

本署檔號
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環境保護署分處
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22 April 2020

Highways Department

Environmental Impact Assessment (EIA) Ordinance, Cap.499
Application for Variation of an Environmental Permit
Project Title: Central-Wan Chai Bypass including its Road Tunnel and Slip Roads
(Application No. VEP-572/2020)

I refer to your above application received on 27 March 2020 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 (No. EP-364/2009/G). I attach the Environmental Permit as amended (No. EP-364/2009/H) 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 me or my colleague Ms. Trista Lau at 2835 1152.

Yours sincerely,

(Sunny C.W. CHEUNG)

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 CONSTRUCT
DESIGNATED PROJECT

建造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 Ordinance), the Director of Environmental Protection (the Director) granted the Environmental Permit (No. EP-364/2009) to **Highways Department** (hereinafter referred to as the "Permit Holder") on 17 August 2009. Pursuant to Section 13 of the Ordinance, the Director amends the Environmental Permit based on the Application No. VEP-572/2020. The amendments, described below, are incorporated into this Environmental Permit (No. EP-364/2009/H). This Environmental Permit as amended is for the construction 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2009年8月17日將環境許可證(編號EP-364/2009)批予路政署(下稱“許可證持有人”)。根據條例第13條的規定，署長因應更改環境許可證的申請編號VEP-572/2020修訂環境許可證編號。以下修訂已包含在本環境許可證(編號EP-364/2009/H)內。本經修訂的環境許可證作為建造本許可證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-572/2020
Document in the Register : 登記冊上的文件:	<ol style="list-style-type: none">1. Central - Wan Chai Bypass and Island Eastern Corridor Link (Register No.: AEIAR-041/2001)<ul style="list-style-type: none">- Environmental Impact Assessment Report (July 2001) [Hereinafter referred to as "the CWB&IECL EIA Report"]- Environmental Monitoring and Audit Manual- Executive Summary2. The Director's letter of approval of the CWB&IECL EIA Report dated 31 August 2001 referenced (19) in Ax(2) to EP2/H4/A/10 II.3. Wan Chai Development Phase II and Central-Wan Chai Bypass (Register No.: AEIAR-125/2008)<ul style="list-style-type: none">- Environmental Impact Assessment Report (December 2007) [Hereinafter referred to as "the WDII&CWB EIA Report"]- Environmental Monitoring and Audit Manual- Executive Summary- Further information received from the Civil Engineering and Development Department on 11 March 2008, 9 April 2008 and 14 November 2008 under Section 8(1) of the Environmental Impact Assessment Ordinance4. The Director's letter of approval of the WDII&CWB EIA Report dated 11 December 2008 referenced (85) in EP2/H4/S3/15 Pt.2.



	<ol style="list-style-type: none"> 5. Central Reclamation Phase III – Studies, Site Investigation, Design and Construction (Register No.: AEIAR-040/2001) <ul style="list-style-type: none"> - Environmental Impact Assessment Report (July 2001) [Hereinafter referred to as "the CRIII EIA Report"] - Environmental Monitoring and Audit Manual - Executive Summary 6. The Director's letter of approval of the CRIII EIA Report dated 31 August 2001 referenced (19) in Ax(4) to EP2/H4/C/09 II. 7. Environmental Permit Issued – Permit No.: EP-356/2009 issued to Civil Engineering and Development Department on 30 July 2009 for construction of the following designated projects: <ul style="list-style-type: none"> (i) Permanent and temporary reclamation works including associated dredging works in Wan Chai Development Phase II (WDII) area (referred to as "DP3" in the WDII&CWB EIA Report); (ii) Wan Chai East Sewage Outfall (referred to as "DP5" in the WDII&CWB EIA Report); and (iii) Dredging for the Cross-harbour Water Mains from Wan Chai to Tsim Sha Tsui (referred to as "DP6" in the WDII&CWB EIA Report). 8. Application for Environmental Permit and attachments submitted by the Permit Holder on 27 July 2009 (Application No.: AEP-364/2009) 9. Environmental Permit (No. EP-364/2009) issued on 17 August 2009 10. Application documents for Variation of Environmental Permit including all attachments submitted by the Permit Holder on 28 July 2010 (Application No. VEP-321/2010) 11. Application documents for Variation of Environmental Permit including all attachments submitted by the Permit Holder on 31 August 2012 (Application No. VEP-374/2012) 12. Application documents for Variation of Environmental Permit including all attachments submitted by the Permit Holder on 20 June 2014 (Application No. VEP-443/2014) 13. Application documents for Variation of Environmental Permit including all attachments submitted by the Permit Holder on 28 October 2015 (Application No. VEP-485/2015) 14. Application documents for Variation of Environmental Permit including all attachments submitted by the Permit Holder on 7 December 2016 (Application No. VEP-512/2016) 15. Application documents for Variation of Environmental Permit including all attachments submitted by the Permit Holder on 10 May 2019 (Application No. VEP-561/2019) 16. Application documents for Variation of Environmental Permit including all attachments submitted by the Permit Holder on 17 September 2019 (Application No. VEP-565/2019) 17. Application documents for Variation of Environmental Permit including all
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	<p>attachments submitted by the Permit Holder on 27 March 2020 (Application No. VEP-572/2020)</p> <ol style="list-style-type: none"> 中環及灣仔繞道和東區走廊連接路設計及建築工程 (登記冊編號: AEIAR-041/2001) <ul style="list-style-type: none"> 環境影響評估報告 (2001年7月) [下稱「CWB&IECL環評報告」] 環境監察審核手冊 行政摘要 署長於2001年8月31日發出CWB&IECL環評報告的批准信, 檔案編號: (19) in Ax(2) to EP2/H4/A/10 II 灣仔發展計劃第二期及中環灣仔繞道 (登記冊編號: AEIAR-125/2008) <ul style="list-style-type: none"> 環境影響評估報告 (2007年12月) [下稱「WDII&CWB環評報告」] 環境監察審核手冊 行政摘要 土木工程拓展署根據條例第8.(1)條於2008年3月11日、2008年4月9日及2008年11月14日所提交的進一步資料 署長於2008年12月11日發出批准WDII&CWB環評報告的信件, 檔案編號: (85) in EP2/H4/S3/15 Pt. 2 中環填海計劃第III期 - 研究、實地堪測、設計與建築(登記冊編號: AEIAR-040/2001) <ul style="list-style-type: none"> 環境影響評估報告 (2001年7月) [下稱「CRIII環評報告」] 環境監察審核手冊 行政摘要 署長於2001年8月31日發出CRIII環評報告的批准信, 檔案編號: (19) in Ax(4) to EP2/H4/C/09 II 已簽發的環境許可證- 許可證編號EP-356/2009; 於2009年7月30日簽發與土木工程拓展署以建造以下指定工程項目: <ol style="list-style-type: none"> 在灣仔發展計劃第二期的永久及臨時填海工程(包括相聯挖泥工程)(WDII&CWB環評報告內稱“DP3”) 灣仔東污水排水口(WDII&CWB環評報告內稱“DP5”);及 灣仔至尖沙咀海底輸水管的挖泥工程(WDII&CWB環評報告內稱“DP6”)。 許可證持有人於2009年7月27日提交的環境許可證申請文件及附件(申請書編號: AEP-364/2009) 已簽發的環境許可證 (編號: EP-364/2009) 於2009年8月17日簽發 許可證持有人於2010年7月28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-321/2010) 許可證持有人於2012年8月31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-374/2012) 許可證持有人於2014年6月20日提交的更改環境許可證申請文件包括所有附
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	<p>件(申請書編號：VEP-443/2014)</p> <p>13. 許可證持有人於2015年 10月28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-485/2015)</p> <p>14. 許可證持有人於2016年12月7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-512/2016)</p> <p>15. 許可證持有人於2019年5月10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-561/2019)</p> <p>16. 許可證持有人於2019年9月17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-565/2019)</p> <p>17. 許可證持有人於2019年3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-572/2020)</p>
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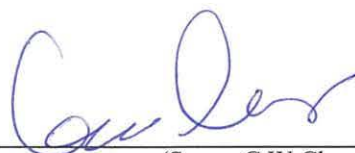
Application No. 申請書編號	Date of Application 申請日期	List of Amendments Incorporated into this Environmental Permit 已包含在本環境許可證內的 修訂項目	Date of Amendment 修訂日期
VEP-321/2010	28 July 2010 2010年7月28日	<p>1) Vary Condition 2.10(c) in Part C of Environmental Permit No. EP-364/2009. 更改環境許可證編號EP-364/2009, C部條件第 2.10(c) 項</p> <p>2) Vary Condition 2.15 in Part C of Environmental Permit No. EP-364/2009. 更改環境許可證編號EP-364/2009, C部條件第2.15 項</p> <p>3) Amend Figures 4a, 4b, 4d, 4e and 4f of Environmental Permit No. EP-364/2009 更改環境許可證編號EP-364/2009圖 4a, 4b, 4d, 4e 及 4f</p> <p>4) Add Figure 4g 加入圖 4g</p>	4 August 2010 2010年 8 月 4 日
VEP-374/2012	31 August 2012 2012 年 8 月 31 日	<p>(a) Vary Condition 1.7 in Part C 於 C 部更改第 1.7 項條件</p> <p>(b) Add Conditions 2.17 to 2.23, Figures 5 to 7 and Tables 2 & 3 to include two works</p>	20 September 2012 2012年9月 20 日



		areas at Ngau Kok Wan, Tsing Yi and Siu Ho Wan, Lantau in Part C 於 C 部加入第 2.17 至 2.23 項條件，圖 5 至 7 和表 2 及 3 以包括兩個分別位於青衣牛角灣及大嶼山小蠔灣的工地	
VEP-443/2014	20 June 2014 2014 年 6 月 20 日	Amend Condition 2.19, Figures 5 to include additional works area (Site B) at Ngau Kok Wan, Tsing Yi, in Part C 於 C 部更改第 2.19 項條件，圖 5 以包括青衣牛角灣(Site B)的工地	11 July 2014 2014年7月 11 日
VEP-485/2015	28 October 2015 2015 年 10 月 28 日	Amend Condition 2.9, Figure 2 and Figure 3 of EP-364/2009/C in Part C. 更改環境許可證編號EP-364/2009/C第2.9項條件，圖2及圖3	24 November 2015 2015年11月 24 日
VEP-512/2016	7 December 2016 2016 年 12 月 7 日	Amend Condition 2.13 and Table 1b of EP-364/2009/D to reflect the newly adoption of air purification system and latest detailed designs of the Central Ventilation Building (CVB). 更改環境許可證編號EP-364/2009/D第2.13項條件及表1b，以反映採用新空氣淨化系統及中通風大樓最新詳細設計	22 December 2016 2016年12月 22 日
VEP-561/2019	10 May 2019 2019 年 5 月 10 日	Amend Condition 2.10, Figure 4a of EP-364/2009/E in Part C. 更改環境許可證編號EP-364/2009/E第2.10項條件及圖4a	15 May 2019 2019年5月 15 日
VEP-565/2019	17 September 2019 2019 年 9 月 17 日	Figure 1 of EP-364/2009/F in Part C. 更改環境許可證編號EP-364/2009/F圖1	10 October 2019 2019年10月 10 日
VEP-572/2020	27 March 2020 2020 年 3 月 27 日	Amend Condition 2.15, Figure 4d, 4e, 4f & 4g of this Permit of EP-482/2013/B to reflect the latest design of absorptive panel in green color on the lower parts of Eastbound noise barriers and Westbound noise enclosures in Island Eastern Corridor Link. 更改環境許可證編號 EP-482/2013/B 第 2.11 項條件、圖 2d、圖 2e、圖 2f 及圖 2g 以反映在東區走廊連接路東西行線的半密封式隔音罩及隔音屏下半部最新擬建的綠色吸音板設計	22 April 2020 2020年4月 22 日

22 April 2020
2020 年 4 月 22 日

Date
日期



(Sunny C.W. Cheung)
Principal Environmental Protection Officer
for Director of Environmental Protection
環境保護署署長
(首席環境保護主任 張展華 代行)



PART B (DESCRIPTION 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 Project 指定工程項目的名稱	Central – Wan Chai Bypass (CWB) including its Road Tunnel and Slip Roads (This designated project is hereafter referred to as "the Project") 中環灣仔繞道，包括其行車隧道及連接路 (本指定工程項目下稱“工程項目”)
Nature of Designated Project 指定工程項目的性質	The Project will involve construction of: <ul style="list-style-type: none"> • a trunk road; and • its road tunnel more than 800m in length between portals. 此工程項目涉及興建: <ul style="list-style-type: none"> • 一條主幹道; 及 • 其入口之間的長度超過800米的行車隧道。
Location of Designated Project 指定工程項目的地點	From Central to North Point, Hong Kong. The location of the Project is shown in Figure 1 of this Permit. 由香港中環至北角。 工程項目的地點展示於本許可證圖1內。
Scale and Scope of Designated Project 指定工程項目的規模和範圍	The scope of the Project includes: <ul style="list-style-type: none"> • a dual three-lane trunk road, approximately 4.5 km in length, and tunnel approximately 3.7 km in length defined from the connection with the existing Rumsey Street Flyover in Central, through to a connection with the existing Island Eastern Corridor to the east of the Causeway Bay Typhoon Shelter(CBTS); • the Central Interchange near the Rumsey Street Flyover to provide road connections to the Central area; • tunnel control buildings and ventilation buildings; • slip roads to connect the CWB to the local road system in the Wan Chai North and Causeway Bay area; • associated road lighting, road signing, traffic control and surveillance system; and • other associated works. <u>Remarks:</u> <p>(a) The scope of the Project does not include (i) the tunnel structure works of the CWB within Central Reclamation Phase III (CRIII) area in Central waterfront area; (ii) the permanent and temporary reclamation and associated dredging works related to the CWB construction; and (iii) the Road P2 and other roads which are classified as primary/district distributor roads in Wan Chai waterfront area near Hong Kong Convention and Exhibition Centre (referred to as "DP2" in the WDII&CWB EIA Report (Register No. AEIAR-125/2008)).</p>



- (b) The tunnel structure works of the CWB within CRIII area are separately covered by environmental permit No. EP-122/2002 and further environmental permit No. FEP-01/122/2003, and their subsequently amended versions, issued to Civil Engineering and Development Department and its contractor, Leighton-China State-Van Oord Joint Venture, respectively.
- (c) The permanent and temporary reclamation and associated dredging works related to the CWB construction are separately covered by environmental permit No. EP-356/2009 issued to Civil Engineering and Development Department.

