

FORM 5
ENVIRONMENTAL IMPACT ASSESSMENT ORDINANCE
(CHAPTER 499)
SECTION 13(1)

Application for Variation of an Environmental Permit

PART A PREVIOUS APPLICATIONS

No previous application for variation of an environmental permit.

The environmental permit was previously amended.

Application No. :

PART B DETAILS OF APPLICANT

B1. Name : (person or company)
TAI PO GOLF CLUB LIMITED

[Note : In accordance with section 13(1) of the Ordinance, the person holding an environmental permit or a person who assumes responsibility for the designated project may apply for variation of the environmental permit.]

B2. Business Registration No. : [REDACTED]
(if applicable)

B3. Correspondence Address :
[REDACTED]

B4. Name of Contact Person : [REDACTED] **B5. Position of Contact Person :** [REDACTED]

B6. Telephone No. : [REDACTED] **B7. Fax No. :** [REDACTED]

B8. E-mail Address : (if any) [REDACTED]

PART C DETAILS OF CURRENT ENVIRONMENTAL PERMIT

C1. Name of the Current Environmental Permit Holder :
TAI PO GOLF CLUB LIMITED

C2. Application No. of the Current Environmental Permit : FEP-212/2022 (FEP-01/571/2019)

C3. The Current Environmental Permit was Issued in : month / year
11 / 2022

Important Notes : Please submit the application together with

- (a) 3 copies of this completed form; and
- (b) appropriate fee as stipulated in the Environmental Impact Assessment (Fees) Regulation

to the Environmental Protection Department at the following address :

The EIA Ordinance Register Office,
27th floor, Southern Centre, 130 Hennessy Road,
Wan Chai, Hong Kong.

Tick (✓) the appropriate box



PART D PROPOSED VARIATIONS TO THE CONDITIONS IN CURRENT ENVIRONMENTAL PERMIT

D1. Condition(s) in the Current Environmental Permit :	D2. Proposed Variation(s) :	D3. Reason for Variation(s) :	D4. Describe the environmental changes arising from the proposed variation(s) :	D5. Describe how the environment and the community might be affected by the proposed variation(s) :	D6. Describe how and to what extent the environmental performance requirements set out in the EIA report previously approved or project profile previously submitted for this project may be affected :	D7. Describe any additional measures proposed to eliminate, reduce or control any adverse environmental impact arising from the proposed variation(s) and to meet the requirements in the Technical Memorandum on Environmental Impact Assessment Process :
<p>Condition 2.10</p> <p>The Independent Landfill Consultant shall be a company experienced in the geotechnical, landfill gas and leachate design aspects of landfill restoration and aftercare and employing at least two professional engineers who are members of the Hong Kong Institution of Engineers or of equivalent professional qualification as approved by the Director. Among those two professional engineers, one shall be a geotechnical engineer with the qualification of Registered Geotechnical Engineer and one shall be a landfill designer. Each of the professional engineers shall have not less than 8 years post-qualification experience specialising in the geotechnical, landfill gas and leachate design aspects of landfill restoration and aftercare.</p>	<p>The Independent Landfill Consultant shall be a company experienced in the geotechnical, landfill gas and leachate design aspects of landfill restoration and aftercare and employing at least two professional engineers who are members of the Hong Kong Institution of Engineers or of equivalent professional qualification as approved by the Director. Among those two professional engineers, one shall be a geotechnical engineer with the qualification of Registered Geotechnical Engineer and one shall be a landfill designer. Each of the professional engineers shall have not less than 8 years post-qualification experience specialising in the geotechnical, landfill gas and leachate design aspects of landfill restoration and aftercare, <u>or otherwise agreed by the Director.</u></p>	<p>Geotechnical engineer with the qualification required in Condition 2.10 for Independent Landfill Consultant is unavailable in Hong Kong. Please refer to Section 3 of the Environmental Review Report (ERR) for Application of VEP.</p>	<p>An environmental review has been conducted for the proposed variation on various environmental aspects. There is no adverse environmental impact arising from the proposed amendments. Please refer to Section 3 of the ERR for Application of VEP.</p>	<p>An environmental review has been conducted for the proposed variation on various environmental aspects. There is no adverse environmental impact arising from the proposed amendments. Please refer to Section 3 of the ERR for Application of VEP.</p>	<p>The environmental performance requirements set out in the approved EIA Report will be maintained. The proposed variation would not change the extent of environmental impacts predicted in the approved EIA report.</p>	<p>No additional measures is required. Please refer to Section 3 of the ERR for Application of VEP.</p>

