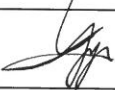



Main Wealth Development Ltd.

**Yau Tong Bay – Decommissioning of
Shipyards Sites**

Final EM&A Review Report

[01/2015]

| | Name | Signature |
|---------------------------------|----------------|---|
| Prepared & Checked: | Oscar Yip |  |
| Reviewed, Approved & Certified: | Y T Tang (ETL) |  |

| | | |
|----------|--------|-----------------------|
| Version: | Rev. 0 | Date: 19 January 2015 |
|----------|--------|-----------------------|

Disclaimer

This report is prepared for Main Wealth Development Ltd. and is given for its sole benefit in relation to and pursuant to Yau Tong Bay – Decommissioning of Shipyards Sites and may not be disclosed to, quoted to or relied upon by any person other than Main Wealth Development Ltd. without our prior written consent. No person (other than Main Wealth Development Ltd.) into whose possession a copy of this report comes may rely on this report without our express written consent and Main Wealth Development Ltd. may not rely on it for any purpose other than as described above.

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Main Wealth Development Limited
71/F Two International Finance Centre
8 Finance Street
Central
Hong Kong

16 January 2015

Attn : Ms. Amy Chan

Dear Madam,

**Yau Tong Bay – Decommissioning of Shipyard Sites
Environmental Permit No. EP-409/2010
Final EM&A Summary Report (version: Rev. 0)**

Further to the receipt from Environmental Team (ET) of the captioned Final EM&A Report on 9, 13, 14, 15 and 16 January 2015 via email, pursuant to Updated EM&A Manual (v.4), we have no comment on the captioned report (Rev.0) for Yau Tong Bay.

Yours faithfully
for MOTT MACDONALD HONG KONG LIMITED



Terence Kong
Independent Environmental Checker (IEC)



NATURE & TECHNOLOGIES (HK) LIMITED

科技環保(香港)有限公司

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Our Ref: 3.14/018/2009/at

19 January 2015

Main Wealth Development Ltd.
72 – 76/F, Two International Finance Centre
8 Finance Street
Central
Hong Kong

Attn: Ms. Amy Chan

Dear Ms. Chan,

**Yau Tong Bay – Decommissioning of Shipyard Sites
Environmental Permit No. EP-409/2010
Final EM&A Summary Report (Version: Rev.0)**

With reference to the captioned document verified by IEC on 16 January 2015, we are pleased to provide our confirmation for the document on sections that is specific to soil remediation work pursuant to Condition 5.4 of the Environmental Permit No. EP-409/2010.

Yours faithfully,
Nature & Technologies (HK) Limited

Ir Dr Gabriel C K Lam
Independent Environmental Auditor

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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. No marine structures were 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 two periods: 21 November 2011 to 31 October 2012 and 28 October 2013 to 5 January 2015.

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

- Building demolition of YTML 15, 19-24 & YTML54 (Phase 1) and general site clearance (Phase 1);
- Building demolition of YTML 21 (Phase 1) and building demolition of YTML 1, YTML 42-46 (Phase 2);
- Building demolition of YTML 5-14 (Phase 2), building demolition of YTML 27-41 (Phase 3) and general site clearance (Phase 2);
- Site clearance (Phase 3);
- 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 | 58 sessions |
| Water quality monitoring | 0 session |
| Environmental site inspection | 110 sessions (Including 1 session of Final Site Inspection conducted on 5 January 2015.) |

Breaches of Action and Limit Levels for Daytime Construction Noise

One Action Level exceedance of construction noise was recorded in the reporting period, since a noise complaint (referred from EPD) was received on 18 June 2012 and the noise source was likely contributed from the demolition work of the project at Ko Fai Road during the weekdays. The complaint was considered as project-related.

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

Breaches of Action and Limit Levels for Water Quality

No Action/Limit Level exceedance of water quality was recorded as no water quality monitoring was conducted in the reporting period.

Environmental Complaint, Notification of Summons and Successful Prosecution

Four complaints, including two (2) air complaints and two (2) noise complaints were received in the reporting period.

An air pollution complaint, was received by EPD on 9 December 2011, and referred from EPD on 15 December 2011. The complaint was about dust emission from demolition works near Ko Fai Road and inefficient dust mitigation measures in works area on 9 December 2011. The dust emission was likely contributed from the breaking works and exposed works area of the Project without sufficient dust suppression measure. The complaint was considered as project-related.

A noise complaint was received by and referred from EPD on 28 December 2011. The complaint was about hammering noise from the Project site near Cha Kwo Ling Road from 24 December 2011 to 26 December 2011 and the construction works (i.e. hammering and weldig) conducted until 2300. The complaint was suspected to be caused by the trespassers of the Project works area and was considered not project related.

A noise complaint (referred from EPD) was received on 18 June 2012. The complaint was about the noise from the operation of Powered Mechanical Equipment (PME) from 8:00 to 19:00 from a construction site near Yau Lai Estate during weekdays and general holidays. The noise source was likely contributed from the demolition work of the project at Ko Fai Road during the weekdays. The complaint was considered as project-related.

An air complaint (referred from EPD) was received on 3 August 2012. The complaint was about the concern of air emission from the spraying activities carried out at the construction site near the junction of Ko Fai Road and Cha Kwo Ling Road on 3 August 2012 that would stain the bodies of vehicles nearby and cause air nuisance to the public. The complaint was considered as project-related.

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

Reporting Change

There was no reporting change required in the reporting period.

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。由二零一二年十一月起，本工程項目之施工期間環境監察與審核工作暫停，並於二零一三年十月二十八日恢復。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。環保署在二零一三年十二月二十日批准了土地整治方法聲明。土壤修復工程於二零一三年十二月二十三日開始。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。

本報告記錄了於 2011 年 11 月 21 日至 2012 年 10 月 31 日以及 2013 年 10 月 28 日至 2015 年 1 月 5 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

- YTML15, 19-24 及 YTML54 的拆卸工程(第一期工程)及清理地盤(第一期工程)、
- YTML 5-14, YTML 42-46 的拆卸工程(第二期工程)、
- YTML1 的拆卸工程(第二期工程), YTML 27-41 的拆卸工程(第三期工程)及清理地盤(第二期工程)、
- 清理地盤(第三期工程)、
- 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 | 58 次 |
| 水質監測 | 0 次 |
| 環境巡查 | 110 次 |
| | (包括 1 次於 2015 年 1 月 5 日進行的最後環境巡查) |

違反監測標準

日間建築噪音

在二零一二年六月十八日收到一個(由環保署轉介)有關建築噪音的投訴，噪音懷疑是由在高輝道地盤在平日的拆卸工程所產生，推斷此噪音投訴個案與本工程項目有關，所以在上述的期間有一個超出行動水平的日間建築噪音監測結果。

在上述的期間的所有日間建築噪音監測結果皆符合極限水平。

水質

在上述的季度因為沒有進行水質監測，故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

在上述的期間收到共四宗投訴, 包括兩宗空氣以及兩宗噪音投訴。

於二零一一年十二月十五日, 由環保署轉介一宗在二零一一年十二月九日接到之空氣污染投訴個案。這宗投訴是關於在二零一一年十二月九日, 於高輝道附近的拆卸工程所排出之塵埃及在工程項目範圍之內的低效能塵埃消減措施。經調查後, 塵埃看似由斷裂工程和空曠工程項目範圍內的塵埃抑制措施不足所造成。此宗投訴個案考慮成與工程項目有關並向承建商提出塵埃消減措施之建議。

於二零一一年十二月二十八日, 環保署轉介一宗在同日接到之噪音投訴個案。這宗投訴是關於在二零一一年十二月二十四日至二十六日期間, 在茶果嶺道附近的工程項目範圍所發出之敲擊噪音, 另外敲擊和燒焊工程一直持續至晚上十一時。噪音懷疑是由非法侵佔地盤者所產生, 推斷此噪音投訴個案與本工程項目無關。

於二零一二年六月十八日, 環保署轉介一宗噪音投訴個案。這宗投訴是關於在平日及公眾假期於早上八時至下午七時期間, 在油麗邨附近的工程地盤所發出之機械設備的噪音。噪音懷疑是由在高輝道地盤平日的拆卸工程所產生, 推斷此噪音投訴個案與本工程項目有關。

於二零一二年八月三日, 環保署轉介一宗空氣投訴個案。這宗投訴是關於在二零一二年八月三日, 在靠近高輝道和茶果嶺道的接合處之噴漆活動所引起的空氣散發憂慮, 導致弄髒停泊在附近車輛的車身及對公眾造成空氣滋擾, 推斷此空氣投訴個案與本工程項目有關。

在上述的年度沒有收到有關環境的傳票及檢控。

報告修訂

本報告年度並沒有修訂報告。

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 According to the EP, 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 remediation method statement was approved by the EPD on 20 December 2013. The soil remediation works commenced on 23 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 Final 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 two periods: 21 November 2011 to 31 October 2012 and 28 October 2013 to 5 January 2015.

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 |
|--|--------------|-----------|-----------|
| Project Proponent (Main Wealth Development Limited) | Gregory Chan | 2908 8679 | 2562 0029 |
| Engineer (AECOM Asia Co. Ltd.) | Edward Poon | 3922 9000 | 3922 9797 |
| Decontamination Contractor (Contractor) (Kin Wing Construction Co., Ltd) | Lee Kam Hung | 2717 9139 | 2725 9316 |
| Independent Environmental Checker (IEC) (Mott MacDonald Hong Kong Limited) | Terence Kong | 2828 5919 | 2827 1823 |
| Independent Environmental Auditor (IEA) (Nature & Technologies (HK) Limited) | Gabriel Lam | 2877 3122 | 2511 0922 |
| Environmental Team Leader (ETL) (AECOM Asia Co. Ltd.) | 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.
- 1.4.2 Two batches of Soil Remediation Report have been submitted to EPD to demonstrate that the remediation work has been properly carried out.
- 1.4.3 Supplementary CAR has been submitted to EPD for endorsement before commencement of remediation work
- 1.4.4 As informed by the Contractor, the major construction activities carried out in the reporting period were:
- Building demolition of YTML 15, 19-24 & YTML54 (Phase 1) and general site clearance (Phase 1);
 - Building demolition of YTML 21 (Phase 1) and building demolition of YTML 1, YTML 42-46 (Phase 2);
 - Building demolition of YTML 5-14 (Phase 2), building demolition of YTML 27-41 (Phase 3) and general site clearance (Phase 2);
 - Site clearance (Phase 3);
 - 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.
- 1.4.5 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 would be carried out when there is demolition of marine structures.
- 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 Fifty-eight (58) 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 One Action Level exceedance of construction noise was recorded in the reporting period, since a noise complaint (referred from EPD) was received on 18 June 2012 and the noise source was likely contributed from the demolition work of the project at Ko Fai Road during the weekdays. The complaint was considered as project-related.
- 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 December 2014 | | |
|----------------------------|--|--------------------------------|-----|-----|
| | | NM1 | NM2 | NM3 |
| Daytime Construction Noise | No. of monitoring events | 58 | 58 | 58 |
| | Action | 1 | | |
| | Limit | 0 | 0 | 0 |
| | <i>Total no. of Action and Limit Level Exceedances</i> | 1 | | |

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

- 3.1.6 **Table 3.2** summarizes the weather condition in each month in the reporting period.

Table 3.2 Summary of Weather Condition for Construction Impact Noise Monitoring

| Reporting Month | Weather Condition | Reporting Month | Weather Condition |
|-----------------|---------------------|-----------------|-------------------|
| Nov-11 | Fine | Jan-14 | Cloudy, Sunny |
| Dec-11 | Sunny | Feb-14 | Cloudy, Sunny |
| Jan-12 | Fine | Mar-14 | Sunny |
| Feb-12 | Fine | Apr-14 | Fine, Sunny |
| Mar-12 | Fine, Sunny | May-14 | Cloudy, Sunny |
| Apr-12 | Fine, Sunny | Jun-14 | Cloudy, Sunny |
| May-12 | Sunny | Jul-14 | Sunny |
| Jun-12 | Sunny | Aug-14 | Sunny |
| Jul-12 | Sunny, Rainy | Sep-14 | Fine, Sunny |
| Aug-12 | Sunny | Oct-14 | Sunny |
| Sep-12 | Fine, Sunny | Nov-14 | Fine |
| Oct-12 | Sunny, Fine, Cloudy | Dec-14 | Fine |
| Oct-13 | Sunny | | |
| Nov-13 | Cloudy, Sunny | | |
| Dec-13 | Fine, Sunny | | |

4 WATER QUALITY MONITORING

4.1.1 Water quality monitoring was not conducted in the reporting period as no demolitions of marine structures were carried out. 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 was 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. Disposal of contaminated soil was completed on 23 December 2014 and all contaminated soil requiring disposal had been transported to the South East New Territories (SENT) Landfill.

5.1.3 All decontamination works were completed on 23 December 2014.

5.2 Excavation

5.2.1 As of 30 September 2014, excavation for all contaminated soil 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 been excavated in October and backfilled in November 2014.

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.

5.2.3 In accumulation, 408 verification samples have been collected to determine the excavation extent of contaminated soil. The excavation extends for all the zones have been confirmed and verified in May 2014, 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**.

5.2.4 The excavation extent of each zone is summarized in **Table 5.1**.

Table 5.1 Excavation Extent of Contaminated Zones

| Zone | Depth | | Area of Contaminated Zone (m ²) | Volume of Contaminated Soil (m ³) | Treatment Method |
|--------------|---------|-----|---|---|-------------------|
| | (mbgl) | (m) | | | |
| T19A | 0.5-2 | 1.5 | 95 | 143 | Cement S/S |
| T22BA | 0-2.5 | 2.5 | 102 | 254 | Cement S/S |
| T22BB | 1.5-3 | 1.5 | 166 | 249 | Cement S/S |
| T32C | 1.5-3.5 | 2 | 87 | 174 | Cement S/S |
| T32D | 0.5-1.5 | 1 | 79 | 79 | Landfill disposal |
| T32E (outer) | 0-1.5 | 1.5 | 517 | 817 | Biopile |
| T32E (inner) | 0-3 | 3 | 166 | 497 | Landfill disposal |

| Zone | Depth | | Area of Contaminated Zone (m ²) | Volume of Contaminated Soil (m ³) | Treatment Method |
|------|-----------|------|---|---|------------------|
| | (mbgl) | (m) | | | |
| T35C | 0-2.5 | 2.5 | 571 | 1433 | Biopile |
| T36A | 0-1.5 | 1.5 | 70 | 104 | Cement S/S |
| A1 | 0-1 | 1 | 25 | 25 | Cement S/S |
| A2 | 1-2.35 | 1.35 | 35 | 47 | Biopile |
| A3 | 2.35-4.95 | 2.6 | 30 | 79 | Cement S/S |
| A4 | 1-2.45 | 1.45 | 39 | 56 | Cement S/S |
| A5 | 1.4-2.55 | 1.15 | 45 | 52 | Cement S/S |
| R1 | 0-1 | 1 | 25 | 25 | Biopile |
| R2 | 0-1 | 1 | 30 | 30 | Biopile |
| R3 | 0-3.95 | 3.95 | 25 | 99 | Biopile |
| R4 | 0-1 | 1 | 25 | 25 | Biopile |
| R5 | 0-1 | 1 | 28 | 28 | Cement S/S |
| R6 | 2.7-4.15 | 1.45 | 25 | 36 | Cement S/S |
| R7 | 3.1-4.55 | 1.45 | 28 | 40 | Cement S/S |
| R8 | 2.5-4.45 | 1.95 | 25 | 49 | Cement S/S |

Note:

Cement S/S: Cement Solidification and Stabilization

5.2.5 According to the CAR/RAPs, QA/QC samples are required for every 20 samples collected. 21 sets of QA/QC samples have been collected. All testing parameters of the QA/QC samples are found below the reporting limit. Procedures for sample collection and preparation are considered acceptable.