工程項目的範圍包括:

- 一條從現有的中環林士街天橋交接處，伸展至銅鑼灣避風塘東面的現有東區走廊交接處，約長4.5公里的三線雙向行車道路及約長3.7公里的隧道;
- 在現有的中環林士街天橋附近，用以連接中環區其他道路的中環交匯處;
- 隧道管理大樓及通風大樓;
- 連接主幹道與灣仔北和銅鑼灣地區現有道路的連接道;
- 相關的道路照明、道路標誌和交通管制及監察系統; 及
- 其他相關工程。

備註:

- (a) 本許可證不包括: (i) 中環灣仔繞道位於中環填海第三期地區內的隧道結構建造工程、(ii) 中環灣仔繞道相關的永久及臨時填海工程(包括相聯挖泥工程)及(iii) 在WDII&CWB環評報告中提及的指定工程項目DP2，位於灣仔海旁地區，近香港會議展覽中心的P2路和其他分類為主要幹道或地區幹道的道路。
- (b) 中環灣仔繞道位於中環填海第三期地區內的隧道結構建造工程已包括在簽發與土木工程拓展署的環境許可證(許可證編號: EP-122/2002)及簽發與其承辦商Leighton-China State-Van Oord Joint Venture的新的環境許可證(許可證編號: FEP-01/122/2003)及其各自的更新版本。
- (c) 中環灣仔繞道相關的永久及臨時填海工程(包括相聯挖泥工程) 已包括在簽發與土木工程拓展署的環境許可證(許可證編號: EP-356/2009)。



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 (EIAO) (Cap.499) and may become the subject of appropriate action being taken under the Ordinance.
- 1.2 The Permit Holder shall ensure full compliance with all legislation from time to time in force including, without limitation to, the Air Pollution Control Ordinance (Cap. 311), Water Pollution Control Ordinance (Cap. 358), Noise Control Ordinance (Cap. 400), and Waste Disposal Ordinance (Cap. 354). This Permit does not of itself constitute any ground of defense against any proceedings instituted under any legislation or imply any approval under any legislation.
- 1.3 The Permit Holder shall make copies of this Permit together with all documents referred to in this Permit and the documents referred to in Part A of this 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(s) and ensure that such person(s) fully understands all conditions and all requirements incorporated by the Permit. The site(s) refers to site(s) of construction of the Project and shall mean the same hereafter.
- 1.5 The Permit Holder shall display conspicuously a copy of this Permit on the construction site(s) 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 this 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 construction site(s).
- 1.6 The Permit Holder shall construct the Project in accordance with the project description in Part B of this Permit (hereafter referred to as "the Project").
- 1.7 The Permit Holder shall ensure that the Project is designed and constructed in accordance with the relevant information and recommendations described in the approved CWB&IECL EIA Report (Register No. AEIAR-041/2001), the approved WDII&CWB EIA Report (Register No. AEIAR-125/2008), the approved CRIII EIA Report (Register No. AEIAR-040/2001), the Environmental Permit No.: EP-356/2009 issued on 30 July 2009 for marine works as described in Part A of this Permit; the Application for Environmental Permit (Application No. AEP-364/2009); the Environmental Permit No. EP-364/2009 issued on 17 August 2009; the Applications for Variation of an Environmental Permit including all attachments submitted by the Permit Holder, other relevant documents in the Register, and the information or mitigation measures described in this Permit, and 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 of 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. As stated in the



Application for Environmental Permit and its attachments (Application No.: AEP-364/2009), the Project is covered by the approved CWB&IECL EIA Report (Register No. AEIAR-041/2001) and the WDII&CWB EIA Report (Register No. AEIAR-125/2008) mentioned in Part A of this Permit. The corresponding coverage of the two EIA reports is shown in Figure 1 of this Permit. The western part of the Project starts from the western boundary of the Project and ends at the eastern boundary of the CRIII area near Lung King Street, Wan Chai. The eastern part of the Project starts from the eastern boundary of the CRIII area and ends at the eastern boundary of the Project. The western part of the Project is covered by the approved CWB&IECL EIA Report (Register No. AEIAR-041/2001) with the clarifications stated in the Application for Environmental Permit and its attachments (Application No.: AEP-364/2009). The eastern part of the Project is covered by the approved WDII&CWB EIA Report (Register No. AEIAR-125/2008)).

- 1.8 All deposited 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.
- 1.9 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. Any non-compliance with the submissions may constitute a contravention of the Environmental Impact Assessment Ordinance (Cap.499). All submissions or any variation of the submissions shall be certified by the Environmental Team (ET) Leader and verified by the Independent Environmental Checker (IEC) referred to in Conditions 2.1 and 2.2 below before submitting to the Director under this Permit.
- 1.10 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.
- 1.11 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 4.0 or later), unless otherwise agreed by the Director and shall be submitted at the same time as the hard copies.
- 1.12 The Permit Holder shall notify the Director in writing the commencement date of construction of the Project no later than one month prior to the commencement of construction of the Project. The Permit Holder shall notify the Director in writing immediately if there is any change of the commencement date of the construction.
- 1.13 For the purpose of this Permit, "commencement of construction" does not include works related to site clearance and preparation or other works as agreed by the Director.
- 1.14 The Permit Holder shall notify the Director in writing the commencement date of operation of the Project no later than one month prior to the commencement of operation of the Project. The Permit Holder shall notify the Director in writing immediately if there is any change of the



commencement date of the operation.

2 Special Conditions

Submissions or Measures to be implemented before Construction of the Project

Employment of Environmental Monitoring and Audit (EM&A) Personnel

- 2.1 An Environmental Team (ET) shall be established by the Permit Holder no later than one month before the commencement of construction of the Project. The ET shall not be in any way an associated body of the Contractor or the Independent Environmental Checker (IEC) for the Project. The ET shall be headed by an ET Leader. The ET Leader shall be a person who has at least 7 years of experience in environmental monitoring and auditing (EM&A) or environmental management. The ET and 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 updated EM&A Manual of the Project approved under Condition 2.5 of this Permit. The ET Leader shall keep a contemporaneous log-book of each and every instance or circumstance or change of circumstances, which may affect the compliance with the recommendations of the EIA Report and this Permit. The ET Leader shall notify the IEC within one working day of the occurrence of any such instance or circumstance or change of circumstances. The ET Leader's log-book shall be kept readily available for inspection by all persons assisting in supervision of the implementation of the recommendations of the EIA Report 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 updated EM&A Manual of the Project approved under Condition 2.5 of this Permit 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.
- 2.2 An IEC shall be employed by the Permit Holder no later than one month before commencement of construction of the Project. The IEC shall not be in any way an associated body of the Contractor or the ET for the Project. The IEC shall be a person who has at least 7 years of experience in EM&A or environmental management. The IEC shall be responsible for duties defined in the updated EM&A Manual approved under Condition 2.5 of this Permit and shall audit the overall EM&A performance, including the implementation of all environmental mitigation measures, submissions required in the updated EM&A Manual, 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 one working day of receipt of notification from the ET Leader of each and every occurrence, change of circumstances or non-compliance with the EIA Report and this Permit, which might affect the monitoring or control of adverse environmental impacts from the Project. In the case where the IEC fails to so notify the Director of the same, fails to discharge the duties of the IEC as defined in the updated EM&A Manual 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.

Environmental Project Committee (ENPC)

- 2.3 To oversee and facilitate effective control of the cumulative environmental impacts arising from potential multiple contracts for the construction of the entire Wan Chai Development Phase II (WDII)



and Central-Wan Chai Bypass (CWB) (hereafter referred to as the whole Project), the Permit Holder shall liaise with the permit holder of environmental permit No. EP-356/2009 to jointly set up an Environmental Project Committee (ENPC). The ENPC shall be set up before the commencement of construction of the earliest components of the whole Project. Regular members of the ENPC will include:

- (a) the ET Leader;
- (b) the IEC; and
- (c) the permit holders of any environmental permit(s) and further environmental permit(s) for the whole Project.

The Community Liaison Group formed under Condition 2.4 of this Permit shall also work under the ENPC set-up to facilitate any necessary liaison works to address potential cumulative environmental impact issues arising from the whole Project. The ENPC shall make recommendation and update under Condition 2.5(a) of this Permit on how to enhance the monitoring and audit of the environmental performance of the whole Project on top of requirements as set out in Conditions 3.1 to 4.3 of this Permit or corresponding requirements set out under subsequent Environmental Permits issued for the whole Project.

Community Liaison Group

- 2.4 The Permit Holder shall liaise with the permit holder of environmental permit No. EP-356/2009 on jointly setting up a Community Liaison Group (CLG) comprising representatives from the relevant concerned and affected parties, including owners' corporations, management offices, local committees and schools of affected areas, including the North Point and Tin Hau areas, to facilitate communication, enquiries and complaints handling on all environmental issues, including the follow up on the implementation of remedial mitigation measures. The Permit Holder shall set up the CLG before the commencement of construction of the relevant component(s) of the WDII and CWB Project. The Permit Holder shall notify the Director the actual date of setting up the CLG, the membership, the terms of reference and the contact details. A designated complaint hotline shall also be set up for the Project to address such concerns and complaints in an efficient manner. The detailed arrangements of the CLG shall be reported to the ENPC and its activities be reflected as update under Condition 2.5(a) of this Permit. .

Submission of Updated EM&A Manual

- 2.5 The Permit Holder shall, no later than one month before the commencement of construction 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:
- (a) make recommendations on how to take into account the ENPC and Community Liaison Group requirements as stipulated in Conditions 2.3 and 2.4 of this Permit respectively;
 - (b) include a real-time on-site monitoring system of the noise level around the works sites at North Point and Tin Hau areas during the construction phase;
 - (c) take into account the relevant EM&A requirements from the approved CWB&IECL EIA Report (Register No. AEIAR-041/2001), the approved WDII&CWB EIA Report (Register No. AEIAR-125/2008), the latest works schedules, division of responsibilities among different contracts in the Project, latest project information, latest environmental mitigation measures including the restriction imposed on the use of pneumatic breakers to demolish the existing Island Eastern Corridor as set out in Condition 2.9(a) of this Permit; and
 - (d) include a monitoring and audit program on noise during the testing and commissioning



stages of ventilation buildings to verify the maximum sound power levels as assumed in the noise assessments contained in the approved CWB&IECL EIA Report (Register No. AEIAR-041/2001) and the WDII&CWB EIA Report (Register No. AEIAR-125/2008). In case the maximum sound power levels under this audit programme exceed those assumed in the EIA Reports, the Permit Holder shall investigate with a view to recommend remedial actions; shall deposit the investigation report with the Director, and implement the recommended remedial actions where appropriate.

Before submission to the Director, the updated EM&A Manual shall be certified by the ET and verified by the IEC as conforming to the relevant information and recommendations contained in the approved CWB&IECL EIA Report (Register No. AEIAR-041/2001), the approved WDII&CWB EIA Report (Register No. AEIAR-125/2008), the approved CRIII EIA Report (Register No. AEIAR-040/2001), the application documents for environmental permit including all attachments (Application No. AEP-364/2009) and other relevant documents in the Register. All measures recommended in the updated EM&A Manual approved under this Condition shall be fully and properly implemented according to the requirements and time schedule(s) set out in the updated EM&A Manual approved under this Condition (hereinafter referred to as the "updated EM&A Manual").

Management Organization of Main Construction Companies

- 2.6 The Permit Holder shall, no later than one month before the commencement of construction of the Project covered by this Permit, inform the Director in writing the management organization of the main construction companies and/or any form of joint ventures associated with the construction of the Project. The submitted information shall include at least an organization chart, names of responsible persons and their contact details. The management organization information submitted under this Condition shall contribute towards the relevant part of the ENPC and CLG that the Permit Holder will set up under Conditions 2.3 and 2.4 of this Permit.

