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本署檔號
OUR REF: (59) in Ax(1) to EP2/H1/KT/PT2/85 Pt.11
來函檔號
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Environmental Protection Department
Branch Office
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環境保護署分處
香港灣仔
軒尼詩道
一百三十號
修頓中心廿八樓

25th June 2015

Civil Engineering and Development Department

Dear Sir,

Environmental Impact Assessment (EIA) Ordinance, Cap.499
Application for Variation of an Environmental Permit

Project Title: Alternative Ground Decontamination Works at
the Proposed Kennedy Town Comprehensive Development Area (KTCDA) Site
(Application No. VEP-475/2015)

I refer to your above application received on 27 May 2015 for variation of an environmental permit under Section 13(1) of the EIA Ordinance.

Pursuant to Section 13(5) of the EIA Ordinance, we have amended the Environmental Permit (EP-136/2002/D). I attach the Environmental Permit as amended (No. EP-136/2002/E) for your use.

Under Section 15 of the EIA Ordinance, the amended Environmental Permit will be placed on the EIA Ordinance Register. It will also be placed on the EIA Ordinance website (<http://www.epd.gov.hk/eia/>).

Please note that if you are aggrieved by any of the conditions imposed in this Permit, you may appeal under Section 17 of the EIA Ordinance within 30 days of receipt of this Permit.

Should you have any queries on the above application, please contact my colleague Mr. Steve LI at 2835 1142.

Yours sincerely,


(Ken Y.K. WONG)

Principal Environmental Protection Officer
for Director of Environmental Protection

ENVIRONMENTAL IMPACT ASSESSMENT ORDINANCE
(CHAPTER 499)
Sections 10 & 13

環境影響評估條例
(第 499 章)
第 10 及 13 條

ENVIRONMENTAL PERMIT TO DECOMMISSION
A DESIGNATED PROJECT

解除運作指定工程項目的環境許可證

PART A (MAIN PERMIT)
A 部 (許可證主要部分)

Pursuant to Section 10 of the Environmental Impact Assessment Ordinance (the EIAO), the Director of Environmental Protection (the Director) grants the environmental permit (EP-136/2002) to **the Civil Engineering and Development Department** (formerly known as the Civil Engineering Department and hereinafter referred to as the "Permit Holder") on 22 May 2002. Pursuant to Section 13 of the EIAO, the Director amends the Environmental Permit based on the Application No. VEP-475/2015. The amendments, described below, are incorporated into this Environmental Permit (EP-136/2002/E). This Environmental Permit as amended is for the decommission of the designated project described in Part B subject to the conditions specified in Part C.

The issue of this environmental permit is based on the documents, approvals or permissions described below:

根據《環境影響評估條例》(環評條例)第10條的規定,環境保護署署長(署長)於2002年5月22日將環境許可證(編號EP-136/2002)批予**土木工程拓展署**(前稱土木工程署,下稱“許可證持有人”)。根據環評條例第13條的規定,署長因應更改環境許可證的申請編號VEP-475/2015修訂環境許可證。以下修訂已包含在本環境許可證內(編號EP-136/2002/E)。本經修訂的環境許可證作為解除運作本許可證B部所說明的指定工程項目,但須遵守C部所列明的條件。

本環境許可證的發出,乃以下表所列的文件、批准或許可作為根據:

Application No. 申請書編號	VEP-475/2015
Document in the Register: 登記冊上的文件:	<p>(1) Environmental Impact Assessment – Demolition of Buildings and Structures in the Proposed Kennedy Town Comprehensive Development Area Site : Final EIA Report, EM&A Manual and Executive Summary (Register No.: AEIAR-058/2002) [Hereinafter referred to as “the EIA Report (Register No.: AEIAR-058/2002)”]</p> <p>(1) 堅尼地城綜合發展區拆卸工程 環境影響評估 : 最終環境影響評估報告, 環境監察及審核手冊 及 行政摘要 (登記冊編號: AEIAR-058/2002) [下稱“環評報告(登記冊編號: AEIAR-058/2002)”]</p> <p>(2) The Director's letter of approval of the EIA Report dated 16 April 2002, ref: EP2/H1/KT/PT2/85 Ax 1</p> <p>(2) 環境保護署署長於 2002 年 4 月 16 日發出批准環評報告的信件 (檔案編號: EP2/H1/KT/PT2/85 Ax 1)</p>



	<p>(3) Application for an Environmental Permit No. AEP-136/2002 received on 24 April 2002 (3) 於 2002 年 4 月 24 日收到的環境許可證申請文件編號 AEP-136/2002</p> <p>(4) Environmental Permit issued on 22 May 2002 (Permit No. EP-136/2002) (4) 於 2002 年 5 月 22 日簽發的環境許可證 (許可證編號 EP-136/2002)</p> <p>(5) Application documents for Variation of Environmental Permit including all attachments submitted by the Permit Holder on 4 April 2007 (Application No. VEP-234/2007) (5) 許可證持有人於 2007 年 4 月 4 日提交的更改環境許可證申請文件包括所有附件(申請書編號：VEP-234/2007)</p> <p>(6) Application documents for Variation of Environmental Permit including all attachments submitted by the Permit Holder on 27 September 2007 (Application No. VEP-239/2007) (6) 許可證持有人於 2007 年 9 月 27 日提交的更改環境許可證申請文件包括所有附件(申請書編號：VEP-239/2007)</p> <p>(7) Application documents for Variation of Environmental Permit including all attachments submitted by the Permit Holder on 4 June 2009 (Application No. VEP-287/2009) (7) 許可證持有人於 2009 年 6 月 4 日提交的更改環境許可證申請文件包括所有附件(申請書編號：VEP-287/2009)</p> <p>(8) Application documents for Variation of Environmental Permit including all attachments submitted by the Permit Holder on 20 October 2011 (Application No. VEP-337/2011) (8) 許可證持有人於 2011 年 10 月 20 日提交的更改環境許可證申請文件包括所有附件(申請書編號：VEP-337/2011)</p>
	<p>(9) Environmental Impact Assessment –Alternative Ground Decontamination Works at the Proposed Kennedy Town Comprehensive Development Area Site: Final EIA Report, EM&A Manual and Executive Summary (Register No.: AEIAR-188/2015) [Hereinafter referred to as “the EIA Report (Register No.:AEIAR-188/2015)”] (9) 堅尼地城綜合發展區替代土地除污工程 - 環境影響評估：最終環境影響評估報告, 環境監察及審核手冊 及 行政摘要 (登記冊編號：AEIAR-188/2015) [下稱“環評報告 (登記冊編號：AEIAR-188/2015)”]</p> <p>(10) Application documents for Variation of Environmental Permit including all attachments submitted by the Permit Holder on 27 May 2015 (Application No. VEP-475/2015) (10) 許可證持有人於 2015 年 5 月 27 日提交的更改環境許可證申請文件包括所有附件(申請書編號：VEP-475/2015)</p>



Application No. 申請書編號	Date of Application 申請日期	List of Amendments Incorporated into this Environmental Permit 已包含在本環境許可證內的修訂項目	Date of Amendment 修訂日期
VEP-234/2007	4 April 2007 2007年4月4日	<p>Add a new condition before each of the following conditions in Part C of Environmental Permit No. EP-136/2002: Conditions 1.8, 1.12, 1.13 and 2.5. 在環境許可證編號 EP-136/2002 C 部第 1.8, 1.12, 1.13 和 2.5 項條件前各加入一項新的條件。</p> <p>Vary Conditions 1.7, 1.11, 1.14, 2.3, 2.4, 2.5 and 2.7 in Part C of Environmental Permit No. EP-136/2002. 更改環境許可證編號 EP-136/2002 C 部第 1.7, 1.11, 1.14, 2.3, 2.4, 2.5 和 2.7 項條件。</p> <p>Renumber the permit conditions in Part C of the Environmental Permit No. EP-136/2002/A where appropriate. 把環境許可證編號 EP-136/2002/A C 部的條件適當地重新編號。</p> <p>Renumber Figure 2 and Figure 3 to Figure 7 and Figure 6 respectively. 把圖 2 和圖 3 依序重新編號為圖 7 和圖 6。</p> <p>Add 4 new figures and numbered as Figures 2 to 5. 加入 4 張新的圖並編號為圖 2 至圖 5。</p>	30 April 2007 2007年4月30日
VEP-239/2007	27 Sep 2007 2007年9月27日	<p>Amend Phase 1 Part 1 Project Boundary to align with curb line at northern end of Sai See Street. Amend Figures 2 and 3 accordingly. 沿西市街北端路邊更改第一階段工程範圍。相應地更改圖 2 和圖 3。</p>	18 Oct 2007 2007年10月18日
VEP-287/2009	4 Jun 2009 2009年6月4日	<p>Vary Conditions 1.1, 1.12 to 1.15, 2.5(g) to (p), 2.7 and 3.1 in Part C of Environmental Permit No. EP-136/2002/B to include reference to the temporary use of Phase 1 site by the holder of Environmental Permit No. EP-313/2008 to carry out Phase 1 Part 2 of the Project. 修改環境許可證編號 EP-136/2002/B C 部第 1.1 項, 1.12 項至 1.15 項, 2.5(g) 項至 (p) 項, 第 2.7 項和 3.1 項, 以顯示環境許可證 EP-313/2008 號的持有人將臨時使用本工程項目第 1 階段的工地範圍, 以進行本工程第 1 階段第 2 部分項目。</p> <p>Vary Condition 2.5(b) in Part C of Environmental Permit No. EP-136/2002/B to remove from Phase 1 Part 1 of the Project the demolition of the existing piers at the harbourfront at the northern boundary of the site. Amend Figures 2 by removing the notation "existing piers to be demolished" accordingly. 修改環境許可證編號 EP-136/2002/B C 部第 2.5(b) 項, 從工程項目第 1 階段第 1 部分中, 刪除北部邊界海旁現有碼頭的拆卸工程。相應地刪除圖 2 內之注釋 "existing piers to be demolished"。</p>	29 June 2009 2009年6月29日



VEP-337/2011	20 Oct 2011 2011 年 10 月 20 日	Vary Conditions 2.5(q) in Part C of Environmental Permit No. EP-136/2002/D to remove the requirement for demolition of the additional concrete paving at Phase 1 Site during Phase 2. 修改環境許可證編號 EP-136/2002/D C 部第 2.5(q) 項, 以移除於本工程項目第 2 階段時拆卸本工程項目第 1 階段的工地範圍內加鋪的混凝土覆蓋之要求。	15 November 2011 2011 年 11 月 15 日
VEP-475/2015	27 May 2015 2015 年 5 月 27 日	<p>Vary Conditions 1.7, 2.1, 2.2, 2.7, 2.20 & 3.1 in Part C of Environmental Permit No. EP-136/2002/D to incorporate the EIA Report (Register No. AEIAR 188/2015). 修改環境許可證編號 EP-136/2002/D C 部第 1.7 項, 2.1 項, 2.2 項, 2.7 項, 2.20 項及 3.1 項, 以加入環評報告(登記冊編號: AEIAR-188/2015)。</p> <p>Delete Condition 2.3 in Part C of Environmental Permit No. EP-136/2002/D. 刪除環境許可證編號 EP-136/2002/D C 部第 2.3 項。</p> <p>Renumber the items under Condition 2.5 in Part C of the Environmental Permit No. EP-136/2002/D where appropriate for update of the Phase 2 work. 因應項目第 2 階段工程, 把環境許可證編號 EP-136/2002/D C 部的第 2.5 項內細項適當地重新編號。</p> <p>Renumber Condition 2.5(q) as 2.5(v) in Part C of Environmental Permit No. EP-136/2002/D to add on-site reuse of remediated soil and 7-year Programme. 修改環境許可證編號 EP-136/2002/D C 部第 2.5(q)項成為 2.5(v) 項以加入原地重用處理後泥土及 7 年工程項目計劃。</p> <p>Renumber Conditions 2.11, 2.12, 2.13 and 2.14 as Conditions 2.5(g), 2.5(h), 2.5(i) and 2.5(j) in Part C of Environmental Permit No. EP-136/2002/D. 修改環境許可證編號 EP-136/2002/D C 部第 2.11 項, 2.12 項, 2.13 項及 2.14 項成為 2.5(g) 項, 2.5(h) 項, 2.5(i) 項及 2.5(j) 項。</p> <p>Renumber Condition 2.15 as Condition 2.18 in Part C of Environmental Permit No. EP-136/2002/D and incorporate new remediation methods for Phase 2 works. 修改環境許可證編號 EP-136/2002/D C 部第 2.15 項成為第 2.18 項並加入第 2 階段工程的土地污染整治方法。</p> <p>Renumber Condition 2.16 as Condition 2.19 in Part C of Environmental Permit No. EP-136/2002/D and update the remediation standards from "Dutch B levels" to "Risk-Based Remediation Goals" Standard. 修改環境許可證編號 EP-136/2002/D C 部第 2.16 項成為第 2.19 項以加入以更改「荷蘭 B 標準」至「按風險釐定的土地污染整治標準」。</p>	25 June 2015 2015 年 6 月 25 日



		<p>Renumber Condition 2.17 as Condition 2.5(k) in Part C of Environmental Permit No. EP-136/2002/D. 修改環境許可證編號 EP-136/2002/D C 部第 2.17 項成為第 2.5(k) 項。</p> <p>Renumber Condition 2.18 as Condition 2.20 in Part C of Environmental Permit No. EP-136/2002/D and incorporate new mitigation measures for the Phase 2 remediation works. 修改環境許可證編號 EP-136/2002/D C 部第 2.18 項成為第 2.20 項, 以更新工程項目第 2 階段的新緩解措施。</p> <p>Renumber Condition 2.19 as Condition 2.23 in Part C of Environmental Permit No. EP-136/2002/D 修改環境許可證編號 EP-136/2002/D C 部第 2.19 項成為第 2.23 項。</p> <p>Add New Conditions 2.5(w) for submission of a detailed updated Project Programme for Phase 2 works. 加入新的環境許可證編號 EP-136/2002/D C 部第 2.5(w)項以提交更新的第 2 階段工程項目計劃。</p> <p>Add New Conditions 2.11 and 2.12 in Part C of Environmental Permit No. EP-136/2002/D to incorporate ecological precautionary measures for Phase 2 of the Project. 加入新的環境許可證編號 EP-136/2002/D C 部第 2.11 項及 2.12 項以加入第 2 階段工程的生態預防措施。</p> <p>Add New Conditions 2.13 and 2.14 in Part C of Environmental Permit No. EP-136/2002/D for the submission of a Review Report for the area occupied by New World First Bus Depot. 加入新的環境許可證編號 EP-136/2002/D C 部第 2.13 項及 2.14 項以針對新世界第一巴士廠佔用土地的檢討報告。</p> <p>Add New Condition 2.15 in Part C of Environmental Permit No. EP-136/2002/D for the submission of Updated EM&A Manual for Biopile System Discharge Emissions and Ambient Hydrocarbon Monitoring 加入新的環境許可證編號 EP-136/2002/D C 部第 2.15 項以提交更新的環監手冊以監察「生物堆法」系統排放及大氣內的炭氫化合物。</p> <p>Add New Condition 2.16 in Part C of Environmental Permit No. EP-136/2002/D for the submission of Construction Noise Management Plan. 加入新的環境許可證編號 EP-136/2002/D C 部第 2.16 項以提交建築噪音管理計劃。</p>	
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		<p>Add New Condition 2.17 in Part C of Environmental Permit No. EP-136/2002/D for the submission of Construction Site Drainage Management Plan. 加入新的環境許可證編號 EP-136/2002/D C 部第 2.17 項以提交建築地盤渠務管理計劃。</p> <p>Add New Condition 2.21 in Part C of Environmental Permit No. EP-136/2002/D for the submission of Landscape Plan. 加入新的環境許可證編號 EP-136/2002/D C 部第 2.21 項以提交園景設計計劃總圖。</p> <p>Add Condition 2.22 in Part C of Environmental Permit No. EP-136/2002/D for the submission of Remediation Report for the Phase 2 remediation works. 加入新的環境許可證編號 EP-136/2002/D C 部第 2.22 項以提交工程項目第 2 階段土地除污工程的整治報告。</p> <p>Add Appendix C to provide a) remediation methods; b) criteria for on-site reuse of treated soil; and c) key mitigation measures for Phase 2 of the Project. 加入附件 C 以提供 a) 土地除污方法; b) 經處理的泥土現場再用標準; c) 主要緩解措施。</p> <p>Add Appendix D to show the typical cross section and oblique view of a "Biopile" for indicative purpose. 加入附件 D 以顯示「生物堆法」的切面圖及斜角圖。</p> <p>Renumber Appendix C as Appendix E to change the remediation standards from "Dutch B levels" to "Risk-Based Remediation Goals" Standard. 修改附件 C 成為附件 E 以更改「荷蘭 B 標準」至「按風險釐定的土地污染整治標準」。</p> <p>Vary Figure 5 to show the phase 2 Project Boundary; location of proposed future waterfront promenade and location of the New World First Bus Depot. 修改圖五以顯示項目第 2 階段工程範圍; 建議海濱長廊 及新世界第一巴士廠位置。</p> <p>Add Figure 8 to show the indicative layout of zones for Phase 2 remediation works. 加入圖八以顯示工程項目第 2 階段土地除污工程時的區域分佈。</p>	
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25 June 2015
2015 年 6 月 25 日