5.3 Biopiling

5.3.1 The set up of the biopiling facility has been completed and treatment has been commenced in March 2014. Excavated organic contaminated soil has been transferred to the facility. Biopiling treatment was completed in August 2014 as proven by the satisfactory result of the regular progress monitoring sample and the biopile closure assessment conducted in July and August 2014.

5.3.2 According to the CAR/RAPs as listed in Section 4.5.3, QA/QC samples are required for every 20 samples collected for monitoring tests for the soil of A- and R- zones. 3 sets of QA/QC sample have been collected since the commencement of biopiling treatment. The results of these 3 sets have been reported in May and September monthly report. Among the received results, all testing parameters of the QA/QC samples are found below the reporting limit. Procedures for sample collection and preparation are considered acceptable.

5.4 Cement Solidification / Stabilization

5.4.1 Cement Solidification / Stabilization have been conducted for metal contaminated soil. A total of 47 sets of monitoring samples (for Toxicity Characteristic Leaching Procedure (TCLP) and Unconfined Compressive Strength (UCS) tests) have been collected since the commencement of cement solidification. The tested results showed that the remediation targets were achieved for all samples. The Cement Solidification / Stabilization procedures for all contaminated zones were completed in September 2014.

5.4.2 According to the CAR/RAPs, QA/QC samples are required for every 20 samples collected for TCLP tests for the soil of A- and R- zones. 2 sets of QA/QC samples have been collected since the commencement of cement solidification / stabilization. All testing parameters of the QA/QC samples are found below the reporting limit. Procedures for sample collection and preparation are considered acceptable.

5.5 Landfill Disposal

- 5.5.1 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. As of 23 December 2014, all contaminated soil requiring disposal (about 895,750 kg (approximately 566m³)) has been transported to SENT.

5.6 IEA Spot Check Samples

- 5.6.1 The Independent Environmental Auditor (IEA) has conducted regular spot check samplings during the decontamination works. A total of twelve (12) spot check samples were collected.
- 5.6.2 The result of the spot check samples 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 treatment and sampling was conducted.

6 ENVIRONMENTAL SITE INSPECTION AND AUDIT

6.1.1 There were one hundred and ten (110) site inspections, including a session of Final Site Inspection, 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. (Due to the presence of several holidays and the availability of different parties, the Final Site Inspection has been postponed to 5 January 2015.)

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

6.1.3.1 Although water spraying was provided during building demolition process, fugitive dust emission was observed. The Contractor should improve the dust suppression measures (e.g. provision of additional sprinklers or water spraying facility) to minimize the dust impacts.

6.1.3.2 Exposed soil stockpile was observed at works area YTML 21 and 54. The Contractor should cover up the exposed soil stockpile with tarpaulin sheet to minimize the dust impacts.

6.1.3.3 Exposed works areas (at YTML19, YTML20-21, YTML22RP, YTML23-24 and YTML54) and access roads (at YTML20, YTML21 and YTML22RP) and within work areas were found dusty and dry. Although manual water spraying by water hose was observed at few works area and sprinklers were provided in works areas, the dust suppression measures provided in works area and on access roads should be further improved. The Contractor should ensure that water spraying facilities or sprinklers should be provided to exposed works areas and access roads and they should be operating effectively to minimize fugitive dust emission.

6.1.3.4 Mud trails were observed at the site entrance/exit facing Cha Kwo Ling Road, outside, at site entrance/exit facing to Ko Fai Road (Phase 2) and outside the site exit / entrance of Phase 3 work area (opposite to the elevator of MTRC station). The Contractor was reminded to provide proper wheel washing facilities at every vehicle exit point of the site. The Contractor should also ensure that the wheel washing facilities were operating at all vehicular site entrances/exits to wash off the deposited silt on vehicles' wheels and bodies and combine with cleaning of public roads. The Contractor should remind the vehicle's drivers to remove any dusty materials from their vehicle's bodies and wheels before leaving construction sites.

6.1.3.5 Site access road and site haul roads at Phase 3 (near Cha Kwo Ling Road) were observed in dry condition. The Contractor was reminded to dampen the site access road and site haul roads more frequently to prevent any fugitive dust generation occurred.

6.1.3.6 Wheel washing facilities with high pressure jets were not provided at two entrance points of the site.

6.1.3.7 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.

6.1.3.8 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.

6.1.3.9 Regular spraying of water has been maintained for areas not covered by water sprinklers (Reminder).

6.1.3.10 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.

6.1.3.11 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

- 6.1.3.12 No noise barrier provided for breaking activity at Phase 2 (near Ko Fai Road) was observed. The Contractor was reminded to provide proper movable noise barrier for all breaking activities.
- 6.1.3.13 The Contractor was reminded to provide valid noise emission label for air compressor placed in work area at Phase 2 (facing to Ko Fai Road).
- 6.1.3.14 The Contractor was reminded to provide proper noise mitigation measure (such as noise barrier) for demolition work of the Phase 3 site work area to reduce noise impact to sensitive receivers effectively.
- 6.1.3.15 The Contractor was reminded that the types and numbers of Powered Mechanical Equipments (PMEs) operated on site (especially in Phase 3 site work area) for demolition works during the weekday normal working hours should strictly comply with the Construction Noise Mitigation Plan (CNMP). The absorptive material wrapping to the breaking tip of the breakers working in works area were found improper at Gate 44. The Contractor should provide proper absorptive material wrapping to the breaking tips of the breakers working in works area to minimize the noise impact.
- 6.1.3.16 A small opening was found at the hoarding at the roadside near YTML 6-11. The opening should be covered.
- 6.1.3.17 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

- 6.1.3.18 Proper drainage channels/bunds/wheel washing bay should be provided to collect the run-off from wheel washing facilities at the site entrance/exit facing Cha Kwo Ling Road.
- 6.1.3.19 Temporary drainage systems in works area should be improved. U-channels and proper bundings should be provided along the site boundaries (especially the sides facing Yau Tong Bay), in together with proper treatment and pumping facilities, to handle the surface runoff from works area, especially during rainy seasons. The Contractor was reminded that any untreated surface run-off should be avoided from overflowing outside the Project site areas.
- 6.1.3.20 Excavated materials and silt was accumulated outside the site entrances / exits at Phase 2 (facing to Ko Fai Road). The Contractor was reminded to remove the silt as soon as possible and combined with cleaning of public roads. Proper bundings should be provided in site entrances / exits to prevent any surface / construction runoff flowing from work areas to public drain, in together with proper treatment and pumping facilities to handle the surface run-off from works area in rainy seasons. The Contractor was reminded that any untreated surface run-off should be avoided from overflowing outside the Project site areas. The Contractor was also recommended to maintain the drainage system properly and regularly.
- 6.1.3.21 Silt accumulated near the exit / entrance of Phase 3 work area (near Cha Kwo Ling Road). The Contractor was reminded to remove the silt to prevent any silty water runoff from the site to public drain due to rainfall.
- 6.1.3.22 Open stockpiles of construction materials and stockpiles of cement placed on site were not covered with tarpaulin or similar fabric.
- 6.1.3.23 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

- 6.1.3.24 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.
- 6.1.3.25 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.
- 6.1.3.26 All the land decontamination site works has been completed on 23 December 2014. After that no site works have been conducted on site except some minor cleanup works.

Chemical and Waste Management

- 6.1.3.27 Debris were accumulated near a locked site security gate (facing to Cha Kwo Ling Road) and along the site boundaries (especially the sides facing to Yau Tong Bay). The Contractor was reminded to remove the debris regularly and maintain the site cleanness
- 6.1.3.28 Designated chemical waste storage area was provided in works area. The condition of the storage area had been improved with enclosing properly on four sides by a wall. Drip tray had been provided for oil drum inside the chemical wastes storage area. However, the storage area should be kept secured / locked the door at all times. A panel with red English words and Chinese characters "CHEMICAL WASTE" "化學廢物" not less than 60mm high on a white background, which is durable, weather resistance and rigid, should be provided. Every chemical waste container should be securely closed or sealed and properly labeled.
- 6.1.3.29 Waste stockpile mixing with recyclable paper cardboards and plastic and stockpiles mixing with C&D wastes and materials were found around the works area. The Contractor should ensure that proper waste sorting was implemented and recyclable wastes should be recycled whenever possible. Waste skip should be provided for temporary waste storage within works area and they should be kept away from seawater front. Wastes should be cleared regularly in order to maintain proper housekeeping.
- 6.1.3.30 Debris was accumulated near a locked site security gate (facing to Cha Kwo Ling Road), along the site boundaries (especially the sides facing to Yau Tong Bay) and the Chemical Waste Storage Area. The Contractor was reminded to remove the debris and maintain the site cleanness.
- 6.1.3.31 Paints were observed spread on bare ground. The Contractor was reminded to provide proper measures (like tarpaulin sheet coverage) when oil painting works were carrying out to avoid any paint spread to bare ground. Any paint on ground should be cleared and disposed of as chemical wastes.
- 6.1.3.32 Oil stains were observed on ground. Oil stains on ground should be cleared and dispose of as chemical waste. Any kinds of maintenance works should be carried out in paved and roofed works area with proper mitigation measures to handle any oil leakage.
- 6.1.3.33 C&D wastes were accumulated near the site entrance. The Contractor was reminded to remove the C&D wastes regularly and provide more receptacles on site for general refuse collection. The Contractor was also reminded to maintain the site cleanness and tidiness.
- 6.1.3.34 No lid was provided for recycle bins (paper, plastic bottles and aluminium cans) near the site entrance. Label for recycle bin of plastic bottles were also observed missing. The Contractor was reminded to provide lids for all recycle bins and label the recycle bins properly.
- 6.1.3.35 The Contractor was reminded to sort the general refuse on site properly.

- 6.1.3.36 The Contractor was reminded to provide sufficient receptacles in Phase 3 work area (near Cha Kwo Ling Road) for general refuse collection.
- 6.1.3.37 Chemical containers were observed placed on ground without drip tray at Phase 3 work area. The Contractor was reminded to provide the drip trays for all oil drums / chemical containers to prevent any oil / chemical leakage.
- 6.1.3.38 Oil drum was observed placed on ground without drip tray at Phase 1 work area. The Contractor was reminded to provide drip tray for all oil drums to prevent oil leakage.
- 6.1.3.39 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.
- 6.1.3.40 Label is missing for an oil drum on site. The oil drum should be properly labelled.
- 6.1.3.41 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).
- 6.1.3.42 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.
- 6.1.3.43 In order to handle the chemical wastes which may generate from works area, the Contractor was reminded to provide a proper chemical wastes storage area within works area in accordance to the "Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes", to store any chemical wastes generated from works area temporarily. Chemical wastes should be stored in proper containers and collected by registered chemical waste collector regularly.

Landscape and Visual Impact

- 6.1.3.44 The retained trees within works area were not well tagged and protected. Protective net/barrier should be provided along the tree protection zone to avoid any damage to the retained trees. All retained trees on site should be properly tagged. Any construction materials and wastes should be kept away from the tree protection zone
- 6.1.3.45 Protective nets/barriers for retain trees were observed damaged due to adverse weather. The Contractor was reminded to replace the damaged protective nets/barriers and maintain the tree protection zone regularly and properly.
- 6.1.3.46 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

- 6.1.3.47 The Contractor should provide recycling bins at the site office area and site exits.
- 6.1.3.48 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 One Action Level exceedance of construction noise was recorded in the reporting period, since a noise complaint (referred from EPD) was received on 18 June 2012 and the noise source was likely contributed from the demolition work of the project at Ko Fai Road during the weekdays. The complaint was considered as project-related.
- 7.1.2 No Limit Level exceedance of construction noise was recorded in the reporting period.
- 7.1.3 No Action/Limit Level exceedance of water quality was recorded as no water quality monitoring was conducted in the reporting period.

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 Four (4) environmental complaints were followed up by Environmental Team in the reporting period. Details of the complaints are shown below:
- 8.1.3 An air complaint, was received by EPD on 9 December 2011, and referred from EPD on 15 December 2011. The complaint was about dust emission from demolition works near Ko Fai Road and inefficient dust mitigation measures in works area on 9 December 2011. As informed by the Demolition Contractor for building structures (Riseship Construction Co. Ltd.) of the Project, concrete breaking works and general clearance of construction wastes and debris were being carried out on that day within the Project site area. Water spraying by sprinklers was implemented along access roads in Project site. Regular water spraying was provided at exposed works area, breaking and construction wastes and debris clearance works area. Exposed soil stockpiles were covered up with tarpaulin sheet to minimize dust impacts. Potential dust emission source, like operating factories near the Project site and construction works carrying by other contractors and heavy traffic at Cha Kwo Ling Road and Ko Fai Road were observed. Nonetheless, the dust emission was likely contributed from the breaking works and exposed works area of the Project without sufficient dust suppression measure. The complaint was considered as project-related. In order to closely monitor the dust impact from the Project site, the Project proponent initiated to set up 4 air quality monitoring stations at air sensitive receivers nearby. The 24-hour TSP monitoring results at the nearest monitoring stations (Yau Lai Estate Hong Lai House and Yau Tong Centre Tower 1) on 10 December 2011 were 73.9 ug/m³ and 90.7 ug/m³ respectively, which was below the Action Level of 156.3 ug/m³ and 175.1 ug/m³ respectively. The Contractor was recommended to regular review dust mitigation measures and ensures effective operation of water spraying facilities implemented in works area. The contractor was also recommended to nominate a direct labour for carrying out water spraying and frequently watering the access roads, exposed works area, breaking, construction waste and debris clearance works area. During the follow-up site inspection conducted on 29 December 2011, access roads and exposed works area were kept wet, moreover, water spraying by water hoses and sprinklers were provided in the work area.
- 8.1.4 A noise complaint was received by and referred from EPD on 28 December 2011. The complaint was about hammering noise from the Project site near Cha Kwo Ling Road from 24 December 2011 to 26 December 2011 and the construction works (i.e. hammering and welding) conducted until 2300. As informed by the Demolition Contractor for building structures (Riseship Construction Co. Ltd.) of the Project, no construction works were conducted during the restricted hours for the concerned period, i.e. from 24 December 2011 at 1900 to 26 December 2011 at 2400. The hammering noise was suspected to be caused by the trespassers of the Project works area. Trespassers were noticed by the Contractor before. The Contractor had reported the trespassing incident to the Police on 29 December 2011 (Case No. KGRN11038374). The complaint was considered not project related. However, the Contractor was reminded that Construction Noise Permit (CNP) should be applied if general construction works using powered mechanical equipments (PMEs) are required to be carried out during restricted hours. Moreover, the types and number of PMEs deployed on site during the restricted hours should strictly comply with the granted CNPs. Also the Contractor should strengthen the security measures by locking up all unused gates and designate a single gate for site

entrance/exit and conducting regular patrol within the works area to avoid any trespassing, especially during restricted hours. During the follow-up site inspection conducted on 12 January 2012, the Contractor had locked up all unused gates and designated a single gate for site entrance/exit.