Submission of Works Schedule and Location Plans

- 2.7 The Permit Holder shall deposit a detailed works schedule of the Project with the Director at least one month before the commencement of the works of the Project. The schedule shall include an updated works programme indicating dates of commencement of construction activities. This schedule to be submitted shall govern the various milestones and anticipated schedule of submissions as reflected in Conditions 2.5, 2.6, 2.8, 2.9, 2.13, 2.14, 2.16, 3.3, 3.4 and 4.2 of this Permit.
- 2.8 The Permit Holder shall deposit with the Director location and layout plans in the scale of 1:1,000 or other appropriate scale of the Project at least two weeks before the commencement of the works of the Project. The plans shall be submitted with an explanatory statement detailing the works boundaries, the works areas, vertical and horizontal alignments of the CWB, its tunnel, slip roads, ventilation buildings/vent shaft(s) and any other major facilities; and the locations of key environmental mitigation measures, including landscaped deck at eastern tunnel portal, noise semi-enclosures and barriers and low noise road surfacing as mentioned in Conditions 2.10 and 2.11 of this Permit.

Measures to Mitigate Construction Noise Impact

- 2.9 To mitigate construction noise impact, the Permit Holder shall deposit with the Director, at least two weeks prior to the commencement of construction of the corresponding component(s) of the Project, four hard copies and one electronic copy of the construction noise management plan, consisting of

layout plan(s) in the scale of 1:1,000 or other appropriate scale and explanatory statement(s) showing the noise mitigation measures to include:

(a) the use of pneumatic breakers, if required to demolish the existing Island Eastern Corridor, to be confined to the period from 0900 to 1700 hours on weekdays (Monday to Friday), and the pneumatic breakers shall not be used any time on Saturdays, Sundays and general holidays, and during examination hours of the schools affected by the works site, including:

- (i) Hong Kong Baptist Church Henrietta Secondary School; and
- (ii) Po Leung Kuk Yu Lee Mo Fan Memorial School;

(b) the installation of different types of noise barriers for particular items of powered mechanical equipments (including saw cutting / wire cutting machines) and construction works at the locations as shown in Figure 2 of this Permit. These noise barriers shall be installed along the existing Island Eastern Corridor structure during the demolition and construction of substructure for the Island Eastern Corridor and construction of adjacent tunnel approach ramp structure, as shown in Figure 2 of this Permit. Besides, temporary noise barriers shall be provided on temporary working platforms on piers or pile caps for the demolition works of existing piers and crossheads for the marine section of the existing Island Eastern Corridor as shown in Figure 3 of this Permit. The barrier material shall have a surface mass of not less than 14 kg/m² on skid footing with 25mm thick internal sound absorptive lining; and

(c) the use of movable/temporary noise barriers, the use of quiet powered mechanical equipments, and the adoption of multiple-phase construction schedules, where appropriate.

The submission(s) shall be certified by the ET Leader and verified by the IEC as conforming to the relevant information and recommendations contained in the approved CWB&IECL EIA Report (Register No. AEIAR-041/2001) and the WDII&CWB EIA Report (Register No. AEIAR-125/2008) before deposit with the Director. All measures recommended in the finalised submission(s) under this Condition shall be fully and properly implemented. Measures covered by other pollution control Ordinances shall not be included in this construction noise management plan.

Measures to Mitigate Operational Noise Impact

2.10 To mitigate traffic noise from road operation, the following noise barriers and semi-enclosures shall be installed before the commencement of operation of the corresponding road sections unless otherwise specified in this Permit. The locations and indicative designs of the noise semi-enclosures and barriers are shown in Figures 4a and 4b of this Permit:

- (a) about 235m length of noise semi-enclosure covering the westbound slip road from the Island Eastern Corridor;
- (b) about 230m length of noise semi-enclosure covering the main carriageways (eastbound and westbound) of the Central-Wan Chai Bypass (CWB) and Island Eastern Corridor;
- (c) about 135m length of 5.5m high cantilevered noise barrier with 4.5m long cantilever inclined at 45° on the eastbound slip road to the Island Eastern Corridor;
- (d) about 95m length of 5.5m high cantilevered noise barrier with 1m long cantilever inclined at 45° on the eastbound slip road to the Island Eastern Corridor;



- (e) about 350m length of 3.5m high vertical noise barrier on the eastbound slip road to the Island Eastern Corridor; and
 - (f) about 265m length of noise semi-enclosure covering the westbound slip road from the Island Eastern Corridor shall be installed before the occupation of planned noise sensitive receivers (NSRs) in the Comprehensive Development Areas (CDA) near Oil Street, North Point, as shown in Figures 4a and 4b of this Permit.
- 2.11 To mitigate traffic noise from road operation, low noise road surfacing shall be paved on the sections of the CWB with speed limit of 70 km/hour or above (except the section of CWB within the tunnel and beneath the landscaped deck at the eastern portal area) as shown in Figures 4b and 4c of this Permit.
- 2.12 To reduce operational noise from ventilation facilities, the Permit Holder shall provide silencers to all ventilation fans installed in all ventilation buildings.

Measures to Mitigate Air Quality Impact

- 2.13 To mitigate the potential air quality impact arising from the operation of the ventilation buildings and their vent shaft(s), the Permit Holder shall implement a series of air mitigation measures. The Permit Holder shall deposit with the Director, at least one month prior to the commencement of construction of the corresponding component(s) of the Project, four hard copies and one electronic copy of the operational air quality management plan to manage and mitigate operational air quality impact, consisting of design drawings in the scale of 1:1,000 or other appropriate scale and explanatory statements showing air quality mitigation measures include:
- (a) the construction of the West Ventilation Building (WVB) at the location as shown in Figure 1 of this Permit, and that WVB shall follow the exhaust related design criteria as shown in Table 1a of this Permit;
 - (b) the construction of the Central Ventilation Building (CVB) at the location as shown in Figure 1 of this Permit, and that CVB shall follow the exhaust related design criteria as shown in Table 1b of this Permit;
 - (c) the construction of the East Ventilation Building (EVB) and its vent shaft at the locations as shown in Figure 1 of this Permit, and that EVB shall follow the exhaust related design criteria as shown in Table 1b of this Permit;
 - (d) an electrostatic precipitator system shall be installed to reduce the dust emission from the EVB operation. The electrostatic precipitator system shall be designed to have a dust removal efficiency of 80% to reduce the level of respirable suspended particulates; and
 - (e) the ventilation system of the Eastern Portal of the CWB Tunnel shall follow the zero portal emission design as described in Section 2.4.18 of the WDII&CWB EIA Report (Register No. AEIAR-125/2008).

The Permit Holder shall, no later than one month before the commencement of construction of the relevant part of the Project, submit to the Director for approval four hard copies and one electronic copy if there is any design change as mentioned in 2.13(a) to (e).

The submission(s) shall be certified by the ET Leader and verified by the IEC as conforming to the relevant information and recommendations contained in the approved CWB&IECL EIA Report (Register No. AEIAR-041/2001), the approved WDII&CWB EIA Report (Register No.



AEIAR-125/2008) and the approved CRIII EIA Report (Register No. AEIAR-040/2001) before deposit with the Director. All measures recommended in the finalised submission(s) under this Condition shall be fully and properly implemented. Measures covered by other pollution control Ordinances shall not be included in the submission(s) on the operational air quality management plan.

Measures to Mitigate Landscape and Visual Impact

- 2.14 To reduce the landscape and visual impact during construction and operation stages of the Project, the Permit Holder shall implement a series of landscape and visual mitigation measures. The Permit Holder shall, at least one month before the commencement of corresponding parts of landscape works of the Project, deposit with the Director four hard copies and one electronic copy of landscape plan(s). The landscape plan(s) shall show the design details, locations, implementation programme, maintenance and management schedules, and drawings in the scale of 1:1,000 or other appropriate scale of the landscape and visual mitigation measures of the Project. Before submission to the Director, the landscape plan(s) shall be certified by the ET Leader and verified by the IEC as conforming to the relevant information and recommendations contained in the approved CWB&IECL EIA Report (Register No. AEIAR-041/2001) and the WDII&CWB EIA Report (Register No. AEIAR-125/2008). All measures recommended in the finalised submission(s) under this Condition shall be fully and properly implemented.
- 2.15 The landscape plan(s) to be submitted under Condition 2.14 of this Permit shall include measures to mitigate the landscape and visual impact of the road traffic noise semi-enclosures and barriers. The noise semi-enclosures and barriers shall mainly compose of:
- (a) transparent panels, translucent panels and/or green roof with translucent skylight in the upper part where appropriate; and
 - (b) absorptive panels in green color in the lower part where appropriate,
- as shown in Figures 4d, 4e, 4f and 4g of this Permit.

Measures to Mitigate Noise and Visual Impacts on Users of Victoria Park

- 2.16 To reduce the noise and visual impacts of the Slip Road 8, as shown in Figure 1 of this Permit, on users of the Victoria Park during the operation phase of the Project, the Permit Holder shall deposit with the Director, at least one month prior to the commencement of construction of the corresponding component(s) of the Project, four hard copies and one electronic copy of Additional Mitigation Plan for Slip Road 8 consisting of design drawings in the scale of 1:1,000 or other appropriate scale and explanatory statement(s) showing the additional noise and visual mitigation measures such as noise screening structures with aesthetic design. Before submission to the Director, the Additional Mitigation Plan shall be certified by the ET Leader and verified by the IEC as conforming to the relevant information and recommendations contained in the approved WDII&CWB EIA Report (Register No. AEIAR-125/2008) and its approval conditions. The recommended noise and visual mitigation measures in the finalised submission shall be fully and properly implemented prior to the commencement of operation of the Project.

Measures to be implemented in Works Areas

Ngau Kok Wan Works Area in Tsing Yi (Site A and Site B)



- 2.17 The Ngau Kok Wan Works Areas as shown in Figure 5 shall be used only for the storage and handling of precast concrete products and structural steel works for the Project.
- 2.18 The loading and unloading of precast concrete products and structural steelworks shall be done by way of marine access only.
- 2.19 For Site A, the stockpiling height shall not exceed 3m from ground level and the stockpiling amount shall not exceed 15,000 m³. For Site B, the stockpiling height shall not exceed 7m from ground level and the stockpiling amount shall not exceed 35,000 m³.
- 2.20 For Site A, fourteen (14) trees shall be retained in-situ at locations marked in Figure 6 and listed in Table 2. For protection, the fourteen (14) retained trees shall be fenced off with about 1.2 m high fence around the dripline of trees or larger area as far as feasible.

Siu Ho Wan Works Area in Lantau

- 2.21 The Siu Ho Wan Works Area as shown in Figure 5 shall be used only for storage of construction materials and equipments including precast concrete products and structural steelworks for the Project.
- 2.22 The stockpiling height shall not exceed 3m from ground level. The stockpiling amount shall not exceed 20,000 m³.
- 2.23 Thirteen (13) trees shall be retained in-situ at locations marked in Figure 7 and listed in Table 3. For protection, the thirteen (13) retained trees shall be fenced off with about 1.2 m high fence around the dripline of trees or larger area as far as feasible.

3 Environmental Monitoring and Audit Requirements

- 3.1 The EM&A programme shall be implemented in accordance with the procedures and requirements as set out in the updated EM&A Manual approved under Condition 2.5 of this Permit. Any major changes to the programme shall be justified by the ET Leader and verified by the IEC as conforming to the information and requirements contained in the updated EM&A Manual approved under Condition 2.5 of this Permit before submission to the Director for approval. The EM&A programme shall include, among other items, the air quality and noise monitoring and audit details to cover the different construction phases. The Permit Holder shall consider the appropriate timing for putting in place a real-time on-site monitoring system of the noise level around the works sites at North Point and Tin Hau areas during the construction phase of the Project, but the real-time monitoring system shall be in place no later than two weeks before the commencement date of demolition works of the existing Island Eastern Corridor. The real-time noise monitoring results shall be presented in the Internet website as described in Condition 4.2 of this Permit.
- 3.2 Samples, measurements and necessary remedial actions shall be taken in accordance with the requirements of the updated EM&A Manual by:
- (a) conducting baseline environmental monitoring;
 - (b) conducting impact monitoring;
 - (c) carrying out remedial actions described in Event/Action Plans of the updated EM&A Manual approved under Condition 2.5 of this Permit in accordance with the time frames set out in Event/Action Plans, or as agreed by the Director, in case where specified criteria in the updated EM&A Manual approved under Condition 2.5 of this Permit are exceeded; and



- (d) logging and keeping records of details of (a) to (c) above for all parameters within 3 working days of collection of data or completion of remedial action(s), for the purpose of preparing and submitting the monthly EM&A Reports and to make available for inspection on site.
- 3.3 Four hard copies and one electronic copy of the Baseline Monitoring Report shall be submitted to the Director at least one month before commencement of construction of the Project. The submission shall be certified by the ET Leader and verified by the IEC. Additional copies of the submission shall be made available to the Director upon his request.
- 3.4 Four hard copies and one electronic copy of monthly EM&A Report shall be submitted to the Director within 10 working days after the end of each reporting month. The EM&A Reports shall include a summary of all non-compliance (exceedances) of the environmental quality performance limits (Action and Limit Levels). In compiling this monthly EM&A Report, the Permit Holder shall address all relevant cumulative construction impacts due to concurrent activities of the concurrent projects including the Central Reclamation Phase III and the Wan Chai Development Phase II projects. The submissions shall be verified by the IEC. Additional copies of the submission shall be provided to the Director upon request by the Director.
- 3.5 All environmental monitoring and audit data submitted under this Permit shall be true, valid and correct.