PART D PROPOSED VARIATIONS TO THE CONDITIONS IN CURRENT ENVIRONMENTAL PERMIT

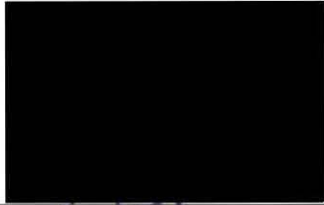
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<p>Condition 2.41</p> <p>No more than 50 construction workers shall be allowed within the Project Site area that falls within the consultation zone of Tai Po Gas Production Plant as shown in Figure 4 of this Permit during construction phase of the Project.</p>	<p>No more than <u>500</u> construction workers shall be allowed within the Project Site area that falls within the consultation zone of Tai Po Gas Production Plant as shown in Figure 4 of this Permit during construction phase of the Project.</p>	<p>The variation is proposed to meet the construction programme with increased number of workers. Please refer to Section 4 of the ERR for Application of VEP.</p>	<p>An environmental review has been conducted for the proposed variation on various environmental aspects. There is no adverse environmental impact arising from the proposed amendments. Please refer to Section 4 of the ERR for Application of VEP.</p>	<p>An environmental review has been conducted for the proposed variation on various environmental aspects. There is no adverse environmental impact arising from the proposed amendments. Please refer to Section 4 of the ERR for Application of VEP.</p>	<p>The environmental performance requirements set out in the approved EIA Report will be maintained. The proposed variation would not change the extent of environmental impacts predicted in the approved EIA report.</p>	<p>No additional measures is required. Please refer to Section 4 of the ERR for Application of VEP.</p>
<p>Condition 2.48</p> <p>No permanent working or residential population shall be allowed within the Project Site area that falls within the consultation zone of Tai Po Gas Production Plant as shown in Figure 4 of this Permit during operation phase of the Project.</p>	<p>Proposed to be deleted.</p>	<p>The variation is proposed to meet the operation needs of the proposed golf course. Please refer to Section 4 of the ERR for Application of VEP.</p>				

PART D PROPOSED VARIATIONS TO THE CONDITIONS IN CURRENT ENVIRONMENTAL PERMIT

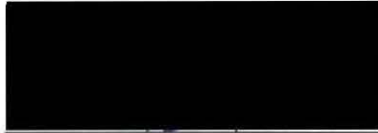
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<p>Condition 2.49</p> <p>No more than 20 transient workers and 20 transient visitors shall be allowed at any time within the Project Site area that falls within the consultation zone of Tai Po Gas Production Plant as shown in Figure 4 of this Permit during operation phase of the Project.</p>	<p>No more than <u>a total of 500 workers and visitors</u> shall be allowed at any time within the Project Site area that falls within the consultation zone of Tai Po Gas Production Plant as shown in Figure 4 of this Permit during operation phase of the Project.</p>	<p>The variation is proposed to meet the operation needs of the proposed golf course. Please refer to Section 4 of the ERR for Application of VEP.</p>	<p>An environmental review has been conducted for the proposed variation on various environmental aspects. There is no adverse environmental impact arising from the proposed amendments. Please refer to Section 4 of the ERR for Application of VEP.</p>	<p>An environmental review has been conducted for the proposed variation on various environmental aspects. There is no adverse environmental impact arising from the proposed amendments. Please refer to Section 4 of the ERR for Application of VEP.</p>	<p>The environmental performance requirements set out in the approved EIA Report will be maintained. The proposed variation would not change the extent of environmental impacts predicted in the approved EIA report.</p>	<p>No additional measures is required. Please refer to Section 4 of the ERR for Application of VEP.</p>

PART E DECLARATION BY APPLICANT

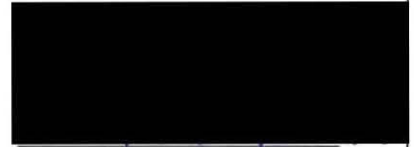
E1. I hereby certify that the particulars given above are correct and true to the best of my knowledge and belief. I understand the environmental permit may be suspended, varied or cancelled if any information given above is false, misleading, wrong or incomplete.



Signature of Applicant



Full Name in Block Letters



Position



on behalf of _____
Company Name and Chop (as appropriate)

14 May 2023
Date

NOTES :

1. A person who constructs or operates a designated project in Part I of Schedule 2 of the Ordinance or decommissions a designated project listed in Part II of Schedule 2 of the Ordinance without an environmental permit or contrary to the permit conditions commits an offence under the Ordinance and is liable to a maximum fine of \$5,000,000 and to a maximum imprisonment for 2 years.
2. A person for whom a designated project is constructed, operated or decommissioned and who permits the carrying out of the designated project in contravention of the Ordinance commits an offence and is liable to a maximum fine of \$5,000,000 and to a maximum imprisonment for 2 years.