Date
日期


(Ken Y.K. WONG)
Principal Environmental Protection Officer
for the Director of Environmental Protection
環境保護署署長
(首席環境保護主任 黃耀光 代行)



PART B (DESCRIPTIONS OF DESIGNATED PROJECT)

B 部 (指定工程項目的說明)

Hereunder is the description of the designated project mentioned in Part A of this environmental permit (hereinafter referred to as the "Permit"):

下列為本環境許可證(下稱“許可證”)A部所提述的指定工程項目的說明:

Title of Designated Projects 指定工程項目的名稱	Demolition of Buildings and Structures in the Proposed Kennedy Town Comprehensive Development Area Site [The above designated projects are hereinafter referred to as "the Project"] 堅尼地城綜合發展區拆卸工程 [上列指定工程項目下稱“工程項目”]
Nature of Designated Projects 指定工程項目的性質	Decommissioning of a municipal incinerator 解除一個市政焚化爐的運作
Location of Designated Projects 指定工程項目的地點	Kennedy Town. The location of the Project is shown on Figure 1 attached to this Permit. 堅尼地城。工程項目的地點如本環境許可證的圖 1 所示。
Scale and Scope of Designated Project(s) 指定工程項目的規模和範圍	Decommissioning of a municipal incinerator, including demolition of the existing chimneys, buildings and structures in the proposed Kennedy Town Comprehensive Development Area site of about 3.4 ha. where the existing incinerator locates, remediation of contaminated soil and wastes within the site, and subsequent disposal of the remediated soil and wastes. 解除一個市政焚化爐的運作，包括拆卸該焚化爐所在地面積約 3.4 公頃的「堅尼地城綜合發展區」內現有的煙囪、大樓及建築物，整治及處置污染了的土壤及物料。

PART C (PERMIT CONDITIONS)

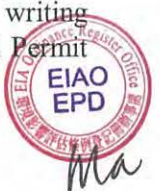
1. General Conditions

- 1.1 The Permit Holder and any person working on the Project shall comply with all conditions set out in this Permit. Any non-compliance by any person may constitute a contravention of the Environmental Impact Assessment Ordinance (Cap.499) and may become the subject of appropriate action being taken under the Ordinance. Upon completion of Phase 1 Part 1 of the Project (see Condition 2.5), the holder of Environmental Permit No. EP-313/2008 will take over the Phase 1 site from the Permit Holder for the construction of the West Island Line (WIL). The holder of Environmental Permit No. EP-313/2008 is required, through conditions under EP-313/2008 or any subsequent variations, to follow up with relevant conditions set out in this Permit in relation to the temporary use of the Phase 1 site (which is named as "Works Area B" in Environmental Permit No. EP-313/2008) during his occupation of the Phase 1 site, in particular Conditions 1.12 to 1.15, 2.5(g) to (u), 2.7 and 3.1. Upon completion of the temporary use of the Phase 1 site for the construction of the WIL, the holder of Environmental Permit No. EP-313/2008 will return the Phase 1 site to the Permit Holder for the implementation of Phase 2 of the Project.
- 1.2 The Permit Holder shall ensure full compliance with all legislation from time to time in force including without limitation the Noise Control Ordinance (Cap. 400), Air Pollution Control Ordinance (Cap. 311), Water Pollution Control Ordinance (Cap. 358), Waste Disposal Ordinance (Cap. 354), Occupational Safety and Health Ordinance (Cap. 509) and Factories and Industrial Undertakings Ordinance (Cap. 59). This Permit does not of itself constitute any ground of defense against any proceedings instituted under any legislation.
- 1.3 The Permit Holder shall make copies of this Permit together with all documents referred to in this Permit or the documents referred to in Part A of the Permit readily available at all times for inspection by the Director or his authorized officers at all sites/offices covered by this Permit. Any reference to the Permit shall include all documents referred to in the Permit and also the relevant documents in the Register.
- 1.4 The Permit Holder shall give a copy of this Permit to the person(s) in charge of the site and ensure that such person(s) fully understands all conditions and all requirements incorporated by the Permit. The site refers to the site of the Project and should mean the same hereinafter.
- 1.5 The Permit Holder shall display conspicuously a copy of this Permit on the site at all vehicular site entrances/exits or at a convenient location for public's information at all times. The Permit Holder shall ensure that the most updated information about the Permit, including any amended Permit, is displayed at such locations. If the Permit Holder surrenders a part or the whole of the Permit, the notice he sends to the Director shall also be displayed at the same locations as the original Permit. The suspended, varied or cancelled Permit shall be removed from display at the site.
- 1.6 The Permit Holder shall carry out the Project as described in Part B of this Permit.
- 1.7 The Permit Holder shall ensure that the Project is designed and constructed in accordance with the information and all recommendations described in the EIA Reports (Register No. AEIAR-058/2002 and Register No. AEIAR-188/2015), the application documents for environmental permits and relevant documents in the Register listed in Part A of this Permit; the information or mitigation measures described in this Permit, mitigation measures to be recommended in submissions that shall be deposited with or approved by the Director as a result of permit conditions contained in this Permit, and mitigation measures to be recommended under on-going



surveillance and monitoring activities during all stages of the Project. Where recommendations referred to in the documents in the Register are not expressly referred to in this Permit, such recommendations are nevertheless to be implemented unless expressly excluded or impliedly amended in this Permit.

- 1.8 The Project shall be implemented in two Phases, with Phase 1 containing 2 Parts, as described in detail in Condition 2.5 of this Permit. A tentative programme for the Project was set out in the Application No. VEP-234/2007.
- 1.9 All submissions as required under this Permit, shall be rectified and resubmitted in accordance with the comments, if any, made by the Director, within one month of the receipt of the Director's comments or otherwise specified by the Director.
- 1.10 All submissions approved by the Director, all submissions deposited without comments by the Director, or all submissions rectified in accordance with comments by the Director under this Permit shall be construed as part of the permit conditions described in Part C of this Permit. Any variation of the submissions shall be approved by the Director in writing or as prescribed in the relevant permit conditions. All submissions or any variations of the submissions made after the establishment of an Environmental Team (ET) and employment of an Independent Environmental Checker (IEC) referred to in Conditions 2.1 and 2.2 below shall be certified by the ET Leader and verified by the IEC before submitting to the Director under this Permit.
- 1.11 The Permit Holder shall release all finalized submissions, as required under this Permit, to the public by depositing copies in the Environmental Impact Assessment Ordinance Register Office, or in any other places, or any internet websites as specified by the Director, or by any other means as specified by the Director for public inspection. For this purpose, the Permit Holder shall provide sufficient copies of the submissions.
- 1.12 The Permit Holder shall notify the Director in writing the commencement dates of the three different phases of the Project: (a) Phase 1 Part 1, (b) Phase 1 Part 2 and (c) Phase 2 of the Project at least one month prior to the commencement of each of the above three different phases of the Project respectively. The Permit Holder shall notify the Director in writing immediately if there is any change of any of the commencement dates. Unless specified otherwise, the commencement of the Project shall be taken to mean the commencement of the Phase 1 Part 1 of the Project. The holder of Environmental Permit No. EP-313/2008 is required, through conditions under EP-313/2008 or any subsequent variations, to follow up with this condition with respect to notifying the Director the commencement date of Phase 1 Part 2, i.e. temporary use of the Phase 1 site (which is named as "Works Area B" in the Environmental Permit No. EP-313/2008) for the construction of the WIL.
- 1.13 The Permit Holder shall notify the Director in writing the completion dates of all three different phases of the Project: (a) Phase 1 Part 1, (b) Phase 1 Part 2 and (c) Phase 2 of the Project within one month of the completion of each of the above three different phases of the Project respectively. The holder of Environmental Permit No. EP-313/2008 is required, through conditions under EP-313/2008 or any subsequent variations, to follow up with this condition with respect to notifying the Director the completion date of Phase 1 Part 2, i.e. temporary use of the Phase 1 site (which is named a "Works Area B" in the Environmental Permit No. EP-313/2008) for the construction of the WIL.
- 1.14 The Permit Holder shall notify the Director in writing the date of handing over the site, or any part of the site, to any other party for the purpose of redevelopment of the area at least one month prior to the handing over of the area. The Permit Holder shall notify the Director in writing immediately if there is any change of the handing over date. The holder of Environmental Permit



No. EP-313/2008 is required, through conditions under EP-313/2008 or any subsequent variations, to follow up with this condition with respect to notifying the Director his exit from or handing over of the Phase 1 site upon completion of Phase 1 Part 2, i.e. temporary use of the Phase 1 site (which is named as "Works Area B" in the Environmental Permit No. EP-313/2008) for the construction of the WIL.

- 1.15 The Permit Holder shall notify the Director in writing the commencement date for temporarily using the site, or any part of the site, for the purpose as described in Condition 2.5(m) at least one month prior to the commencement of temporary use of the area. The Permit Holder shall notify the Director in writing immediately if there is any change of the commencement date for such temporary use. The holder of Environmental Permit No. EP-313/2008 is required, through conditions under EP-313/2008 or any subsequent variations, to follow up with this condition with respect to notifying the Director the commencement date for temporarily using the Phase 1 site (which is named as "Works Area B" in the Environmental Permit No. EP-313/2008) for the construction of the WIL under Phase 1 Part 2 of the Project.
- 1.16 All submissions to the Director required under this Permit shall be delivered either in person or by registered mail to the Environmental Impact Assessment Ordinance Register Office (currently at 27/F, Southorn Centre, 130 Hennessy Road, Wanchai, Hong Kong). Electronic copies of all finalized submissions required under this Permit shall be prepared in Hyper Text Markup Language (HTML) (version 4.0 or later) and in Portable Document Format (PDF) (version 1.3 or later), unless otherwise agreed by the Director and shall be submitted at the same time as the hard copies.
- 1.17 For the purpose of this Permit, "commencement of each Phase and/or each Part of a Phase of the Project" does not include works related to site investigation, contamination confirmatory investigation, or other works as agreed by the Director. Any damage to the existing concrete ground slab caused by site investigation, contamination confirmatory investigation, or other works as agreed by the Director shall be repaired as soon as practicable such that the structural integrity of the existing concrete ground slab is maintained so as to avoid exposing the soil underneath as far as practicable.

2. Special Conditions

- 2.1 An Environmental Team (ET) shall be established by the Permit Holder no later than one month before the commencement of the Project. The ET shall be headed by an ET Leader. The ET Leader shall be a person who has at least 7 years' experience in environmental monitoring and auditing (EM&A) or environmental management. The ET and the ET Leader shall be responsible for the duties defined in the EM&A Manuals of the EIA Reports (Register No. AEIAR-058/2002 and Register No. AEIAR-188/2015). The ET Leader shall be responsible for the implementation of the EM&A programme in accordance with the EM&A requirements as contained in the EM&A Manuals. The ET Leader shall keep a contemporaneous log-book of each and every instance or circumstance or change of circumstances which may affect the environmental impact assessment and each and every non-compliance with the recommendations of the EIA Reports (Register No. AEIAR-058/2002 and Register No. AEIAR-188/2015) or this Permit. This log-book shall be kept readily available for inspection by all persons assisting in supervision of the implementation of the EIA Report recommendations and this Permit or by the Director or his authorized officers. Failure to maintain records in the log-book, failure to discharge the duties of the ET Leader as defined in the EM&A Manuals or failure to comply with this Condition would entitle the Director to require the Permit Holder by notice in writing to replace the ET Leader. Failure by the Permit Holder to make replacement, or further failure to keep contemporaneous records in the log-book despite the employment of a new ET Leader may render the Permit liable to suspension, cancellation or variation. The ET shall not be in any way an associated body of the Contractor or the IEC for the



Project.

- 2.2 An Independent Environmental Checker (IEC) shall be employed by the Permit Holder no later than one month before the commencement of the Project. The IEC shall be a person who has at least 7 years' experience in environmental monitoring and audit (EM&A) or environmental management. The IEC shall be responsible for the duties defined in the EM&A Manuals of the EIA Reports (Register No. AEIAR-058/2002 and Register No. AEIAR-188/2015), and shall audit the overall EM&A programme described in the EIA Reports (Register No. AEIAR-058/2002 and Register No. AEIAR-188/2015), including the implementation of all environmental mitigation measures, submissions required in the EM&A Manuals, and any other submissions required under this Permit. In addition, the IEC shall be responsible for verifying the environmental acceptability of permanent and temporary works, relevant design plans and submissions under this Permit. The IEC shall verify the log-book(s) mentioned in Condition 2.1 of this Permit. The IEC shall notify the Director by fax, within 24 hours of each and every occurrence, change of circumstances or non-compliance with the EIA Reports (Register No. AEIAR-058/2002 and Register No. AEIAR-188/2015) or this Permit, which might affect the monitoring or control of adverse environmental impact. Where the IEC fails to so notify the Director of the same, fails to discharge the duties of the IEC as defined in the EM&A Manuals or fails to comply with this Condition, the Director may require the Permit Holder by notice in writing to replace the IEC. Failure to replace the IEC as directed or further failure to so notify the Director despite employment of a new IEC may render the Permit liable to suspension, cancellation or variation. Notification by the Permit Holder is the same as notification by the IEC for the purpose of this Condition. The IEC shall not be in any way an associated body of the Contractor or the Environmental Team for the Project.
- 2.3 [Deleted]
- 2.4 The Permit Holder shall, within one month after the commencement of each Phase and each Part of a Phase of the Project, inform the Director in writing of the management organization of the main companies and/or any form of joint ventures associated with the carrying out of the Project. The submitted information shall include at least an organization chart, names of responsible persons including the ET Leader and the IEC, and their contact details. The different phases or part of a Phase are defined under Condition 2.5 of this Permit.

Phased Approach for Implementing the Project and Implementation Requirements

- 2.5 The Project shall be implemented in two Phases with the following conditions.

Phase 1 Part 1

- (a) The Site area for both Part 1 and Part 2 of Phase 1 of the Project is shown in **Figure 2** of this Permit. At the time of notification of commencement of Phase 1 Part 1 of the Project as required under Condition 1.12, the Permit Holder shall deposit with the Director an updated Project programme, to be accompanied by layout plans with detailed descriptions and drawings of mitigation measures in scale of 1:1000 or in other suitable scale as agreed by the Director, showing clearly the relevant works in Phase 1 Part 1 of the Project.
- (b) Phase 1 Part 1 of the Project includes demolition and clearance of all existing chimneys, buildings and ancillary structures above the existing concrete ground slab in the Phase 1 Site area where the former Kennedy Town Incinerator Plant (KTIP) and the Kennedy Town Abattoir (KTA) are located. The Phase 1 Part 1 also includes the removal of asbestos



containing materials and dioxin/furan contaminated wastes within the Phase 1 Site.