4 Electronic Reporting of EM&A Information

- 4.1 To facilitate public inspection of the Baseline Monitoring Report and regular 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 4.0 or later), unless otherwise agreed by the Director and shall be submitted at the same time as the hardcopies as described in Conditions 3.3 and 3.4 of this Permit. For the HTML version, a content page capable of providing hyperlink to each section and sub-section of these Reports shall be included in the beginning of the document. Hyperlinks to all figures, drawings and tables in these Reports shall be provided in the main text from 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 must be the same as the hardcopies.
- 4.2 The Permit Holder shall, set up a dedicated web site and notify the Director in writing the Internet address where the environmental monitoring and project data is to be placed, within six weeks after the commencement of construction of the Project. All environmental monitoring data described in Condition 4.1 above shall be made available to the public via a dedicated web site to be set up by the Permit Holder in the shortest practicable 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.
- 4.3 The Internet website as described in Condition 4.2 above shall enable user-friendly public access to the monitoring and project data including the approved EIA Reports and the environmental permit(s) of the Project. The Internet website shall have features capable of:
 - (a) providing access to all environmental monitoring data collected since the commencement of works;
 - (b) searching by date;
 - (c) searching by types of monitoring data (noise and air quality); and
 - (d) hyperlinks 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 construction site by the amended permit.
4. A person who assumes the responsibility for the whole or a part of the designated project(s) may, before he assumes responsibility of the designated project(s), 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 construction site.
6. If this Permit is cancelled or surrendered during construction of 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 construct or operate a designated project listed in Part I of schedule 2 of the Ordinance without a valid environmental permit.
7. Any person who constructs 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.



Table 1a: Exhaust Related Design Criteria of the West Ventilation Building (based on Table 3.9 of the CWB&IECL EIA Report (Register No. AEIAR-041/2001))*

	Maximum capacity (m ³ s ⁻¹)	Exit velocity (m s ⁻¹)	Minimum discharge height (meter above ground)	Exhaust direction
West Ventilation Building (WVB)**	420	8	15	Vertical

Notes: * This Table shall be read in conjunction with Condition 2.13 and Figure 1 of this Permit.
** The vent shaft will be incorporated within the WVB.

Table 1b Exhaust Related Design Criteria of the Central Ventilation Building and the East Ventilation Building and its Vent Shaft (based on Table 3.11 of the WDII&CWB EIA Report (Register No. AEIAR-125/2008))*

	Cross-sectional area of stack (m ²)	Exit velocity (m s ⁻¹)	Minimum mid-discharge height (meter above ground)	Exhaust direction
Central Ventilation Building (CVB)**	80	8	17.5	Vertical
Vent shaft of the East Ventilation Building (EVB)***	94	8	16.25	Inclined 45 degree upward (discharge towards sea direction)

Notes: * This Table shall be read in conjunction with Condition 2.13 and Figure 1 of this Permit.
** The vent shaft of CVB will be incorporated within the CVB.
*** The vent shaft of EVB will be separated from the EVB and located at the eastern breakwater of the Causeway Bay Typhoon Shelter.

Table 2: Trees to be retained in Ngau Kok Wan Works Area

Tree No.	Scientific Name	Chinese Common Name	Recommendation
T001	Macaranga Tanarius	血桐	Retain and fence off
T002	Macaranga Tanarius	血桐	Retain and fence off
T003	Macaranga Tanarius	血桐	Retain and fence off
T004	Macaranga Tanarius	血桐	Retain and fence off
T005	Macaranga Tanarius	血桐	Retain and fence off



Tree No.	Scientific Name	Chinese Common Name	Recommendation
T006	Leucaena leucocephala	銀合歡	Retain and fence off
T007	Leucaena leucocephala	銀合歡	Retain and fence off
T008	Leucaena leucocephala	銀合歡	Retain and fence off
T009	Leucaena leucocephala	銀合歡	Retain and fence off
T010	Leucaena leucocephala	銀合歡	Retain and fence off
T011	Leucaena leucocephala	銀合歡	Retain and fence off
T012	Leucaena leucocephala	銀合歡	Retain and fence off
T013	Leucaena leucocephala	銀合歡	Retain and fence off
T014	Leucaena leucocephala	銀合歡	Retain and fence off

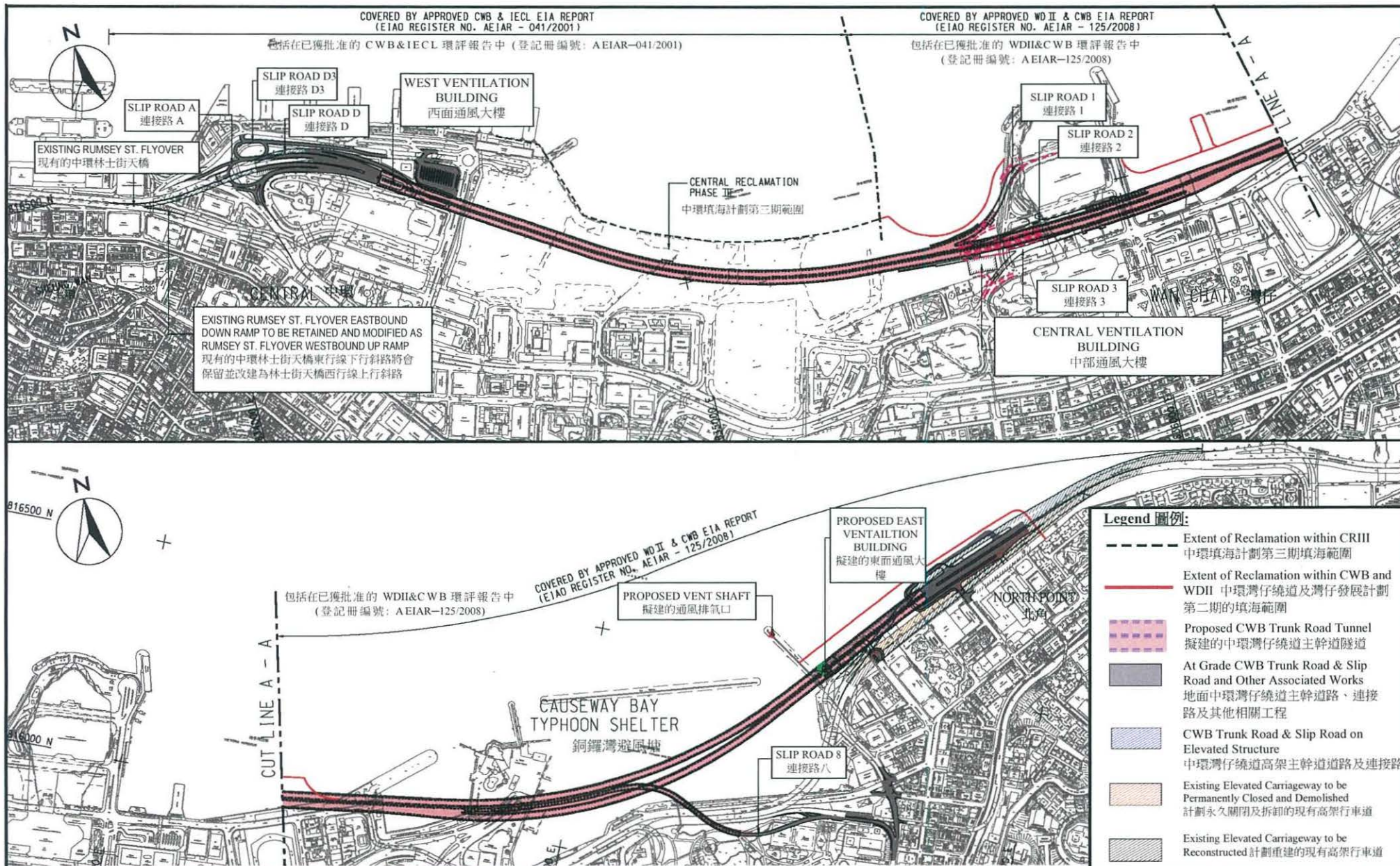
Note: This Table shall be read in conjunction with Condition 2.20 and Figure 6 of this Permit.
This Table is based on Tree Survey Schedule in Environmental Assessment for Handling and Stockpile of Precast Concrete Product and Structural Steelworks at Ngau Kok Wan, Tsing Yi.

Table 3: Trees to be retained in Siu Ho Wan Works Area

Tree No.	Scientific Name	Chinese Common Name	Recommendation
T001	Syzygium Cumini	海南蒲桃	Retain and fence off
T002	Macaranga Tanarius	血桐	Retain and fence off
T003	Macaranga Tanarius	血桐	Retain and fence off
T004	Acacia Confusa	台灣相思	Retain and fence off
T005	Acacia Confusa	台灣相思	Retain and fence off
T006	Acacia Auriculiformis	耳果相思	Retain and fence off
T007	Acacia Confusa	台灣相思	Retain and fence off
T008	Acacia Confusa	台灣相思	Retain and fence off
T009	Liquidamber Formosana	楓香	Retain and fence off
T010	Acacia Confusa	台灣相思	Retain and fence off
T011	Liquidamber Formosana	楓香	Retain and fence off
T012	Acacia Confusa	台灣相思	Retain and fence off
T013	Acacia Confusa	台灣相思	Retain and fence off

Note: This Table shall be read in conjunction with Condition 2.23 and Figure 7 of this Permit.
This Table is based on Tree Survey Schedule in Environmental Assessment for Storage of Construction Materials and Equipment at Siu Ho Wan, Lantau Island.





Project Title: Central-Wanchai Bypass (CWB) Including Its Road Tunnel and Slip Roads
工程項目名稱: 中環灣仔繞道包括其行車隧道及連接路

Environmental Permit No.: EP-364/2009/H
環境許可證編號: EP-364/2009/H

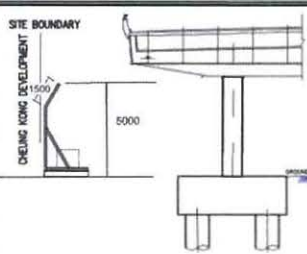
Figure 1: Location of the Project
圖 1: 工程項目位置

(This figure was prepared based on Figure 1 in Application for Variation of an Environmental Permit no. VEP-565/2019)
(本圖是根據申請更改環境許可證申請書編號 VEP-565/2019 內的圖 1 編製)



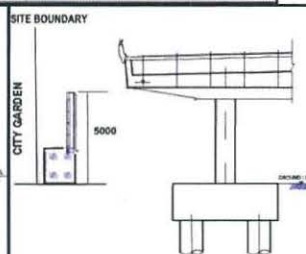
LEGEND: 圖例

-  LINE OF TEMPORARY NOISE BARRIER
-  LINE OF TEMPORARY NOISE BARRIER (TO BE PLACED AT LOCATIONS WHERE CONSTRUCTION WORKS ARE IN PROGRESS)
-  LINE OF MOVABLE NOISE BARRIER
-  可移動隔音屏障位置



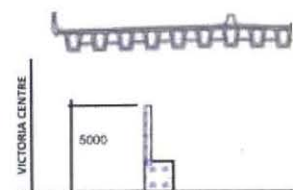
SECTION D-D
TYPICAL SECTION FOR
TEMPORARY NOISE BARRIER
臨時隔音屏障的切面 D-D

SCALE N.T.S.



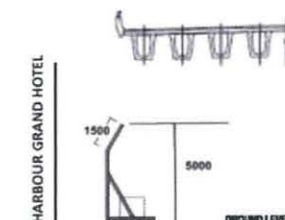
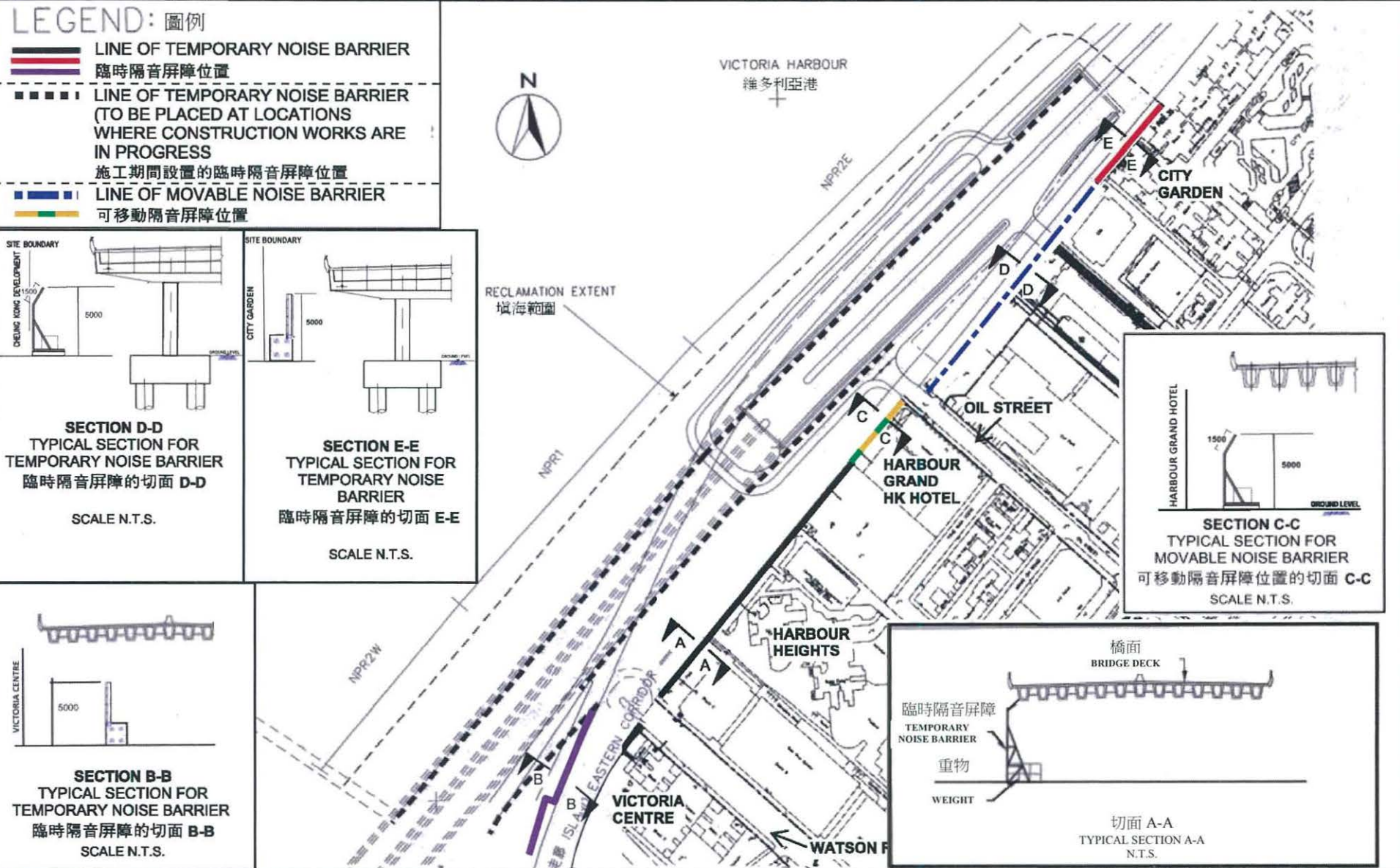
SECTION E-E
TYPICAL SECTION FOR
TEMPORARY NOISE
BARRIER
臨時隔音屏障的切面 E-E

SCALE N.T.S.