Tai Po Golf Club Limited

Proposed Golf Course Development at Tai Po Lot No. 246 Shuen Wan

Environmental Review Report for Application of Variation of Environmental Permit
(VEP)

Reference: 289499-REP-012-01

18 April 2023

This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 289499

Ove Arup & Partners Hong Kong Limited
Level 5 Festival Walk
80 Tat Chee Avenue
Kowloon Tong
Kowloon
Hong Kong
arup.com

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1. Introduction

1.1 Background

- 1.1.1.1 In June 2017, the Chief Executive in Council has agreed in principle to the government proposal to grant a piece of land in Tai Po in exchange for its private land in Sha Lo Tung which has high ecological values. Under the non-in-situ land exchange proposal, the piece of land at the Shuen Wan Restored Landfill in Tai Po will be granted and the Sha Lo Tung site would be considered by government for active conservation management to avoid degradation and damage for long-term public enjoyment. This land exchange proposal is a unique, exceptional and isolated case, adding the idea is technically feasible as the private land ownership is largely unified under one entity and both Sha Lo Tung and the land at the landfill site, which has been planned for golf course development, are located in Tai Po, as shown in **Figure 1** of FEP-01/571/2019 (extracted as **Appendix 1.1**). The non-in-situ land exchange proposal has been completed in July 2022, and the Project Site has been handed over to the Project Proponent (PP).
- 1.1.1.2 The Project is a Designated Project (DP) under Environmental Impact Assessment Ordinance (EIAO), and an Environmental Impact Assessment (EIA) study was conducted in 2017. The *Shuen Wan Golf Course EIA Report* was approved by the Director of Environmental Protection on 5 July 2019 (AEIAR-221/2019) with the Environmental Permit (EP, EP-571/2019) issued on 20 September 2019. An application of Further Environmental Permit (FEP) has been made by Tai Po Golf Club Limited (the PP) and FEP was issued on 29 November 2022 (FEP-01/571/2019). Besides, surrender of EP-571/2019 has been applied and approved on 9 December 2022.
- 1.1.1.3 However, there has been changes to the detailed design of the Project. As more information is collected throughout the design phase, there are inevitably some changes / optimisations to the design adopted in the approved EIA report (AEIAR-221/2019), as summarised in the subsequent sections.

1.2 Need for the Proposed Amendments

- 1.2.1.1 As mentioned above, the non-in-situ land exchange proposal has been completed in July 2022, and the Project Site has been handed over to the PP. The Project is currently under detailed design stage to optimise the design adopted in the approved EIA report (AEIAR-221/2019), and the construction of the Project involving site formation works, superstructure works, etc. would be commenced in December 2023 tentatively. As the Project is a DP under EIAO, the Project shall be designed, constructed and operated in accordance with the information or mitigation measures in the issued EP (FEP-01/571/2019).
- 1.2.1.2 During the detailed design stage, construction programme, construction methodology, etc. have been reviewed and optimised to facilitate the construction and operation of the Project. In addition, EP conditions have also been reviewed such that the Project will be constructed and operated according to Clause 1.6 of the FEP-01/571/2019.

1.2.1.3 According to the FEP-01/571/2019, several professionals shall be employed by the Permit Holder before the commencement of construction of the Project, including Environmental Team (ET), Ecologist, Registered Landscape Architect (RLA), Independent Environmental Checker (IEC), Independent Landfill Consultant and Specialist Contractor. The Project Site is located at Shuen Wan Restored Landfill in Tai Po. There are 13 closed landfills in Hong Kong located at Shuen Wan, Gin Drinkers Bay, Jordan Valley, etc., which were restored to minimise their potential adverse impacts on the environment and to render them safe for beneficial use. Due to small number of restored landfills in Hong Kong, companies with landfill restoration and aftercare experience are limited in Hong Kong.

1.2.1.4 After review, the proposed amendments under this Project comprise the followings, and details refer to the subsequent sections.

- The qualification of Independent Landfill Consultant as stipulated in Clause 2.10 of FEP-01/571/2019; and
- The population allowed within the Project Site area that falls within the Consultant Zone (CZ) of Tai Po Gas Production Plant (TPGPP) during construction and operational phase of the Project as stipulated in Clauses 2.41, 2.48 and 2.49 of FEP-01/571/2019.

1.3 Interfacing with Other Projects

1.3.1.1 During the construction and operational phases of the Project, there would be concurrent projects within 500m assessment area. The concurrent projects have been reviewed to include those in the approved EIA report (AEIAR-221/2019), and other projects within 500m assessment area based on the best available information. They are listed below:

- Shuen Wan Landfill Restoration Contract;
- Food Waste Pre-treatment Facilities (FWPF) for Food Waste / Sewage Sludge Anaerobic Co-Digestion Pilot Trial in Tai Po Sewage Treatment Works (TPSTW);
- Upgrading of Sewage Pumping Stations and Sewerage along Ting Kok Road;
- Columbarium Development at Shuen Wan Landfill, Tai Po;
- Development of a Bathing Beach at Lung Mei, Tai Po;
- Upgrading of Tai Po Sewage Treatment Works (TPSTW);
- Proposed Tolo Harbour Effluent Export Scheme (THEES) Upgrading;
- Proposed Organic Waste Pre-treatment Centre (OWPC); and
- Planned Residential Development at Ting Kok.

