate identified contaminated spots.

The demolition works of the building structures on land commenced on 21 November 2011 and was completed in September 2012. According to the Project Proponent, the marine structures will not be demolished.

The impact Environmental Monitoring and Audit (hereinafter referred to as “EM&A”) programme for the Project commenced on 21 November 2011. The EM&A works was suspended from November 2012 for the captioned Project and the EM&A works has been resumed on 28 October 2013. The impact EM&A programme includes daytime construction noise and water quality monitoring, soil remediation works monitoring and auditing and site auditing. The remediation method statement was approved by the EPD on 20 December 2013. The soil remediation works commenced on 23 December 2013.

This report documents the findings of EM&A works conducted in the period between 28 October 2013 and 30 September 2014.

As informed by the Contractor, construction activities were carried out in the reporting period as listed below:

- Setting up biopile base liner and cement solidification mixing pit;
- Decommissioning of the underground oil tank at YTML 6-11;
- Excavation of contaminated soil in Zones A1, A2, A3, A4, A5, R1, R2, R3, R4, R5, R6, R7, R8, T19A, T22BA, T22BB, T32C, T32E (inner), T32E (outer), T35C and T36A ;
- Backfilling Zones R2, R3, R4, R5, R6, R7, R8, A1, A3, A4, A5, T22BA, T22BB, T32C, T32E (inner), T35C and T36A;
- Formation of biopiles;
- Cleanup progress monitoring of Biopile;
- Cement solidification treatment for Zones A3, A4, A5, R6, R7, R8, T19A, T22BA, T22BB, T32C, T36A;
- Disposal of contaminated soil in Zone T32E to the South East New Territories (SENT) Landfill; and
- Closure Assessment Sampling of Biopile.

A summary of monitoring and audit activities conducted in the reporting period is listed below:

Daytime noise monitoring	26 sessions
Water quality monitoring	0 session
Environmental site inspection	47 sessions

### Breaches of Action and Limit Levels for Daytime Construction Noise

No Action Level exceedance was recorded since no construction noise related complaint was received in the reporting period.

No Limit Level exceedance of construction noise was recorded in the reporting period.

### Breaches of Action and Limit Levels for Water Quality

Water quality monitoring was not conducted in the reporting period as demolition of marine structures was not yet commenced. No Action/Limit Level exceedance of water quality was recorded in the reporting period.

### Environmental Complaint, Notification of Summons and Successful Prosecution

No environmental complaint, notification of summons and successful prosecution was received in the reporting period.

### Reporting Change

There was no reporting change required in the reporting period.

### **Future Key Issues**

Key issues to be considered in the coming month include:

- Proper storage and labeling of oils and chemicals on site;
- Chemical, chemical waste and waste management;
- Proper maintenance of all drainage facilities and wheel washing facilities on site;
- Dust suppression from excavation activities and haul road traffic; and
- Tree protective measures for all retained trees.

## 行政摘要

「油塘灣—船廠拆卸工程」(以下簡稱「本工程項目」)是一項被臚列於環境影響評估條例(第 499 章)附表 2 中的指定工程項目並受到環境許可證編號 **EP-409/2010** 所管制。本工程項目的主要目的是要拆除位於油塘灣的舊有和現有的船廠及其建築物和海事結構，以及處理指定的已受污染點。

本工程項目已於二零一一年十一月二十一日竣工並預期於二零一三年完成。本工程項目的施工期間環境監察及審核計劃亦由二零一一年十一月二十一日開始。施工期間環境監察與審核計劃包括：日間建築噪音監測，水質監測，已受污染泥復育工作的監察與審核及工地審核巡查。