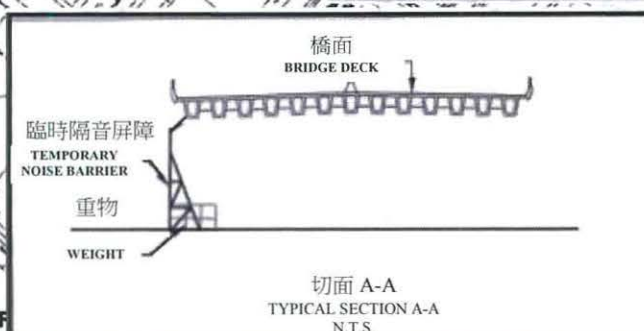


SECTION B-B
TYPICAL SECTION FOR
TEMPORARY NOISE BARRIER
臨時隔音屏障的切面 B-B

SCALE N.T.S.



SECTION C-C
TYPICAL SECTION FOR
MOVABLE NOISE BARRIER
可移動隔音屏障位置的切面 C-C
SCALE N.T.S.



切面 A-A
TYPICAL SECTION A-A
N.T.S.



Project Title: Central-Wanchai Bypass (CWB) – Tunnel (North Point Section) and
Island Eastern Corridor Link

工程項目名稱：中環灣仔繞道—北角段隧道及東區走廊連接路

Environmental Permit No.: EP-364/2009/H

環境許可證編號：EP-364/2009/H

Figure 2: Location of Temporary Noise Barriers during Construction Phase in North Point Waterfront
圖 2: 在北角海旁施工期間的臨時隔音屏障位置圖

(This figure was prepared based on Figure 2 of the report submitted under VEP Application (Register No.: VEP-485/2015))
(本圖是根據更改環境許可證申請文件(申請書編號: VEP-485/2015)所提交的報告圖 2 編制))

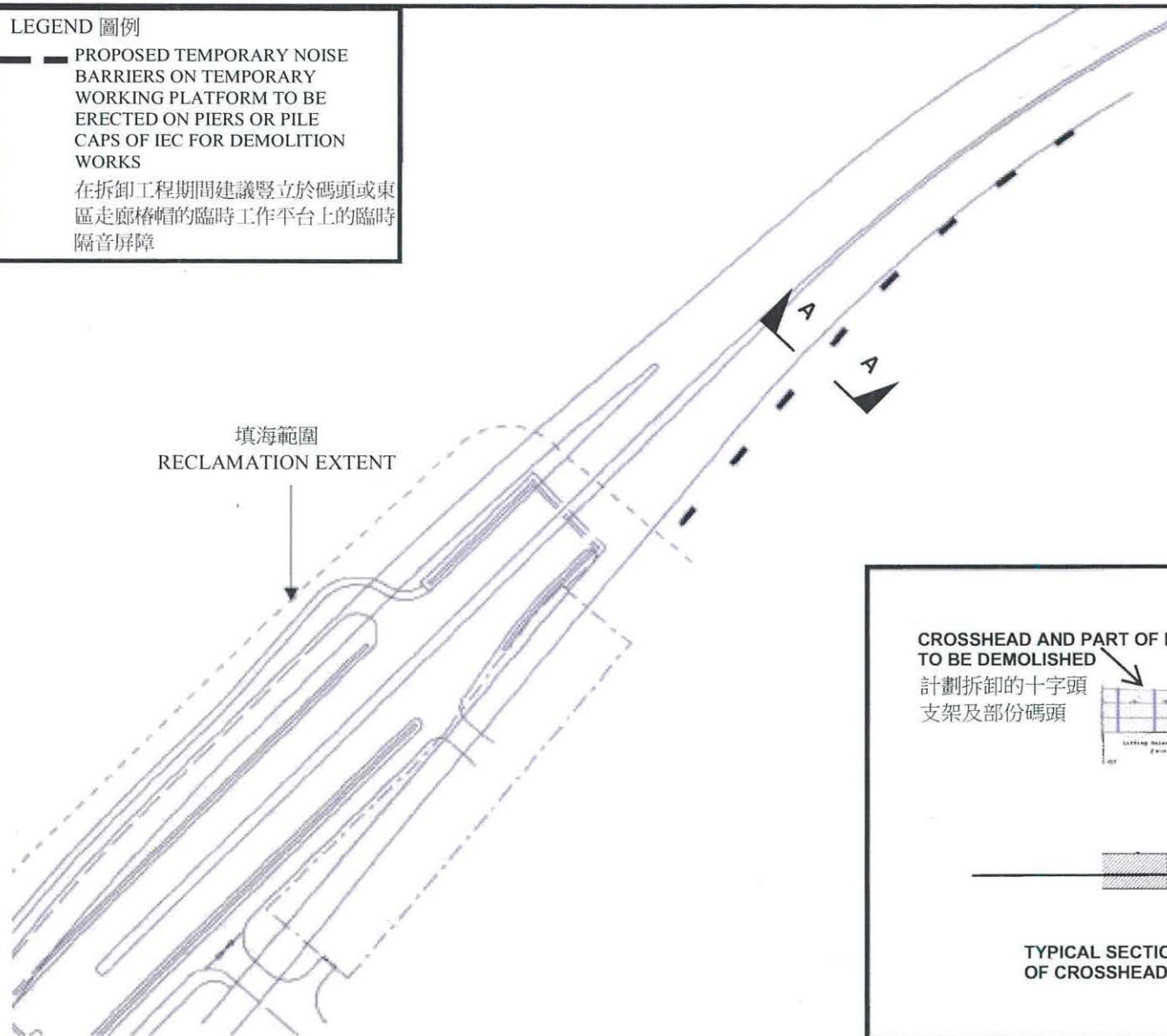


LEGEND 圖例

PROPOSED TEMPORARY NOISE BARRIERS ON TEMPORARY WORKING PLATFORM TO BE ERECTED ON PIERS OR PILE CAPS OF IEC FOR DEMOLITION WORKS

在拆卸工程期間建議豎立於碼頭或東區走廊橋樑的臨時工作平台上的臨時隔音屏障

填海範圍
RECLAMATION EXTENT



CROSSHEAD AND PART OF PIER
TO BE DEMOLISHED
計劃拆卸的十字頭
支架及部份碼頭

TEMPORARY
NOISE BARRIER
臨時隔音屏

TEMPORARY WORKING
PLATFORM
臨時工作平台

SEA WATER LEVEL 海平面

TYPICAL SECTION A-A FOR DEMOLITION
OF CROSSHEAD AND PART OF PIER

N.T.S.

拆卸的十字頭
支架及部份碼
頭結構的切面
A-A



Project Title: Central-Wanchai Bypass (CWB) Including Its Road Tunnel and Slip Roads
工程項目名稱：中環灣仔繞道包括其行車隧道及連接路

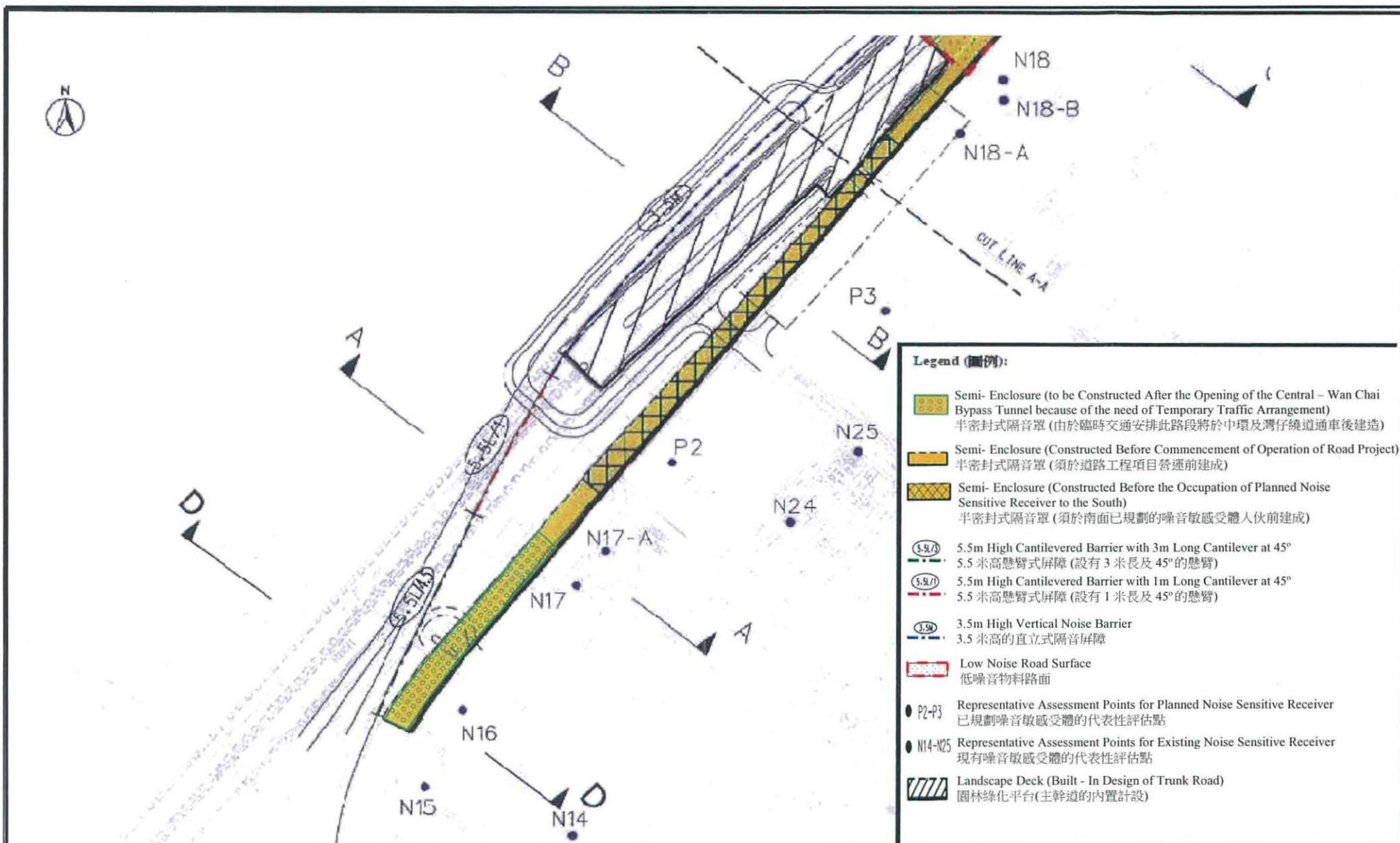
Environmental Permit No. : EP-364/2009/H
環境許可證編號：EP-364/2009/H

Figure 3: Location of Temporary Noise Barriers during Demolition of Existing Piers and Crossheads in Marine Section of IEC

圖 3: 拆卸現有碼頭及東區走廊海面十字頭支架期間的臨時隔音屏障位置圖

(This figure was prepared Figure 3 of the report submitted under VEP Application (Register No.: VEP-485/2015))
(本圖是根據更改環境許可證申請文件(申請書編號：VEP-485/2015)所提交的報告圖 3 編制))