1.4 Purpose of This Environmental Review Report

1.4.1.1 This environmental review report (ERR) provides information to identify and describe the potential impacts on the environment and the community due to the proposed amendments and evaluate the potential impacts, and to confirm the compliance of relevant environmental standards. The information presented herein forms part of the submission to the Environmental Protection Department (EPD) for an Application for VEP. The purpose of this ERR is to demonstrate that no unacceptable impacts will be resulted from the proposed amendments. In addition, it will also demonstrate no exceedance or violation of environmental performance requirement as set out in the approved EIA report (AEIAR-221/2019) and hence a VEP can be granted.

1.5 Structure of the Environmental Review Report

1.5.1.1 The structure of the ERR is given below:

- | | |
|------------------|--|
| Section 1 | Introduces the project background, purposes and objectives of this ERR. Describes the need for the proposed amendments. |
| Section 2 | Describes the proposed amendments, as well as the proposed variation to the EP condition. |
| Section 3 | Describes the reason to amend the qualification of Independent Landfill Consultant in Clause 2.10 under FEP-01/571/2019 and reviews environmental changes arising from the proposed amendment. |
| Section 4 | Describes the reason to amend the population allowed in Clauses 2.41, 2.48 and 2.49 under FEP-01/571/2019 and reviews environmental changes arising from the proposed amendment. |
| Section 5 | Identifies and reviews the changes in the environmental monitoring and auditing scope arising from the proposed amendments. |
| Section 6 | Reviews and justifies whether there are any material changes to the designated project |
| Section 7 | Summarises and concludes the findings. |

2. Proposed Amendments

2.1 Proposed Amendments

2.1.1.1 As discussed in **Section 1.2**, two proposed amendments on the original design adopted in the approved EIA report (AEIAR-221/2019) and clauses stipulated in FEP-01/571/2019 respectively, would be required to facilitate the latest design development of the golf course. Those proposed amendments are presented in **Table 2.1**.

Table 2.1 Proposed amendment items

EP Condition	Original Conditions in FEP-01/571/2019	Proposed Amendments	Reason for Variations
Qualification of Independent Landfill Consultant			
2.10	The Independent Landfill Consultant shall be a company experienced in the geotechnical, landfill gas and leachate design aspects of landfill restoration and aftercare and employing at least two professional engineers who are members of the Hong Kong Institution of Engineers or of equivalent professional qualification as approved by the Director. Among those two professional engineers, one shall be a geotechnical engineer with the qualification of Registered Geotechnical Engineer and one shall be a landfill designer. Each of the professional engineers shall have not less than 8 years post-qualification experience specialising in the geotechnical, landfill gas and leachate design aspects of landfill restoration and aftercare.	The Independent Landfill Consultant shall be a company experienced in the geotechnical, landfill gas and leachate design aspects of landfill restoration and aftercare and employing at least two professional engineers who are members of the Hong Kong Institution of Engineers or of equivalent professional qualification as approved by the Director. Among those two professional engineers, one shall be a geotechnical engineer with the qualification of Registered Geotechnical Engineer and one shall be a landfill designer. Each of the professional engineers shall have not less than 8 years post-qualification experience specialising in the geotechnical, landfill gas and leachate design aspects of landfill restoration and aftercare, <u>or otherwise agreed by the Director.</u>	Refer to Section 3 .
Population allowed within the Project Site area that falls within the CZ of TPGPP during construction and operational phase of the Project			
2.41 Figure 4	No more than 50 construction workers shall be allowed within the Project Site area that falls within the consultation zone of Tai Po Gas Production Plant as shown in Figure 4 of this Permit during construction phase of the Project.	No more than <u>500</u> construction workers shall be allowed within the Project Site area that falls within the consultation zone of Tai Po Gas Production Plant as shown in Figure 4 of this Permit during construction phase of the Project.	Refer to Section 4 .
2.48 Figure 4	No permanent working or residential population shall be allowed within the Project Site area that falls within the consultation zone of Tai Po Gas Production Plant as shown in Figure 4 of this Permit during operation phase of the Project.	Clause 2.48 to be deleted.	Refer to Section 4 .

EP Condition	Original Conditions in FEP-01/571/2019	Proposed Amendments	Reason for Variations
2.49 Figure 4	No more than 20 transient workers and 20 transient visitors shall be allowed at any time within the Project Site area that falls within the consultation zone of Tai Po Gas Production Plant as shown in Figure 4 of this Permit during operation phase of the Project.	No more than <u>a total of 500 workers and visitors</u> shall be allowed at any time within the Project Site area that falls within the consultation zone of Tai Po Gas Production Plant as shown in Figure 4 of this Permit during operation phase of the Project.	Refer to Section 4.