- (c) Hoardings shall be erected around the Phase 1 Site at the commencement of Phase 1 Part 1 of the Project and shall be properly maintained throughout Phase 1 of the Project to restrict access of the Phase 1 Site to only authorized site staffs and workers.
- (d) Throughout Phase 1 Part 1, the existing concrete ground slab within the Phase 1 Site shall not be demolished but shall be retained intact as far as practicable. Before completion of the Phase 1 Part 1 of the Project, inspection shall be carried out on the condition of the existing concrete ground slab and existing drainage system with the view to identify and repair any surface cracks such that their structural integrity is maintained to avoid exposing the soil underneath as far as practicable. Such inspection and repair shall be carried out every month thereafter until the commencement of Phase 1 Part 2 of the Project. Where the inspection and repair work fall within the reporting month of the monthly Environmental Monitoring & Audit (EM&A) report described under Condition 3.5 of this Permit, the inspection findings and repair work carried out shall be reported in that monthly EM&A report.
- (e) With the exception of drainage facilities required for the proper function of the site drainage system, the existing underground facilities such as refuse bunkers, lift pits, underground chambers and openings, and sub-sided areas within the Phase 1 Site area shall be cleaned up and backfilled with clean soil to about 130 mm from the top level of adjacent ground slab. A layer of concrete cover of not less than 130 mm thickness shall then be laid on top of the clean soil to fill up the underground facilities such that the top level of the concrete cover on top of the clean soil above the underground facilities matches the top level of adjacent ground slab. Before completion of the Phase 1 Part 1 of the Project, inspection shall be carried out on the condition of the concrete covers and existing drainage facilities retained for the proper function of the site drainage system, with the view to identify and repair any surface cracks such that their structural integrity is maintained to avoid exposing the soil underneath as far as practicable. Such inspection and repair shall be carried out every month thereafter until the commencement of Phase 1 Part 2 of the Project. Where the inspection and repair work fall within the reporting month of the monthly Environmental Monitoring & Audit (EM&A) report described under Condition 3.5 of this Permit, the inspection findings and repair work carried out shall be reported in that monthly EM&A report.
- (f) Phase 1 Part 1 of the Project shall not involve any excavation work that may disturb or expose any part of the soil underneath the existing concrete slab.

Control on Demolition

- (g) Non-blasting methods shall be used for the demolition of all structures within the project site boundary including buildings and chimneys.
- (h) All Asbestos Containing Materials (ACM) shall be removed prior to commencement of demolition works except for those ACM removal works that are constrained by access and have to be handled while the demolition work progresses.

Remediation and Disposal of Wastes contaminated by Dioxins and/or Furans

- (i) Treatment and disposal of wastes contaminated with dioxins and/or furans as identified in **Appendix A** of this permit and in the CCI findings shall be carried out in accordance with the

approved WMP and shall include the following steps:

- a. conduct pilot mixing and Toxicity Characteristic Leachate Procedures (TCLP) tests for the contaminated wastes to verify the effectiveness of the mix and establish the necessary cement to wastes ratio for the purpose of compliance with the 1 part per billion toxicity equivalent (1 ppb TEQ) TCLP criteria;
 - b. inform the Director the results of the pilot tests for confirmation of the disposal site. If the pilot tests identify that some of the contaminated wastes would need to be disposed of as Chemical Wastes, the fallback option to be adopted to dispose of the Chemical Wastes and the associated method statements shall be provided together with the results of the pilot tests;
 - c. treat the contaminated wastes by mixing with cement;
 - d. seal the treated wastes into steel drums lined with plastic sheeting after passing the TCLP test as stated in **Appendix B** of this Permit. Duplicate samples of the treated wastes may need to be collected for parallel testing by another qualified laboratory if requested by the Director; and
 - e. dispose of the drummed material in Condition 2.5(i)(d) above to a Government landfill agreed by the Director under Condition 2.15(i)(b) above.
- (j) Testing shall be conducted on samples taken from any materials left on the North, South, East, West and underneath of the removed materials to confirm that all contaminated materials failing to meet the criteria of 1 ppb TEQ have been removed for treatment. Duplicate samples of the materials may need to be collected for parallel testing by another qualified laboratory if requested by the Director.

Submission of Remediation Reports

- (k) Six hard copies and one electronic copy of Remediation Report(s) shall be deposited with the Director after the completion of the remediation and disposal of contaminated soil and wastes at specific site areas. The Remediation Report(s) shall demonstrate that the remediation and disposal work for the site area that it covers has been undertaken according to the specified methodology and has been shown to be adequate. The Remediation Report(s) shall be submitted at least four weeks before the concerned handed over to other parties for redevelopment. The Remediation Report for works covered in Phase 1 Part 1 of the Project shall be submitted at least four weeks before commencement of Phase 1 Part 2 of the Project." The Remediation Report for works covered in Phase 1 Part 1 of the Project shall be submitted at least four weeks before commencement of Phase 1 Part 2 of the Project.

Phase 1 Part 2

- (l) At the time of notification of commencement of Phase 1 Part 2 of the Project as required under Condition 1.12, the Permit Holder shall deposit with the Director a detailed updated Project programme, to be accompanied by layout plans with detailed descriptions and drawings of mitigation measures in scale of 1:1000 or in other suitable scale as agreed by the Director, showing clearly the relevant works in Phase 1 Part 2 of the Project. The Project shall be implemented according to the updated programme. The holder of Environmental Permit No. EP-313/2008 is required, through conditions under EP-313/2008 or any

subsequent variations, to follow up with this condition during the temporary use of the Phase 1 site (which is named as "Works Area B" in the Environmental Permit No. EP-313/2008) for the construction of the WIL.

- (m) Phase 1 Part 2 of the Project includes the temporary use of the Phase 1 Site as site office and for the storage of common construction materials, the provision of mitigation measures to avoid any potential release of additional underground contaminants into the environment resulting from the above temporary use of the site, and the provision of mitigation measures to avoid impacts on workers on Phase 1 Site and the general public nearby, including residents and passers-by. It also includes the removal of temporary site office and facilities for the storage of common construction materials before completion of the Phase 1 Part 2. The holder of Environmental Permit No. EP-313/2008 is required, through conditions under EP-313/2008 or any subsequent variations, to follow up with this condition during the temporary use of the Phase 1 site (which is named as "Works Area B" in the Environmental Permit No. EP-313/2008) for the construction of the WIL.
- (n) Under Phase 1 Part 2 of the Project, the Permit Holder shall not use or carry out any activity in the Phase 1 Site other than the site office and storage of common construction materials as proposed. The holder of Environmental Permit No. EP-313/2008 is required, through conditions under EP-313/2008 or any subsequent variations, to follow up with this condition during the temporary use of the Phase 1 site (which is named as "Works Area B" in the Environmental Permit No. EP-313/2008) for the construction of the WIL.
- (o) At locations within the Phase 1 Site area identified to be temporarily used as site office and for storage of common construction materials, an additional concrete paving of not less than 200 mm thickness shall be provided. The indicative extent of this additional concrete paving, as extracted from the Application No. VEP-234/2007, is shown in **Figure 3** of this Permit. The holder of Environmental Permit No. EP-313/2008 is required, through conditions under EP-313/2008 or any subsequent variations, to follow up with this condition during the temporary use of the Phase 1 site (which is named as "Works Area B" in the Environmental Permit No. EP-313/2008) for the construction of the WIL.
- (p) No temporary use, to include site office and storage of common construction material, at the Phase 1 Site shall be allowed until Remediation Report(s) has been deposited with the Director in accordance with Condition 2.5(k) below after the completion of the remediation and disposal of dioxin/furan contaminated wastes at specific site areas proposed for temporary use. The holder of Environmental Permit No. EP-313/2008 is required, through conditions under EP-313/2008 or any subsequent variations, to follow up with this condition during the temporary use of the Phase 1 site (which is named as "Works Area B" in the Environmental Permit No. EP-313/2008) for the construction of the WIL.
- (q) No temporary use, to include site office and storage of common construction material, at the Phase 1 Site shall be allowed until the identified locations for such temporary uses have been provided with the pre-requisite additional concrete paving as stipulated in Condition 2.5(o) above. The holder of Environmental Permit No. EP-313/2008 is required, through conditions under EP-313/2008 or any subsequent variations, to follow up with this condition during the temporary use of the Phase 1 site (which is named as "Works Area B" in the Environmental Permit No. EP-313/2008) for the construction of the WIL.
- (r) Throughout the entire period of Phase 1 Part 2, the additional concrete paving to avoid exposing the contaminated soil underneath shall remain intact and shall not be demolished. Within 7 days, and every month thereafter, of the start of use of the Site for temporary site office and/or storage of common construction materials, inspection shall be carried out on the



condition of the additional concrete paving, the site drainage and the foul sewerage systems to identify, with the view to repair/remedy any surface cracks such that the structural integrity of these systems is maintained and the soil underneath will not be disturbed or exposed as far as practicable. The holder of Environmental Permit No. EP-313/2008 is required, through conditions under EP-313/2008 or any subsequent variations, to follow up with this condition during the temporary use of the Phase 1 site (which is named as "Works Area B" in the Environmental Permit No. EP-313/2008) for the construction of the WIL.

- (s) To allow natural air dispersion of any entrapped vapour contaminants that might be released from the soil and groundwater, the site office to be erected in the Phase 1 Site shall be properly designed and constructed to create and maintain a clear void of at least 500 mm height between the underside of the site office floor and the top of the additional concrete paving below. The indicative design is shown in **Figure 4** of this Permit. The holder of Environmental Permit No. EP-313/2008 is required, through conditions under EP-313/2008 or any subsequent variations, to follow up with this condition during the temporary use of the Phase 1 site (which is named as "Works Area B" in the Environmental Permit No. EP-313/2008) for the construction of the WIL.
- (t) To further safeguard against seepage of any vapour contaminants into site offices from the soil and groundwater, the site office to be erected in the Phase 1 Site shall be properly designed and constructed to incorporate gas-resistant membranes flooring. The indicative design is shown in **Figure 4** of this Permit. The holder of Environmental Permit No. EP-313/2008 is required, through conditions under EP-313/2008 or any subsequent variations, to follow up with this condition during the temporary use of the Phase 1 site (which is named as "Works Area B" in the Environmental Permit No. EP-313/2008) for the construction of the WIL.
- (u) Phase 1 Part 2 of the Project, including any additional site drainage and/or foul sewerage works, shall not involve any excavation work that may disturb or expose any part of the soil underneath the existing concrete slab and the additional concrete paving. The holder of Environmental Permit No. EP-313/2008 is required, through conditions under EP-313/2008 or any subsequent variations, to follow up with this condition during the temporary use of the Phase 1 site (which is named as "Works Area B" in the Environmental Permit No. EP-313/2008) for the construction of the WIL.

Phase 2

- (v) The Phase 2 Site area is shown in **Figure 5** of this Permit. Phase 2 of the Project shall commence as soon as practicable after the completion of all Phase 1 Part 2 works and shall not be delayed. Phase 2 of the Project shall comprise the demolition of existing concrete ground slab, demolition of any additional site drainage and/or foul sewerage works, demolition of the existing Cadogan Street Temporary Garden, refuse collection point, bus depot and public car park. Phase 2 of the Project shall also include remediation of contaminated soil below ground level within the Phase 2 Site area and the subsequent on-site reuse of the remediated soil. The 7-year programme proposed in the approved EIA Report (Register No. AEIAR-188/2015) for works in Phase 2 also involves on-site reprovision of the public car park and refuse collection point.
- (w) At the time of notification of commencement of Phase 2 of the Project as required under Condition 1.12, the Permit Holder shall deposit with the Director a detailed updated Project programme, to be accompanied by layout plans with detailed descriptions and drawings of



mitigation measures in scale of 1:1000 or in other suitable scale as agreed by the Director, having regard to measures described in Conditions 2.20, 2.23 and Appendix C, showing clearly the relevant works in Phase 2 of the Project. The Project shall be implemented according to the updated programme.

Submissions and Measures before commencement of Phase 2 works

Contamination Confirmatory Investigation

- 2.6 To cater for the phased approach for implementing the Project, a proposal on the contamination confirmatory investigation (CCI) shall be submitted, before the commencement of the Project, to the Director for approval. The Permit Holder shall agree with the Director the timing for submitting the CCI proposal. The CCI proposal shall provide details of the CCI programme to tie in, in terms of the timing and location, with each Phase and each Part of a Phase of the Project. The CCI programme shall state the timing for submission of the CCI findings, review of the waste treatment and disposal method, and preparation and submission of the Waste Management Plan taking into account relevant CCI findings as required under Condition 2.7. The CCI shall provide further information on the extent of contamination at the Investigation Areas A, B, C and D shown in **Figure 6** of this Permit in addition to those assessed in the EIA Report (Register No. AEIAR-058/2002). Six hard copies and one electronic copy of the relevant findings of the CCI shall be deposited with the Director before the commencement of each Phase of the Project.

Submission of Waste Management Plan

- 2.7 Six hard copies and one electronic copy of a Waste Management Plan (WMP) for each of the three different phases of the Project: (a) Phase 1 Part 1, (b) Phase 1 Part 2 and (c) Phase 2 of the Project shall be submitted to the Director for approval within one month after the commencement of the three different phases of the Project respectively. The WMP shall take into account the relevant findings and recommendations in the waste management section of the EIA Reports (Register No. AEIAR-058/2002 and Register No. AEIAR-188/2015), and any relevant findings of the CCI. Before submission to the Director, the WMP shall be certified by the ET Leader and verified by the IEC as conforming to the information and recommendations contained in the EIA Report, and any relevant findings of the CCI. The holder of Environmental Permit No. EP-313/2008 is required, through conditions under EP-313/2008 or any subsequent variations, to follow up with this condition with respect to submission of a WMP for Phase 1 Part 2, i.e. temporary use of the Phase 1 site (which is named as "Works Area B" in the Environmental Permit No. EP-313/2008) for the construction of the WIL.
- 2.8 The WMP shall include, but not limited to, the following information for each type of the wastes relevant to the specific Project Phase/Part that it is intended to cover. The types of wastes to be covered should include asbestos containing materials, dioxin/furan contaminated wastes, contaminated soil, and construction and demolition materials.
- (a) summary of the locational sources, quantity, level of contamination (if applicable), remediation required prior to disposal (if applicable), and on-site and off-site disposal methods for different type of wastes;
 - (b) timings for generation, remediation (if applicable), temporary on-site stockpiling or storage, and final on-site or off-site disposal of different type of wastes;
 - (c) timings for conducting the pilot tests as required under Conditions 2.5(i)(a) as appropriate;

- (d) method statements on the remediation works to be carried out on different types of contaminated soil and wastes, and the confirmatory and parallel independent testing to be conducted;
 - (e) on-site waste management measures to control nuisances during the generation, handling, remediation (if applicable), and temporary stockpiling of the different types of wastes, in particular for asbestos containing materials, dioxin/furan contaminated wastes and contaminated soil;
 - (f) possible recycling and reuse of materials;
 - (g) location of the disposal site(s) for various types of wastes;
 - (h) confirmation on whether or not barges would be used for removal of wastes;
 - (i) transportation routing(s) of the removal of various types of wastes from the project site to the disposal site(s);
 - (j) measures to control nuisances due to transportation of different type of wastes, in particular to avoid loss of asbestos containing materials, dioxin/furan contaminated wastes and contaminated soil; to remove possible soil left on the first several hundred meters of roads by vehicles leaving the site, such as the option of using specially design road cleansing vehicle; and to reduce dust nuisance from trucks carrying wastes, such as the option of installing mechanical covers to trucks;
 - (k) trip-ticket system for waste transfer/disposal operations, including a certification system to confirm to the disposal site's operator that the contaminated wastes have been remediated to meet the specific disposal criteria; and
 - (l) responsibilities for implementation.
- 2.9 All the measures recommended in the approved WMP shall be fully implemented in accordance with the requirements and time schedule(s) set out in the WMP.
- 2.10 Before obtaining the Director's approval on the WMP as required under Condition 2.7, no disposal of waste, spoil, soil, excavation materials or materials obtained from the Project site shall be allowed at any locations.