本報告記錄了於二零一一年十一月一日至二零一二年十月三十一日期間所進行的環境監察與審核工作。

根據承建商提供的資料，在上述的季度的主要建築活動為

- 設立生物堆積底座內膽及水泥凝固混合坑、
- 清拆在 YTML 6-11 的地下油缸、
- 在區域 A1、A2、A3、A4、A5、R1、R2、R3、R4、R5、R6、R7、R8、T19A、T22BA、T22BB、T32C、T32E (內部)、T32E (外部)、T35C 和 T36A 污染土壤的挖掘，
- 在區域 R2、R3、R4、R5、R6、R7、R8、A1、A3、A4、A5、T22BA、T22BB、T32C、T32E (內部)、T35C 和 T36A 的回填、
- 生物堆的形成
- 生物堆清理進度監控、
- 在區域 A3、A4、A5、R6、R7、R8、T19A、T22BA、T22BB、T32C 和 T36A 的水泥固化處理、
- 在新界東南堆填區處置區域 T32E 的污染土壤，以及
- 生物堆封閉評估抽樣。

在上述的年度有下列次數的監察及審核活動進行：

日間建築噪音監測	26 次
水質監測	0 次
環境巡查	47 次

## 違反監測標準

### 日間建築噪音

在上述的期間沒有收到有關建築噪音的投訴，所以噪音監測結果皆符合行動水平。在上述的季度的所有日間建築噪音監測結果皆符合極限水平。

### 水質

因為相關的海事結構拆除工程仍未開始，故沒有水質監測在上述的年度進行。因此，沒有違反水質行動水平和極限水平的記錄。

## 有關收到的環境的投訴，傳票及檢控

在上述的年度沒有收到有關環境的投訴、傳票及檢控。

## 報告修訂

本報告年度並沒有修訂報告。

**預計要注意的事項**

- 正確保存油類和化學品;
- 化學廢物和廢物管理;
- 正確保養所有排水設施和車輪清洗設施;
- 抑制從發掘活動和運輸道路交通的灰塵;和
- 對保留樹木的保護措施。

## 1 INTRODUCTION

### 1.1 Background

- 1.1.1 The Project Site of “Yau Tong Bay-Decommissioning of Shipyard Sites” (hereinafter referred to as “the Project”) is located along the shore of Yau Tong Bay (which is also known as Kwun Tong Tsai Wan) in East Kowloon within the Kwun Tong District and the Project Site together with its adjacent land is zoned Comprehensive Development area (“CDA”) on the Approved Cha Kwo Ling, Yau Tong, Lei Yue Mun Outline Zoning Plan (OZP) No. S/K15/19. It faces Victoria Harbour to the southwest and is bounded by the Eastern Harbour Crossing Ventilation Building to the west, Cha Kwo Ling Road to the north and east, and Ko Fai Road to the south. The site is also adjacent to the former Yau Tong Industrial Area, which is at present mainly occupied by obsolete industrial buildings.
- 1.1.2 The Project is a designated project and is governed by the Environmental Permit No. EP-409/2010 (hereinafter referred to as “the EP”).
- 1.1.3 Major works to be undertaken in the Project include:-
- Demolition of past and existing shipyard and building structures;
  - Demolition of marine structure of shipyards; and
  - Decontamination of identified contaminated spots.
- 1.1.4 For the decommissioning of past and existing shipyard lots, there is a total of 39 Marine Lots along the shore of Yau Tong Bay are under the control of the Project Proponent (Main Wealth Development Limited) and covered in this Project. These 39 lots (or the ‘concerned lots’) ,with a total area of over 1 hectare (ha), as listed below and highlighted in **Figure 1**, are hereinafter referred to as the ‘Project Site’. The land uses for the Project Site had been industrial and various land uses including shipyards, timber yards, sawmills and concrete batching plant.
- YTML No. 1
  - YTMLs No. 5-14
  - YTML No. 15
  - YTMLs No. 19-24
  - YTMLs No. 27-38
  - YTMLs No. 41-46
  - YTML No. 54
- 1.1.5 Main Wealth Development Limited (the Project Proponent) has commissioned AECOM Asia Company Limited as the Engineer of the Project and Kin Wing Construction Co., Ltd was commissioned as the Decontamination Contractor of the Project (hereafter referred to as “the Contractor”).
- 1.1.6 AECOM Asia Company Limited was appointed to undertake the Environmental Team (hereafter referred to as “ET”) services for implementation of all the Environmental Monitoring and Audit (hereafter referred to as “EM&A”) works under the Project. Mott MacDonald Hong Kong Limited and Nature & Technologies (HK) Limited act as the Independent Environmental Checker (hereafter referred to as “IEC”) and Independent Environmental Auditor (hereafter referred to as “IEA”) for the Project respectively.
- 1.1.7 According to the updated programme, the demolition works of the Project commenced on 21 November 2011. The demolition works of the building structures on land commenced on 21 November 2011 and was completed in September 2012. The demolition works of marine structures are yet to commence. The remediation method statement was approved by the EPD on 20 December 2013. The soil remediation works commenced on 23 December 2013.
- 1.1.8 In accordance with the updated Environmental Monitoring and Audit Manual (hereinafter referred to as “the EM&A Manual”) of the Project, there is a need of an impact EM&A programme includes daytime construction noise and water quality monitoring, soil remediation works monitoring and auditing and site auditing. The impact EM&A Programme for the Project commenced on 21 November 2011. The EM&A works was suspended from November 2012 for the captioned Project and the EM&A works has been resumed on 28 October 2013.