3. Proposed Amendment on Qualification of Independent Landfill Consultant under Clause 2.10

- 3.1.1.1 **Section 2.1** has presented the amendment items under this VEP application. As mentioned in **Section 1.2** above, the Project is currently under detailed design stage to optimise the design adopted in the approved EIA report (AEIAR-221/2019), and the construction of the Project involving site formation works, superstructure works, etc. would be commenced in December 2023 tentatively. As the Project is a DP under EIAO, the Project shall be designed, constructed and operated in accordance with the information or mitigation measures in the issued EP (FEP-01/571/2019).
- 3.1.1.2 According to the FEP-01/571/2019, several professionals shall be employed by the Permit Holder before the commencement of construction of the Project, including Environmental Team (ET), Ecologist, Registered Landscape Architect (RLA), Independent Environmental Checker (IEC), Independent Landfill Consultant and Specialist Contractor. As stipulated in Clause 2.6 of EP, an IEC with a supporting team shall be employed by the Permit Holder no later than four months before the commencement of construction of the Project. Besides, as stipulated in Clause 2.10, Independent Landfill Consultant shall be appointed by the Permit Holder to form part of the IEC supporting team to verify the submissions of Design Plan and Works Plan, and to audit the modification works of existing landfill restoration facilities to ensure compliance with the recommendations of the approved Design Plan, the approved Works Plan and the approved EIA Report (AEIAR-221/2019).
- 3.1.1.3 The qualification of Independent Landfill Consultant has been stipulated in Clause 2.10 of FEP-01/571/2019 as below, *“The Independent Landfill Consultant shall not be in any way an associated body of the ER, the ET, the Contractor, or the Specialist Contractor for the Project or the Shuen Wan Landfill Restoration Contractor. The Independent Landfill Consultant shall be approved by the Director before appointment by the Permit Holder. The Independent Landfill Consultant shall be a company experienced in the geotechnical, landfill gas and leachate design aspects of landfill restoration and aftercare and employing at least two professional engineers who are members of the Hong Kong Institution of Engineers or of equivalent professional qualification as approved by the Director. Among those two professional engineers, one shall be a geotechnical engineer with the qualification of Registered Geotechnical Engineer and one shall be a landfill designer. Each of the professional engineers shall have not less than 8 years post-qualification experience specialising in the geotechnical, landfill gas and leachate design aspects of landfill restoration and aftercare.”*
- 3.1.1.4 In September 2022, the Permit Holder invited five companies for proposal on the IEC service (“proposal”), and only one company has submitted the proposal. The Permit Holder then invited another three companies for proposal in October 2022, and none has submitted proposal for the IEC service. For the only company submitted the proposal, the Independent Landfill Consultant comprises the following members:
- A team leader, who is a Fellow Member of the Hong Kong Institution of Engineers (HKIE) with over 27 years of experience in landfill gas management, leachate treatment, as well as landfill gas and leachate design aspects of landfill restoration and aftercare for both local and overseas landfills;
 - A landfill designer, who is a Chartered Waste Manager of Chartered Institution of Wastes Management (CIWM) with over 30 years of experience in all aspects associated with landfill disposal, across various stages of design to remediation, associated gas monitoring, landfill gas and leachate design aspects of landfill restoration and aftercare for both local and overseas projects; and

- A geotechnical engineer, who is a Member of HKIE and a Registered Geotechnical Engineer (RGE) with over 30 years of experience in geotechnical and civil engineering fields, and acted as RGE for numerous infrastructural and engineering projects.

3.1.1.5 The proposed geotechnical engineer is a Member of HKIE, and a RGE with over 30 years of experience in geotechnical and civil engineering fields without sufficient experience in geotechnical, landfill gas and leachate design aspects of landfill restoration and aftercare, as required under Clause 2.10 of FEP-01/571/2019. Hence, the company submitted the proposal could not fulfil the requirements under Clause 2.10 of FEP-01/571/2019.

3.1.1.6 As mentioned in **Section 1.2**, companies with landfill restoration and aftercare experience are limited due to small number of restored landfills in Hong Kong. Besides, according to the RGE Geotechnical Engineers' Register, there are only 104 RGEs in Hong Kong. Therefore, it is proposed to have the Independent Landfill Consultant with qualification stipulated in Clause 2.10 of FEP-01/571/2019, or qualification agreed by the Director of Environmental Protection (the Director) to suit the current market. Given the Independent Landfill Consultant will have qualification stipulated in Clause 2.10 of FEP-01/571/2019, or qualification agreed by the Director, environmental changes and potential impact are not anticipated from the proposed amendment on the qualification of Independent Landfill Consultant as stipulated under FEP-01/571/2019.