Ecological Precautionary Measures

- 2.11 Before commencement of site clearance works, the Project site shall be inspected to confirm that there are no active bird nests on trees. If any active bird nest is found, a suitably sized buffer area shall be established around the tree to minimise human or machinery disturbance until the nest is abandoned.
- 2.12 Before commencement of site clearance works, daytime inspection shall be carried out to confirm that there are no Short-nosed Fruit Bats on trees, particularly Chinese Fan-palms, within the Project site. If any Short-nosed Fruit Bat is found roosting on a tree, a suitably sized buffer area shall be established around the tree to minimise human or machinery disturbance until the bat has left.

Submission of Review Report for the Area occupied by the New World First Bus Depot

- 2.13 As the area occupied by the New World First Bus Depot (Bus Depot) as shown in Figure 5 of this Permit may be subjected to further contamination since approval of the CAR/RAP in the EIA Report (Register No. AEIAR-188/2015), the Permit Holder shall, no later than two months before commencement of work at the Bus Depot area, deposit with the Director four hard copies and one electronic copy of a Review Report to confirm:
- (a) the validity of the approved CAP and CAR/RAP in the EIA Report (Register No. AEIAR-188/2015);
 - (b) whether there is any potential contaminations due to the continual operation of the Bus Depot; and
 - (c) whether further site investigation is required.
- 2.14 The Review Report shall be prepared based on a site appraisal conducted in accordance with the "Practice Guide for Investigation and Remediation of Contaminated Land" issued by EPD. If the Review Report confirms that further site investigation is required, the Permit Holder shall:
- (a) submit to the Director for approval four hard copies and one electronic copy of a Supplementary Contamination Assessment Plan (SCAP), which shall include details of representative sampling and analysis required to determine the nature and extent of further contamination; and
 - (b) no later than one month after the completion of the site investigation works in accordance with the approved SCAP, submit to the Director for approval four hard copies and one electronic copy of Supplementary Contamination Assessment Report to document the findings of the site investigation works and assessment on the nature and extent of further contamination and a Supplementary Remediation Action Plan with necessary remediation measures.

Submission of Updated EM&A Manual for Biopile System Discharge Emissions and Ambient Hydrocarbons Monitoring

- 2.15 The Permit Holder shall, no later than one month before the commencement of Phase 2 of the Project, submit to the Director for approval four hard copies and one electronic copy of an updated EM&A Manual for the Project. The updated EM&A Manual shall include:
- (a) updates on the environmental monitoring and audit requirements relating to Biopile System Discharge Emissions and Ambient Hydrocarbons (HC) Monitoring as recommended in Chapter 2 of the EM&A Manual of the EIA Report (Register No. AEIAR-188/2015);
 - (b) drawings in the scale of 1:5,000 or other appropriate scale as agreed by the Director showing the proposed locations for conducting Biopile System Discharge Emissions and Ambient HC Monitoring;
 - (c) proposed monitoring methodology and measurement parameters; and
 - (d) an Event and Action Plan with proposed immediate remedial action(s).



Submission of Construction Noise Management Plan

- 2.16 To avoid construction noise impact on S.K.H. Lui Ming Choi Memorial Primary School, the Permit Holder shall, no later than one month before the commencement of construction of relevant part of the Project, submit to the Director for approval four hard copies and one electronic copy of a Construction Noise Management Plan (CNMP) for construction work during examination periods of the School. The plan shall include:-
- (a) a proposal of construction noise mitigation measures, including the provision of noise barriers and enclosures for different types of construction activities to be carried out for the Project where applicable, and any other initiatives proposed by the Permit Holder; and
 - (b) administrative measures, including setting up a manned hotline or a channel of communication with the School, to avoid noisy construction activities during examination).

Submission of Construction Site Drainage Management Plan

- 2.17 Four hard copies and one electronic copy of Construction Site Drainage Management Plan (CSDMP) with detailed design of the site drainage system and incorporating the requirements stipulated in S.5.7.1.1 of the EIA Report (Register No.: AEIAR-188/2015), certified by a qualified civil engineer with suitable drainage system design experience, shall be submitted to the Director for approval before commencement of the Phase 2 of the Project. The CSDMP shall include detailed designs of cut-off channels, earth bunds or similar impervious water barriers for collecting and preventing site runoff from escaping off-site.

Submissions and Measures during Phase 2 Works

Remediation of Soil Contaminated with Heavy Metal and/or Hydrocarbons

- 2.18 Remediation for contaminated soil identified in the Contamination Assessment Report / Remediation Action Plan (CAR/RAP) in Appendix 7.2 of the EIA Report (Register No. AEIAR-188/2015) and any further site investigation required in Condition 2.13 shall be carried out according to the following methods: :
- (a) The remediation methods as stated in Appendix C of this permit shall be adopted for the 3 different types of contaminated soil, i.e. Type A contaminated soil (Heavy Metals) by cement solidification; Type B contaminated soil (Hydrocarbons) by biopiling; and Type C contaminated soil (Heavy Metals and Hydrocarbons) by biopiling followed by cement solidification. A typical cross section and oblique view of a biopile is shown in Appendix D.
 - (b) Upon proper treatment, Type A soil shall be reused on site after passing the TCLP test as stated in Table C1 of Appendix C of this permit and meeting the Unconfined Compressive Strength (UCS) test of not less than 1 MPa. Duplicate samples of the treated soil may need to be collected for parallel testing by another qualified laboratory if requested by the Director; and
 - (c) Upon proper treatment, Type B soil shall be reused on site after passing the biopile closure assessment as stated in Table C2 of Appendix C of this permit. Duplicate samples of the treated soil may need to be collected for parallel testing by another qualified laboratory if requested by the Director.

- (d) Upon proper treatment, Type C soil shall be reused on site after passing the TCLP test, UCS test and biopile closure assessment as required in above Conditions 2.18(b) and (c). Duplicate samples of the treated soil may need to be collected for parallel testing by another qualified laboratory if requested by the Director.
- 2.19 Prior to backfilling the respective excavation zones with treated soil, confirmatory sampling shall be conducted to confirm that all contaminated soil has been removed. The confirmatory sampling will be conducted in accordance with the requirements stipulated in Section 4.3.3. of CAR/RAP in Appendix 7.2 of the EIA Report (Register No. AEIAR-188/2015) to meet the Risk Based Remediation Goals ("RBRG") Standards as shown in Appendix E of this Permit. Duplicate samples of the soil may need to be collected for parallel testing by another qualified laboratory if requested by the Director.

Mitigation and Precautionary Measures

- 2.20 Mitigation measures shall be implemented to prevent pollution, control nuisances, and reduce risk during the remediation phases, in accordance with the EIA Reports (Register No. AEIAR-058/2002 and AEIAR-188/2015), including but not limited to the following:

- (a) Control on active works area (i.e. area with concrete paving material removed and without any cover)
- (i) During excavation works, no more than 1,200 m² total active works area shall be in operation at any one zone. The indicative layout of zone groups is shown in Figure 8 of this Permit.
- (ii) No more than 3,200 m² total active works area shall be allowed at any one time over the entire Project site for better control on the potential emission of hydrocarbons, heavy metals and fugitive dusts.;
- (b) Dust suppression measures

All active works areas shall be sprayed with water frequently at no less than once every 2.5 hours. All stockpiled soil shall be covered with tarpaulin or other impermeable material to minimise potential emissions of fugitive dust, heavy metals and hydrocarbons.;

- (c) Control measures during remediation by biopile method:
- i) During biopile operation, the biopiles shall be enclosed by impervious membrane during bio-degradation process and activated carbon filters with an installed removal efficiency of at least 99% of Volatile Organic Compounds (VOC) shall be fitted to the pipe outlet(s) of the biopile(s);
- ii) Emissions from the biopile pipe outlet(s) shall be regularly monitored by a Continuous Emission Monitoring System to check the performance of the activated carbon filter system; and
- iii) Spent activated carbon filter shall be replaced regularly to ensure that the measured total Volatile Organic Compounds (VOC) emission concentration from the system is below 20 ppm; and
- iv) The extraction pump and/or blower for the biopile pipe network shall be switched off to stop system discharge emission when exceedance of the monitored total VOC limit of 20 mg/m³ is detected and/or unacceptable air quality is monitored at the site boundary. Resumption of biopile

system discharge emission shall only be allowed after confirmation and implementation of appropriate mitigation measures, e.g. replacement of the activated carbon filter. ;

(d) Control measures during remediation by cement solidification method:

The cement solidification process and the associated storage bins shall be fully enclosed. Any storage piles shall be covered with tarpaulin or other impermeable material. Soils that require both hydrocarbons (HC) and heavy metals (HM) remediation will first go through HC remediation by biopiling and then through HM remediation by cement solidification; and

(e) The Key Mitigation Measures as stated in Appendix C of this Permit shall be implemented.

Submission of Landscape Plan

- 2.21 To reduce the landscape impact due to the Project, four hard copies and one electronic copy of a Landscape Plan, at least one month before the commencement of corresponding parts of landscape works of the Project, shall be deposited with the Director. The Plan shall include the design details, locations, implementation programme, maintenance and management schedules, and drawings in the scale of 1:1,000 or other appropriate scale as agreed by the Director of the landscape mitigation measures of the Project as recommended in the EIA Report (Register No.: AEIAR – 188/2015). In particular, the Landscape Plan shall show the design of the waterfront promenade and details of the tree compensatory proposal. Compensatory tree planting with a minimum ratio of 1:1 in terms of quantity shall be provided in the proposed future waterfront promenade

Submission of Remediation Report(s)

- 2.22 Six hard copies and one electronic copy of Remediation Report(s) shall be submitted to the Director for approval after the completion of the remediation of corresponding areas of the Project. The Remediation Report(s) shall demonstrate that the remediation for the site area that it covers has been undertaken according to the specified methodology and has met the treatment Goals at Appendix E for the intended land use, i.e. Urban Residential, Rural Residential, Industrial or Public Parks, known at the time of submission. The Remediation Report(s) shall be submitted at least four weeks before the concerned area(s) of Phase 2 of the Project is/are handed over to other parties for redevelopment.

Measures for Works in all Phases

- 2.23 Mitigation measures shall be implemented to prevent other demolition related nuisances throughout the demolition and remediation phases, in accordance with the EIA Report (Register No. AEIAR-058/2002), including but not limited to the following:
- (a) provide boundary hoarding of height not less than 5.5 meters measured from street level modified to perimeter noise barrier form, and made of panels with superficial surface density not less than 10 kg/m²;
 - (b) provide moveable noise barriers close to powered mechanical equipment (PME) in cases where, in the opinion of the ET leader, IEC or the Director, such PME has the potential to cause excessive noise nuisance to sensitive receivers and where a benefit will result from providing

the barriers;

- (c) if necessary, in addition to the Conditions 2.23(a) and (b) above, modify continuous operational periods for noisy plant or take other measures to comply with the construction noise criteria;
- (d) use adequately designed and maintained perimeter channels, sediment traps, temporary channels, temporary diversion and oil interception facilities to mitigate site run-off impacts;
- (e) divert all clean surface water around the site; and
- (f) provide bunded areas for generators, and for storage of fuel, oil and chemical wastes.

3. Environmental Monitoring and Audit (EM&A) for the Project

- 3.1 The EM&A programme shall be implemented as set out in the EM&A Manuals of the EIA Reports (Register AEIAR-058/2002 and EIAR-188/2015). Any changes to the programme shall be justified by the IEC as conforming to the requirements set out in the EM&A Manuals and shall be submitted to the Director for approval. An updated EM&A Manual with details covering the two different phases of the Project: (a) Phase 1 Part 1 and (b) Phase 1 Part 2 of the Project, making reference to the documents submitted with the Application for Variation of Environmental Permit (Application No. VEP-234/2007), shall be submitted to the Director for approval at least 1 month before commencement of each of the specific phases of the Project: that is (a) Phase 1 Part 1 and (b) Phase 1 Part 2 of the Project. The holder of Environmental Permit No. EP-313/2008 is required, through conditions under EP-313/2008 or any subsequent variations, to follow up with this condition with respect to submission of an EM&A Manual and implementation of an EM&A programme for Phase 1 Part 2, i.e. temporary use of the Phase 1 site (which is named as "Works Area B" in the Environmental Permit No. EP-313/2008) for the construction of the WIL.
- 3.2 A complaint investigation procedure shall be set up at least two weeks before the commencement of the Project. The complaint investigation procedure shall follow the requirements set out in the EM&A programme.
- 3.3 All environmental monitoring and audit data submitted under this Permit shall be true, valid and correct.
- 3.4 Four hard copies and one electronic copy of the Baseline Monitoring Report shall be submitted to the Director at least two weeks before the commencement of the Project. Additional copies of the submission shall be provided to the Director upon request from the Director.
- 3.5 Four hard copies and one electronic copy of monthly EM&A Report shall be submitted to the Director within two weeks after the end of the reporting month. Additional copies of the submission shall be provided to the Director upon request from the Director.
- 3.6 The actions described in the Event/Action Plans of the EM&A Manual shall be fully and properly carried out, in accordance with the time frame(s) set out in the Event/Action Plan, or as agreed by the Director.

4. Electronic Reporting of EM&A Information

- 4.1 To facilitate public inspection of the Baseline Monitoring Report and monthly EM&A Reports, via the EIAO Internet Website and at the EIAO Register Office, electronic copies of these Reports



shall be prepared in Hyper Text Markup Language (HTML) (version 4.0 or later) and in Portable Document Format (PDF version 1.3 or later), unless otherwise agreed by the Director and shall be submitted at the same time as the hard copies as described in Conditions 3.4 and 3.5 of this Permit. For the HTML version, a content page capable of providing hyperlinks to each section and sub-section of these Reports shall be included at the beginning of the document. Hyperlinks to all figures, drawings and tables in these Reports shall be provided in the main text where the respective references are made. All graphics in these Reports shall be in interlaced GIF format unless otherwise agreed by the Director. The content of the electronic copies of these Reports shall be the same as the hard copies.

- 4.2 All environmental monitoring data described in Condition 4.1 above shall be made available to the public via internet access in the shortest possible time and in no event later than two weeks after the relevant environmental monitoring data are collected or become available, unless otherwise agreed with the Director. The Permit Holder shall notify the Director in writing, within six weeks after the commencement of the Project, the internet address where the environmental monitoring data are to be placed. The internet address and the relevant environmental monitoring data shall be made available to the public via the EIAO Internet Website and the EIAO Register Office.
- 4.3 The internet website as described in Condition 4.2 above shall enable user-friendly public access to the monitoring data with features capable of:
- (a) providing access to all environmental monitoring data collected since the commencement of the Project;
 - (b) searching by date;
 - (c) searching by types of monitoring data; and
 - (d) hyperlinking to relevant monitoring data after searching;
- or otherwise as agreed by the Director.

Notes :

1. This Permit consists of three parts, namely, PART A (Main Permit), PART B (Description of Designated Project) and PART C (Permit Conditions). Any person relying on this permit should obtain independent legal advice on the legal implications under the Ordinance, and the following notes are for general information only.
2. If there is a breach of any conditions of this Permit, the Director or his authorized officer may, with the consent of the Secretary for the Environment, order the cessation of associated work until the remedial action is taken in respect of the resultant environmental damage, and in that case the Permit Holder shall not carry out any associated works without the permission of the Director or his authorized officer.
3. The Permit Holder may apply under Section 13 of the Ordinance to the Director for a variation of the conditions of this Permit. The Permit Holder shall replace the original permit displayed on the Project site by the amended permit.
4. A person who assumes the responsibility for the whole or a part of the designated project may, before he assumes responsibility of the designated project, apply under Section 12 of the Ordinance to the Director for a further environmental permit.