- 8.1.5 A noise complaint was received by and referred from EPD on 18 June 2012. The complaint was about the noise from the operation of Powered Mechanical Equipment (PME) from 8:00 to 19:00 from a construction site near Yau Lai Estate during weekdays and general holidays. As informed by the Demolition Contractor for building structures (Riseship Construction Co. Ltd.) of the Project, demolition works were conducted in weekdays (Monday to Saturday) during the normal daytime working hours (from 8:30 to 18:30) at project site near Ko Fai Road and no construction activities were conducted during general holidays. As reported by the Contractor, excavators were observed operated in Sand Deposits near Cha Kwo Ling Road and Ko Fai Road. Road paving bitumen works (for traffic roads at Ko Fai Road) were also observed outside the site entrance (Phase 1) in Ko Fai Road. Since site inspection in December 2011, the 3m high hoarding had been installed along the site boundary of Ko Fai road and Cha Kwo Ling road for different phases of work sites. In addition, the noise monitoring result at the nearest monitoring station (Yau Lai Estate Hong Lai House) on 6 June 2012 and 12 June 2012 were 65.1 dB(A) and 67.4 dB(A) respectively, which were below the limit level of 75 dB(A), while excavators were observed operating at Phase 2 (near Ko Fai Road) site works area during the course of monitoring. Nevertheless, the noise source was likely contributed from the demolition work of the project at Ko Fai Road during the weekdays. The complaint was considered as project-related. The Contractor was reminded that the types and numbers of Powered Mechanical Equipments (PMEs) operated on site for demolition works during the weekday normal working hours should strictly comply with the Environmental Permit (EP) and Construction Noise Mitigation Plan (CNMP). The Contractor should properly fulfil the requirements of EP and CNMP. The Contractor is recommended to provide proper noise mitigation measures (even if is not required in CNMP) for demolition work of the project site. Moreover, the Contractor was reminded that Construction Noise Permit (CNP) should be applied if general construction works using PMEs / Prescribed Construction Work (PCW) are required to be carried out during the restricted hours.
- 8.1.6 An air complaint (referred from EPD) was received on 3 August 2012. The complaint was about the concern of air emission from the spraying activities carried out at the construction site near the junction of Ko Fai Road and Cha Kwo Ling Road on 3 August 2012 that would stain the bodies of vehicles nearby and cause air nuisance to the public. As informed by the Demolition Contractor for building structures (Riseship Construction Co. Ltd.) of the Project, paint spraying activities for hoarding was carried out at Phase 1 work areas from 9:00 to 16:00 on 3 August 2012 and the 3 sides (including the side facing the pedestrian roads and traffic roads of Ko Fai Road and Cha Kwo Ling Road) of painting work area (at Phase 1) was covered by impervious tarpaulin during the painting activities. Painting works for hoarding at Phase 1 work areas (near the junction of Ko Fai Road and Cha Kwo Ling Road) was completed on 3 August 2012 and no painting work at Phase 1 work areas is currently planned for the near future. Nevertheless, the complaint was considered as project-related. Therefore, the Contractor was reminded to keep the proper mitigation measures in place for the same activities to be carried out, such as proper covering of paint spraying areas by impervious tarpaulin which prevents any air emission from painting activities to passer-by and parked / passing vehicles. The Contractor should consider using other painting method - brushing painting to reduce the air emission during the activities. For future renovation works, the notice and warning sign should be placed at a prominent location outside the hoarding.
- 8.1.7 No notification of summons and prosecutions was received in the reporting period.
- 8.1.8 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 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.

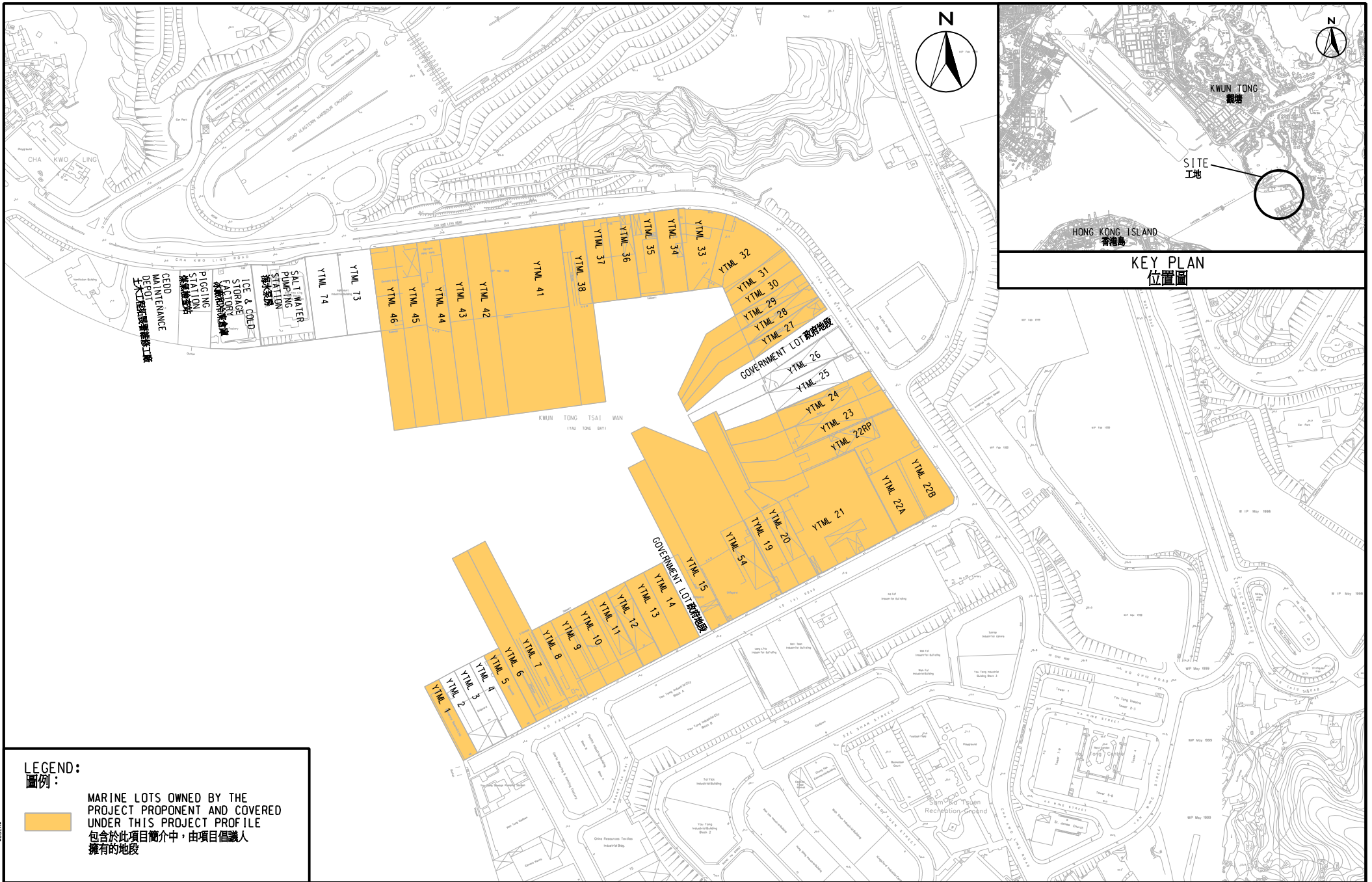
11 REVIEW OF EM&A PROGRAMME

- 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 were completed in September 2012. The soil remediation works of the Project commenced on 23 December 2013 and were completed on 23 December 2014.
- 12.1.2 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.
- 12.1.3 Noise monitoring and weekly site inspection were carried out in the reporting period, in accordance with the EM&A Manual.
- 12.1.4 One Action Level exceedance of construction noise was recorded in the reporting period, since a noise complaint (referred from EPD) was received on 18 June 2012 and the noise source was likely contributed from the demolition work of the project at Ko Fai Road during the weekdays. The complaint was considered as project-related.
- 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 no demolitions of marine structures were carried out. Therefore, 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.

FIGURES



LEGEND:
圖例:

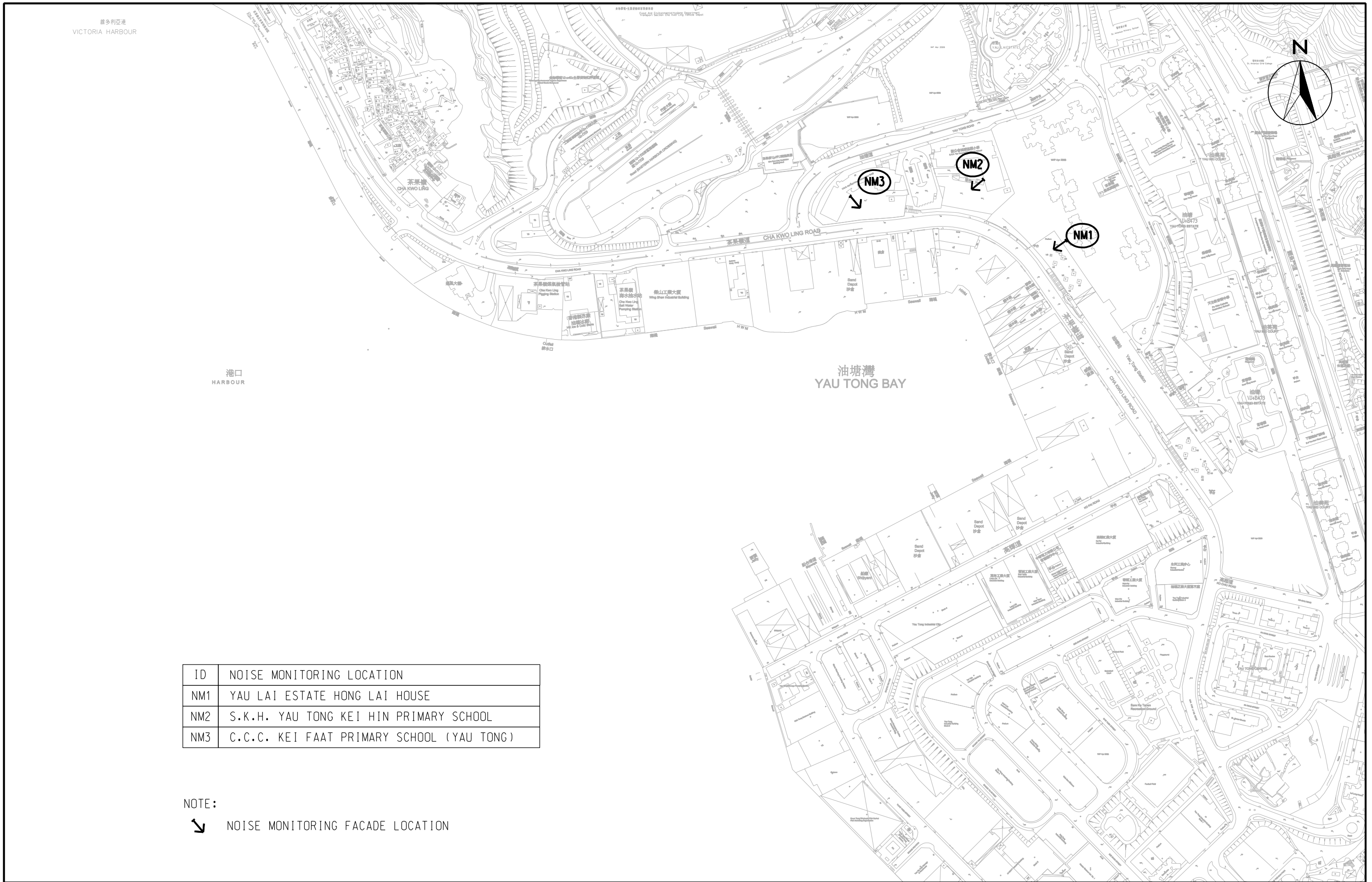
MARINE LOTS OWNED BY THE PROJECT PROPONENT AND COVERED UNDER THIS PROJECT PROFILE
包含於此項目簡介中，由項目倡議人擁有的地段

YAU TONG BAY - DECOMMISSIONING OF SHIPYARD SITES PROJECT PROFILE

油塘灣 - 船廠拆卸工程
SITE LOCATION PLAN
工地位置圖

| | | | |
|-------------|-------------|-------------|----------|
| SCALE 比例 | A4 1 : 4500 | DATE 日期 | NOV 2010 |
| CHECK 校對 | -- | DRAWN 繪圖 | -- |
| JOB No. | 60048283 | FIGURE NO. | 1 |
| | | REV | A |

AECOM



| ID | NOISE MONITORING LOCATION |
|-----|---|
| NM1 | YAU LAI ESTATE HONG LAI HOUSE |
| NM2 | S.K.H. YAU TONG KEI HIN PRIMARY SCHOOL |
| NM3 | C.C.C. KEI FAAT PRIMARY SCHOOL (YAU TONG) |

NOTE:

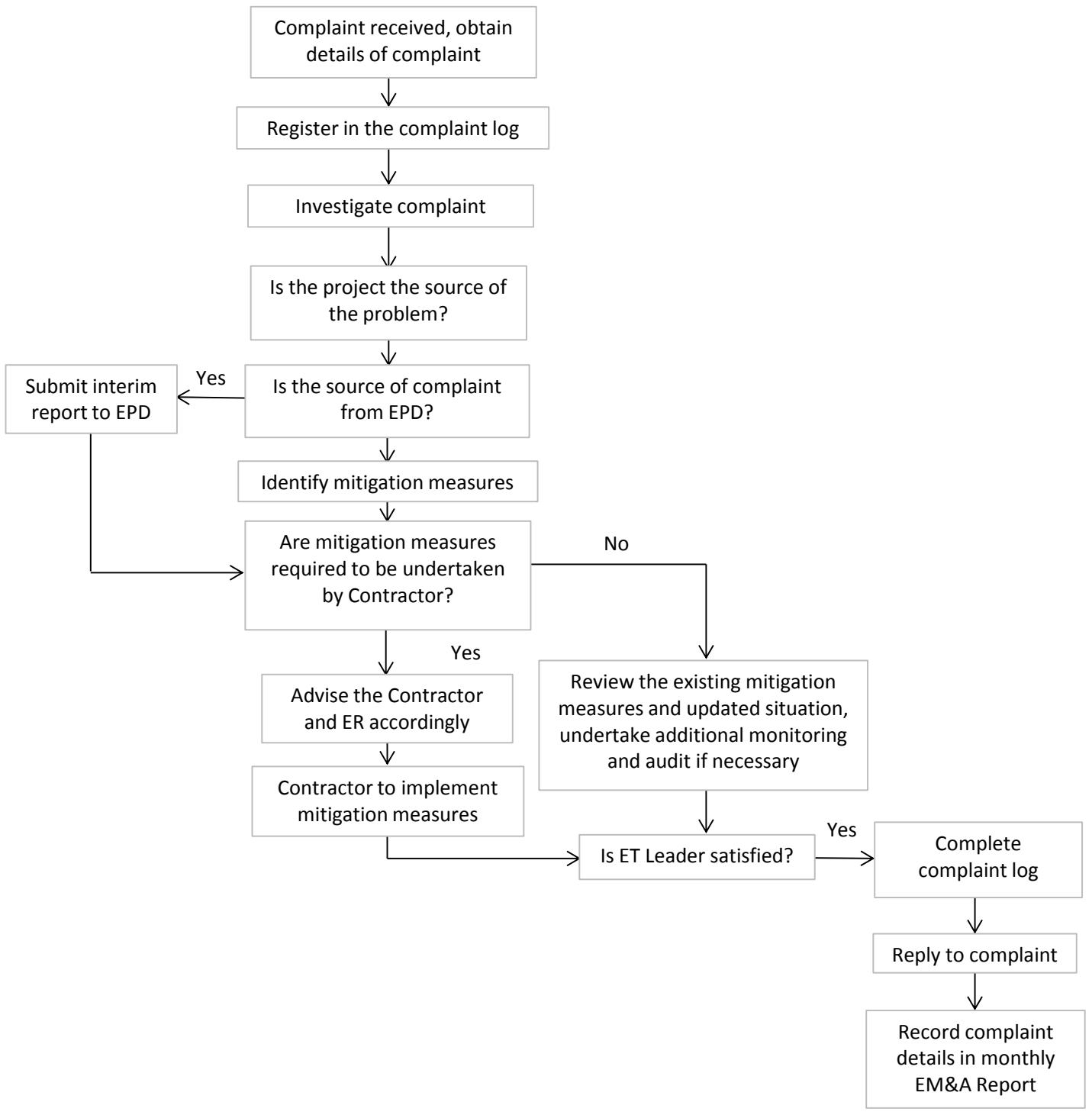
↘ NOISE MONITORING FACADE LOCATION

YAU TONG BAY - DECOMMISSIONING OF SHIPYARD SITES

NOISE MONITORING LOCATIONS

AECOM

| | | | | |
|-------------|-------------|------------|-----------|--------|
| SCALE | A3 1 : 3000 | DATE | AUG. 2011 | |
| CHECK | LSHT | DRAWN | LLHY | |
| PROJECT NO. | 60048283 | FIGURE NO. | 2 | REV -- |