4. Proposed Amendment on Population Allowed under Clauses 2.41, 2.48 and 2.49

- 4.1.1.1 According to the approved EIA report (AEIAR-221/2019), the number of construction workers within the CZ would be capped at 50 to minimise the construction phase hazard to life impact. As stipulated in Clause 2.41 of FEP-01/571/2019 (**Table 2.1**), no more than 50 construction workers shall be allowed within the Project Site area that falls within the CZ of TPGPP during construction phase of the Project. In order to meet the construction programme with increased number of workers working within the Project Site area that falls within the CZ of TPGPP, it is proposed to amend the population allowed within the Project Site area that falls within the CZ of TPGPP from 50 to 500 for construction phase under Clause 2.41 of FEP-01/571/2019. With reference to the approved EIA report (AEIAR-221/2019), the above requirement shall be included in the Contract Document of the Project, where the future contractor shall be obliged to implement.
- 4.1.1.2 For operational phase, the approved EIA report (AEIAR-221/2019) assumed no permanent working or residential population within the CZ, and there would only be daily average of 20 transient visitors within the CZ. As stipulated in Clause 2.48 of FEP-01/571/2019 (**Table 2.1**), no permanent working or residential population shall be allowed within the Project Site area that falls within the CZ of TPGPP during operational phase of the Project. Besides, as stipulated in Clause 2.49 of FEP-01/571/2019 (**Table 2.1**), no more than 20 transient workers and 20 transient visitors shall be allowed at any time within the Project Site area that falls within the CZ of TPGPP during operational phase of the Project. In order to meet the operation needs of the proposed golf course, it is proposed to delete Clause 2.48, and amend the population allowed within the Project Site area that falls within the CZ of TPGPP to be 500 during operational phase under Clause 2.49 of FEP-01/571/2019. With reference to the approved EIA report (AEIAR-221/2019), the future operator will implement a record system and booking system to monitor the number of staff and visitors, respectively, within the Project Site area that falls within the CZ of TPGPP and make sure it would not be exceeded.
- 4.1.1.3 All environmental aspects considered in the EIA report are revisited to identify any environmental changes arising from the proposed amendments. For the amendment on the population allowed within the Project Site area that falls within the CZ of TPGPP during construction and operational phases, with the proper implementation of the recommended mitigation measures in the approved EIA report (AEIAR-221/2019), potential impacts on air quality, noise, water quality, waste management implications, land contamination, landfill gas hazards, ecology, fisheries and landscape and visual are not anticipated. Hence, only environmental changes on hazard to life impact will be discussed in the following section.
- 4.1.1.4 With reference to the approved EIA report for Upgrading of TPSTW (AEIAR-244/2022), population data in vicinity of their project has been considered in the Quantitative Risk Assessment (QRA) in Year 2025, 2030 and 2036, including the population of the proposed golf course.
- 4.1.1.5 According to the Further Information submitted by the Applicant (**Appendix 4.1**), the hazard to life assessment conducted under the approved EIA report for Upgrading of TPSTW (AEIAR-244/2022) assumed that a total population number of 500 would be evenly distributed within the entire proposed golf course. This is equivalent to a population of approximately 185 within the concerned “Overlapping Area” (i.e. within the Project Site area that falls within the CZ of TPGPP), which is conservative as compared to 40 transient population assumed in the approved EIA report (AEIAR-221/2019).

- 4.1.1.6 As presented in the approved EIA report for Upgrading of TPSTW (AEIAR-244/2022), the area within the Project would be exposed to an individual risk level of less than 1E-09 per year from TPGPP. This is well below the acceptable off-site individual risk level of 1E-05 per year. To further address the uncertainties on the future population in the proposed golf course, a separate sensitivity test has been conducted by the Applicant in the Further Information (**Appendix 4.1**) assuming that the population within the concerned “Overlapping Area” would be 500. The sensitivity test indicated that adopting this new population assumption would not change the hazard to life assessment results (including the shape of F-N Curves in Year 2025, 2030 and 2036, and the Potential Loss of Life Distribution) presented in the approved EIA report for Upgrading of TPSTW (AEIAR-244/2022).
- 4.1.1.7 As mentioned in **Section 1.2**, the construction of the Project would be commenced in December 2023 tentatively. Given, (1) the area within the Project would be exposed to an individual risk level of less than 1E-09 per year from TPGPP as abovementioned, and (2) the population in Year 2023 would be lower than that in Year 2025 (i.e. one of the assessment year in the approved EIA report for Upgrading of TPSTW (AEIAR-244/2022)), construction phase of the Project is not likely to induce a significant change to the prevailing risk level of TPGPP with the proposed amendment.
- 4.1.1.8 In addition, given (1) the area within the Project would be exposed to an individual risk level of less than 1E-09 per year from TPGPP, and (2) the hazard to life assessment results in Year 2030 and 2036 as abovementioned, operational phase of the Project is not likely to induce a significant change to the prevailing risk level of TPGPP with the proposed amendment.