## 1.2 Scope of Report

- 1.2.1 This is the second Annual Environmental Monitoring and Audit (EM&A) Review Report for the Project “Yau Tong Bay – Decommissioning of Shipyard Sites”. This report presents a summary of the environmental monitoring and audit works, list of activities and mitigation measures proposed by the ET for the Project in the period between 28 October 2013 and 30 September 2014.

## 1.3 Project Organization

- 1.3.1 The project organization structure is shown in **Appendix A**. The key personnel contact names and numbers are summarized in **Table 1.1**.

**Table 1.1 Contact Information of Key Personnel**

Party	Name	Telephone	Fax
<b>Project Proponent</b> <b>(Main Wealth Development Limited)</b>	Gregory Chan	2908 8679	2562 0029
<b>Engineer</b> <b>(AECOM Asia Co. Ltd.)</b>	Edward Poon	3922 9000	3922 9797
<b>Decontamination Contractor (Contractor)</b> <b>(Kin Wing Construction Co., Ltd)</b>	Lee Kam Hung	2717 9139	2725 9316
<b>Independent Environmental Checker (IEC)</b> <b>(Mott MacDonald Hong Kong Limited)</b>	Terence Kong	2828 5919	2827 1823
<b>Independent Environmental Auditor (IEA)</b> <b>(Nature &amp; Technologies (HK) Limited)</b>	Gabriel Lam	2877 3122	2511 0922
<b>Environmental Team Leader (ETL)</b> <b>(AECOM Asia Co. Ltd.)</b>	Y T Tang	3922 9393	3922 9797

#### 1.4 Summary of Construction Works

- 1.4.1 The demolition works of the building structures on land commenced on 21 November 2011 and was completed in September 2012. According to the Project Proponent, the marine structures will not be demolished.
- 1.4.2 The remediation method statement was approved by the EPD on 20 December 2013. The soil remediation works commenced on 23 December 2013. A Supplementary CAR for the underground tank at YTML 6-11 and a Soil Remediation Report (Batch 1, which cover YTML 1, 5, 6-11, 12, 13-14, 54, 19-21, 22A, 22B, 22RP and 23-24) have been submitted on 13 August 2014 and 18 August 2014 respectively. The response from EPD is pending.
- 1.4.3 As informed by the Contractor, the major construction activities carried out in the reporting period were:
- Setting up biopile base liner and cement solidification mixing pit;
  - Decommissioning of the underground oil tank at YTML 6-11;
  - Excavation of contaminated soil in Zones A1, A2, A3, A4, A5, R1, R2, R3, R4, R5, R6, R7, R8, T19A, T22BA, T22BB, T32C, T32E (inner), T32E (outer), T35C and T36A ;
  - Backfilling Zones R2, R3, R4, R5, R6, R7, R8, A1, A3, A4, A5, T22BA, T22BB, T32C, T32E (inner), T35C and T36A;
  - Formation of biopiles;
  - Cleanup progress monitoring of Biopile;
  - Cement solidification treatment for Zones A3, A4, A5, R6, R7, R8, T19A, T22BA, T22BB, T32C, T36A;
  - Disposal of contaminated soil in Zone T32E to the South East New Territories (SENT) Landfill; and
  - Closure Assessment Sampling of Biopile.
- 1.4.4 The general layout plan of the Project site is shown in **Figure 1**.