| | | | | | |
|--------------|---|---------|----------|------------|--------|
| AECOM | Yau Tong Bay – Decommissioning of Shipyard Sites | SCALE | N.T.S. | DATE | Dec-11 |
| | | CHECK | ENFL | DRAWN | JWYM |
| | Environmental Complaint Handling Procedure | JOB NO. | 60048283 | FIGURE NO. | 3 |



| ZONE ID | AREA (m ²) | DEPTH (m) | VOLUME (m ³) |
|---------|------------------------|-----------|--------------------------|
| R4 | 25 | 0-1 | 25 |
| R8 | 25 | 2.5-4.45 | 48.75 |

| ZONE ID | AREA (m ²) | DEPTH (m) | VOLUME (m ³) |
|---------|------------------------|-----------|--------------------------|
| T36A | 69.5 | 0-1.5 | 104.25 |

| ZONE ID | AREA (m ²) | DEPTH (m) | VOLUME (m ³) |
|---------|------------------------|-----------|--------------------------|
| T35C | 570.5 | 0-2.5 | 1433.04 |

| ZONE ID | AREA (m ²) | DEPTH (m) | VOLUME (m ³) |
|--------------|------------------------|-----------|--------------------------|
| T32C | 86.79 | 1.5-3.5 | 173.57 |
| T32D | 78.54 | 0.5-1.5 | 78.54 |
| T32E (OUTER) | 516.96 | 0-1.5 | 816.82 |
| T32E (INNER) | 165.72 | 0-3 | 497.16 |

| ZONE ID | AREA (m ²) | DEPTH (m) | VOLUME (m ³) |
|---------|------------------------|-----------|--------------------------|
| R2 | 25 | 0-1 | 25 |
| R3 | 25 | 0-1 | 25 |
| R3 | 25 | 1-3.95 | 73.75 |

| ZONE ID | AREA (m ²) | DEPTH (m) | VOLUME (m ³) |
|---------|------------------------|-----------|--------------------------|
| A3 | 25 | 2.35-4.95 | 65 |
| A2 | 31.5 | 1-2.35 | 42.5 |
| A4 | 25 | 1-2.45 | 36.25 |
| A5 | 25 | 1.4-2.55 | 28.75 |

| ZONE ID | AREA (m ²) | DEPTH (m) | VOLUME (m ³) |
|---------|------------------------|-----------|--------------------------|
| R7 | 25 | 3.1-4.55 | 36.25 |

| ZONE ID | AREA (m ²) | DEPTH (m) | VOLUME (m ³) |
|---------|------------------------|-----------|--------------------------|
| R1 | 25 | 0-1 | 25 |

| ZONE ID | AREA (m ²) | DEPTH (m) | VOLUME (m ³) |
|---------|------------------------|-----------|--------------------------|
| T22BA | 101.51 | 0-2.5 | 253.78 |
| T22BB | 165.72 | 1.5-3 | 248.58 |

| ZONE ID | AREA (m ²) | DEPTH (m) | VOLUME (m ³) |
|---------|------------------------|-----------|--------------------------|
| T19A | 95.43 | 0.5-2 | 143.14 |

| ZONE ID | AREA (m ²) | DEPTH (m) | VOLUME (m ³) |
|---------|------------------------|-----------|--------------------------|
| A1 | 25 | 0-1 | 25 |

| ZONE ID | AREA (m ²) | DEPTH (m) | VOLUME (m ³) |
|---------|------------------------|-----------|--------------------------|
| R6 | 25 | 2.7-4.15 | 36.25 |

| ZONE ID | AREA (m ²) | DEPTH (m) | VOLUME (m ³) |
|---------|------------------------|-----------|--------------------------|
| R5 | 27.5 | 0-1 | 27.5 |

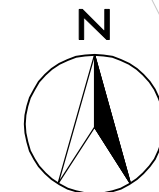
LEGEND

- Marine Lot under this Project
- Finalized Excavation Extent of Contaminated Zones



YAU TONG BAY REDEVELOPMENT
LAND DECONTAMINATION WORKS
PROJECT LAYOUT PLAN AND EXCAVATION ZONE

| | | | |
|-------------|-----------|------------|----------|
| SCALE | A3 1:2500 | DATE | JUL 2014 |
| CHECK | LLHY | DRAWN | KW |
| PROJECT NO. | 60048208 | FIGURE NO. | 4 |



Sand Depot
沙倉

Seawall
海堤

船台滑道
Slipways

船廠
Shipyard

YTML LOT NO. 6-11

UNDERGROUND OIL TANK

Workshop

Workshop

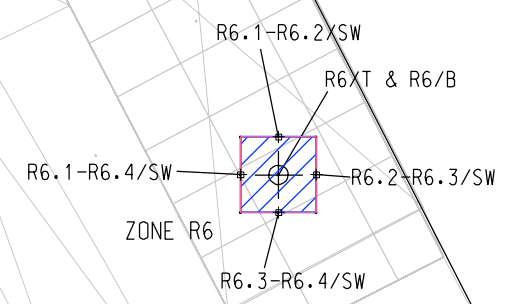
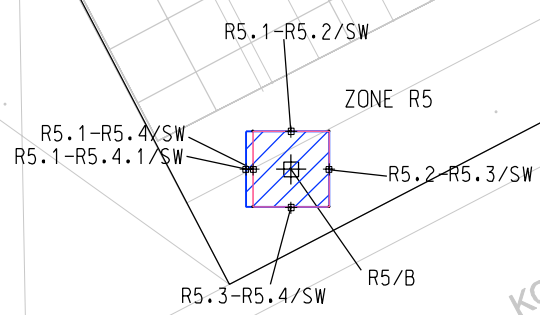
PH

KO FAI ROAD

LEGEND

- SITE EXTENT
- EXCAVATION EXTENT OF CONTAMINATED ZONE
- ORIGINAL EXTENT OF CONTAMINATED ZONE
- PIT BOTTOM CONFIRMATORY SAMPLING LOCATION
- PIT TOP AND PIT BOTTOM CONFIRMATORY SAMPLING LOCATION
- SIDEWALL CONFIRMATORY SAMPLING LOCATION

NOTE:
REFER TO THE REPORT FOR THE COORDINATES OF AS-BUILT SAMPLING LOCATIONS



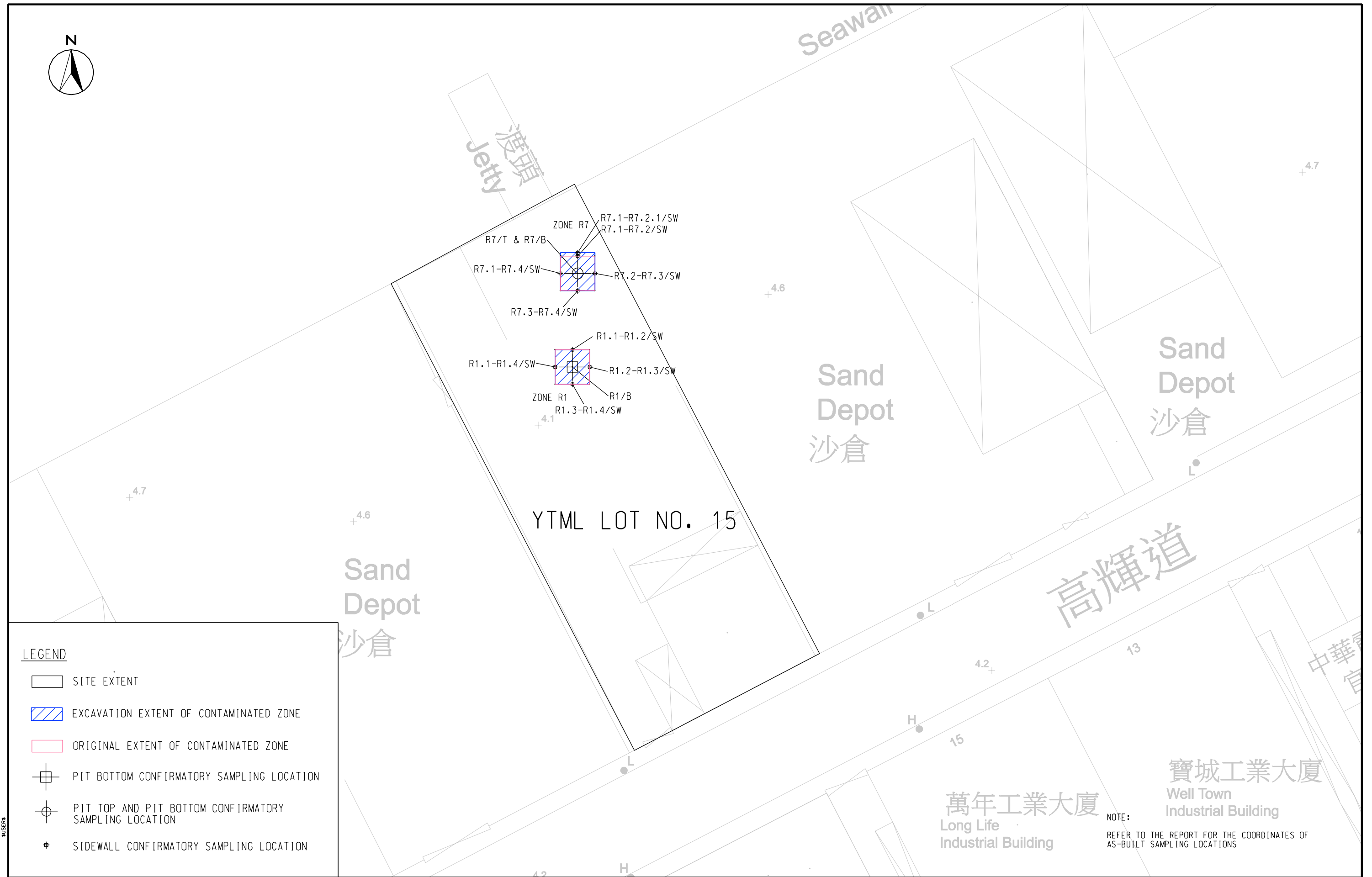
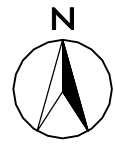
YAU TONG BAY REDEVELOPMENT
LAND DECONTAMINATION WORKS

EXCAVATION EXTENT OF CONTAMINATED ZONES (ZONES R5 & R6)



| | | | |
|---------|------------|-------------|----------|
| SCALE | A3 1 : 500 | DATE | JUL 2014 |
| CHECK | LLHY | DRAWN | KW |
| JOB No. | 60048208 | DRAWING No. | 5 |
| | | REV | - |

Plotting By: IDATES



LEGEND

- SITE EXTENT
- EXCAVATION EXTENT OF CONTAMINATED ZONE
- ORIGINAL EXTENT OF CONTAMINATED ZONE
- +
+
+
+
 PIT BOTTOM CONFIRMATORY SAMPLING LOCATION
- +
+
+
+
 PIT TOP AND PIT BOTTOM CONFIRMATORY SAMPLING LOCATION
- +
+
 SIDEWALL CONFIRMATORY SAMPLING LOCATION

NOTE:
REFER TO THE REPORT FOR THE COORDINATES OF AS-BUILT SAMPLING LOCATIONS

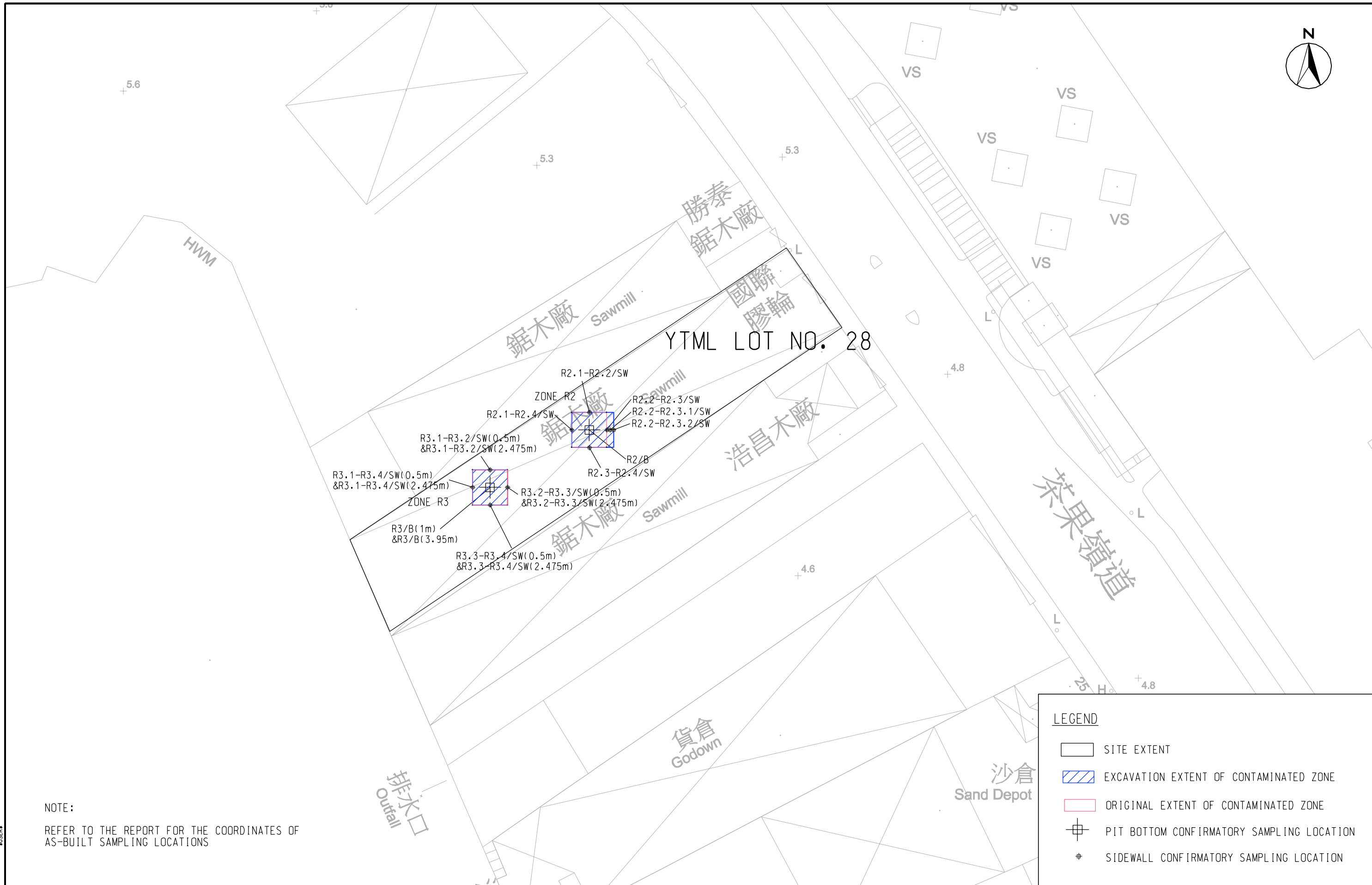
Plotting By: IDATES



YAU TONG BAY REDEVELOPMENT
LAND DECONTAMINATION WORKS

EXCAVATION EXTENT OF CONTAMINATED ZONES (ZONES R1 & R7)

| | | | |
|---------|------------|-------------|----------|
| SCALE | A3 1 : 500 | DATE | JUL 2014 |
| CHECK | LLHY | DRAWN | KW |
| JOB No. | 60048208 | DRAWING No. | 6 |
| | | REV | - |