5. Change of Environmental Monitoring & Audit (EM&A) Scope

5.1 General

- 5.1.1.1 Based on the potential environmental issues identified in **Section 4** and subsequent review for hazard to life impact, the proposed amendments would not result in significant environmental impacts as compared with those recommended in the approved EIA report. Hence, the EM&A requirements recommended in terms of monitoring stations and monitoring requirements would remain unchanged.

6. Justification on Material Change

6.1 General

6.1.1.1 Details of the proposed amendments under the VEP application have been listed out in **Table 2.1**. The proposed amendments would not involve any circumstances stated under Section 6 of the Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM) which are regarded as material changes to a designated project, as listed below:

- A change to physical alignment layout or design of the project causing an environmental impact likely to affect existing or planned community, ecologically important areas \or sites of cultural heritage;
- A physical change resulting in an increase in the extent of reclamation or dredging affecting water flow or quality likely to affect ecologically important areas, or disrupting sites of cultural heritage;
- An increase in pollution emissions or discharges or waste generation likely to violate guidelines or criteria in this technical memorandum without mitigation measures in place;
- An increase in throughput or scale of the project leading to physical additions or alterations that are likely to violate the guidelines or criteria in this technical memorandum without mitigation measures in place; or
- A change resulting in physical works that are likely to affect a rare, endangered or protected species, or an important ecological habitat, or a site of cultural heritage.

6.1.1.2 Hence, the proposed amendments do not constitute material changes to the DP.

7. Conclusion

7.1.1.1 This document has discussed there will be no environmental changes result from the proposed amendment items:

- The qualification of Independent Landfill Consultant as stipulated in Clause 2.10 of FEP-01/571/2019; and
- The population allowed within the Project Site area that falls within the CZ of TPGPP during construction and operational phase of the Project as stipulated in Clauses 2.41, 2.48 and 2.49 of FEP-01/571/2019.


7.1.1.2 An environmental review has been conducted for the proposed variation on various environmental aspects, including hazard to life, air quality, noise, water quality, waste management implications, land contamination, landfill gas hazards, ecology, fisheries and landscape and visual. There is no adverse environmental impact arising from the proposed amendments. There will be no material change to the environmental impact even with the proposed amendments. The project will remain in compliance with the EIAO-TM requirements, and no deterioration of the surrounding environmental is anticipated.