## 2 ENVIRONMENTAL MONITORING AND AUDIT REQUIREMENTS

### 2.1 Monitoring Parameters and Locations

- 2.1.1 The EM&A Manual designated locations for the monitoring of environmental impacts in terms of construction noise, water quality and land contamination impact due to the Project.
- 2.1.2 Water quality monitoring will be conducted when the demolition of marine structures commences.
- 2.1.3 The EM&A Manual also requires environmental site inspections for air quality, noise, water quality, waste management, land contamination, and landscape and visual impacts.
- 2.1.4 The description of monitoring parameters, frequencies and durations, and detailed locations of monitoring stations for impact noise are listed below. The monitoring stations for impact noise are depicted in **Figure 2**.

**Table 2.1 Locations of Impact Noise Monitoring Stations**

Monitoring Station	Location	Description
NM1	Yau Lai Estate Hong Lai House	1m from the exterior of the roof top façade of the building
NM2	S.K.H. Yau Tong Kei Hin Primary School	1m from the exterior of the roof top façade of the building
NM3	C.C.C. Kei Faat Primary School (Yau Tong)	1m from the exterior of the roof top façade of the building

**Table 2.2 Noise Monitoring Parameters, Frequency and Duration**

Parameter	Frequency and Duration
30-mins measurement at each monitoring station between 0700 and 1900 on normal weekdays. $L_{eq}$ , $L_{10}$ and $L_{90}$ would be recorded.	At least once per two weeks

### 2.2 Environmental Quality Performance Limits (Action/Limit Levels)

- 2.2.1 The environmental quality performance limits, i.e. Action and Limit Levels for construction noise monitoring works were derived from the baseline monitoring results as detailed in the EM&A Manual. **Appendix C** shows the established Action and Limit Levels for noise monitoring.

### 2.3 Environmental Mitigation Measures

- 2.3.1 Relevant environmental mitigation measures as recommended in the Project EIA final report were stipulated in the EM&A Manual and environmental requirement in contract documents for the Contractor to adopt. A list of mitigation measures and their implementation statuses, i.e. Implementation Schedule of Environmental Mitigation Measures (EMIS), are given in **Appendix B**.

### 3 NOISE MONITORING

- 3.1.1 Noise monitoring was conducted at 3 designated monitoring stations (NM1 to NM3), for at least once per two weeks during daytime 0700 – 1900 of reporting quarter. The graphical plots of trends of the monitoring results are provided in **Appendix D**.
- 3.1.2 Twenty-seven (26) daytime noise monitoring events were carried out at each of the designated monitoring stations (NM1 to NM3) respectively in the reporting period.
- 3.1.3 No Action Level exceedance was recorded since no construction noise related complaint was received in the reporting period.
- 3.1.4 No Limit Level exceedance of construction noise was recorded in the reporting period.
- 3.1.5 **Table 3.1** presents the number of exceedances recorded in the reporting period. The number of monitoring events included regular impact monitoring events and additional ones, if any.