NOTE:
REFER TO THE REPORT FOR THE COORDINATES OF AS-BUILT SAMPLING LOCATIONS

| LEGEND | | | |
|--------|---|--|---|
| | SITE EXTENT | | EXCAVATION EXTENT OF CONTAMINATED ZONE |
| | ORIGINAL EXTENT OF CONTAMINATED ZONE | | PIT BOTTOM CONFIRMATORY SAMPLING LOCATION |
| | SIDEWALL CONFIRMATORY SAMPLING LOCATION | | |

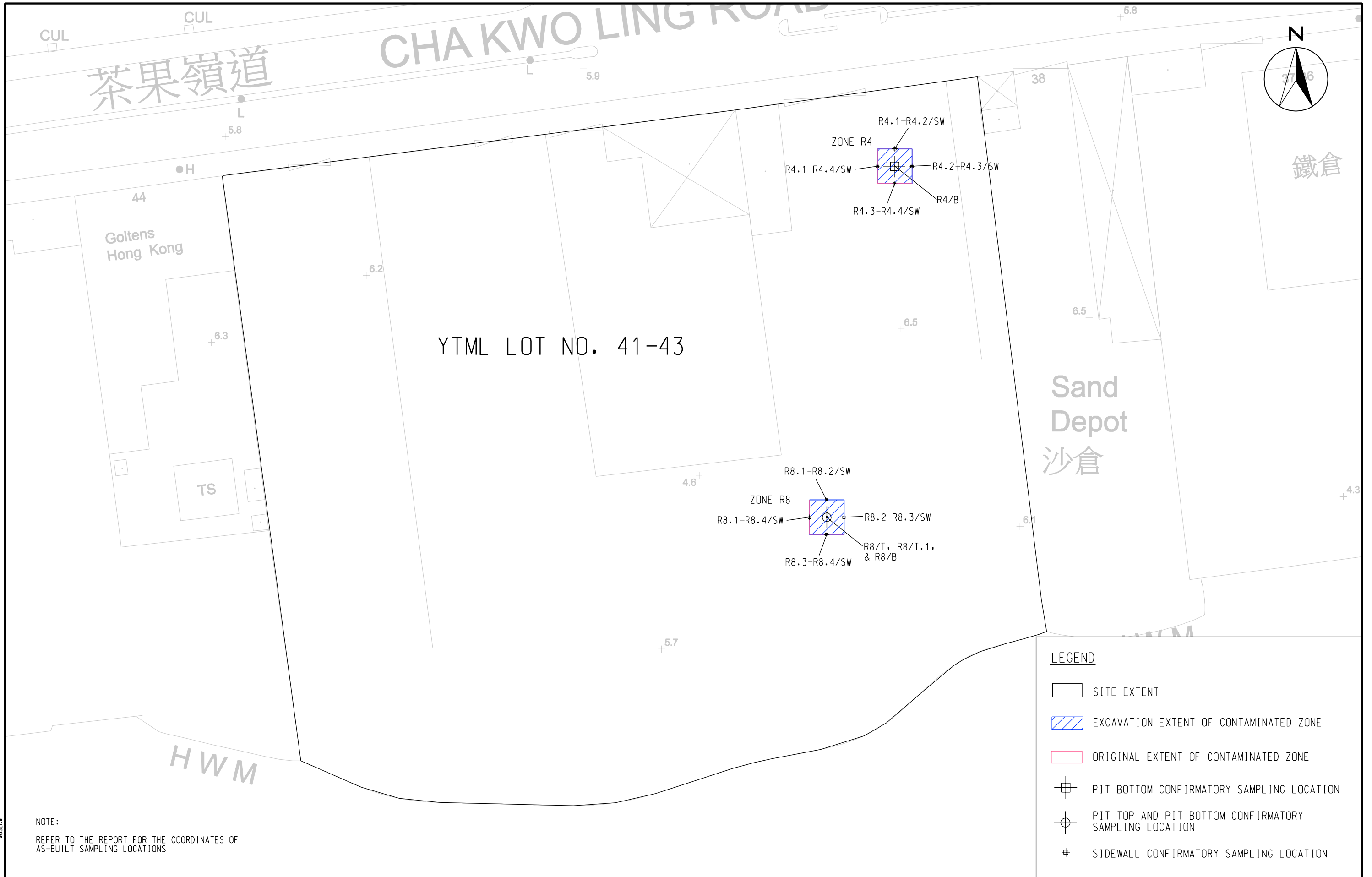


YAU TONG BAY REDEVELOPMENT
LAND DECONTAMINATION WORKS

EXCAVATION EXTENT OF CONTAMINATED ZONES (ZONES R2 & R3)

| | | | |
|---------|------------|-------------|----------|
| SCALE | A3 1 : 500 | DATE | JUL 2014 |
| CHECK | LLHY | DRAWN | KW |
| JOB No. | 60048208 | DRAWING No. | 7 |
| | | REV | - |

P:\60048208\1.01\CAD\Drawing\Figure\CAR\Remediation Spec



NOTE:
REFER TO THE REPORT FOR THE COORDINATES OF
AS-BUILT SAMPLING LOCATIONS

| LEGEND | | | |
|--------|---|--|---|
| | SITE EXTENT | | EXCAVATION EXTENT OF CONTAMINATED ZONE |
| | ORIGINAL EXTENT OF CONTAMINATED ZONE | | PIT BOTTOM CONFIRMATORY SAMPLING LOCATION |
| | PIT TOP AND PIT BOTTOM CONFIRMATORY SAMPLING LOCATION | | SIDEWALL CONFIRMATORY SAMPLING LOCATION |

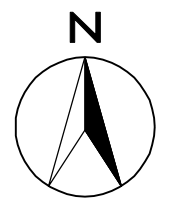
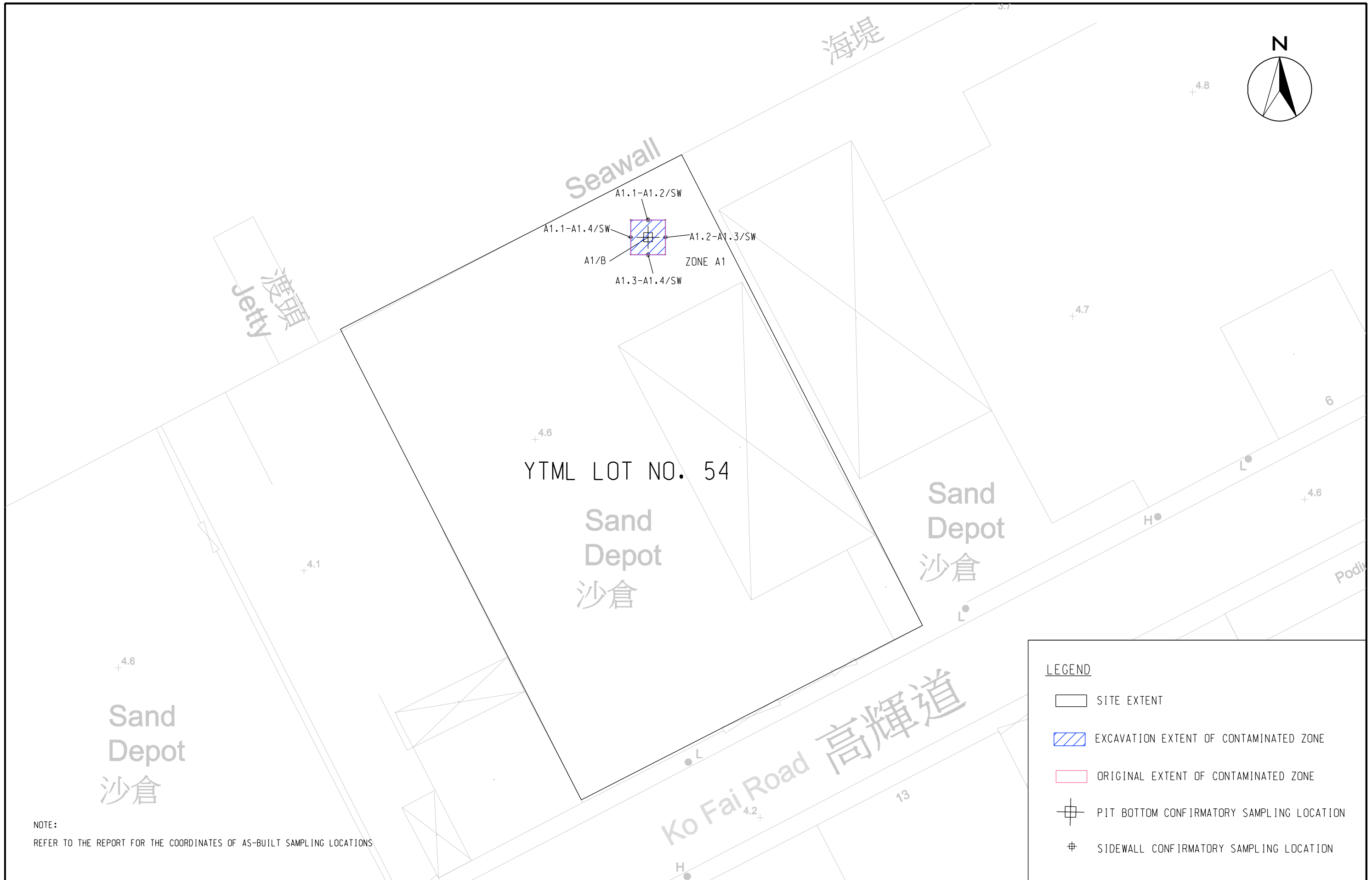
POTTING BY: DATES



YAU TONG BAY REDEVELOPMENT
LAND DECONTAMINATION WORKS

EXCAVATION EXTENT OF CONTAMINATED ZONES (ZONES R4 & R8)

| | | | |
|---------|------------|-------------|----------|
| SCALE | A3 1 : 500 | DATE | JUL 2014 |
| CHECK | LLHY | DRAWN | KW |
| JOB No. | 60048208 | DRAWING No. | 8 |
| | | REV | - |



LEGEND

- SITE EXTENT
- EXCAVATION EXTENT OF CONTAMINATED ZONE
- ORIGINAL EXTENT OF CONTAMINATED ZONE
- PIT BOTTOM CONFIRMATORY SAMPLING LOCATION
- SIDEWALL CONFIRMATORY SAMPLING LOCATION

NOTE:
REFER TO THE REPORT FOR THE COORDINATES OF AS-BUILT SAMPLING LOCATIONS

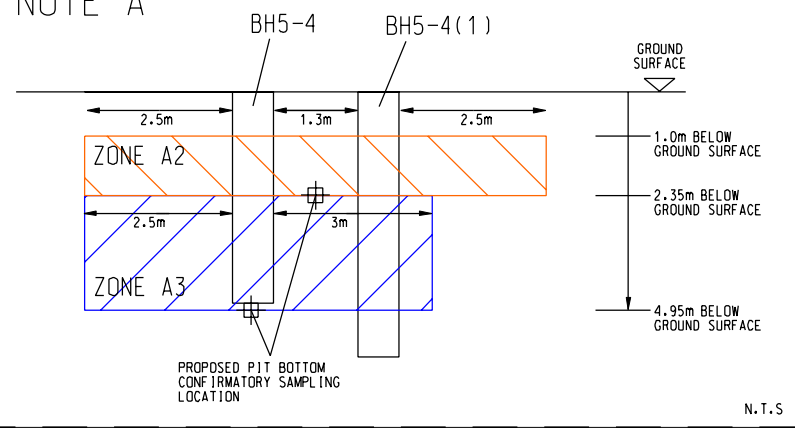


YAU TONG BAY REDEVELOPMENT
LAND DECONTAMINATION WORKS

EXCAVATION EXTENT OF CONTAMINATED ZONE (ZONE A1)

| | | | |
|---------|------------|-------------|----------|
| SCALE | A3 1 : 500 | DATE | JUL 2014 |
| CHECK | LLHY | DRAWN | KW |
| JOB No. | 60048208 | DRAWING No. | 9 |
| | | REV | - |

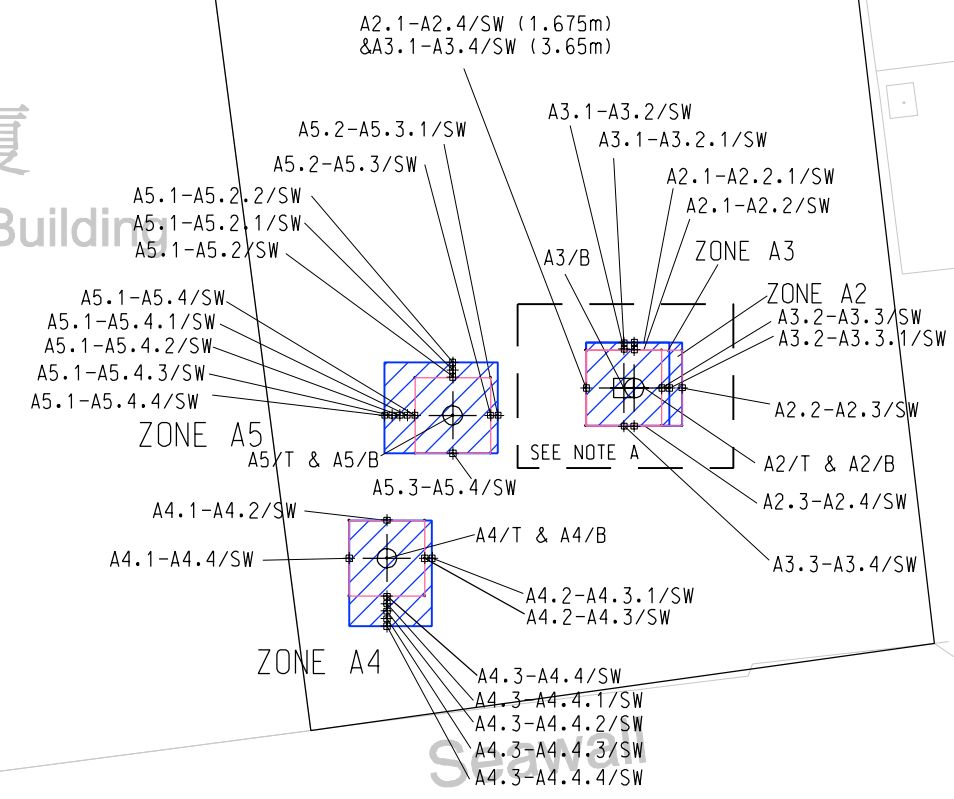
NOTE A



YTML LOT NO. 45-46

嶺
抽水站
Wing Shan Industrial Building
Wing Shan Water
Treatment Station

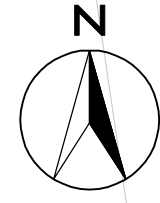
榮山工業大廈
Wing Shan Industrial Building



Goltens
Hong Kong

HWM

海堤



| LEGEND | | | |
|--------|---|--|---|
| | SITE EXTENT | | EXCAVATION EXTENT OF CONTAMINATED ZONE |
| | ORIGINAL EXTENT OF CONTAMINATED ZONE | | AS-BUILT SIDEWALL CONFIRMATORY SAMPLING LOCATION |
| | PIT BOTTOM CONFIRMATORY SAMPLING LOCATION | | PIT TOP AND PIT BOTTOM CONFIRMATORY SAMPLING LOCATION |