5. Under Section 14 of the Ordinance, the Director may with the consent of the Secretary for the Environment, suspend, vary or cancel this Permit. The suspended, varied or cancelled Permit shall be removed from display at the Project site.
6. If this Permit is cancelled or surrendered during the Project, another environmental permit must be obtained under the Ordinance before the Project could be continued. It is an offence under Section 26(1) of the Ordinance to decommission a designated project listed in Part II of Schedule 2 of the Ordinance without a valid environmental permit.
7. Any person who carries out the Project contrary to the conditions in the Permit, and is convicted of an offence under the Ordinance, is liable: -
 - (i) on a first conviction on indictment to a fine of \$ 2 million and to imprisonment for 6 months;
 - (ii) on a second or subsequent conviction on indictment to a fine of \$ 5 million and to imprisonment for 2 years;
 - (iii) on a first summary conviction to a fine at level 6 and to imprisonment for 6 months;
 - (iv) on a second or subsequent summary conviction to a fine of \$1 million and to imprisonment for 1 year; and
 - (v) in any case where the offence is of a continuing nature, the court or magistrate may impose a fine of \$ 10,000 for each day on which he is satisfied the offence continued.
8. The Permit Holder may appeal against any condition of this Permit under Section 17 of the Ordinance within 30 days of receipt of this Permit.
9. The Notes are for general reference only and that the Permit Holder should refer to the EIA Ordinance for details and seek independent legal advice.
10. Occupational safety and health issues are governed by the Occupational Safety and Health Ordinance (Cap. 509), and Factories and Industrial Undertakings Ordinance (Cap.59). The Permit Holder is advised to contact the Labour Department for requirements relating to occupational safety and health issues.

Environmental Permit No. EP-136/2002/E

環境許可證編號 EP-136/2002/E



APPENDIX A

**LOCATIONS IDENTIFIED IN THE EIA REPORT (AEIAR-058/2002) REQUIRING
REMEDiation AND THE ACTIONS RECOMMENDED**

(Extracted from table 4.3 of the EIA Report, Register No. AEIAR-058/2002))

Table A Soil/Rubbles/Ash Wastes Remediation Actions Required

Borehole [#]	Action Required	Remove concrete surface and clear uncontaminated surface material and stockpile	Proposed depth of Material for Removal or Treatment	Remedial Action	Reassurance / Confirmatory Sampling
TB1	Yes	Concrete down to 0.3m depth	Immediately below concrete 0.3m to 4.0m	Immobilisation for 0.3m to 2.0m and 3.0m to 4.0m* TCLP test followed by removal of 2.0m to 3.0m to landfill. Immobilisation if TCLP tests exceed criteria **.	Yes, determine extent of HM (Cd, Cu, Pb, Zn and Hg) and TPH contamination at edge and base of excavated hole.*
TB2	Yes	Concrete down to 0.5m depth	Immediately below concrete 0.5m to 1.5m	Immobilisation*	Yes, determine extent of HM (As, Cu, Pb and Zn) contamination at edge and base of excavated hole.*
TB3	Yes	Concrete down to 2.5m depth	2.5m to 3.5m	Immobilisation *	Yes, determine extent of HM (Cu, Pb, Zn and Hg) contamination at edge and base of excavated hole.*
TB4	Yes	Down to 2.2m depth	2.2m to 4.2m	Immobilisation *	Yes, determine extent of HM (As, Cu, Pb and Zn) contamination at edge and base of excavated hole.*
TB5	Yes	Concrete down to 1.8m. Down to 2.5m depth	2.5m to 4.0m	Immobilisation*	Yes, determine extent of HM (Pb) contamination at edge and base of excavated hole.*
TB8	Yes	Concrete down to 1m. Down to 2.5m	2.5m to 3.5m	TCLP test followed by removal of 2.5m to 3.5m to landfill. Immobilisation if TCLP tests exceed criteria **.	Yes, determine extent of PAH contamination at edge and base of excavated hole.*
TB9	Yes	Concrete down to 1.0m depth	1.0m to 2.0m	Immobilisation*	Yes, determine extent of HM (Pb) contamination at edge and base of excavated hole.*
TB10	Yes	Surface rubble/ash and brick material (not soil) about 1.5m depth.	1.5 m	Clear Waste to landfill. Waste to be treated and tested to meet EPD disposal criteria.	Yes, determine extent of HM (As, Cd, Cu, Pb, Zn) TPH and PCDD/PCDF contamination under surface contaminated materials.*
TB11	Yes	Down to 1.5m depth	1.5 m	Clear Waste to landfill. Waste to be treated and tested to meet EPD disposal criteria.	Yes, determine extent of HM (Cd, Cu, Pb, and Zn) and PCDD/PCDF contamination under surface contaminated materials.*
TB11	Yes	Below hardstanding surface (soil materials)	1.5 to 4.0m	Immobilisation*	Yes, to determine extent of HM (Pb) contamination at edge and base of excavated hole.
TB12	Yes	Concrete down to 0.5m	0.5 to 1.5m	Immobilisation*	Yes, determine extent of HM (Cd, Cu, Pb and Zn) contamination at edge and base of excavated hole.*
TB13	Yes	Down to 2.5m	2.5m to 3.5m	Immobilisation*	Yes, determine extent of HM (Pb, Zn, Hg) contamination at edge and base of excavated hole.*
TB15	Yes	Concrete down to 0.4m	0.4 to 2.4m	TCLP test followed by removal of 0.4m to 2.4m to landfill. Immobilisation if TCLP tests exceed criteria **.	Yes, determine extent of HM (As, Cu, Pb, Hg and Zn) and PAH contamination at edge and base of excavated hole.*
TB16	Yes	Concrete down to 0.8m	0.8 to 4.3m	Immobilisation *	Yes, determine extent of HM (Cu, Pb and Zn) contamination at edge and base of excavated hole.*
TB17	Yes	Concrete down to 0.4m	0.4 to 2.4m	Immobilisation *	Yes, determine extent of HM (Pb and Hg) contamination at edge and base of excavated hole.*
TB18	Yes	Concrete down to 1.0m	1.0m to 2.0m	Immobilisation *	Yes, determine extent of HM (Pb) contamination at edge and base of excavated hole.*
TB19	Yes	Concrete down to 0.6m	0.6m to 4.0m	Immobilisation *	Yes, determine extent of HM (Pb and Hg) contamination at edge and base of excavated hole.*

Borehole [#]	Action Required	Remove concrete surface and clear uncontaminated surface material and stockpile	Proposed depth of Material for Removal or Treatment	Remedial Action	Reassurance / Confirmatory Sampling
TB20	Yes	Concrete down to 0.3m	0.3m to 2.3m	TCLP test followed by removal of 0.3m to 2.3m to landfill. Immobilisation if TCLP tests exceed criteria **.	Yes, determine extent of HM (As, Cu, Pb, Hg, Cd and Zn) PAH and TPH contamination at edge and base of excavated hole.*
TB21	Yes	Concrete down to 0.5m	0.5m to 5.0m	TCLP test followed by removal of 0.5m to 3.5m to landfill. Immobilisation if TCLP tests exceed criteria **. Remaining depth to be immobilised to 5m *	Yes, determine extent of HM (Cu, Pb, Hg and Zn) and TPH contamination at edge and base of excavated hole.*
TB22	Yes	Concrete down to 0.5m	0.5 to 1.5m	Immobilisation *	Yes, determine extent of HM (Pb) contamination at edge and base of excavated hole.*
TB23	Yes	Concrete down to 0.5m	0.5 to 4m	Immobilisation*	Yes, determine extent of HM (Pb) contamination at edge and base of excavated hole.*
TB24	Yes	Concrete down to 1.2m	1.2 to 4.2m	Immobilisation*	Yes, determine extent of HM (Cu, Pb and Hg) contamination at edge and base of excavated hole.*
TB25	Yes	Concrete down to 0.9m. Down to 1.0m	Depth 1.0m – 4.4m	TCLP test followed by removal of 1.0m to 2.9m to landfill. Immobilisation if TCLP tests exceed criteria **. Immobilisation for remaining 2.9m to 4.4m*	Yes, to determine extent of HM (Pb, Hg) and PAH contamination at edge and base of excavated hole.*
TB26	Yes	Concrete down to 0.8m	Depth 0.8m – 3.0m	TCLP test followed by removal of 0.8m to 3.0m to landfill. Immobilisation if TCLP tests exceed criteria **.	Yes, to determine extent of HM (Pb, Cu, Zn, Hg) and TPH contamination.*
TB27	Yes	Concrete down to 0.5m and clean soil down to 2.0m	2.0 to 4.0m	TCLP test followed by removal of 2.0m to 4.0m to landfill. Immobilisation if TCLP tests exceed criteria **.	Yes, determine extent of HM (Cu and Pb) and PAH contamination at edge and base of excavated hole.*
TB28	Yes	Concrete down to 0.4m	0.4 to 4.4m	Immobilisation*	Yes, determine extent of HM (As, Cd, Cu, Pb, and Zn) contamination at edge and base of excavated hole.*
TB29	Yes	Concrete down to 0.5m	0.5 to 3.5m	Immobilisation*	Yes, determine extent of HM (Cu, Pb, Hg and Zn) contamination at edge and base of excavated hole.*
TB30	Yes	Concrete down to 0.6m	0.6 to 1.6m	Immobilisation*	Yes, determine extent of HM (Pb) contamination at edge and base of excavated hole.*
Refuse Bunkers	Yes	N/A	N/A	Landfill disposal *	Examine bunker refuse prior to demolition.

#

For location of boreholes, please refer to **Figure 7** of the Permit

*

If contamination confirmed by reassurance sampling extract a further 1m into the soil, immobilise and resample.

**

TCLP test for all metals identified in Table E1 in EPD Contaminated Sites Investigation and Remediation Guidance Notes

--- END OF APPENDIX A ---



APPENDIX B

Criteria for Soil Contamination and Landfill Disposal of Contaminated Soil

(Extracted from Appendix B of the EIA Report, Register No. AEIAR-058/2002)

DISPOSAL CRITERIA FOR CONTAMINATED SOIL

Metals (for on-site reuse)

Parameter	TCLP Limit (ppm)
Cadmium	10
Chromium	50
Copper	250
Nickel	250
Lead	50
Zinc	250
Mercury	1
Tin	250
Silver	50
Antimony	150
Arsenic	50
Beryllium	10
Thallium	50
Vanadium	250
Selenium	1
Barium	1000

Source : Guidance Notes for Investigation and Remediation of Contaminated Sites (EPD TR1 / 99).

Metals

Toxicity Characteristics Leaching Procedure (TCLP) test for materials contaminated with heavy metals needs to be carried out in accordance with the testing frequency and requirements as stipulated in EPD's Guidance Notes for Investigation and Remediation of Contaminated Sites.

TPH and PAH

Toxicity Characteristic Leaching Procedure (TCLP) tests for TPH, PAH and BTEX contaminated materials have to be carried out according to the testing frequency and requirements as stipulated in EPD's "Guidance Notes for Investigation and Remediation of Contaminated Sites. Pre-treatment is required to bring levels of TPH to below the TCLP limit of 2,500ppm PAH/BTEX to below the TCLP limit 1,000ppm.

Dioxins and Furans (PCDD/PCDF)

Toxicity Characteristic Leaching Procedure (TCLP) tests for PCDD/PCDF contaminated materials have to be carried out with reference to the requirements as stipulated in EPD's Guidance Notes for Investigation and Remediation of Contaminated Sites. Pre-treatment is required to bring levels of PCDD/PCDF to below the TCLP limit of 1ppb PCDD/PCDF (TEQ), subject to TCLP confirmation at a frequency of 1 sample per 100 tonnes of stabilised materials.

N.B.

TEQ	=	toxicity equivalent units.
ppm	=	mg/kg (milligrams / kilogram)
ppm	=	µg/g (micrograms / gram)
ppb	=	ng/g (nanograms / gram)
ppb	=	1000pg/g (picograms / gram)

--- END OF APPENDIX B ---



Appendix C

For Phase 2 of the Project

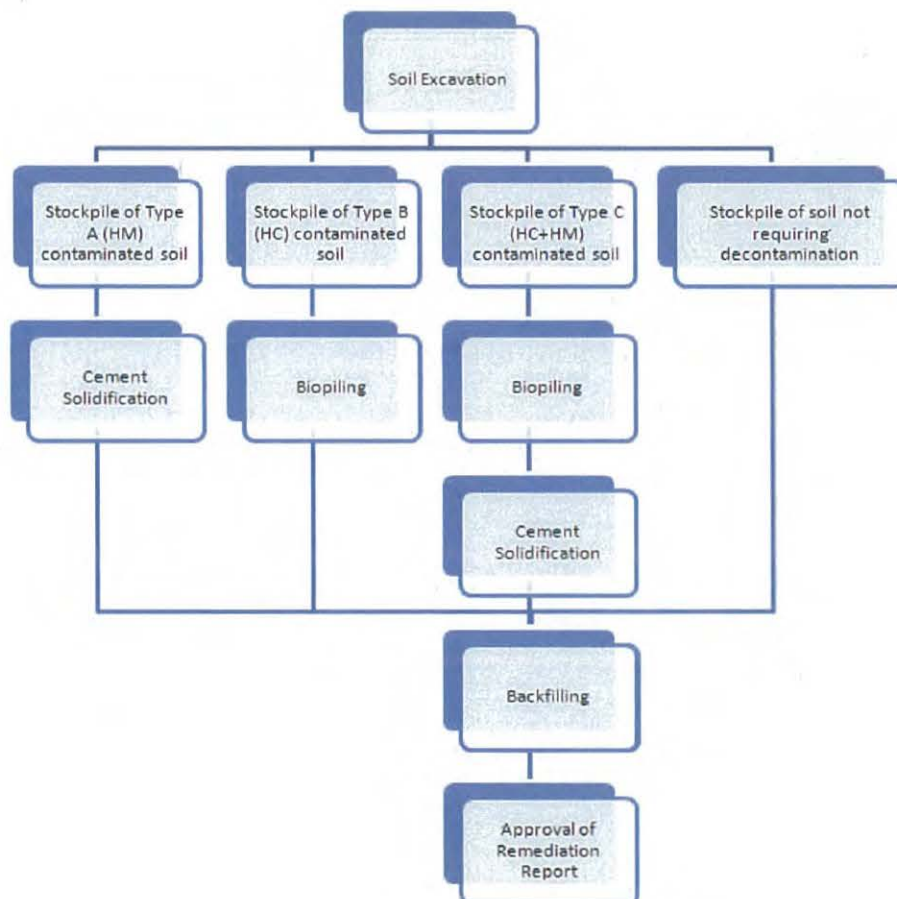
Remediation Methods¹

The following remediation methods are recommended for the 3 different types of contaminated soil:

- Type A contaminated soil (Heavy Metals): Cement solidification, test, on-site backfilling.
- Type B contaminated soil (Hydrocarbons): Biopiling, test, on-site backfilling.
- Type C contaminated soil (Heavy Metals and Hydrocarbons): Biopiling followed by cement solidification, test, on-site backfilling.

The contaminated soil would be excavated and transported to the corresponding designated areas on-site for appropriate remediation. Trucks would carry the excavated contaminated soil into the stockpiling areas or remediation works areas for temporary storage or treatment respectively. **Graphic C1** indicates the workflow during remediation works.