**Table 3.1 Summary of Number of Exceedances for Construction Impact Noise Monitoring**

Monitoring Parameter	Level of Exceedance	November 2011 to October 2012		
		NM1	NM2	NM3
Daytime Construction Noise	No. of monitoring events	26	26	26
	Action	0	0	0
	Limit	0	0	0
	<i>Total no. of Action and Limit Level Exceedances</i>	<b>0</b>	<b>0</b>	<b>0</b>

Remarks: Exceedances which are not project-related are not presented in this table.

## 4 WATER QUALITY MONITORING

- 4.1.1 Water quality monitoring was not conducted in the reporting period as demolition of marine structures was not commenced. Therefore, no Action/Limit Level exceedance of water quality was recorded in the reporting period.

## 5 LAND CONTAMINATION MONITORING

### 5.1 Monitoring Status

- 5.1.1 The remediation method statement was approved by the EPD on 20 December 2013. The soil remediation works commenced on 23 December 2013.
- 5.1.2 Cement Solidification and Stabilization was commenced on 21 January 2014 and biopile remediation was commenced on 24 March 2014. Monitoring works has been conducted accordingly. Biopile treatment and Cement Solidification and Stabilization were completed in August 2014 and September 2014 respectively and the treated soil was being used for backfilling.

### 5.2 Excavation Progress

- 5.2.1 As of 30 September 2014, excavation for all contaminated soil requiring biopile and/or cement solidification treatment has been completed in zones T19A, T22BA, T22BB, T32C, T32E, T35C, T36A, A1, A2, A3, A4, A5, R1, R2, R3, R4, R5, R6, R7 and R8. Soil in zone T32D, which required landfill disposal, has not been excavated yet and will be excavated in later phase.
- 5.2.2 Verification sampling has been conducted according to the corresponding CAR/RAPs ((a) *Appendix 7C – Remediation Action Plan for Yau Tong Bay Marine Lots in the Reclamation of Yau Tong Bay Final EIA Report (January 2002)*; (b) *Yau Tong Bay - Decommissioning of Shipyard Sites - Contamination Assessment Report and Remediation Action Plan (YTML 1, 6-11, 15, 28, 29, 38 and 41-43*; (c) *Yau Tong Bay – Decommissioning of Shipyard Sites - Supplementary Contamination Assessment Report and Remediation Action Plan for Previously Inaccessible Lots (YTML 27, 44, 45-46, 54 and Underground Oil Tank at YTML 6-11)*) to define the contamination extent. The excavation extends for all the zones have been confirmed in May, according to the verification sampling results. The locations of the contamination zones are shown in **Figure 4** and the finalized excavation extent of the contaminated zones are indicated in **Figures 5 to 12**.

### 5.3 Biopiling and Cement Solidification / Stabilization Progress

- 5.3.1 The set up of the biopiling facility has been completed and treatment has been commenced in March. Excavated soil from Zones A2, R1, R2, R3, R4, T32E(outer) and T35C has been transferred to the facility. Biopiling treatment was in progress during the reporting quarter and progress monitoring samples were collected regularly to check if remediation targets have been achieved. As of 30 September 2014, biopiling treatment for all samples were completed.
- 5.3.2 Cement Solidification / Stabilization have been conducted for contaminated soil from zones A2 and T32E. 10 monitoring samples of the cement-treated soil were collected for Toxicity Characteristic Leaching Procedure (TCLP) and Unconfined Compressive Strength (UCS) tests in the reporting quarter. The tested results showed that the remediation targets were achieved for all samples.

### 5.4 Landfill Disposal Progress

- 5.4.1 Contaminated soil in zone T32D and a portion of zone T32E (T32E(inner)) is subjected to be disposed at landfill. The soils are packed and sealed in impermeable containers with proper labels. The containers with the contaminated soil are then collected and transferred from the Site to the South East New Territories (SENT) Landfill by a licensed chemical waste collector, Sun Base Environmental Service Limited. In total, 191,250 kg (approximately 126m<sup>3</sup>) of contaminated soil has been transported to SENT in the reporting period.