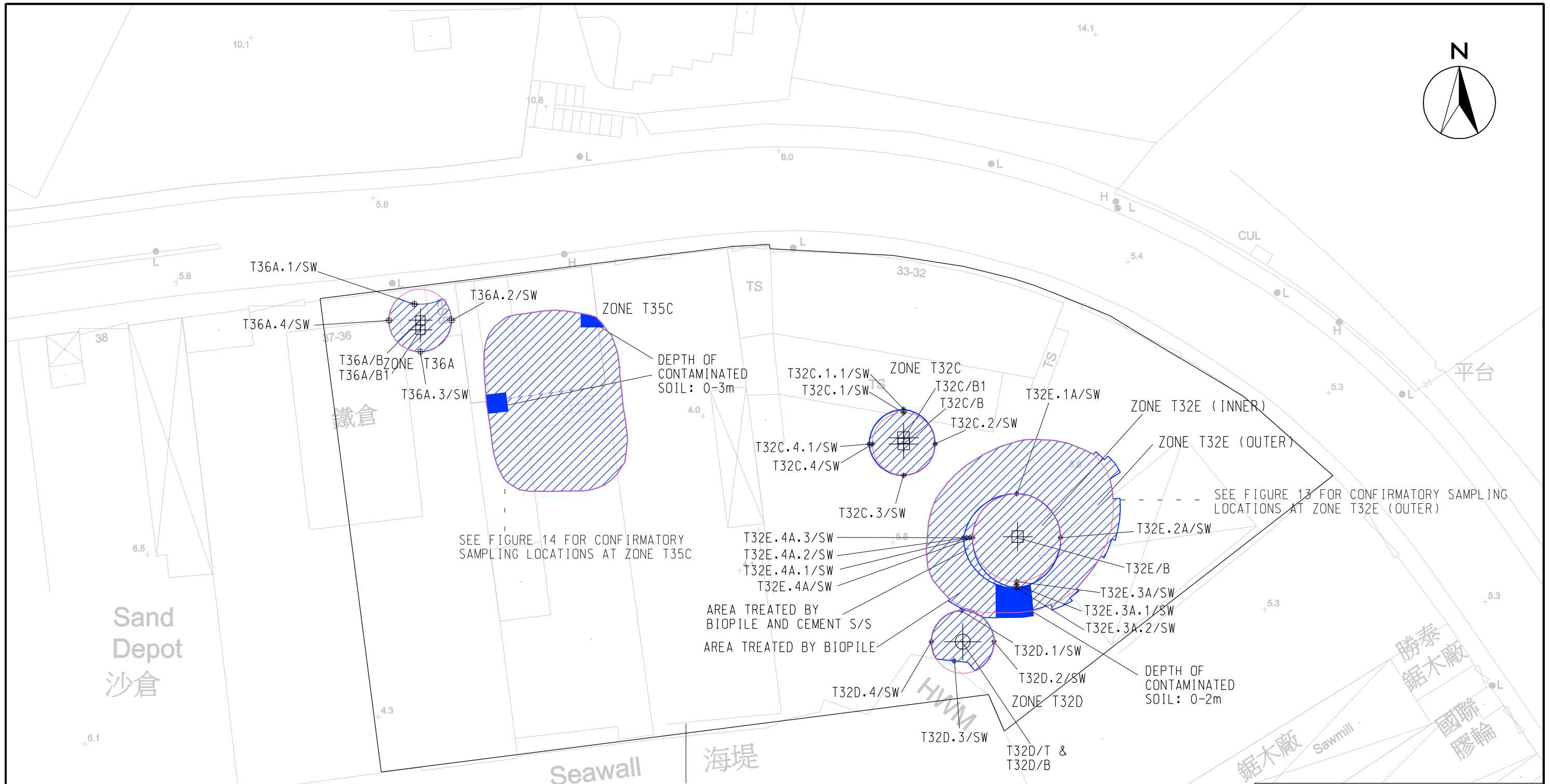
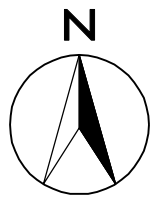
NOTE:
REFER TO THE REPORT FOR THE COORDINATES OF AS-BUILT SAMPLING LOCATIONS



YAU TONG BAY REDEVELOPMENT
LAND DECONTAMINATION WORKS

EXCAVATION EXTENT OF CONTAMINATED ZONES (ZONES A2, A3, A4 & A5)

| | | | |
|---------|------------|-------------|----------|
| SCALE | A3 1 : 500 | DATE | JUL 2014 |
| CHECK | LLHY | DRAWN | KW |
| JOB No. | 60048208 | DRAWING No. | 10 |
| | | REV | - |



YTML LOT NO. 32-33, 34, 35, & 36

NOTE:
REFER TO THE REPORT FOR THE COORDINATES OF AS-BUILT SAMPLING LOCATIONS

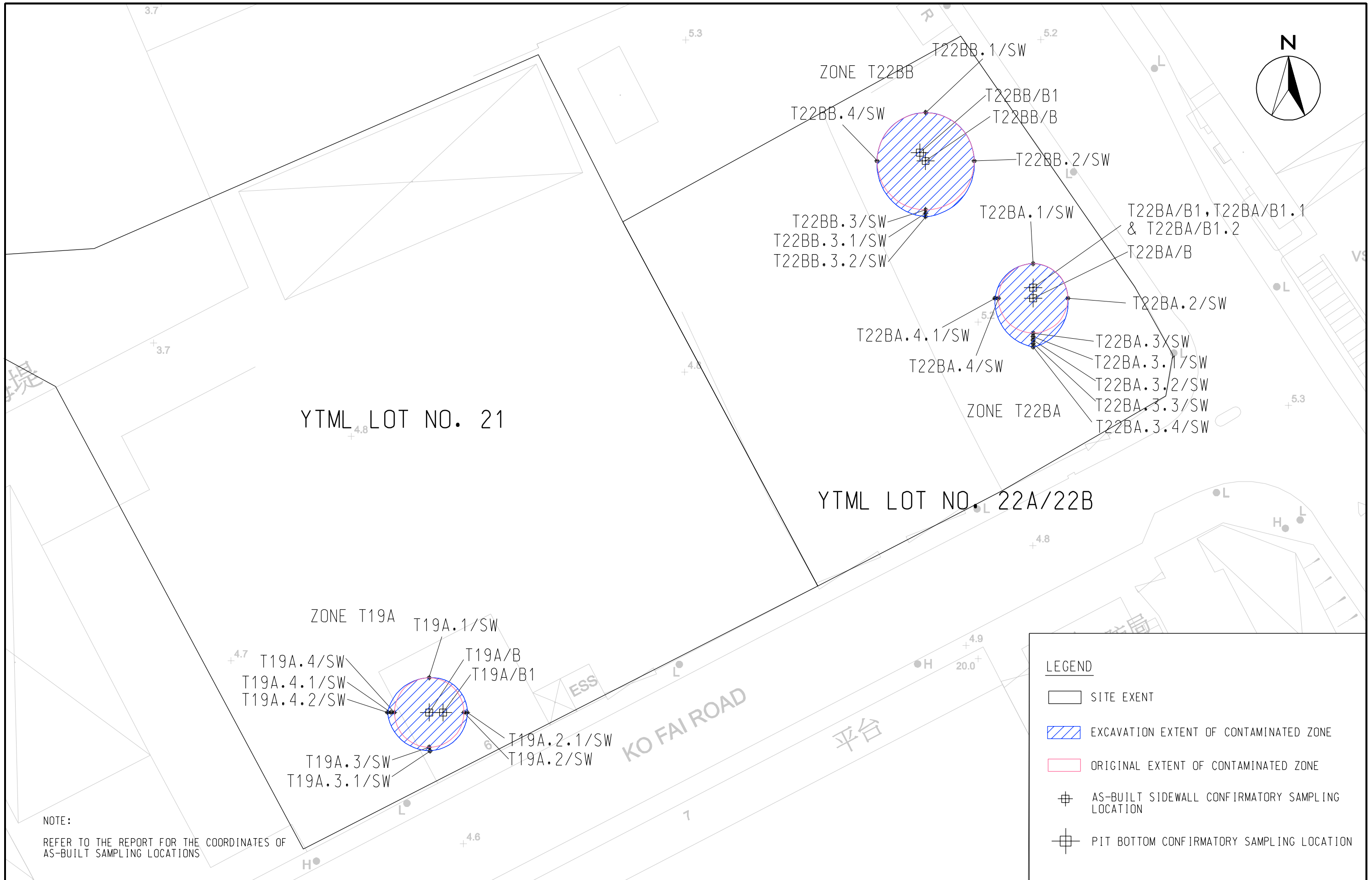
| LEGEND | |
|--------|---|
| | SITE EXTENT |
| | EXCAVATION EXTENT OF CONTAMINATED ZONE |
| | ORIGINAL EXTENT OF CONTAMINATED ZONE |
| | PIT BOTTOM CONFIRMATORY SAMPLING LOCATION |
| | PIT TOP AND PIT BOTTOM CONFIRMATORY SAMPLING LOCATION |
| | SIDEWALL CONFIRMATORY SAMPLING LOCATION |



YAU TONG BAY REDEVELOPMENT
LAND DECONTAMINATION WORKS

EXCAVATION EXTENT OF CONTAMINATED ZONES (ZONES T32C, T32D, T32E, T35C AND T36A)

| | | | |
|-------------|------------|------------|----------|
| SCALE | A3 1 : 625 | DATE | JUL 2014 |
| CHECK | LLHY | DRAWN | KW |
| PROJECT NO. | 60048208 | FIGURE NO. | 11 |
| | | REV | - |



NOTE:
REFER TO THE REPORT FOR THE COORDINATES OF AS-BUILT SAMPLING LOCATIONS



YAU TONG BAY REDEVELOPMENT
LAND DECONTAMINATION WORKS

EXCAVATION EXTENT OF CONTAMINATED ZONES (ZONES T19A, T22BA, T22BB)



| | | | |
|-------------|------------|------------|----------|
| SCALE | A3 1 : 500 | DATE | JUL 2014 |
| CHECK | LLHY | DRAWN | KW |
| PROJECT NO. | 60048208 | FIGURE NO. | 12 |
| | | REV | - |

SOIL FROM R1,
R2 & R4 (80m³)

SOIL FROM A2
(46.8m³)



NOTE:
THE SAMPLING LOCATIONS ARE INDICATIVE ONLY

LEGEND
 BIOPILE SET-UP
 SAMPLING LOCATION

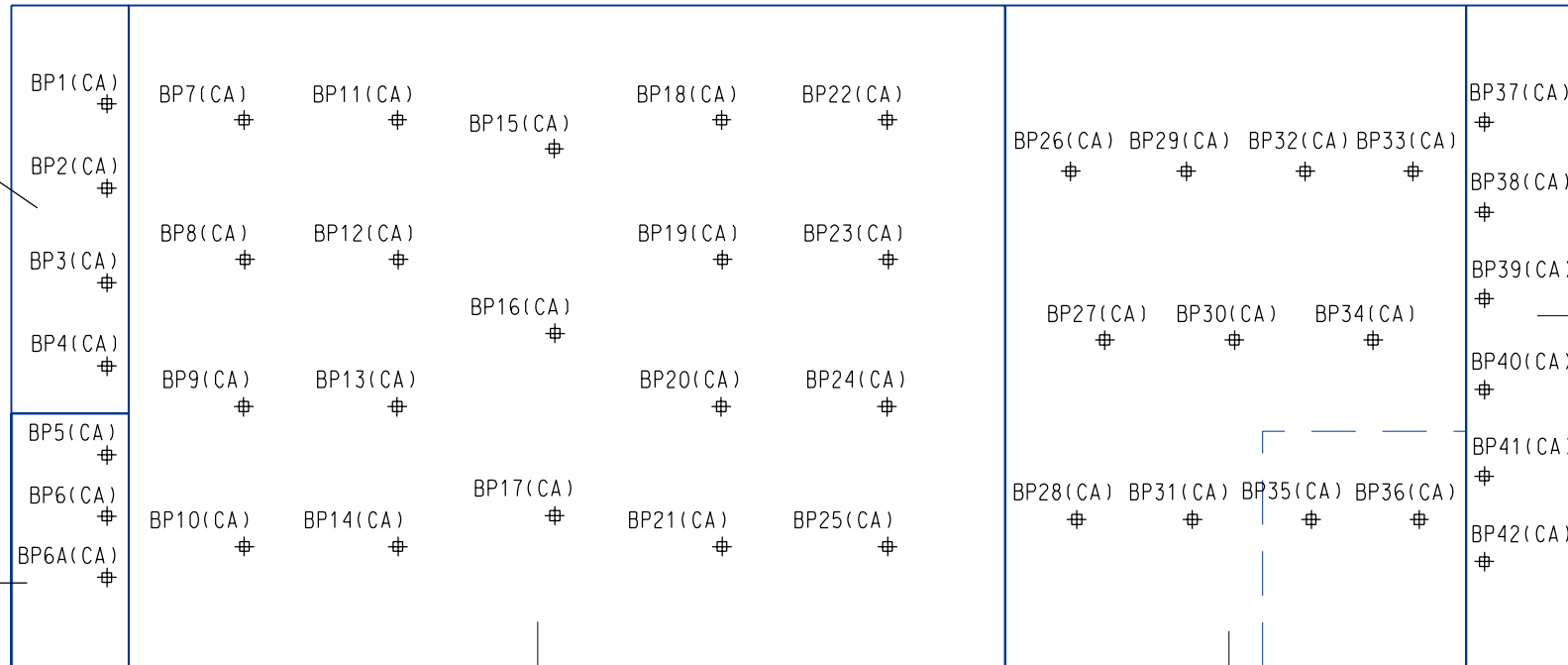


YAU TONG BAY REDEVELOPMENT
LAND DECONTAMINATION WORKS
SAMPLING PLAN FOR BIOPILE MONITORING

| | | | |
|-------------|------------|------------|----------|
| SCALE | A3 1 : 200 | DATE | APR 2014 |
| CHECK | LLHY | DRAWN | KW |
| PROJECT NO. | 60048208 | FIGURE NO. | 13 |
| | | REV | - |

SOIL FROM R1,
R2 & R4 (80m³)

SOIL FROM A2
(46.8m³)



NOTE:
THE SAMPLING LOCATIONS ARE INDICATIVE ONLY

LEGEND

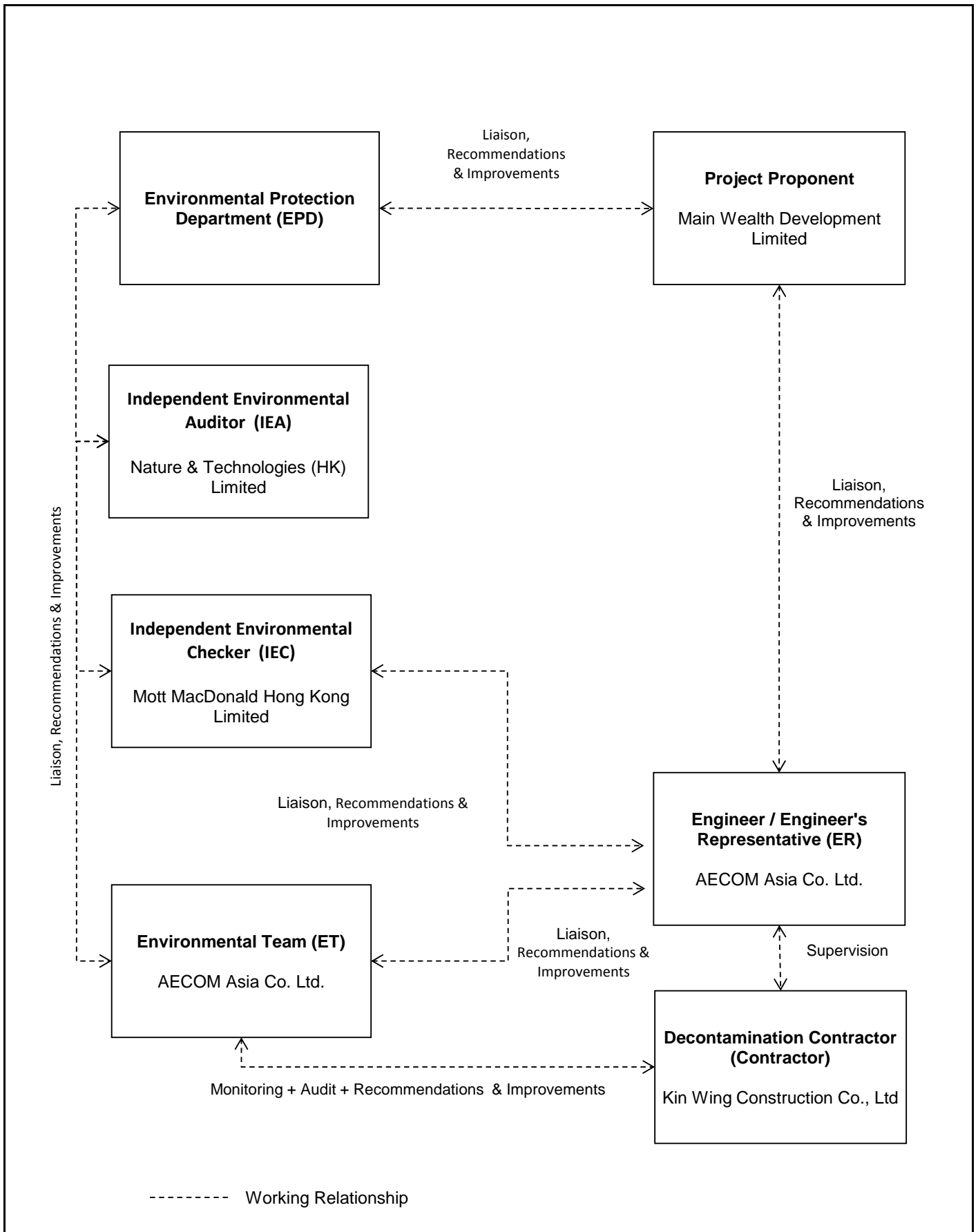
- BIOPILE SET-UP
- SAMPLING LOCATION



YAU TONG BAY REDEVELOPMENT
LAND DECONTAMINATION WORKS
SAMPLING PLAN FOR BIOPILE CLOSURE ASSESSMENT

| | | | |
|-------------|------------|------------|----------|
| SCALE | A3 1 : 200 | DATE | JUL 2014 |
| CHECK | LLHY | DRAWN | KW |
| PROJECT NO. | 60048208 | FIGURE NO. | 14 |
| | | REV | - |