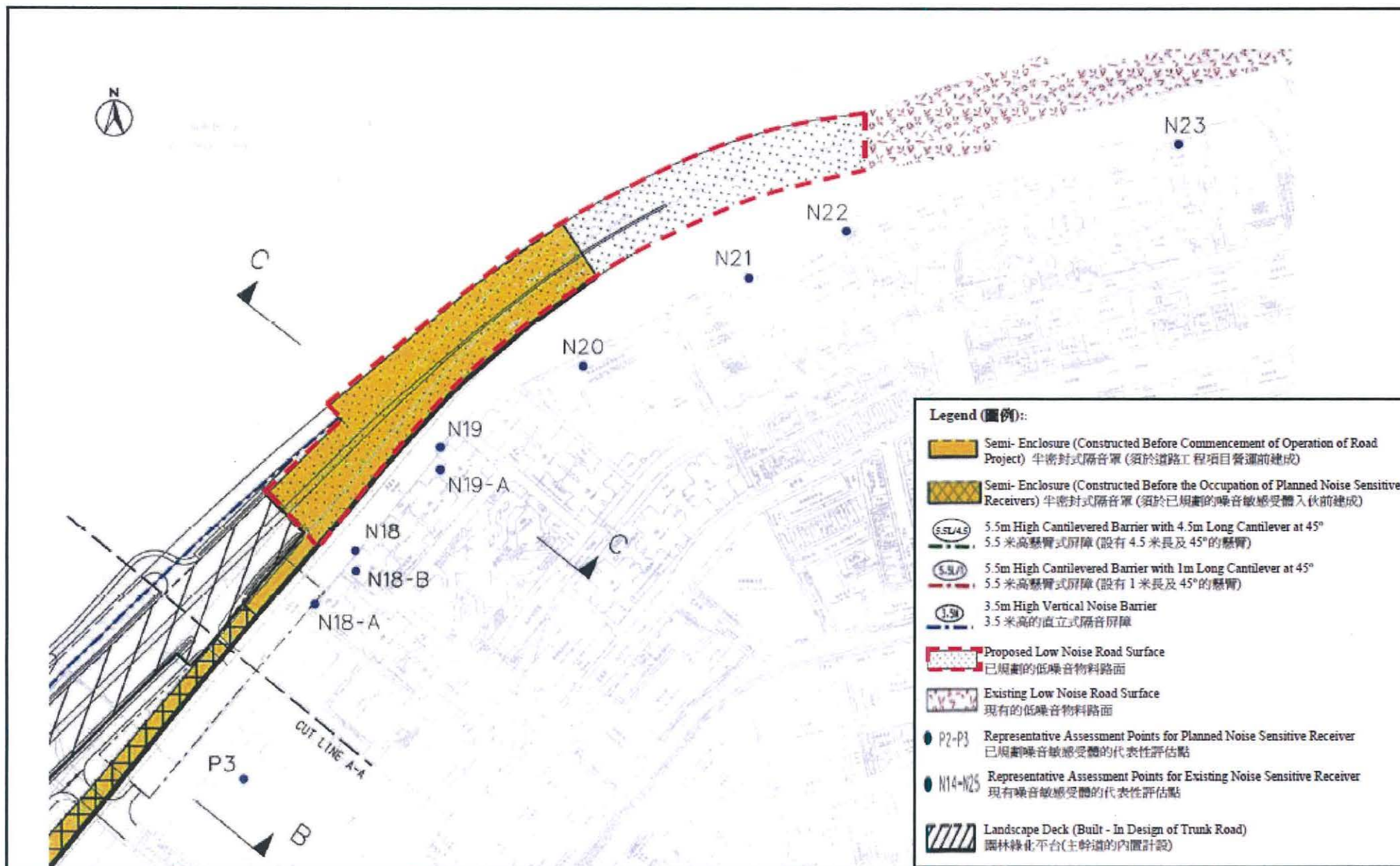


Project Title: Central-Wanchai Bypass (CWB) Including Its Road Tunnel and Slip Roads
 工程項目名稱：中環灣仔繞道包括其行車隧道及連接路
 Environmental Permit No. : EP-364/2009/H
 環境許可證編號：EP-364/2009/H

Figure 4a: Locations of Direct Noise Mitigation Measures (Sheet 1 of 3)
 圖 4a: 直接噪音緩解措施位置圖 (第1張, 共3張)

(This figure was prepared based on Figure 4a in Application for Variation of an Environmental Permit no. VEP-561/2019)
 (本圖是根據申請更改環境許可證申請書編號 VEP-561/2019 內的圖 4a 編製)





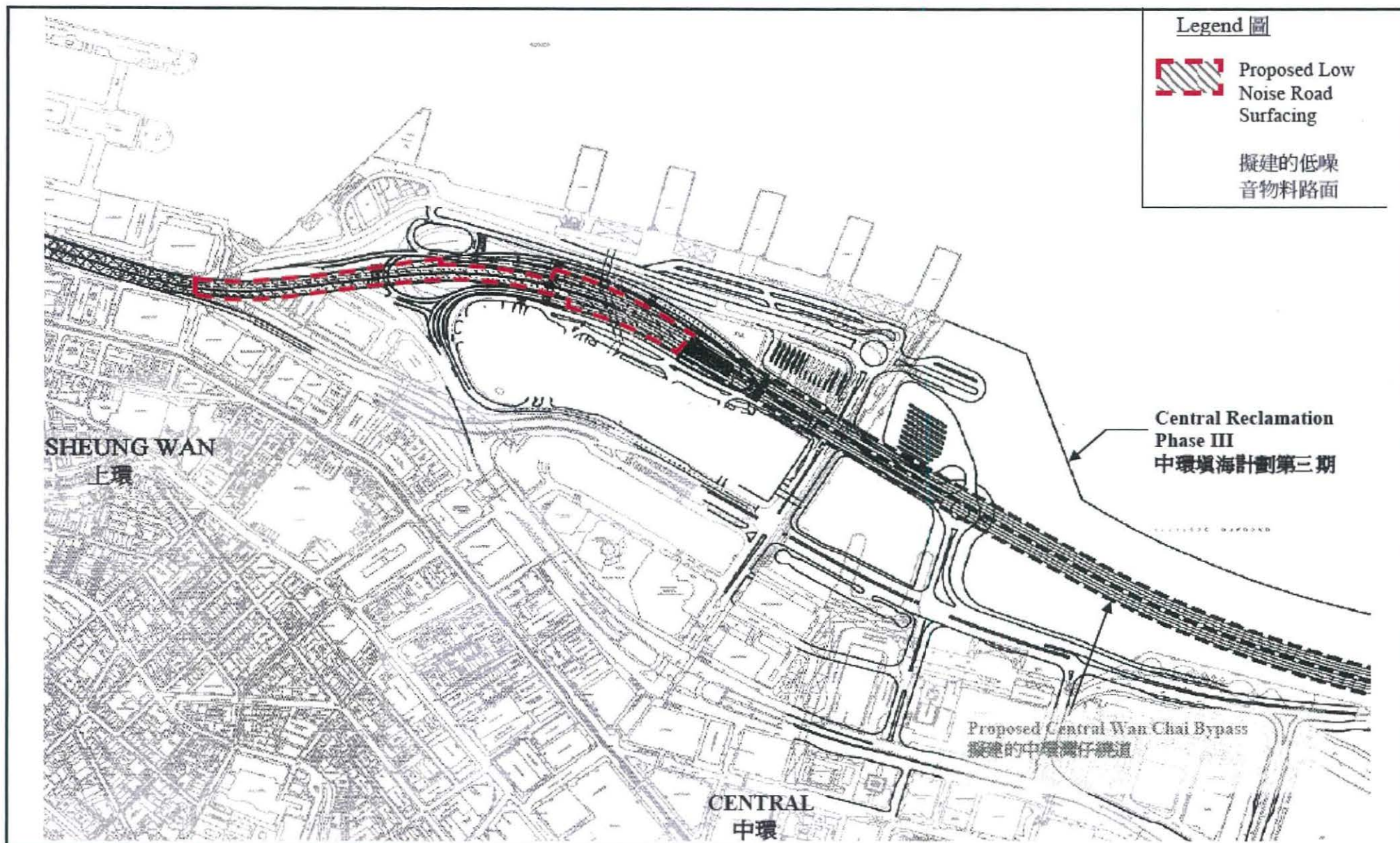
Project Title: Central-Wanchai Bypass (CWB) Including Its Road Tunnel and Slip Roads
 工程項目名稱：中環灣仔繞道包括其行車隧道及連接路

Environmental Permit No. : EP-364/2009/H
 環境許可證編號 : EP-364/2009/H

Figure 4b: Locations of Direct Noise Mitigation Measures (Sheet 2 of 3)
 圖 4b：直接噪音緩解措施位置圖(第2張，共3張)

(This figure was prepared based on Figure 4b in Application for Variation of an Environmental Permit no. VEP-321/2010)
 (本圖是根據申請更改環境許可證申請書編號 VEP-321/2010 內的圖 4b 編製)





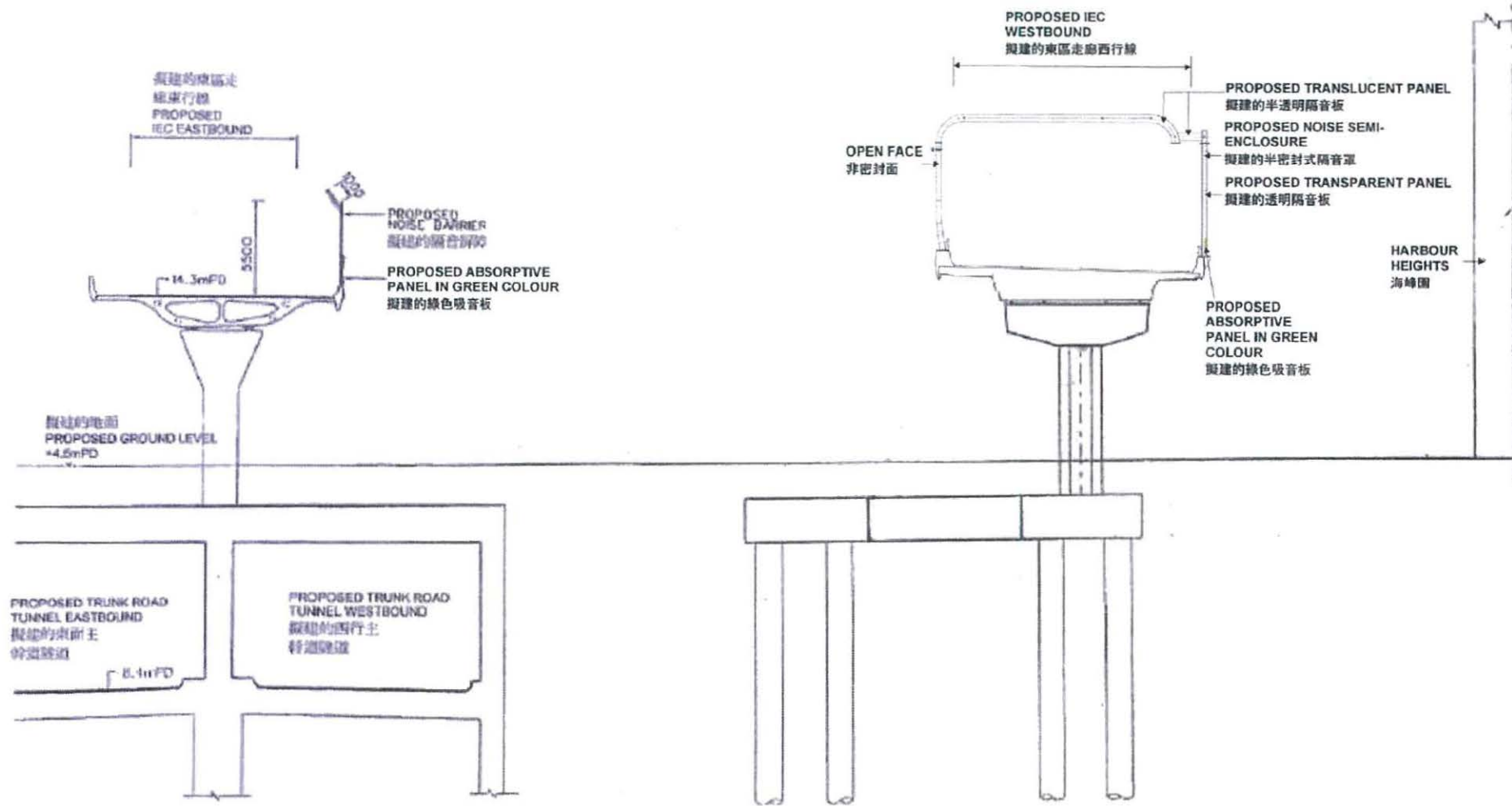
Project Title: Central-Wanchai Bypass (CWB) Including Its Road Tunnel and Slip Roads
 工程項目名稱：中環灣仔繞道包括其行車隧道及連接路

Environmental Permit No.: EP-364/2009/H
 環境許可證編號：EP-364/2009/H

Figure 4c: Locations of Direct Noise Mitigation Measures (Sheet 3 of 3)
 圖 4c: 直接噪音緩解措施位置圖 (第3張, 共3張)

(This figure was prepared based on Figure 4.2.1 of the CWB&IECL EIA Report (Register No.: 041/2001))
 (本圖是根據 CWB&IECL 環評報告 (登記冊編號 AEIAR-041/2001) 圖 4.2.1 編製)