Graphic C1: Flow Chart for Remediation Works

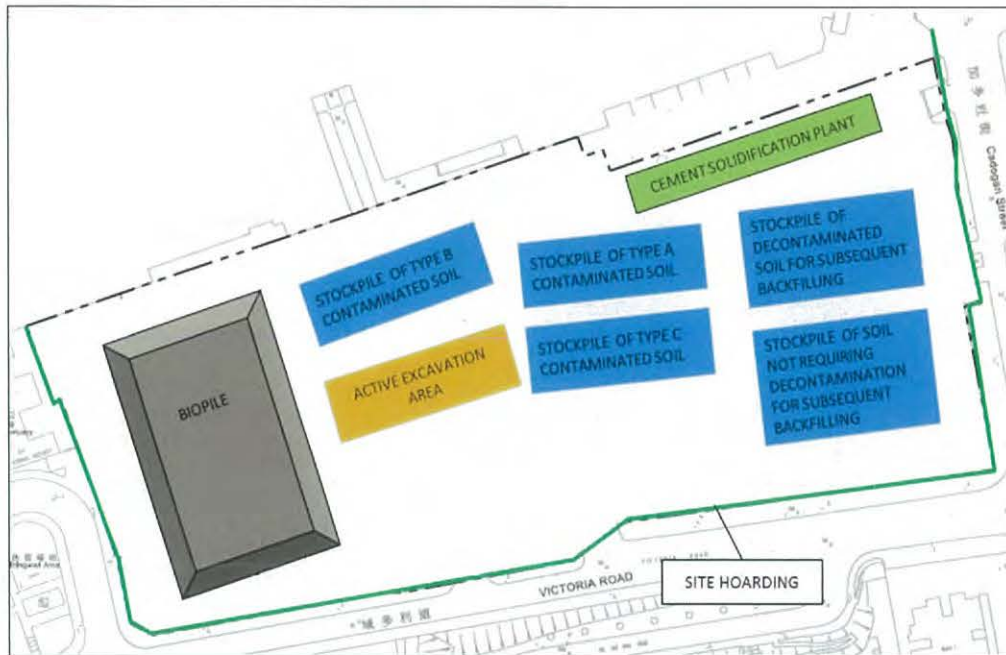


¹ This part was prepared based on Section 7.7 and Graphic 7.1 of the EIA Report (Register No.: AEIAR-188/2015).

Typical Site Layout²

A schematic layout of a typical arrangement for all the works including excavation, cement solidification plant, biopile and stockpiling areas for different types of soil is shown in **Graphic C2**.

Graphic C2: Schematic Diagram of Typical Site Layout



Criteria for Treated Soil from Cement Solidification³

Table C1: Universal Treatment Standards for On-site Reuse of Cement Solidification Treated Soil

Parameter	TCLP Limit (mg/L)
Antimony	1.15
Arsenic	5
Barium	21
Cadmium	0.11
Chromium (total)	0.6
Lead	0.75
Mercury (all others)	0.025
Nickel	11
Zinc	4.3

- Note: (1) Universal Treatment Standard: US 40 CFR 268.48.
- (2) For other RBRGs metal contaminants Cobalt, Copper, Manganese, Molybdenum and Tin, they must be reduced by at least 90 percent in mobility for respective metals through cement solidification remediation treatment. The reduction of mobility of metal contaminants (leachable metals contaminants) should be confirmed through TCLP tests (i.e. to carry out TCLP test for the untreated soil and for the soil after treatment and to compare the concentrations of the metals in the leachates).
- (3) The TCLP test for the concerned metal(s) will be tested both for untreated soil and for soil after treatment in order to confirm that the requirement of Note (2) can be complied with (i.e. reduced by at least 90 percent in mobility for the respective metal(s) through cement solidification remediation treatment).

² This part was prepared based on Graphic 7.2 of the EIA Report (Register No.: AEIAR-188/2015).

³ This table was prepared based on Table 4.7 of the Appendix 7.2 of the EIA Report (Register No.: AEIAR-188/2015).

Criteria for Treated Soil from Biopile⁴

Table C2: Soil Clean-up Targets for Biopile Closure Assessment

Parameter	Soil RBRGs – Urban Residential / Rural Residential (mg/kg)
PAH	
Benzo(a)anthracene	11.4
Benzo(a)pyrene	1.14
Benzo(b)fluoranthene	9.88
Benzo(k)fluoranthene	114
Dibenzo(a,h)anthracene	1.14
Indeno(1,2,3-cd)pyrene	11.4
Petroleum Carbon Ranges (PCR/TPH)	
C6 - C8	545
C9 - C16	1,330
C17 - C35	10,000

Key Mitigation Measures⁵

During excavation, the Contractor shall adopt the following measures:

- Properly design and execute excavation profile;
- Fence off the contaminated area throughout the period of remediation works;
- Take precautions when controlling ground settlement, groundwater and wastewater;
- Avoid temporary stockpiling as far as practical. In case temporary storage is needed, contaminated soil should be placed in designated area paved with either concrete or lined with impermeable sheeting, bunded and covered properly with tarpaulins to prevent cross-contamination of different types of contaminated soil;
- Supply of suitable backfill materials after excavation;
- Implement speed control for vehicles travelling on site;
- Properly decontaminate machineries and vehicles before excavating or taking different contaminated soil and leaving the excavation zone.

The following mitigation measures shall be followed during remediation works:

- The loading, unloading, handling and storage of cement should be carried out in an enclosed environment;
- The loading, unloading, handling, transfer or storage of materials that may generate airborne dust emissions such as untreated soil and oversize materials sorted out from screening plant and stabilised soil stockpiled in designated area should be carried out in such a manner to prevent or minimise dust emissions.
- All practical measures, including but not limited to speed control for vehicles, should be taken to minimise dust emissions;
- Simultaneous operation of mixing facilities and other equipment shall be avoided as far as possible to minimise unnecessary generation of noise nuisance;

⁴ This table was prepared based on Table 4.6 of the Appendix 7.2 of the EIA Report (Register No. AEIAR-188/2015).

⁵ This part was prepared based on S.7.8.2 of the EIA Report (Register No.: AEIAR-188/2015).

- Stockpile of untreated soil shall be covered as far as practicable;
- Treated oversize materials can be used as backfilling material for on-site backfilling. Sorted materials of size smaller than 5cm will be collected and transferred to the mixing plant for further remediation;
- Treated soils can be broken down into suitable size for on-site backfilling purpose;
- Water used in installation of pipe piles should as far as practicable be recirculated after sedimentation. Excess wastewater should go through silt removal facilities before discharge. The Contractor would be required to obtain a license from EPD under the WPCO for discharge to the public drainage system.
- Housekeeping should be maintained at all times at the mixing plant as well as among other remediation facilities;
- Visual inspection and rinsing (if needed) of any contaminated soil adhered on the broken concrete slab surface are recommended; and
- A clear separation between treated and untreated materials is recommended. Furthermore, physical separation of the temporary stockpiles of different types of soils in clearly designated areas with appropriate signage and fencing should be provided.

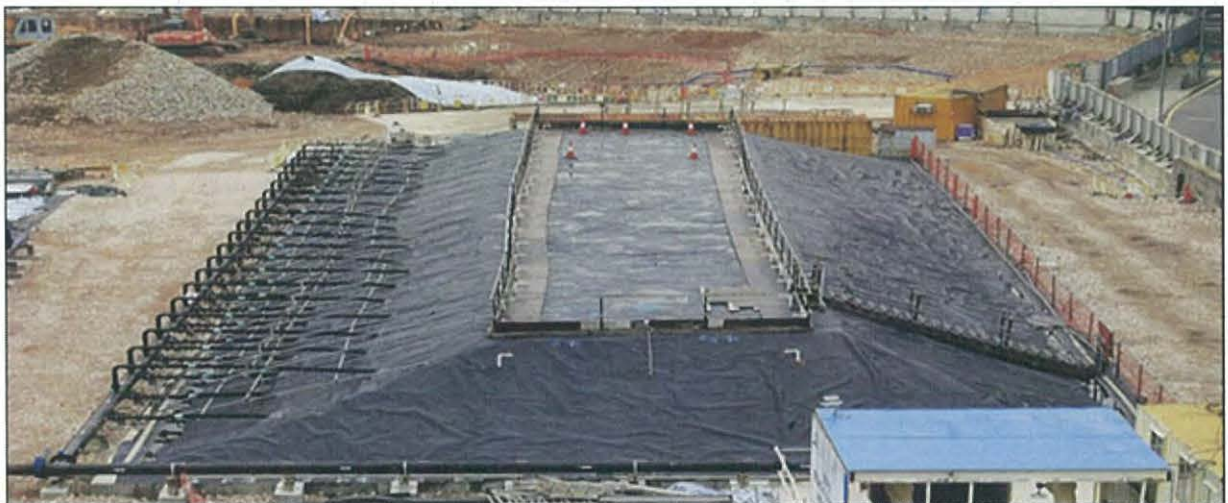
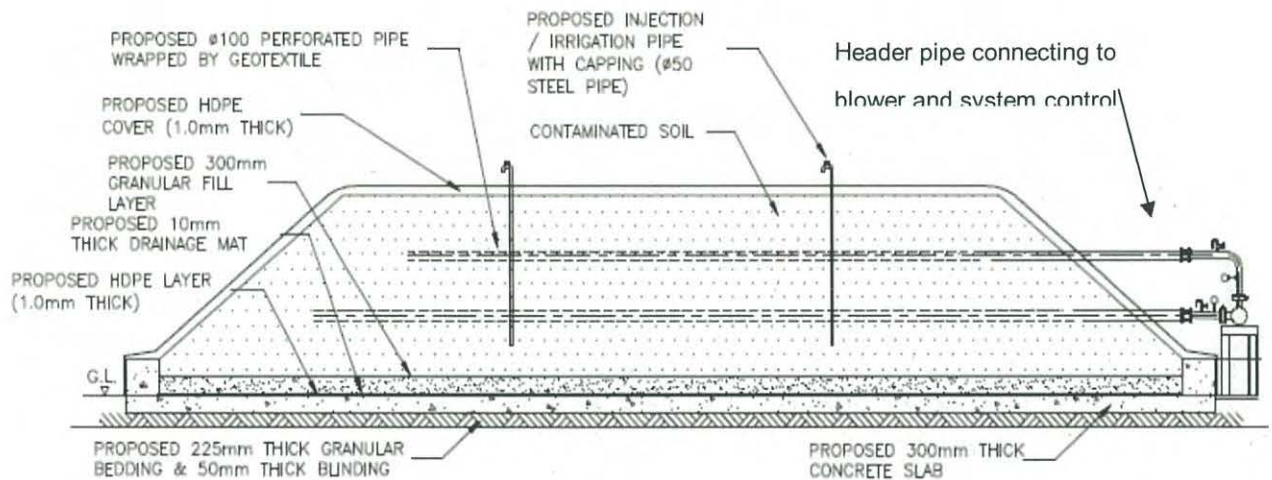
- End of Appendix C -



Appendix D

Typical Cross Section and Oblique View of a Biopile⁶

Graphic D1: General Cross-Section and Oblique View of a Biopile for indicative purpose



- End of Appendix D -

⁶ This part was prepared based on Graphic 3.1 of the EIA Report (Register No.: AEIAR-188/2015).

APPENDIX E

(Extracted from Table 2.1 of

“Guidance Manual for Use of Risk-Based Remediation Goals”

Risk-Based Remediation Goals (RBRGs) for Soil & Soil Saturation Limit

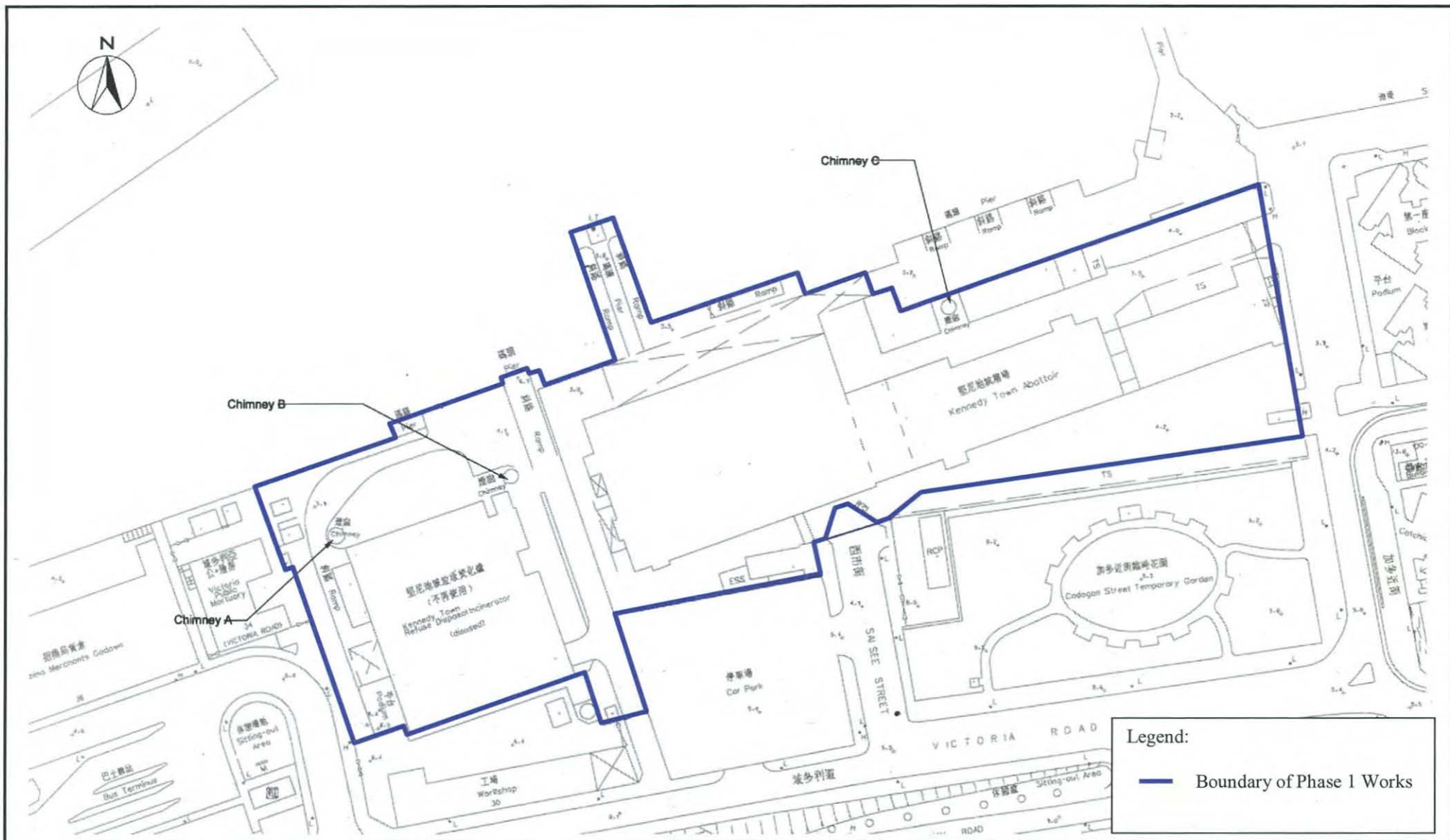
Chemical	Risk-Based Remediation Goals for Soil				Soil Saturation Limit (C _{sat}) (mg/kg)
	Urban Residential (mg/kg)	Rural Residential (mg/kg)	Industrial (mg/kg)	Public Parks (mg/kg)	
VOCs					
Acetone	9.59E+03	4.26E+03	1.00E+04*	1.00E+04*	***
Benzene	7.04E-01	2.79E-01	9.21E+00	4.22E+01	3.36E+02
Bromodichloromethane	3.17E-01	1.29E-01	2.85E+00	1.34E+01	1.03E+03
2-Butanone	1.00E+04*	1.00E+04*	1.00E+04*	1.00E+04*	***
Chloroform	1.32E-01	5.29E-02	1.54E+00	2.53E+02	1.10E+03
Ethylbenzene	7.09E+02	2.98E+02	8.24E+03	1.00E+04*	1.38E+02
Methyl tert-Butyl Ether	6.88E+00	2.80E+00	7.01E+01	5.05E+02	2.38E+03
Methylene Chloride	1.30E+00	5.29E-01	1.39E+01	1.28E+02	9.21E+02
Styrene	3.22E+03	1.54E+03	1.00E+04*	1.00E+04*	4.97E+02
Tetrachloroethene	1.01E-01	4.44E-02	7.77E-01	1.84E+00	9.71E+01
Toluene	1.44E+03	7.05E+02	1.00E+04*	1.00E+04*	2.35E+02
Trichloroethene	5.23E-01	2.11E-01	5.68E+00	6.94E+01	4.88E+02
Xylenes (Total)	9.50E+01	3.68E+01	1.23E+03	1.00E+04*	1.50E+02
SVOCs					
Acenaphthene	3.51E+03	3.28E+03	1.00E+04*	1.00E+04*	6.02E+01
Acenaphthylene	2.34E+03	1.51E+03	1.00E+04*	1.00E+04*	1.98E+01
Anthracene	1.00E+04*	1.00E+04*	1.00E+04*	1.00E+04*	2.56E+00
Benzo(a)anthracene	1.20E+01	1.14E+01	9.18E+01	3.83E+01	
Benzo(a)pyrene	1.20E+00	1.14E+00	9.18E+00	3.83E+00	
Benzo(b)fluoranthene	9.88E+00	1.01E+01	1.78E+01	2.04E+01	
Benzo(g,h,i)perylene	1.80E+03	1.71E+03	1.00E+04*	5.74E+03	
Benzo(k)fluoranthene	1.20E+02	1.14E+02	9.18E+02	3.83E+02	
bis-(2-Ethylhexyl)phthalate	3.00E+01	2.80E+01	9.18E+01	9.42E+01	
Chrysene	8.71E+02	9.19E+02	1.14E+03	1.54E+03	
Dibenzo(a,h)anthracene	1.20E+00	1.14E+00	9.18E+00	3.83E+00	
Fluoranthene	2.40E+03	2.27E+03	1.00E+04*	7.62E+03	
Fluorene	2.38E+03	2.25E+03	1.00E+04*	7.45E+03	5.47E+01
Hexachlorobenzene	2.43E-01	2.20E-01	5.82E-01	7.13E-01	
Indeno(1,2,3-cd)pyrene	1.20E+01	1.14E+01	9.18E+01	3.83E+01	
Naphthalene	1.82E+02	8.56E+01	4.53E+02	9.14E+02	1.25E+02
Phenanthrene	1.00E+04*	1.00E+04*	1.00E+04*	1.00E+04*	2.80E+01
Phenol	1.00E+04*	1.00E+04*	1.00E+04*	1.00E+04*	7.26E+03
Pyrene	1.80E+03	1.71E+03	1.00E+04*	5.72E+03	
Metals					
Antimony	2.95E+01	2.91E+01	2.61E+02	9.79E+01	
Arsenic	2.21E+01	2.18E+01	1.96E+02	7.35E+01	
Barium	1.00E+04*	1.00E+04*	1.00E+04*	1.00E+04*	
Cadmium	7.38E+01	7.28E+01	6.53E+02	2.45E+02	
Chromium III	1.00E+04*	1.00E+04*	1.00E+04*	1.00E+04*	
Chromium VI	2.21E+02	2.18E+02	1.96E+03	7.35E+02	
Cobalt	1.48E+03	1.46E+03	1.00E+04*	4.90E+03	
Copper	2.95E+03	2.91E+03	1.00E+04*	9.79E+03	
Lead	2.58E+02	2.55E+02	2.29E+03	8.57E+02	
Manganese	1.00E+04*	1.00E+04*	1.00E+04*	1.00E+04*	
Mercury	1.10E+01	6.52E+00	3.84E+01	4.56E+01	
Molybdenum	3.69E+02	3.64E+02	3.26E+03	1.22E+03	
Nickel	1.48E+03	1.46E+03	1.00E+04*	4.90E+03	
Tin	1.00E+04*	1.00E+04*	1.00E+04*	1.00E+04*	
Zinc	1.00E+04*	1.00E+04*	1.00E+04*	1.00E+04*	
Dioxins / PCBs					
Dioxins (I-TEQ)	1.00E-03	1.00E-03	5.00E-03	1.00E-03	
PCBs	2.36E-01	2.26E-01	7.48E-01	7.56E-01	
Petroleum Carbon Ranges					
C6 - C8	1.41E+03	5.45E+02	1.00E+04*	1.00E+04*	1.00E+03
C9 - C16	2.24E+03	1.33E+03	1.00E+04*	1.00E+04*	3.00E+03
C17 - C35	1.00E+04*	1.00E+04*	1.00E+04*	1.00E+04*	5.00E+03
Other Inorganic Compounds					
Cyanide, free	1.48E+03	1.46E+03	1.00E+04*	4.90E+03	
Organometallics					
TBTO	2.21E+01	2.18E+01	1.96E+02	7.35E+01	