## **5.5 IEA Spot Check Samples**

- 5.5.1 The Independent Environmental Auditor (IEA) conducted ten (10) spot check samplings in the reporting period. A total of ten (10) spot check samples were collected.
- 5.5.2 The result of the spot check sample are in order with the Contractor's sample, except the sample collected on 19 May 2014, which is found discrepant with the sample collected by the Contractor. Exceedance of remediation target was found in the contractor's sample while the IEA spot check sample result has shown a level within the standard limit. This may due to uneven distribution of the contaminants. With respect to the Contractor result, further sampling for BP2 was conducted in June.

## 6 ENVIRONMENTAL SITE INSPECTION AND AUDIT

- 6.1.1 There were forty-seven (47) site inspections conducted in the reporting period to monitor the implementation of proper environmental pollution control and mitigation measures for the Project. The major concerns for the Project are air quality, noise, water quality and chemical and waste management. Observations recorded are described below.
- 6.1.2 The Contractor has rectified observations as identified during environmental site inspection in the reporting period within agreed time frame.
- 6.1.3 Particular observations during the site inspections are described below:

### ***Air Quality***

- 6.1.4 Wheel washing facilities with high pressure jets were not provided at two entrance points of the site.
- 6.1.5 Stockpiles of wastes and construction materials were not sprayed with water; or covered entirely by impervious sheeting or placed in sheltered areas. The Contractor should cover stockpiles of wastes and construction materials; and regularly spray water to stockpile materials or dusty site surfaces should be maintained.
- 6.1.6 Some site areas are not installed with water sprinklers. Regular spraying of water by other methods (e.g. water vehicles) at those areas should be maintained.
- 6.1.7 Regular spraying of water has been maintained for areas not covered by water sprinklers (Reminder).
- 6.1.8 The stockpile of bioremediated soil has been transferred for backfilling or cement S/S. The impervious sheet has been temporarily removed during the transferring process.
- 6.1.9 Since the cement for solidification process was mixed with soil and water once it is debagged, the dust generated in de-bagging and mixing process has been minimised.

### ***Noise***

- 6.1.10 A small opening was found at the hoarding at the roadside near YTML 6-11. The opening should be covered.
- 6.1.11 A few hoardings at the seawall side were found temporary removed. The Contractor was reminded to maintain the condition of the hoarding as per the approved hoarding plan. Also, temporary measures such as barricades and sand bags shall be provided in order to prevent surface run-off being discharged outside the site boundary. (Reminder)

### ***Water Quality***

- 6.1.12 Open stockpiles of construction materials and stockpiles of cement placed on site were not covered with tarpaulin or similar fabric.
- 6.1.13 Construction debris and spoil be were not covered up or disposed of as soon as possible to avoid being washed into the nearby receiving waters.

### ***Land Contamination***

- 6.1.14 IEA has collected spot check samples and the results are in order with the verification samples collected by the Contractor, except the sample taken at BP2 on 19 May 2014.  
  
Discrepancy was observed and exceedance was found in the contractor's sample while the IEA spot check sample result has shown a level within the standard limit. The difference may be due to uneven distribution of contaminants in soil. With respect to the Contractor result, further sampling for BP2 was conducted in June.

### ***Chemical and Waste Management***

- 6.1.15 The stockpile of the excavated contaminated soil should be placed on area laid with impermeable liner and properly covered. It was observed that a few excavated soils from the stockpile were spilled

outside the liner. The Contractor should ensure that the stockpile of contaminated soil is properly placed on the liner.

- 6.1.16 Label is missing for an oil drum on site. The oil drum should be properly labelled.
- 6.1.17 The contaminated soil to be disposed of to the landfill (as chemical wastes) is filled in labelled drums or bags, and temporary stored inside a truck's tank provided by a licensed chemical waste collector. The chemical waste collector then collects the tank and disposes of the contaminated soil to the landfill at a regular time interval (Reminder).
- 6.1.18 Two drums of diesel oil were observed placed on the ground with no drip tray or bunding provided. The oil drums should be stored in bunded areas.