切面 A-A
SECTION A-A



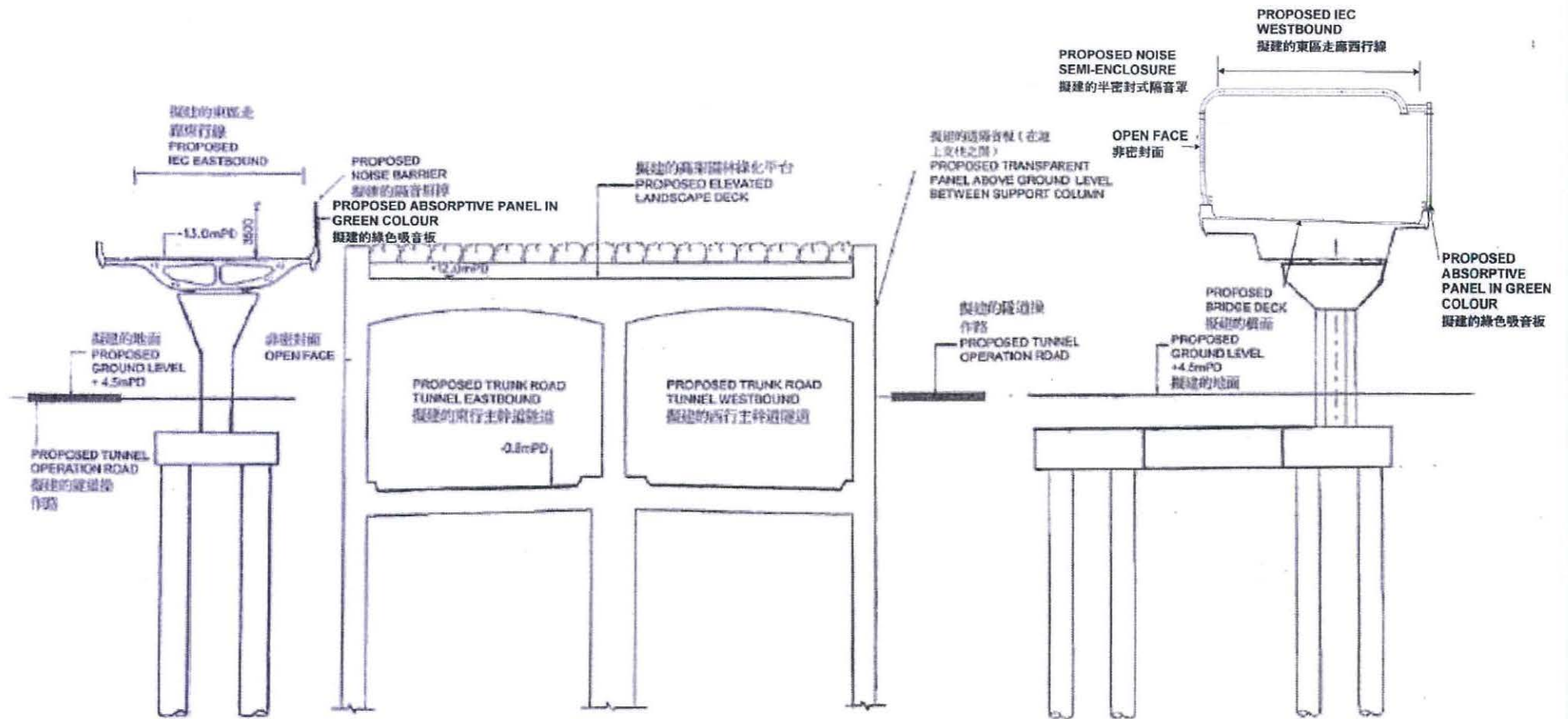
Project Title: Central-Wanchai Bypass (CWB) Including Its Road Tunnel and Slip Roads
工程項目名稱：中環灣仔繞道包括其行車隧道及連接路

Environmental Permit No. : EP-364/2009/H
環境許可證編號 : EP-364/2009/H

Figure 4d: Section of Direct Noise Mitigation Measures
圖 4d：直接噪音緩解措施切面圖

(This figure was prepared based on Figure 4d in Application for Variation of an Environmental Permit no. VEP-572/2020)
(本圖是根據申請更改環境許可證申請書編號 VEP-572/2020 內的圖 4d 編製)





切面 B-B
SECTION B-B



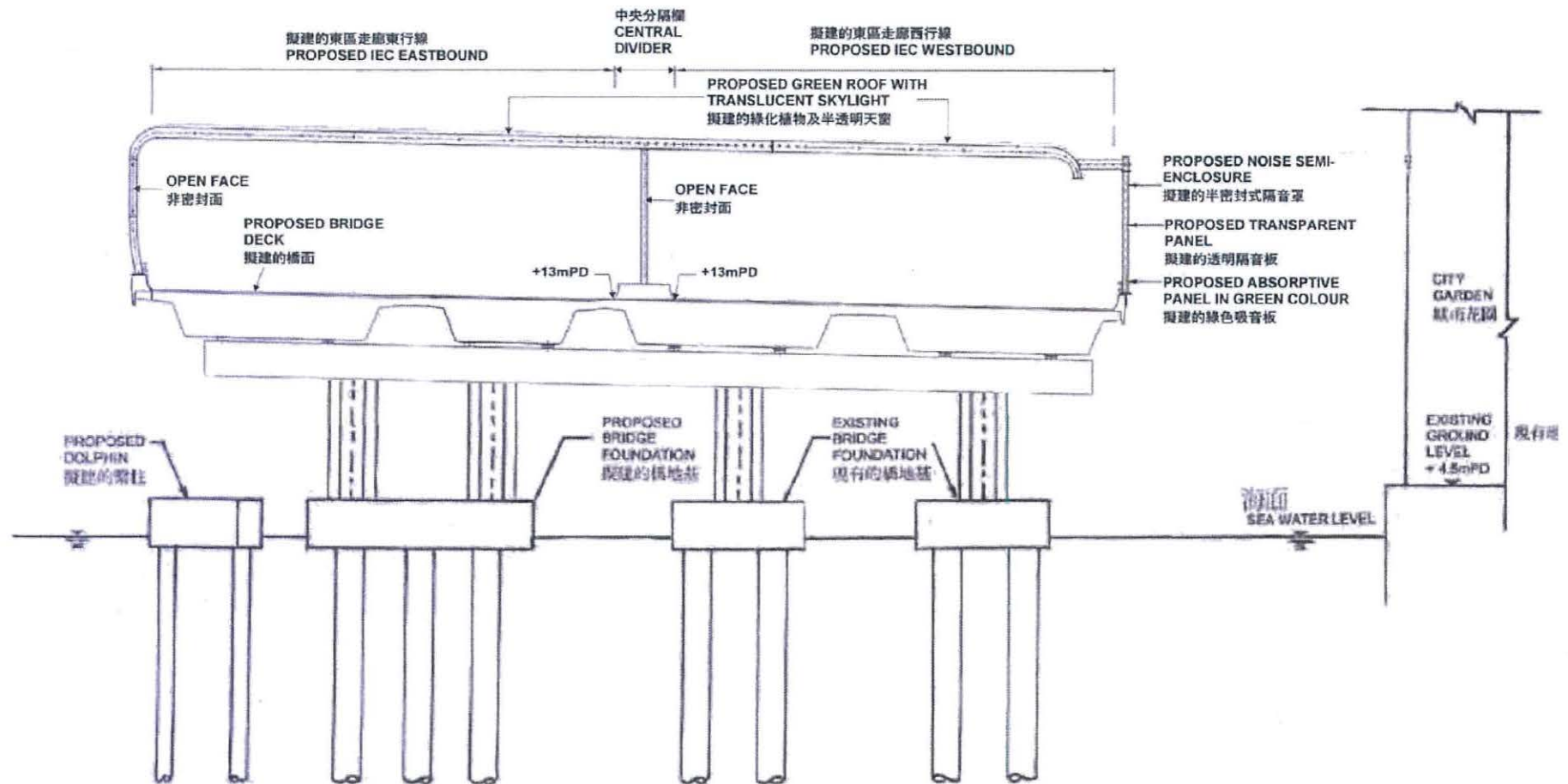
Project Title: Central-Wanchai Bypass (CWB) Including Its Road Tunnel and Slip Roads
工程項目名稱：中環灣仔繞道包括其行車隧道及連接路

Environmental Permit No. : EP-364/2009/H
環境許可證編號 : EP-364/2009/H

Figure 4e: Section of Direct Noise Mitigation Measures
圖 4e：直接噪音緩解措施切面圖

(This figure was prepared based on Figure 4e in Application for Variation of an Environmental Permit no. VEP-572/2020)
(本圖是根據申請更改環境許可證申請書編號 VEP-572/2020 內的圖 4e 編製)





切面 C-C



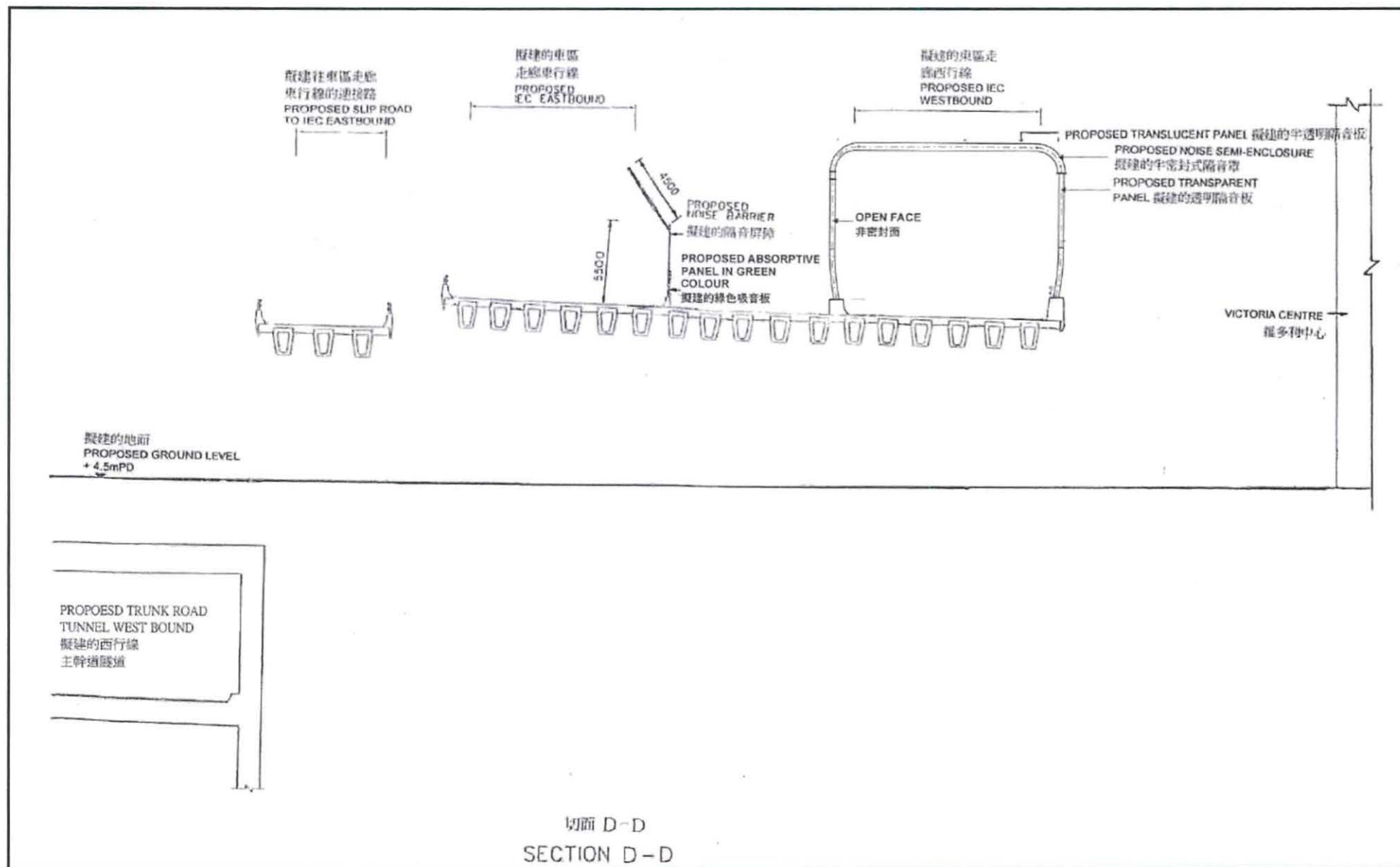
Project Title: Central-Wanchai Bypass (CWB) Including Its Road Tunnel and Slip Roads
工程項目名稱：中環灣仔繞道包括其行車隧道及連接路

Environmental Permit No. : EP-364/2009/H
環境許可證編號 : EP-364/2009/H

Figure 4f: Section of Direct Noise Mitigation Measures
圖 4f: 直接噪音緩解措施切面圖

(This figure was prepared based on Figure 4f in Application for Variation of an Environmental Permit no. VEP-572/2020)
(本圖是根據申請更改環境許可證申請書編號 VEP-572/2020 內的圖 4f 編製)





Project Title: Central-Wanchai Bypass (CWB) Including Its Road Tunnel and Slip Roads
工程項目名稱：中環灣仔繞道包括其行車隧道及連接路