Notes:

- (1) For Dioxins, the cleanup levels in USEPA Office of Solid Waste and Emergency Response (OSWER) Directive of 1998 have been adopted. The OSWER Directive value of 1 ppb for residential use has been applied to the scenarios of "Urban Residential", "Rural Residential", and "Public Parks", while the low end of the range of values for industrial, 5 ppb, has been applied to the scenario of "Industrial".
- (2) Soil saturation limits for petroleum carbon ranges taken from the Canada-Wide Standards for Petroleum Hydrocarbons in Soil, CCME 2000.
- (3) * indicates a 'ceiling limit' concentration.
- (4) *** indicates that the C_{sat} value exceeds the 'ceiling limit' therefore the RBRG applies.

--- END OF APPENDIX E ---





Project Title: Demolition of buildings and structures in the proposed Kennedy Town Comprehensive Development Area Site

工程項目名稱：堅尼地城綜合發展區拆卸工程

Environmental Permit No. : EP-136/2002/E

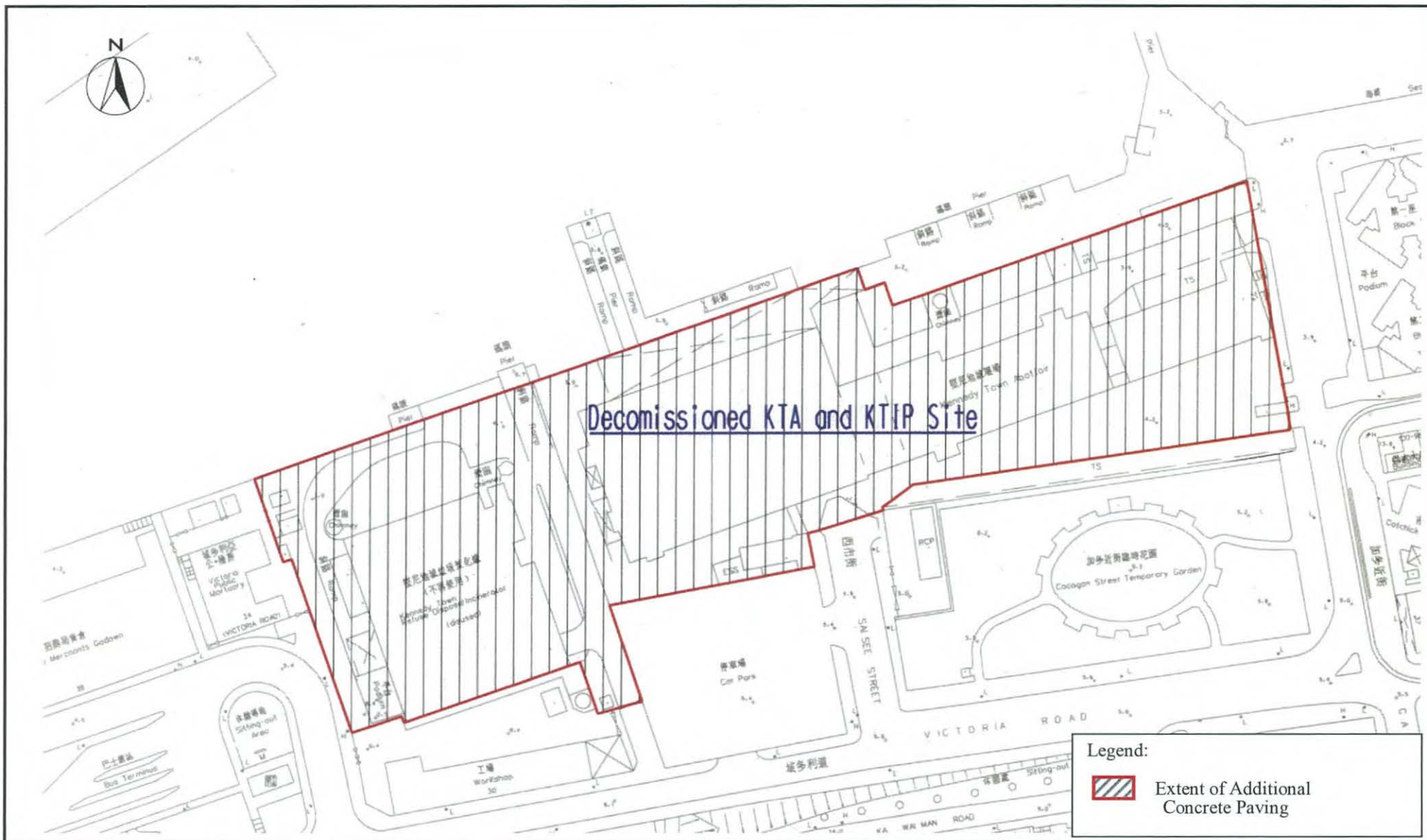
環境許可證編號 : EP-136/2002/E

Figure 2: Phase 1 Project Boundary

Note:

This figure was prepared based on drawing number 1.2 of the VEP application number VEP-234/2007





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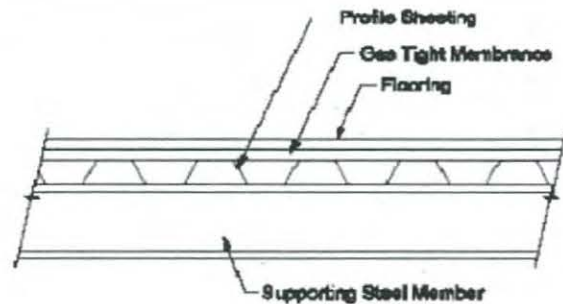
環境許可證編號 : EP-136/2002/E

Figure 3: Extent of Additional Concrete Paving

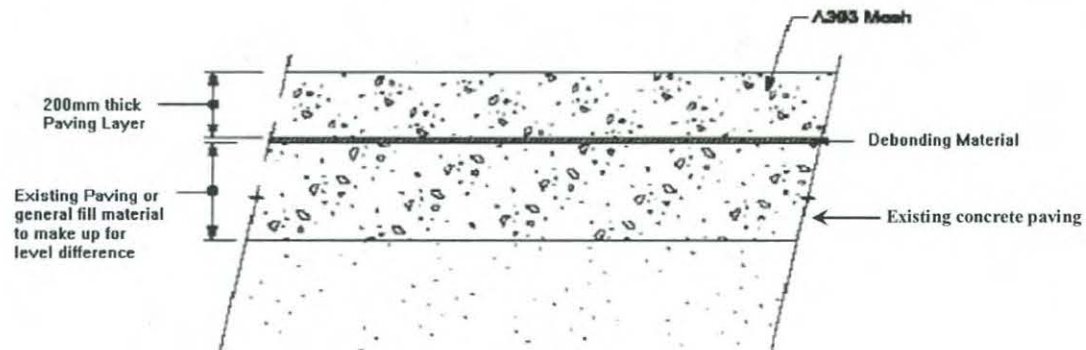
Note:

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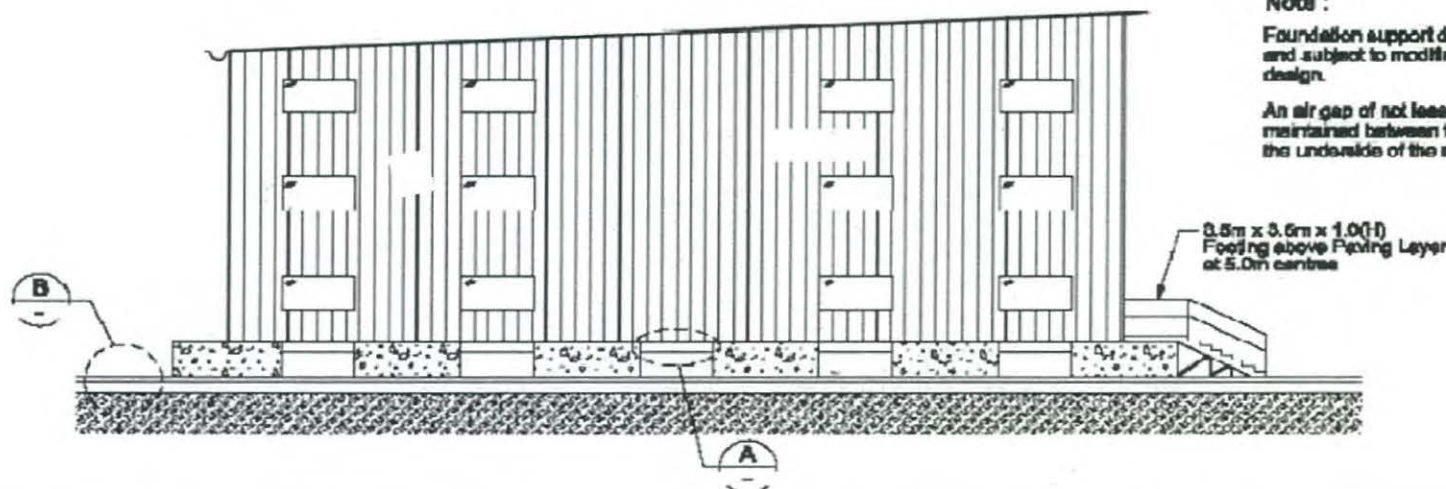




Detail A
1:30



Detail B
1:30



Note :

Foundation support details indicative only and subject to modification during detailed design.

An air gap of not less than 500mm will be maintained between the ground slab and the underside of the site offices.