**APPENDIX A
PROJECT ORGANIZATION STRUCTURE**



| | | | | | |
|--------------|---|---------|----------|----------|--------|
| AECOM | Yau Tong Bay - Decommissioning of Shipyard Sites | SCALE | N.T.S. | DATE | Dec-13 |
| | | CHECK | ENFL | DRAWN | JCYK |
| | Project Organization Structure | JOB NO. | 60048283 | APPENDIX | A |

**APPENDIX B
IMPLEMENTATION SCHEDULE OF
ENVIRONMENTAL MITIGATION MEASURES
(EMIS)**

Appendix C - Implementation Schedule of Environmental Mitigation Measures (EMIS)

Air Quality - Schedule of Recommended Mitigation Measures

| Impact | Mitigation Measures | Timing | Implementation Status |
|---------------------------------|--|---------------------|-----------------------|
| Air Quality during Construction | <ul style="list-style-type: none"> Careful siting of construction activities which generate substantial amount of dust can effectively reduce the overall impact. | During construction | V |
| | <ul style="list-style-type: none"> Use of regular watering, with complete coverage if possible, to reduce dust emissions from exposed site surfaces and unpaved roads and for dusty construction areas and areas close to ASRs, particularly during dry weather. | | V |
| | <ul style="list-style-type: none"> Open stockpiles shall be avoided. Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where possible, prevent placing dusty material storage piles near ASRs. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines. | | V |
| | <ul style="list-style-type: none"> No free falling construction debris should be allowed; debris should be let down by hoist or enclosed tunnel to the ground. | | N/A |
| | <ul style="list-style-type: none"> All dusty materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet. | | V |
| | <ul style="list-style-type: none"> Provision of wind shield and dust extraction units or similar dust mitigation measures at the loading points, and use of water sprinklers at the loading area where dust generation is likely during the loading process of loose material, particularly in dry seasons/ periods. | | V |
| | <ul style="list-style-type: none"> Height from which dusty materials are dropped should be controlled to a minimum practical height to limit fugitive dust generation from unloading. | | N/A |
| | <ul style="list-style-type: none"> Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations. | | V |
| | <ul style="list-style-type: none"> Skip hoist for material transport should be totally enclosed by impervious sheeting. | | V |
| | <ul style="list-style-type: none"> Establishment and use of vehicle wheel and body washing facilities at the exit points of the site and public roads, combined with cleaning of public roads wherever necessary and practical. | | V |
| | <ul style="list-style-type: none"> 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. | | V |
| | <ul style="list-style-type: none"> Provision of not less than 2.4m high hoarding from ground level along site boundary where adjoins a road, streets or other accessible to the public except for a site entrance or exit. | | V |
| | <ul style="list-style-type: none"> Imposition of speed controls for vehicles on site haul roads. Where feasible, routing of vehicles and positioning of construction plants should be at a maximum possible distances from sensitive receivers. | | V |
| | <ul style="list-style-type: none"> Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides. | | N/A |
| | <ul style="list-style-type: none"> Instigation of an environmental monitoring and auditing program to monitor the construction process in order to enforce controls and modify method of work if dusty conditions arise. | | V |

Noise - Schedule of Recommended Mitigation Measures

| Impact | Mitigation Measures | Timing | Implementation Status |
|--|---|---------------------|---|
| Construction Noise during Construction | <ul style="list-style-type: none"> • In order to reduce the excessive noise impacts at the affected NSRs during normal daytime working hours, the following mitigation measures shall be implemented:- <ul style="list-style-type: none"> - adopting quiet powered mechanical equipment; - scheduling of works; - erect a 3m tall moveable noise barriers along the site boundary; and - noise enclosure. | During construction | V |
| | <ul style="list-style-type: none"> • Only well-maintained plant should be operated on-site and plant should be serviced regularly. | | V |
| | <ul style="list-style-type: none"> • Silencers or mufflers on construction equipment should be utilized and should be properly maintained. | | V |
| | <ul style="list-style-type: none"> • Mobile plant, if any, should be sited as far away from NSRs as possible. | | V |
| | <ul style="list-style-type: none"> • Machines and plant (such as trucks) that may be in intermittent use should be shut down between works periods or should be throttled down to a minimum. | | V |
| | <ul style="list-style-type: none"> • Plant known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the nearby NSRs. | | V |
| | <ul style="list-style-type: none"> • Material stockpiles and other structures should be effectively utilised, wherever practicable, in screening noise from on-site construction activities. | | V |
| | <ul style="list-style-type: none"> • Use of acoustic barriers as close to the source as possible. Equipment to be shielded: air compressor, water pump, concrete pump, dumper, dump truck, generator, various hand tools, saw, excavator, loader, truck mixer, mobile crane, vibrator and breaker. | | During examination periods of the school nearby |

Water Quality - Schedule of Recommended Mitigation Measures

| Impact | Mitigation Measures | Timing | Implementation Status |
|---|---|---------------------|-----------------------|
| Water Quality during Construction | Construction works at or close to the seafront | During construction | V |
| | <ul style="list-style-type: none"> • Temporary storage of construction materials (e.g. equipment, filling materials, chemicals and fuel), chemical waste storage area and temporary stockpile of construction and demolition materials should be located well away from the seawater front and storm drainage during carrying out of the works. | | V |
| | <ul style="list-style-type: none"> • Stockpiling of construction and demolition materials and dusty materials should be covered and located away from the seawater front and storm drainage. | | V |
| | <ul style="list-style-type: none"> • Construction debris and spoil should be covered up and/or disposed of as soon as possible to avoid being washed into the nearby receiving waters. | | V |
| | Construction run-off and Drainage | During construction | V |
| | <p>The site practices outlined in ProPECC PN 1/94 "Construction Site Drainage" shall be followed as far as practicable in order to minimise surface runoff and the chance of erosion, and also to retain and reduce any suspended solids prior to discharge. These practices include, inter alia, the following items:-</p> <ul style="list-style-type: none"> • Provision of perimeter channels to intercept storm-runoff from outside the site. These shall be constructed in advance of site formation works and earthworks. | | V |
| | <ul style="list-style-type: none"> • Vehicle and plant servicing areas, vehicle wash bays and lubrication bays should as far as possible be located within roofed areas. The drainage in these covered areas should be connected to foul sewers via a petrol interceptor and/or oil/grease separator. Oil leakage or spillage should be contained and cleaned up immediately. Waste oil should be collected and stored for recycling or disposal in accordance with the Waste Disposal Ordinance. | | V |
| | <ul style="list-style-type: none"> • Sand/silt removal facilities such as sand traps, silt traps and sediment basins shall be provided to remove sand/silt particles from runoff to meet the requirements of the Technical Memorandum standard under the Water Pollution Control Ordinance. The design of silt removal facilities should be based on the guidelines provided in ProPECC PN 1/94. All drainage facilities and erosion and sediment control structures should be inspected monthly, regularly cleaned and maintained to ensure proper and efficient operation at all times and particularly during rainstorms. | | V |
| | <ul style="list-style-type: none"> • Careful programming of the works to minimise the potential of soil erosion during the rainy season. Other measures that need to be implemented before, during, and after rainstorms are summarized in ProPECC PN 1/94. | | V |
| | <ul style="list-style-type: none"> • Exposed soil surface shall be protected by paving as soon as possible to reduce the potential of soil erosion. | | V |
| | <ul style="list-style-type: none"> • Open stockpiles of construction materials on site shall be covered with tarpaulin or similar fabric during rainstorm. | | V |
| | General Construction Activities | | During construction |
| <ul style="list-style-type: none"> • Debris and rubbish generated on-site shall be collected, handled and disposed of properly to avoid entering the nearby nullah and stormwater drains. Stockpiles of cement and other construction material should be kept covered when not being used. | V | | |

| Impact | Mitigation Measures | Timing | Implementation Status |
|---|---|---------------------|-----------------------|
| Water Quality during Construction | <ul style="list-style-type: none"> Oils and fuels should only be used and stored in designated areas which have pollution prevention facilities. All fuel tanks and storage areas shall be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank. The bund should be drained of rainwater after a rain event. | | V |
| | Sewage Effluent | | |
| | <ul style="list-style-type: none"> Temporary sanitary facilities, such as portable chemical toilets, shall be employed on-site. A licensed contractor would be responsible for appropriate disposal and maintenance of these facilities. | During construction | V |
| | <ul style="list-style-type: none"> Effluent discharged from the construction site should comply with the standards stipulated in the TM-DSS. | | V |
| | <ul style="list-style-type: none"> Subject to the sampling results of Contamination Assessment Plan of the site, any contaminated land treatments are subjected to EPD's requirements on handling, treatment and disposal. Should effluent stream and/or extracted ground water be discharged from the site, the discharge shall comply with the WPCO and any EPD special requirements. | | N/A |
| <ul style="list-style-type: none"> Establishment of baseline and impact monitoring program to establish the baseline water quality condition and monitor the construction process in order to enforce controls and modify method of work if any adverse impacts on the water sensitive receivers are detected. | V | | |

Waste Management- Schedule of Recommended Mitigation Measures

| Impact | Mitigation Measures | Timing | Implementation Status |
|--------------------------------------|---|---------------------|-----------------------|
| Waste Management during Construction | Good Site Practice | | |
| | <ul style="list-style-type: none"> Nominate an approved personnel, such as a site manager, to be responsible for good site practices and effective arrangements for collection and disposal to an appropriate facility of all wastes generated at the works area. Training of site personnel in proper waste management and handling procedures shall be undertaken. | During construction | V |
| | <ul style="list-style-type: none"> Construction materials should be planned and stocked carefully to minimise and avoid unnecessary generation of waste. | | V |
| | <ul style="list-style-type: none"> General refuse shall be stored and collected separately from other construction and chemical wastes. Provide on-site refuse collection facilities and enclosed transfer facility for storage and containment. | | V |
| | <ul style="list-style-type: none"> Waste points should be provided sufficiently and waste should be collected regularly. | | V |
| | <ul style="list-style-type: none"> Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers. | | V |
| | <ul style="list-style-type: none"> Separate chemical wastes for special handling and appropriate treatment at the Chemical Waste Treatment Centre located at Tsing Yi. Chemical waste shall be handled according to the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. | | V |

| Impact | Mitigation Measures | Timing | Implementation Status | |
|---|---|---------------------|-----------------------|---|
| Waste Management during Construction | <ul style="list-style-type: none"> Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors. | During construction | V | |
| | <ul style="list-style-type: none"> Develop procedures such as a trip-ticket system to monitor the disposal of C&D material and solid wastes at public filling areas and landfills, and to control fly-tipping. | | V | |
| | <ul style="list-style-type: none"> A recording system for the amount of wastes generated, recycled and disposed should be proposed. | | V | |
| | Waste Reduction Measures | | | |
| | <p>Good management and control can prevent the generation of a significant amount of waste. Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction include:-</p> | | During construction | V |
| | <ul style="list-style-type: none"> 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. | | | |
| | <ul style="list-style-type: none"> Encourage collection of aluminum cans, PET bottles and paper by providing separate labelled bins to enable these wastes to be segregated from other general refuse generated by the work force. | | | V |
| | <ul style="list-style-type: none"> Any unused chemicals or those with remaining functional capacity shall be recycled. | | | V |
| | <ul style="list-style-type: none"> Use of reusable non-timber formwork to reduce the amount of C&D material. | | | V |
| | <ul style="list-style-type: none"> Prior to disposal of C&D waste, it is recommended that wood, steel and other metals shall be separated for re-use and / or recycling to minimise the quantity of waste to be disposed of to landfill. | | | V |
| <ul style="list-style-type: none"> Proper storage and site practices to minimise the potential for damage or contamination of construction materials. | | V | | |
| <ul style="list-style-type: none"> Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste. | | V | | |
| General Site Wastes | | | | |
| <ul style="list-style-type: none"> Collection area for construction site waste should be provided where waste can be stored prior to removal from site. | | During construction | V | |
| <ul style="list-style-type: none"> An enclosed and covered area for the collection of the waste is recommended to reduce 'wind blow' of light material. | | | V | |
| <ul style="list-style-type: none"> An open area used for storage or loading/unloading of wastes should be bunded and all the polluted surface run-off collected within this area should be diverted into sewers. | | | V | |
| <ul style="list-style-type: none"> 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. | | | V | |
| Workforce Wastes | | | | |
| <ul style="list-style-type: none"> Suitable collection sites around site offices and canteen should be required. | | During construction | V | |
| <ul style="list-style-type: none"> Waste should be removed daily or as often as required. | | | V | |

| Impact | Mitigation Measures | Timing | Implementation Status |
|--------------------------------------|---|---------------------|-----------------------|
| Waste Management during Construction | Chemical Waste | | |
| | <ul style="list-style-type: none"> • After use, chemical waste (for example, cleaning fluids, solvents, lubrication oil and fuel) should be handled according to the Code of Practice on the Package, Labelling and Storage of Chemical Wastes. | During construction | V |
| | <ul style="list-style-type: none"> • Waste should be properly stored on site within suitably designed containers and should be collected by approved licensed waste collectors for disposal at the Chemical Waste Treatment Centre (CWTC) or other licensed facility in accordance with the Waste Disposal Chemical Waste (General) Regulation. | | V |
| | <ul style="list-style-type: none"> • Any service shop and minor maintenance facilities should be located on hard standing within a bunded area, and sumps and oil interceptors should be provided. | During construction | N/A |
| | <ul style="list-style-type: none"> • Provision of appropriate on-site temporary storage facility for any asbestos containing materials (ACM) where necessary. Storage facilities shall be designed in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. | | V |
| | <ul style="list-style-type: none"> • Employ registered contractors for removal of ACM off-site and disposal at a designated landfill site. | | V |
| | Construction and Demolition Material | | |
| | <ul style="list-style-type: none"> • The selective demolition method is recommended to be employed to minimize the effort of sorting mixed C&D materials. | During construction | V |
| | <ul style="list-style-type: none"> • In order to minimise the impact resulting from collection and transportation of C&D material for off-site disposal, it is recommended that the public fill material generated from demolition works shall be re-used on-site as far as possible. | | V |
| | <ul style="list-style-type: none"> • A suitable area should be designated to facilitate the sorting process and a temporary stockpiling area will be required for the separated materials. Separate construction and demolition material into C&D waste (non-inert material) and public fill (inert material) for appropriate disposal. Public fill disposed at a public filling area shall only consist of earth, building debris, broken rock and concrete. The material shall be free from marine mud, household refuse, plastic, metals, industrial and chemical waste, animal and vegetable matter, and other material considered to be unsuitable by the Filling Supervisor. Small quantities of timber mixed with otherwise suitable material would be permitted. C&D waste, such as wood, glass, plastic, steel and other metals, shall be reused or recycled and, as a last resort, disposed to landfill. | | V |