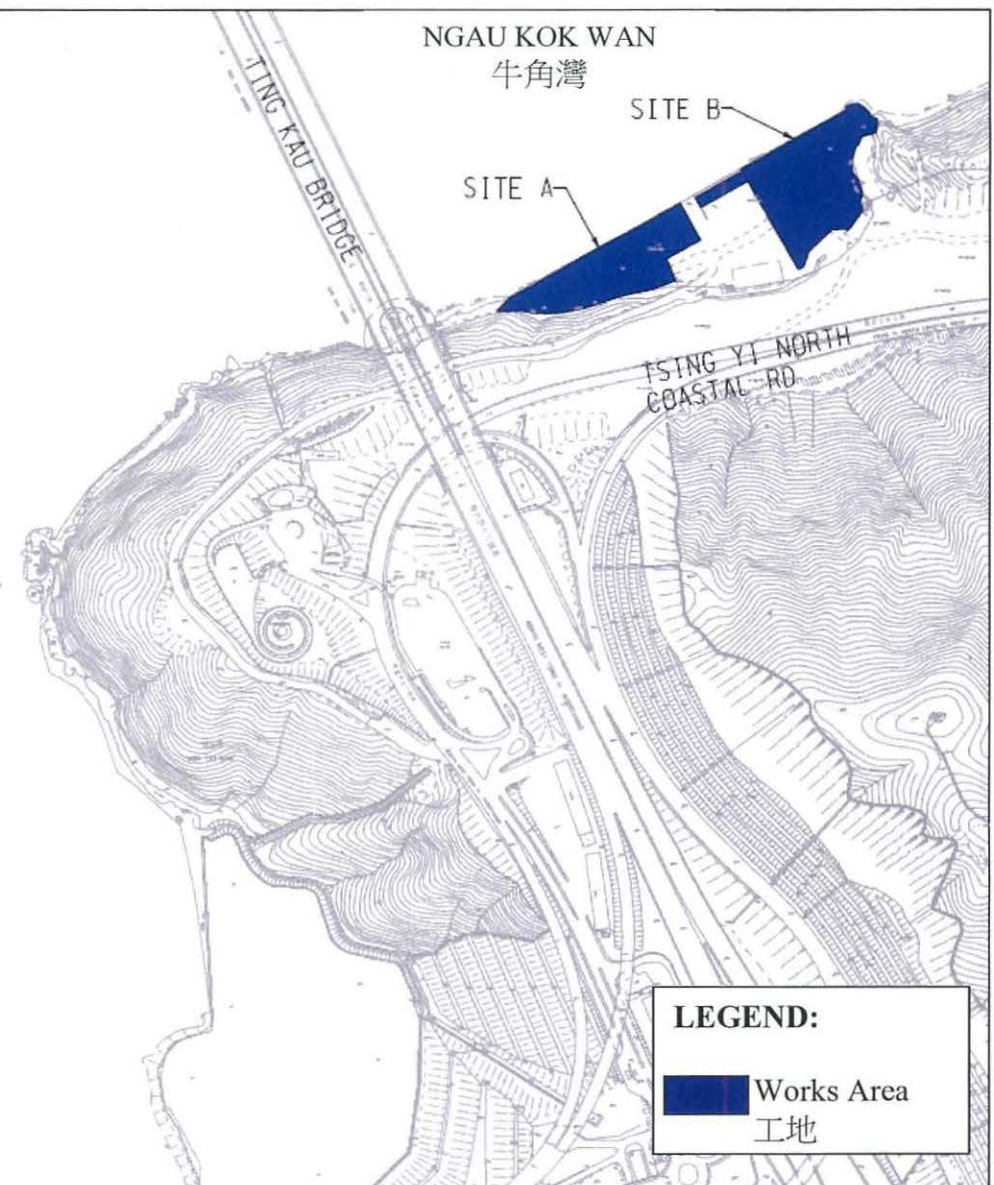
Environmental Permit No. : EP-364/2009/H
環境許可證編號 : EP-364/2009/H

Figure 4g: Section of Direct Noise Mitigation Measures
圖 4g: 直接噪音緩解措施剖面圖

(This figure was prepared based on Figure 4g in Application for Variation of an Environmental Permit no. VEP-472/2020)
(本圖是根據申請更改環境許可證申請書編號 VEP-572/2020 內的圖 4g 編製)







Project Title: Wan Chai Development Phase II and Central-Wan Chai Bypass
工程項目名稱：灣仔發展計劃第二期及中環灣仔繞道

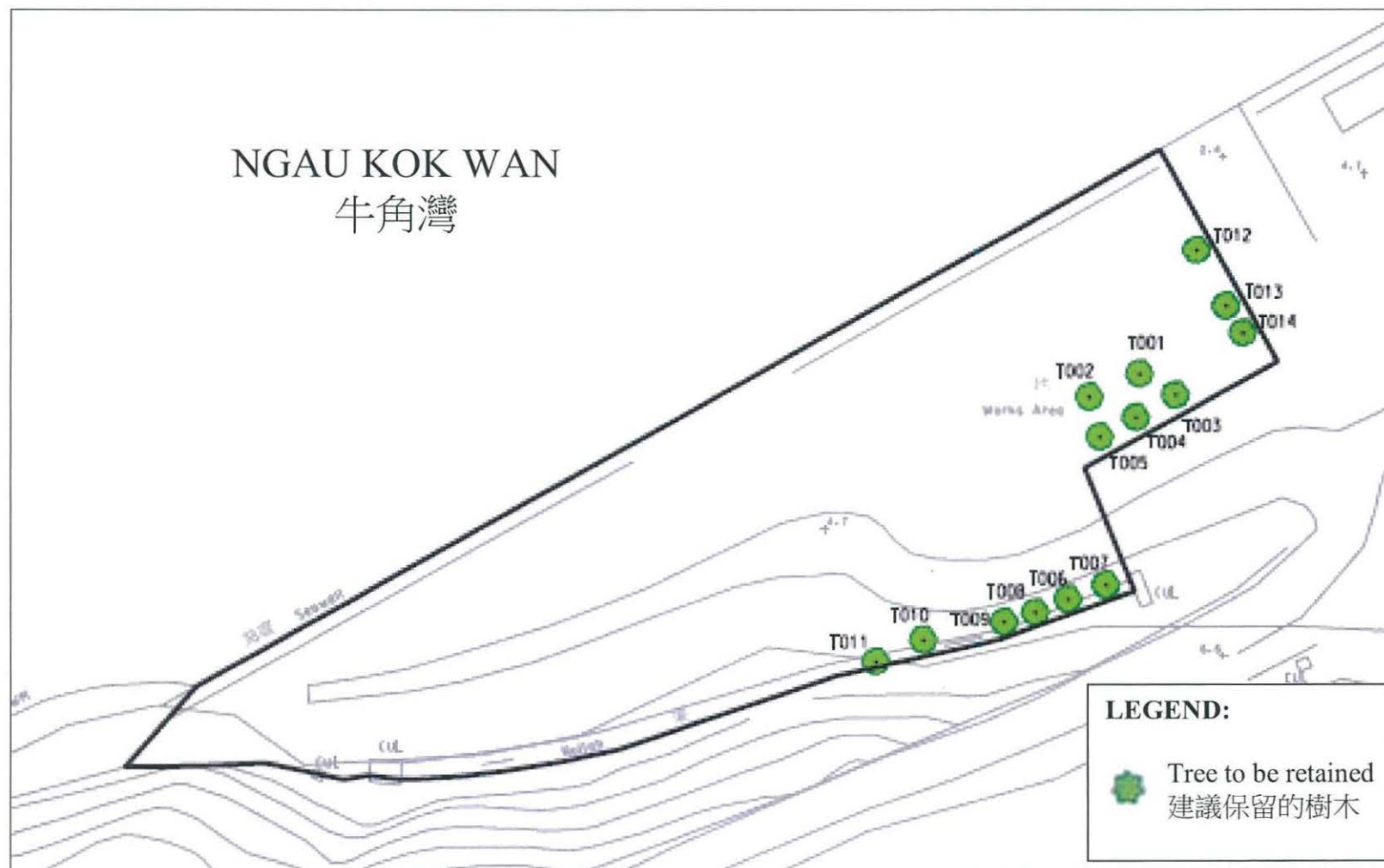
Environmental Permit No.: EP - 364/2009/H
環境許可證編號：EP - 364/2009/H

Figure 5: Works Area at Ngau Kok Wan and Siu Ho Wan
圖 5: 位於牛角灣及小蠔灣的工地

(This figure was prepared based on drawing no. 60095653/T1/SK0346 of Application for Variation of Environmental Permit and attachments (Application No.: VEP-374/2012) and drawing no. CDD SR3 0438 of Application for Variation of Environmental Permit and attachments (Application No.: VEP-443/2014)).

(本圖是根據更改的環境許可證申請文件(申請書編號: AEP-374/2012)圖編號 60095653/T1/SK0346 及(申請書編號: AEP-443/2014)圖編號 CDD SR3 0438 編製)





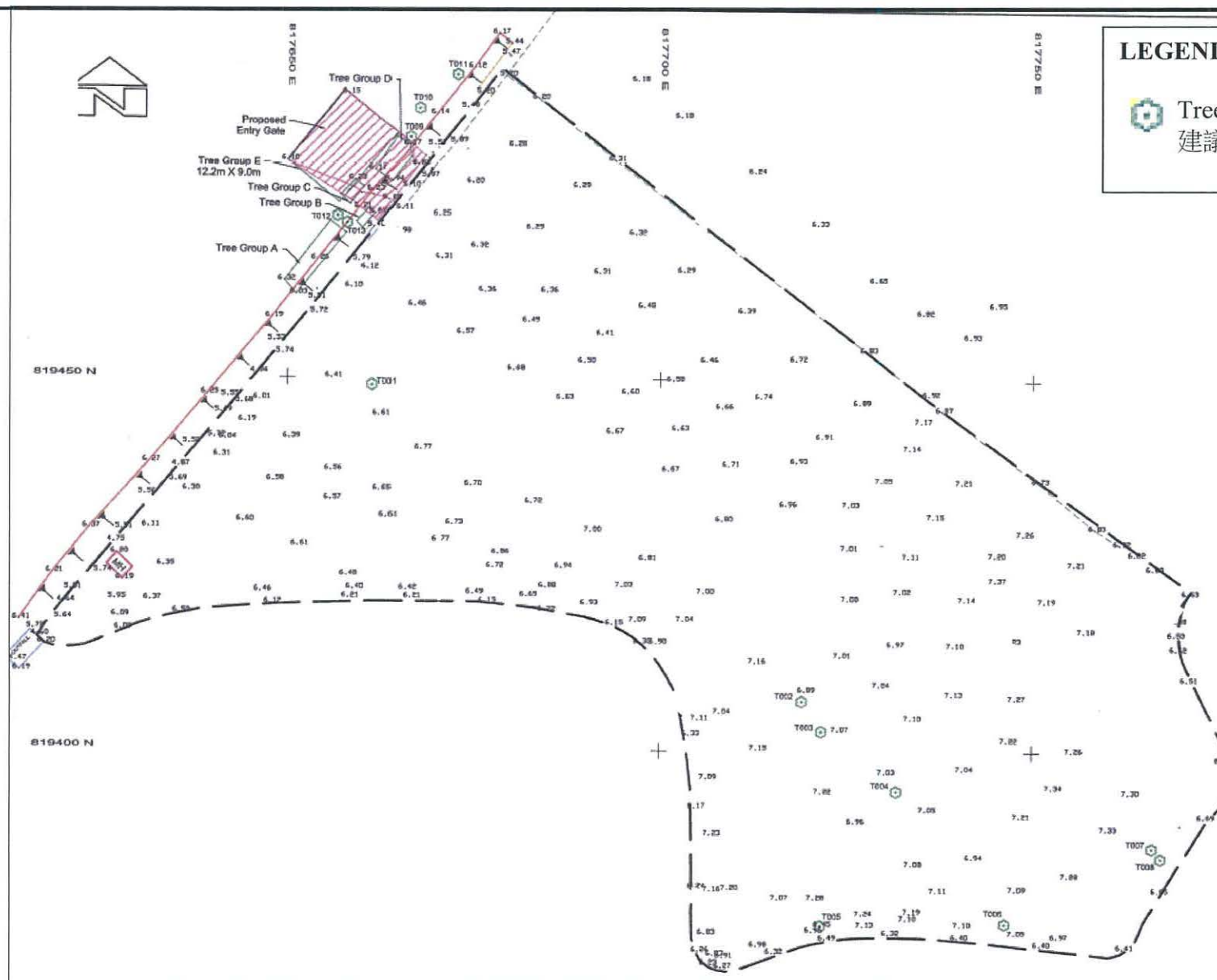
Project Title: Wan Chai Development Phase II and Central-Wan Chai Bypass
工程項目名稱：灣仔發展計劃第二期及中環灣仔繞道

Environmental Permit No.: EP - 364/2009/H
環境許可證編號：EP - 364/2009/H


Figure 6: Location Plan for Trees to be Retained at Ngau Kok Wan Works Area
圖 6: 建議於牛角灣工地保留的樹木位置圖

(This figure was prepared based on Tree Location Plan of Application for Variation of Environmental Permit and attachments (Application No.: VEP-374/2012))
(本圖是根據更改的環境許可證申請文件(申請書編: AEP-374/2012) 樹木位置圖編製)





LEGEND:

 Tree to be retained
建議保留的樹木



Project Title: Wan Chai Development Phase II and Central-Wan Chai Bypass
工程項目名稱：灣仔發展計劃第二期及中環灣仔繞道

Environmental Permit No.: EP - 364/2009/H
環境許可證編號：EP - 364/2009/H

Figure 7: Location Plan for Trees to be Retained at Siu Ho Wan Works Area
圖 7: 建議於小蠔灣工地保留的樹木位置圖

(This figure was prepared based on Tree Location Plan of Application for Variation of Environmental Permit and attachments (Application No.: VEP-374/2012))
(本圖是根據更改的環境許可證申請文件(申請書編: AEP-374/2012) 樹木位置圖編製)