Appendix 1.1

Figure 1 under FEP-01/571/2019

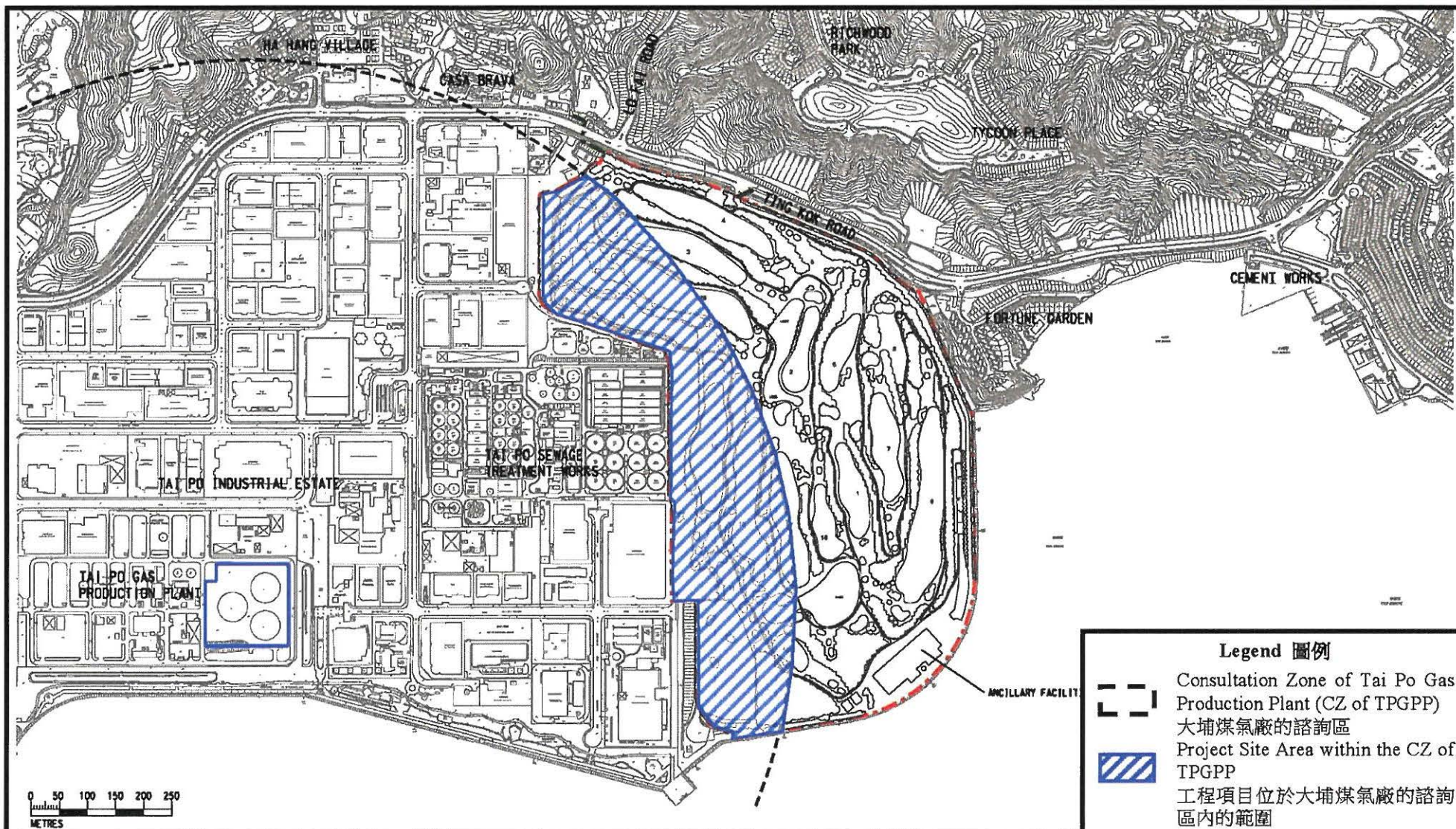


Legend 圖例	
	Project Location 工程項目位置
	1.2 ha Core Roosting Area 1.2 公頃核心夜間棲息地
	<i>Aquilaria sinensis</i> 土沉香

Project Title 工程項目名稱	Shuen Wan Golf Course 船灣高爾夫球場	Environmental Permit No.: 環境許可證編號： FEP-01/571/2019	
Figure 1 圖一	Project Location and Conceptual Layout Plan 工程項目位置及概念佈局圖 [This figure was prepared based on Figure 2.1 of EIA Report (Register No.: AEIAR-221/2019)] [本圖是根據環境影響評估報告(登記冊編號: AEIAR-221/2019) 圖 2.1 編制]		

Appendix 2.1

Figure 4 under FEP-01/571/2019



Legend 圖例

-  Consultation Zone of Tai Po Gas Production Plant (CZ of TPGPP)
大埔煤氣廠的諮詢區
-  Project Site Area within the CZ of TPGPP
工程項目位於大埔煤氣廠的諮詢區內的範圍

Project Title
工程項目名稱

Shuen Wan Golf Course
船灣高爾夫球場

Figure 4
圖四

Project Site Area within the Consultation Zone of Tai Po Gas Production Plant
工程項目位於大埔煤氣廠的諮詢區內的範圍

[This figure was prepared based on Figure 4.2 of EIA Report (Register No.: AEIAR-221/2019)]
[本圖是根據環境影響評估報告(登記冊編號: AEIAR-221/2019) 圖 4.2 編制]

Environmental Permit No.:
環境許可證編號:
FEP-01/571/2019



Appendix 4.1

Further Information under the approved EIA report of Upgrading of Tai Po Sewage Treatment Works
(AEIAR-244/2022)

Further Information to EPD

Request for Further Information – Information on the hazard to life assessment result by conducting a sensitivity test on the assumption that a population of 500 within the Shuen Wan Golf Course area that falls within the consultation zone of Tai Po Gas Production Plant.

Further Information

Tai Po Gas Production Plant (TPGPP) is a Potentially Hazardous Installation (PHI). Part of the Shuen Wan Golf Course (SWG C) is overlapping with the Consultation Zone (CZ) of TPGPP. Population increase due to development within the CZ of TPGPP may increase the hazard to life impact posed by the PHI. Based on the information provided in the approved EIA Report for SWGC (Register No.: AEIAR-221/2019), a daily average of 40 transient population would be arranged within this “Overlapping Area”.

The hazard to life assessment conducted under this EIA for Upgrading of Tai Po Sewage Treatment Works assumed that a total population number of 500 would be evenly distributed within the entire SWGC. This is equivalent to a population of approximately 185 within the concerned “Overlapping Area”, which is conservative as compared to 40 transient population assumed in the EIA for SWGC.

As presented in this EIA Report, the area within SWGC would be exposed to an individual risk level of less than $1E-09$ per year from TPGPP. This is well below the acceptable off-site individual risk level of $1E-05$ per year.

To further address the uncertainties on the future population in SWGC, a separate sensitivity test has been conducted assuming that the population within the concerned “Overlapping Area” would be 500. The sensitivity test indicated that adopting this new population assumption would not change the hazard to life assessment results (including the shape of F-N Curves and the Potential Loss of Life Distribution) presented in this EIA Report.