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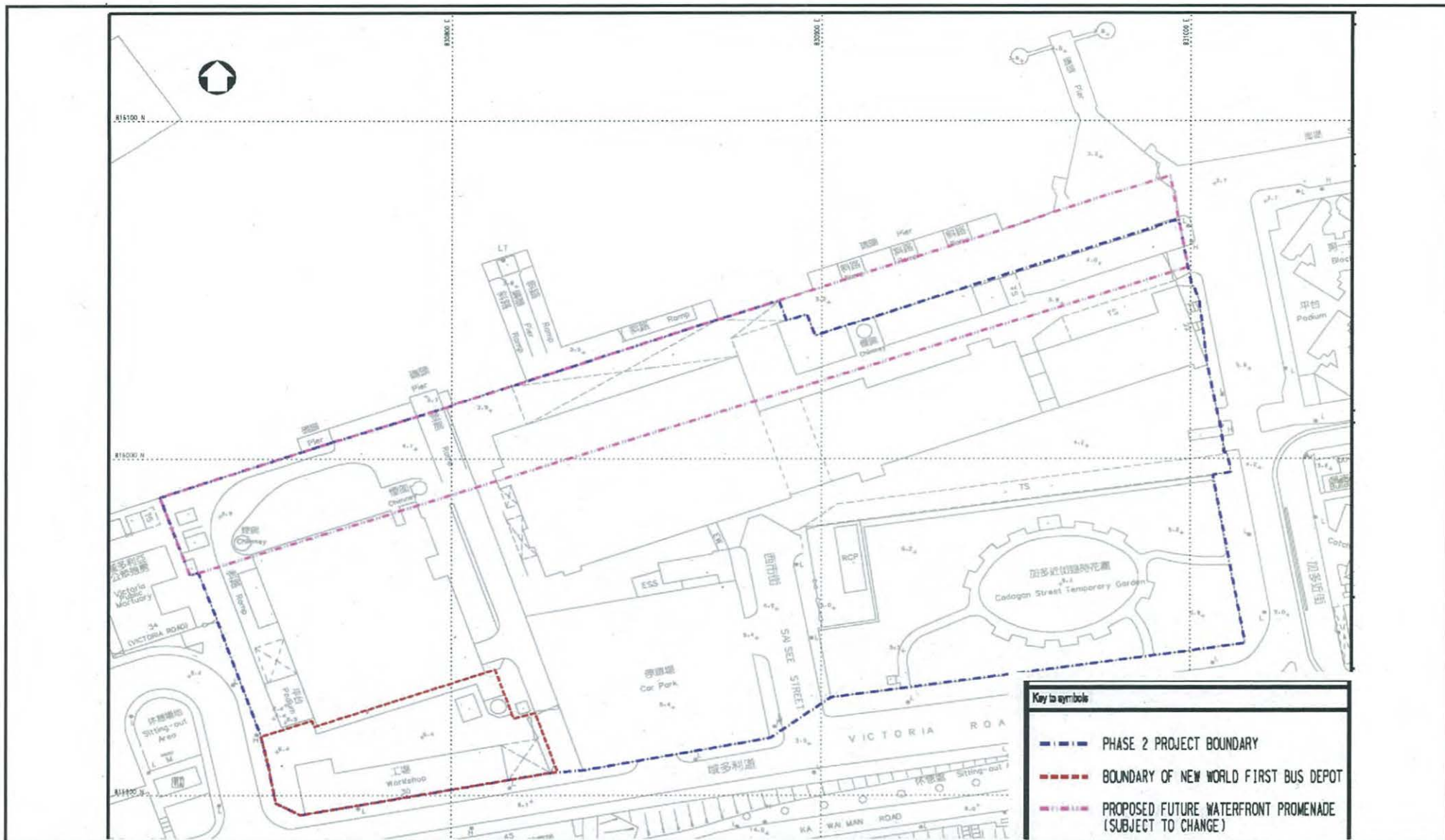
環境許可證編號 : EP-136/2002/E

Figure 4: Mitigation Design at Phase 1 site

Note:

This figure was prepared based on Appendix 1.2 of the Environmental Report for Application number VEP-234/2007





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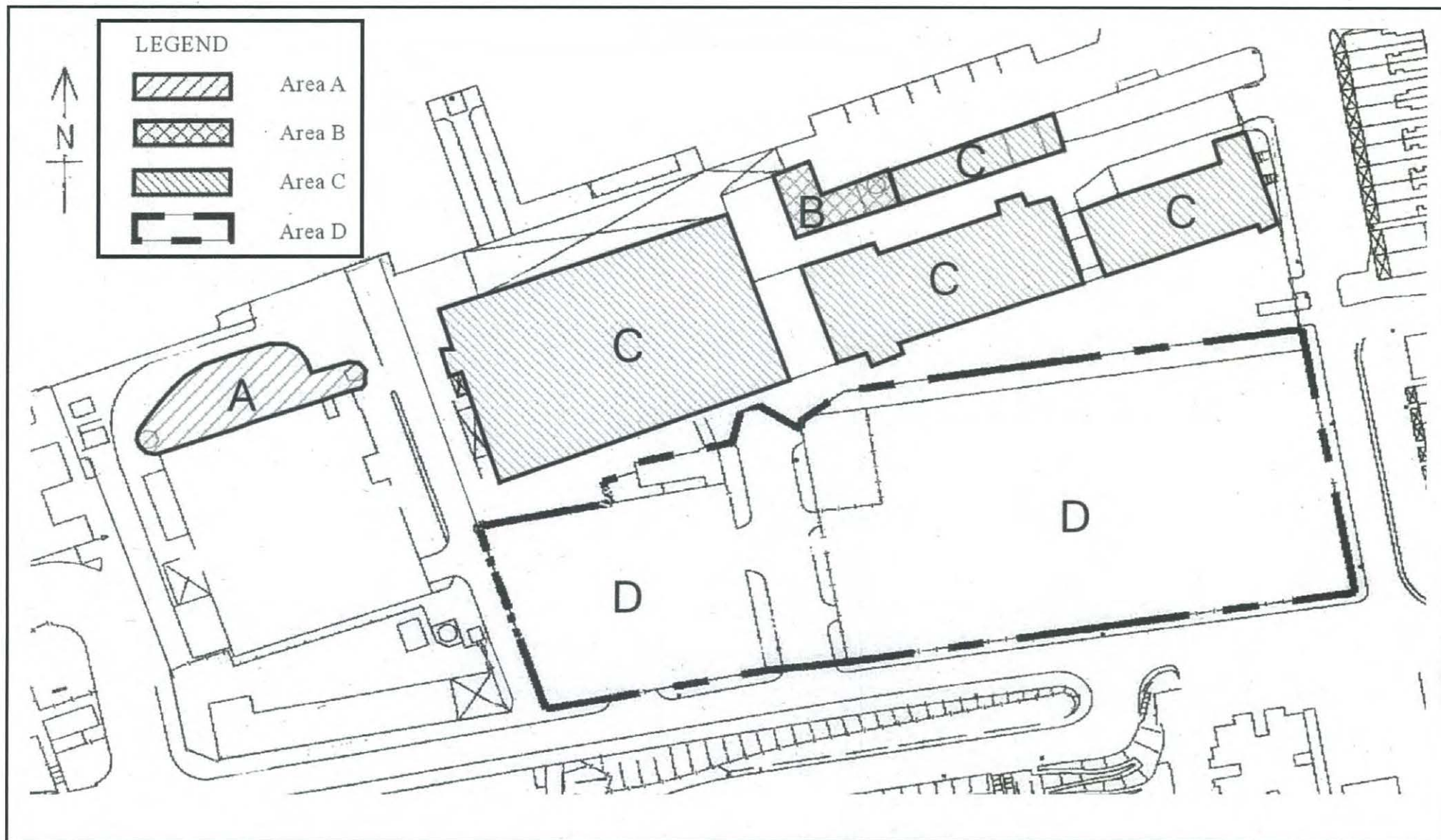
環境許可證編號 : EP-136/2002/E

Figure 5: Phase 2 Project Boundary and location of the New World First Bus Depot

Note:

This figure was prepared based on Figure 5 of the VEP application number VEP-475/2015





Project Title: Demolition of buildings and structures in the proposed Kennedy Town Comprehensive Development Area Site

工程項目名稱：堅尼地城綜合發展區拆卸工程

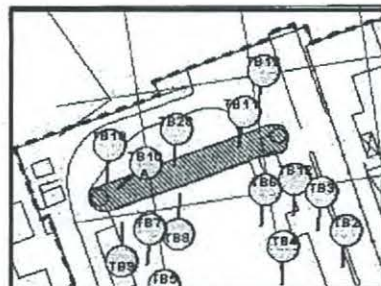
Environmental Permit No. : EP-136/2002/E

環境許可證編號 : EP-136/2002/E

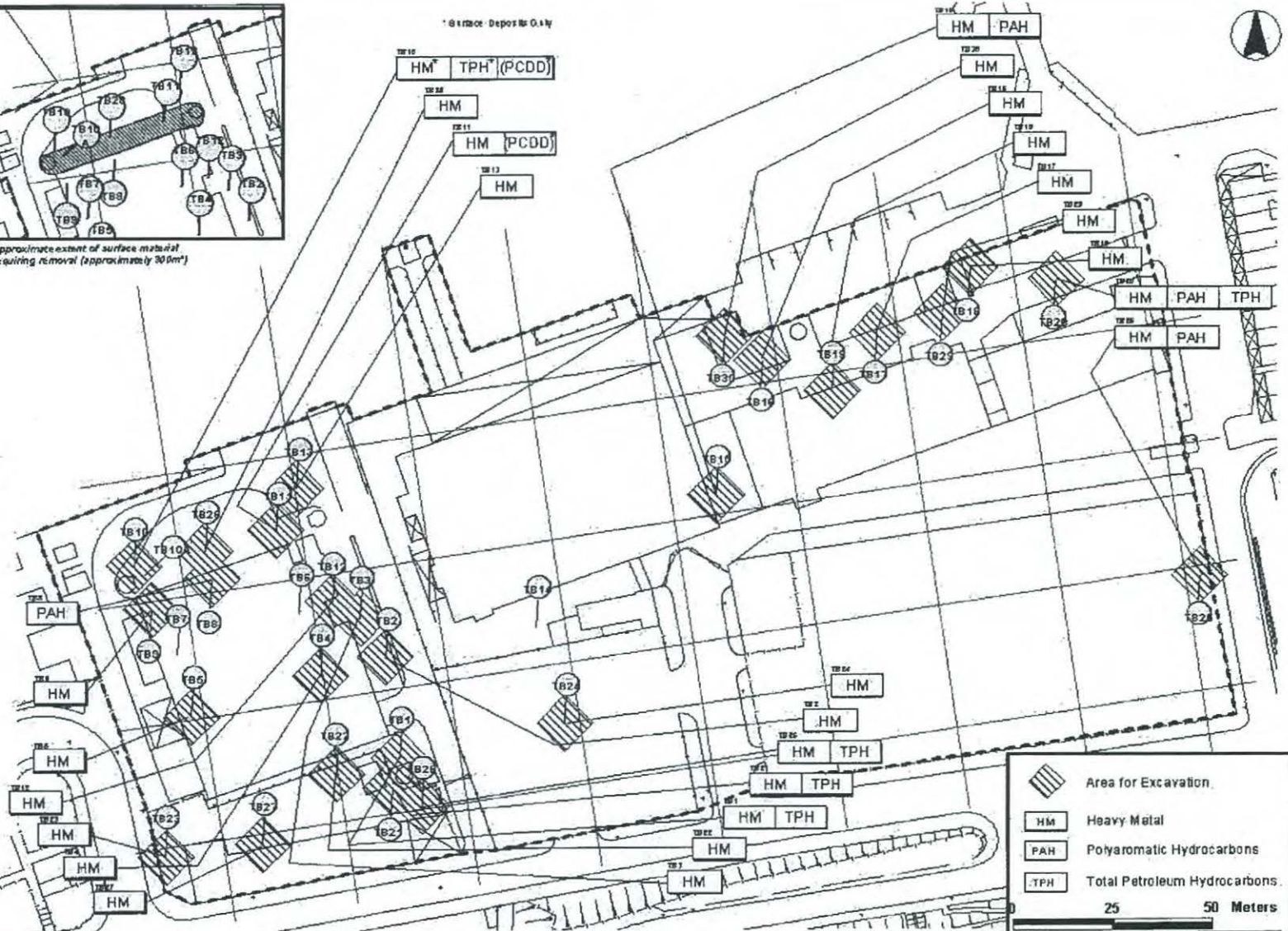
Figure 6: Locations of Investigation Areas



- TB1 Fuel Tank (Disused)
- TB2 Generator Room
- TB3 Transformer Room
- TB4 Incinerators Hall
- TB5 Incinerators Hall
- TB6 Ash Conveyor
- TB7 Ash Conveyor
- TB8 Boiler
- TB9 Boiler
- TB10 Grit Collection
- TB10A Grit Collection
- TB11 Grit Collection
- TB12 Dust Bunker
- TB13 Ash Hopper
- TB14 Transformer Compound
- TB15 Pump House
- TB16 Animal Carcass Incinerator
- TB17 Boiler House
- TB18 Diesel Tanks
- TB19 Blood and Bone Cookers
- TB20 Car Park
- TB21 Fuel Tank (In Use)
- TB22 Lubrication Store
- TB23 Chemical/Battery Store
- TB24 Car Park
- TB25 CSTG (Former Market)
- TB26 Fuel Tank Pipes
- TB27 Maintenance
- TB28 Grit Collection
- TB29 Diesel Tanks
- TB30 EMSD Workshop



Approximate extent of surface material requiring removal (approximately 300m²)



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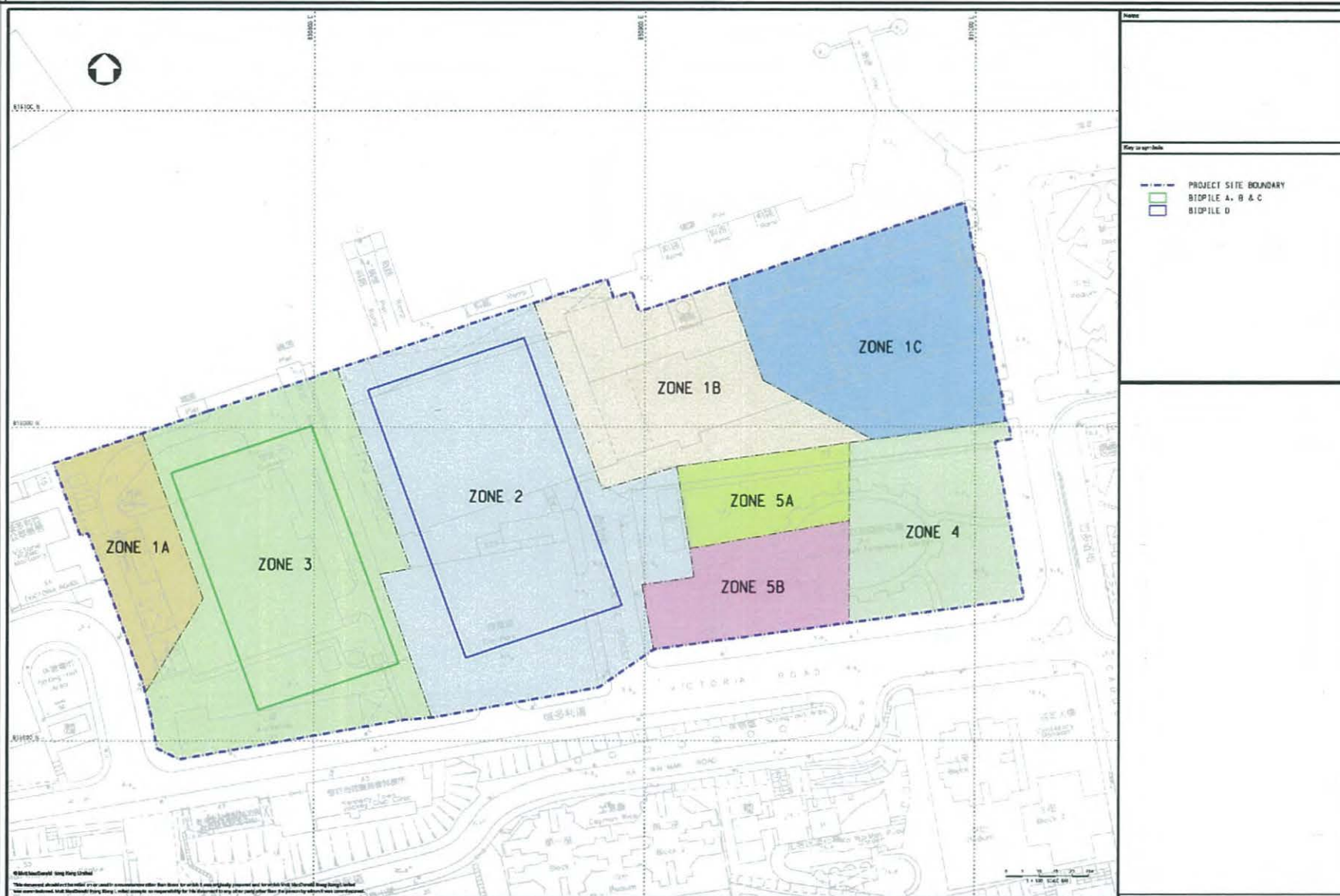
環境許可證編號 : EP-136/2002/E

Figure 7: Locations of Boreholes Showing Contaminated Locations Requiring Clean Up

Note:

This figure was prepared based on Figure 4.2 of the EIA Report number AEIAR-058/2002





Project Title: Demolition of buildings and structures in the proposed Kennedy Town Comprehensive Development Area Site

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Environmental Permit No. : EP-136/2002/E

環境許可證編號 : EP-136/2002/E

Figure 8: 7-year Phase 2 Ground Decontaminations Works – Indicative Layout of Zones

Note:

This figure was prepared based on Figure 2.3b. – “Site Decontamination Works (Reprovisioning Option B)” of the EIA Report Number AEIAR-188/2015