Land Contamination - Schedule of Recommended Mitigation Measures

| Impact | Mitigation Measures | Timing | Implementation Status |
|--|--|---|---|
| <p>Land Contamination (For inaccessible lots and lots which the Permit Holder opt to re-assess in accordance with the Risk-Based Remediation Goals (RBRGs) approach)</p> | <ul style="list-style-type: none"> Further land contamination assessments to be carried out for inaccessible lots, lots which the Permit Holder opt to re-assess in accordance with the RBRGs approach, as well as areas that required further sampling to ascertain contamination extent. Supplementary CAP, CAR and RAPs to be submitted to EPD for endorsement before commencement of remediation work. These reports shall detail the further sampling & remediation works required. The development construction work shall only commence after all the remediation work has been completed. | <p>Inaccessible lots as described under para. 3.5 of Appendix 7A of YTB-EIA as well as areas that required further sampling to ascertain contamination extent/ Upon availability of site access</p> <p>Supplementary CAP, CAR and RAPs to be submitted to EPD for endorsement before commencement of the remediation work.</p> <p>Development construction work should only commence after all the remediation work has been completed.</p> | <p>V</p> <p>(Two CAPs (Yau Tong Bay - Decommissioning of Shipyard Sites Supplementary CAP for Previous Inaccessible Lots (YTML 27, 44, 45-46, 54 and Underground Oil Tank at YTML 6-11) & Yau Tong Bay - Decommissioning of Shipyard Sites (CAP for YTML 1, 6-11, 15, 28, 29, 38 and 41-43)) have been submitted to EPD and approved on 6 Jul 2011 and 30 Aug 2011 respectively. The corresponding CARs and RAPs were submitted to EPD in June 2012 and were subsequently approved in June 2013 after two rounds of comment.)</p> |

| Impact | Mitigation Measures | Timing | Implementation Status |
|---|---|---|--|
| Land Contamination (For inaccessible lots and lots which the Permit Holder opt to re-assess in accordance with the Risk-Based Remediation Goals (RBRGs) approach) | <ul style="list-style-type: none"> • A method statement detailing the following shall be submitted to EPD for endorsement:- <ul style="list-style-type: none"> - Methodology, monitoring and verification procedures for biopiling and solidification; - Pilot test procedures for solidification process to ascertain the concrete mix recipe and leachability of the product; - The sample size for the verification soil test to be conducted by IEA for spot check purpose; - The notification system for notifying the Director the satisfactory completion of the excavation and treatment of contaminated soil; and - Provision and operation requirements of equipment and personnel decontamination facilities. | <p>All areas identified to require solidification of soil as land remediation / The pilot test results and method statement shall be submitted and endorsed at least one month prior to the full scale solidification works.</p> <p>All soil identified and to be identified as contaminated with TPH / The method statement shall be submitted and endorsed at least one month prior to the commencement of the biopiling works.</p> | <p style="text-align: center;">V</p> <p>(A method statement for biopiling and solidification has been submitted to EPD on 2 Oct 2013. The method statement is endorsed by EPD on 20 Dec 2013.)</p> |
| Land Contamination (For | <ul style="list-style-type: none"> • A Soil Remediation Report should be submitted to EPD to demonstrate that the remediation work has been properly carried out. | All areas identified to require soil and | <p style="text-align: center;">V</p> <p>(The batch 2 of Soil Remediation</p> |

| Impact | Mitigation Measures | Timing | Implementation Status |
|--|---|--|--|
| inaccessible lots and lots which the Permit Holder opt to re-assess in accordance with the Risk-Based Remediation Goals (RBRGs) approach) | <ul style="list-style-type: none"> • Inspections for dioxin. Should there be signs of incineration facilities, burn pits or facilities that utilises high temperature burning, soil sampling for dioxin will be carried out. Details regarding such sampling shall be approved by EPD. A detailed proposal for dealing with dioxin contaminated material, if found, shall also be submitted to EPD for approval. | groundwater remediation / The Remediation Report shall be submitted and endorsed prior to the commencement of the development construction works. | Report [SRR for YTML 15 and 27-46 (Zone nos. T32C, T32D, T32E, T35C, T36A, R1, R2, R3, R4, R7, R8, A2, A3, A4 and A5)] has been submitted to EPD on 7 January 2015.) |
| Land Contamination (For lots and facilities assessed under EIA with approved CAP, CAR and RAP based on Dutch B levels referenced to ProPECC PN3/94 – Contaminated Land | <ul style="list-style-type: none"> • A pilot test shall be conducted to ascertain the concrete mix recipe and leachability of the product prior to a full scale solidification and a method statement detailing the solidification procedure (including the sampling proposal for process monitoring) shall be submitted to EPD for endorsement. | All areas identified to require solidification of soil as land remediation / The pilot test results and method statement shall be submitted and endorsed prior to the full scale | V (A pilot test to ascertain the concrete mix recipe was conducted on 30 Dec 2013. The method statement for solidification has been submitted to EPD on 2 Oct 2013 and subsequently endorsed by EPD |

| Impact | Mitigation Measures | Timing | Implementation Status |
|--|---|--|---|
| Assessment and Remediation) | | solidification works. | on 20 Dec 2013.) |
| Land Contamination (For lots and facilities assessed under EIA with approved CAP, CAR and RAP based on Dutch B levels referenced to ProPECC PN3/94 – Contaminated Land Assessment and Remediation) | <ul style="list-style-type: none"> • A method statement detailing the biopiling methodology, monitoring and verification procedures shall be submitted to EPD for endorsement. | All soil identified and to be identified as contaminated with TPH / The method statement shall be submitted and endorsed prior to the commencement of the biopiling works. | <p>V</p> <p>(The method statement for biopiling has been submitted to EPD on 2 Oct 2013 and subsequently endorsed by EPD on 20 Dec 2013.)</p> |
| Assessment and Remediation) | <ul style="list-style-type: none"> • A Soil Remediation Report should be submitted to EPD to demonstrate that the remediation work has been properly carried out. | All areas identified to require soil and groundwater remediation / The Remediation Report shall be submitted and endorsed prior to the commencement of the development construction works. | <p>V</p> <p>(The batch 2 of Soil Remediation Report [SRR for YTML 15 and 27-46 (Zone nos. T32C, T32D, T32E, T35C, T36A, R1, R2, R3, R4, R7, R8, A2, A3, A4 and A5)] has been submitted to EPD on 7 January 2015.)</p> |

Landscape and Visual Impact - Schedule of Recommended Mitigation Measures

| Impact | Mitigation Measures | Timing | Implementation Status |
|---|--|---------------------|-----------------------|
| Landscape and Visual Impact during Construction | <ul style="list-style-type: none"> On-site mature trees within the Project boundary shall be retained. Any mature tree shall not be transplanted or fell unless permission has been given by the EPD. | During construction | V |
| | <ul style="list-style-type: none"> During the biopiling process, the biopiles shall be limited to a height of less than 3m. | | V |
| | <ul style="list-style-type: none"> Erection and maintenance of decorative screen/colour hoarding around the site. | | V |

Legend: V = implemented;
 X = not implemented;
 @ = partially implemented;
 N/A = not applicable - No such work was undertaken or no such material was used on site.

**APPENDIX C
SUMMARY OF ACTION AND LIMIT LEVELS**

Appendix C - Summary of Action and Limit Levels

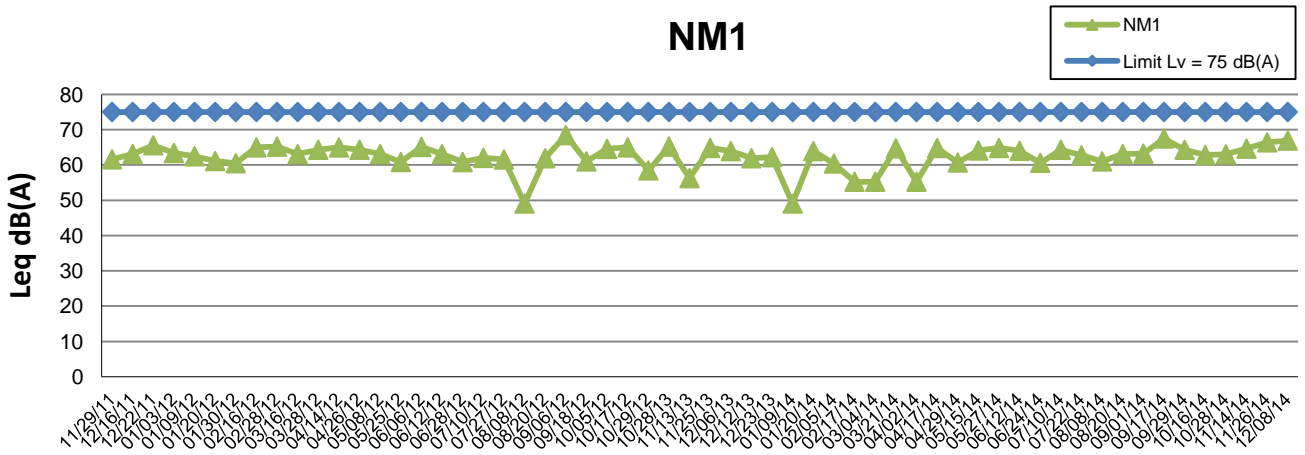
Table 1 – Action and Limit Levels for Construction Noise (0700-1900 hrs of normal weekdays)

| Location | Action Level | Limit Level |
|-----------------|--|--------------------|
| NM1 | When one documented complaint, related to 0700 – 1900 hours on normal weekdays, is received from any one of the sensitive receivers. | 75 dB(A) |
| NM2 | | 65/70 dB(A)* |
| NM3 | | 65/70 dB(A)* |

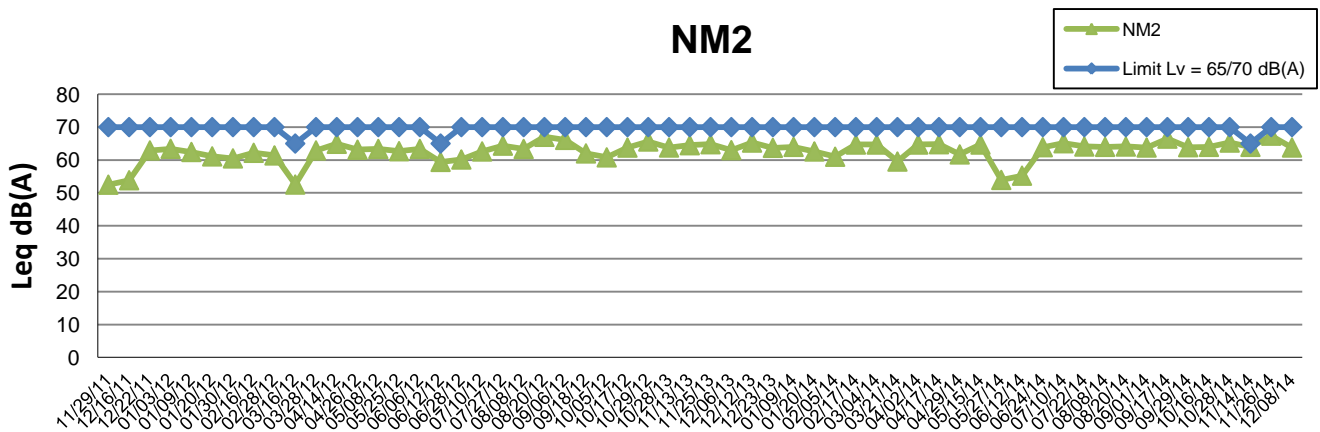
*Daytime noise Limit Level of 70 dB(A) applies to education institutions, while 65dB(A) applies during school examination period.

**APPENDIX D
GRAPHICAL PRESENTATION OF IMPACT
DAYTIME CONSTRUCTION NOISE
MONITORING RESULTS**

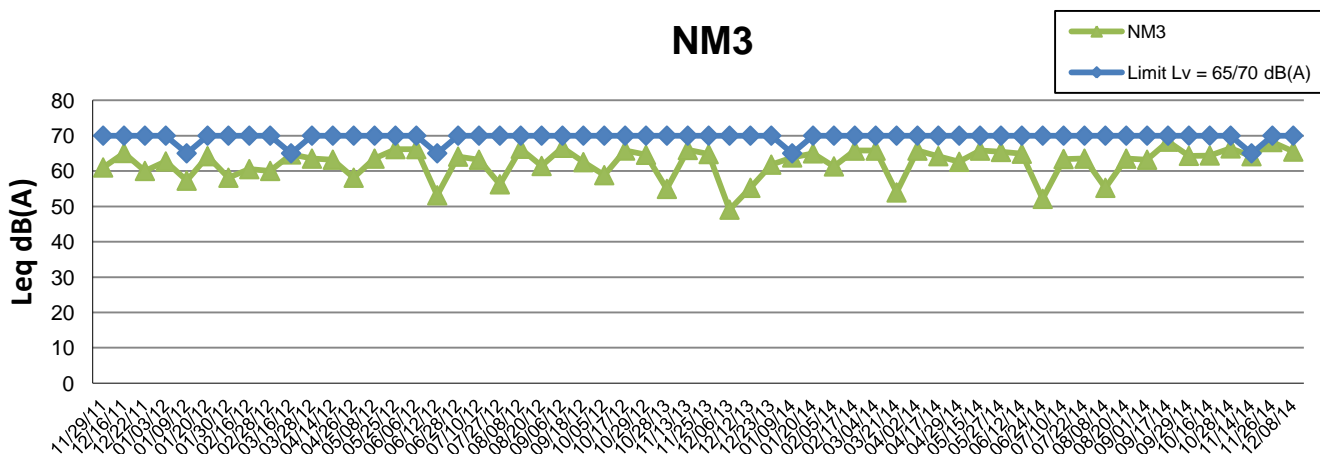
NM1




NM2



NM3



Remark: Measured noise level would be shown if Measured noise level (Leq) <= Baseline noise level

| | | | | | |
|---|--|---------|----------|--------------|--------|
|  | Yau Tong Bay – Decommissioning of Shipyard Sites | SCALE | N.T.S. | DATE | Jan-14 |
| | Graphical Presentation of Impact Daytime Construction Noise Monitoring Results | CHECK | ENFL | DRAWN | OLWY |
| | | JOB NO. | 60048283 | APPENDIX No. | Rev. |

**APPENDIX E
CUMULATIVE STATISTICS ON
COMPLAINTS, NOTIFICATIONS OF
SUMMONS AND SUCCESSFUL
PROSECUTIONS**

Appendix E

Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions

| | Date Received | Subject | Status | Total no. in this reporting period | Total no. since project commencement |
|--------------------------|---------------|---------|--------|------------------------------------|--------------------------------------|
| Environmental complaints | - | - | - | 0 | 4 |
| Notification of summons | - | - | - | 0 | 0 |
| Successful Prosecutions | - | - | - | 0 | 0 |