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

- 5.1.1. The protective net in the surrounding of one of the retained trees was found slid off at the time of the site inspection; now, it is fixed to its original position. The nets surrounding other retained trees in the site are also checked to be in proper positions.

#### ***Miscellaneous***

- 6.1.19 The Contractor should provide recycling bins at the site office area and site exits.
- 6.1.20 Relevant Environmental Permits are not posted at two vehicle site entrances.

## **7 SUMMARY AND REVIEW OF NON-COMPLIANCE (EXCEEDANCES) OF THE ENVIRONMENTAL QUALITY**

- 7.1.1 No Action Level exceedance was recorded since no construction noise related complaint was received in the reporting quarter.
- 7.1.2 No Limit Level exceedance of construction noise was recorded in the reporting quarter.
- 7.1.3 Water quality monitoring was not conducted in the reporting quarter as demolition of marine structures was not commenced.

## **8 ENVIRONMENTAL COMPLAINTS, NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS**

- 8.1.1 The Environmental Complaint Handling Procedure is annexed in **Figure 3**.
- 8.1.2 No environmental complaint, notification of summons and prosecutions was received in the reporting period.
- 8.1.3 Cumulative statistics on complaints, notifications of summons and successful prosecutions are summarized in **Appendix E**.

## **9 REVIEW OF THE VALIDITY OF THE EIA/ERR PREDICTION**

- 9.1.1 The overall result was in line with the Environmental Impact Assessment (EIA) and Environmental Review Report (ERR) prediction that with the implementation of noise mitigation measures, the construction noise from the Project works will meet the stipulated criterion at the NSRs.

## **10 REVIEW OF ENVIRONMENTAL IMPLEMENTATION STATUS**

- 10.1.1 The impact noise and water quality monitoring programme ensured that any environmental impact to the receivers would be readily detected and timely actions could be taken to rectify any non-compliance. Assessment and analysis of monitoring results collected demonstrated the environmental acceptability of the Project. The weekly site inspection and soil remediation monitoring and auditing ensured that all the environmental mitigation measures recommended in the EIA report were effectively implemented. Despite the minor deficiencies found during site audits, the relevant contractor had taken appropriate actions to rectify deficiencies within reasonable timeframe. Therefore, the effectiveness and efficiency of the mitigation measures were considered high in most of the time.

## **11 REVIEW OF EM&A PROGRAMME**

- 11.1.1 The environmental monitoring methodology was considered well established as the monitoring results were found in line with the EIA predictions.
- 11.1.2 The EM&A programme effectively monitored the environmental impacts from the construction activities and no particular recommendation was advised for the improvement of the programme.

## **12 CONCLUSIONS**

- 12.1.1 The demolition works of the Project commenced on 21 November 2011 and was completed in September 2012.
- 12.1.2 The impact EM&A programme for the Project commenced on 21 November 2011.
- 12.1.3 Noise monitoring and weekly site inspection were carried out from October 2013 to September 2014, in accordance with the EM&A Manual.
- 12.1.4 No Action Level exceedance was recorded since no construction noise related complaint was received in the reporting quarter.
- 12.1.5 No Limit Level exceedance of construction noise was recorded in the reporting period.
- 12.1.6 Water quality monitoring was not conducted in the reporting period as demolition of marine structures was not yet commenced. No Action/Limit Level exceedance of water quality was recorded in the reporting period.
- 12.1.7 Four (4) environmental complaints were followed up by Environmental Team in the reporting period.
- 12.1.8 No environmental complaint, notification of summons and successful prosecution was received in the reporting report.
- 12.1.9 Mitigation measures had been implemented by the Contractors to minimize the environmental impacts due to construction activities. Site inspections carried out by ET and IEC showed that the Contractors rectified the problems observed promptly and no major environmental deficiency was induced. The EM&A programme was considered successfully and adequately conducted during the course of the reporting period.