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OUR REF: (38) in EP2/N6/A/240
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網址
HOMEPAGE: <http://www.epd.gov.hk>

**Environmental Protection Department
Branch Office**
28th Floor, Southorn Centre,
130 Hennessy Road,
Wan Chai, Hong Kong.



環境保護署分處
香港灣仔
軒尼詩道
一百三十號
修頓中心廿八樓

18 July 2025

By Registered Post & Fax

Highways Department

**Environmental Impact Assessment (EIA) Ordinance, Cap.499
Application for EIA Study Brief**

**Project Title: Hong Kong Section of Hong Kong-Shenzhen Western Rail Link (Hung
Shui Kiu-Qianhai)**
(Application No. ESB-377/2025)

I refer to your above application received on 5 June 2025 for an EIA Study Brief under Section 5(1)(a) of the EIA Ordinance.

In accordance with Section 5(7)(a) of the EIA Ordinance and after public inspection of the project profile, I issue the attached EIA Study Brief (No. ESB-377/2025) for your preparation of an EIA report.

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

You may submit an application for approval of the EIA report in accordance with Section 6(2) of the EIA Ordinance after its completion. Upon receipt of your application, this department will decide under Section 6(3) of the EIA Ordinance whether the EIA report meets the requirements of the EIA Study Brief and Technical Memorandum on EIA Process, and accordingly advise you under Section 6(4) of the EIA Ordinance whether a submission to the Advisory Council on the Environment (ACE) or its subcommittee is required. In this connection, you are required to provide a set of soft copy of the Executive Summary of the EIA report to the Secretariat of the EIA Subcommittee of the Council by email at acesecretariat@eeb.gov.hk for selection for submission when you submit the EIA report to this department for approval. Should you have questions on the submission, please contact Executive Officer (Cross-Boundary & International Division) 1 of the Secretariat of the EIA Subcommittee of the ACE at 2594 6324.

If the EIA report is selected by ACE for submission and presentation, you are expected to provide ACE with an account of the environmental issues arising from the project, major conclusions and recommendations of the EIA study. In particular, the main environmental concerns of the general public and interest groups who may be affected by the Project should be identified and addressed in the EIA study. As such, you are strongly advised to engage the public and interest groups during the course of the EIA study. Please find attached a copy of the "*Guidance Note on Advertisement and Public Inspection of Documents*" and "*Modus Operandi of the EIA Subcommittee of the Advisory Council on the Environment*" for your reference.

Please note that if you are aggrieved by any of the content of this EIA Study Brief, you may appeal under Section 17 of the EIA Ordinance within 30 days of receipt of this EIA Study Brief.

Should you have any queries on the above application, please contact my colleague Ms. Hyde MAK at 2835 1123.

Yours sincerely,



(Ms. Clara U)

Principal Environmental Protection Officer
for Director of Environmental Protection

Encl.

c.c. (w/o encl.)

ACE EIA Subcommittee Secretariat

Attn. : EO(CBD)1

**ENVIRONMENTAL IMPACT ASSESSMENT ORDINANCE
(CAP. 499)**

**GUIDANCE NOTE ON ADVERTISEMENT AND
PUBLIC INSPECTION OF DOCUMENTS**

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ENVIRONMENTAL IMPACT ASSESSMENT ORDINANCE (CAP.499)

GUIDANCE NOTE ON ADVERTISEMENT AND PUBLIC INSPECTION OF DOCUMENTS

1. Purpose

This guidance note sets out the advertisement requirements and the arrangement for public inspection of a project profile or an environmental impact assessment (EIA) report submitted under the Environmental Impact Assessment (EIA) Ordinance (the Ordinance).

This guidance note should be read in conjunction with "A Guide to the EIA Ordinance" which can be obtained from the EIA Ordinance Register Office at 27/F, Southorn Centre, 130 Hennessy Road, Wan Chai, Hong Kong or downloaded from the EIA Ordinance website (<https://www.epd.gov.hk/eia>).

2. Advertising the Availability of Project Profile and the Arrangement for its Public Inspection

The Requirement

Under the Ordinance, an applicant should advertise, at his or her own expense, the availability of a project profile for the following applications:

- (i) an application for EIA study brief under section 5.(1)(a) of the Ordinance; or
- (ii) an application for permission to apply directly for environmental permit under section 5.(1)(b) of the Ordinance.

Timing and Frequency of Advertisement

An applicant should advertise the availability of the project profile on the day following the submission of the application form and the project profile to the Director of Environmental Protection (the Director).

The applicant would only need to make one advertisement in a Chinese newspaper and an English newspaper, unless further information relating to the project profile is required and the applicant has been advised by the Director to advertise the availability of the additional information.

The Format and Size of Advertisement

For a project profile submitted for an application for EIA study brief, the format of advertisement should follow Appendix 1.

For a project profile submitted for an application for permission to apply directly for environmental permit, the format of advertisement should follow Appendix 2. The applicant should state clearly whether the application is pursuant to section 5.(9), 5.(10) or 5.(11) of the Ordinance.

Advertising the Availability of Additional Information

If the Director requires further information concerning the project profile, the applicant may have to advertise the availability of the additional information. The Director will advise the applicant the details of such an advertisement.

Period and Place of Public Inspection of Project Profile

The Director will place the project profile at the following locations for the public to inspect for 14 days from the day of the advertisement:

- (a) The EIA Ordinance Register Office, Environmental Protection Department, 27th floor, Southorn Centre, 130 Hennessy Road, Wan Chai, Hong Kong (Opening hours: Monday to Friday 0900 to 1700, closed on Saturday, Sunday and Public Holidays);
- (b) Wan Chai Environmental Resource Centre, 221 Queen's Road East, Wan Chai, Hong Kong (Opening hours: Monday, Wednesday to Sunday Friday 1000 to 1700, closed on Tuesday, Saturday, Sunday and Public Holidays) [Note: Temporarily closed due to renovation.]; and
- (c) the relevant District Offices in those districts where the designated project will be located (Opening hours: normal office hours of District Offices).

The Director will also upload the project profile to the EIA Ordinance website (<https://www.epd.gov.hk/eia>).

Before the public inspection period expires, the public may forward written comments to the Director by post or fax or email to the EIA Ordinance Register Office at the following address:

The EIA Ordinance Register Office
Environmental Protection Department
27th floor, Southorn Centre,
130 Hennessy Road,
Wanchai, Hong Kong
Fax. no.: 2147 0894
Email address: eiaocomment@epd.gov.hk

3. Advertising the Availability of EIA Report and the Arrangement for its Public Inspection

The Requirement

Under the Ordinance, an applicant should advertise the availability of the EIA report when the report is considered by the Director as meeting the requirements of the EIA study brief and the Technical Memorandum on EIA Process.

Delivery of EIA Reports

The applicant should notify EPD of date of advertisement at least two full working days before the day of first advertisement and submit (no. of EIA report specified in the EIA study brief) with electronic copy to the EIA Ordinance Register Office on the 27th Floor, Southorn Centre, 130 Hennessy Road, Wan Chai, Hong Kong. If EPD find the electronic copy differs from the hard copy substantially, the applicant would be required to defer the date of advertisement until the defect is rectified.

Timing and Frequency of Advertisement

The applicant should advertise the availability of the EIA report once every 10 days of the 30 days public inspection period. The arrangement should be as follows:

- (a) the first advertisement to be placed on the same day of the placing of the report at locations required by the Director;
- (b) the second advertisement to be placed 10 days after the first advertisement; and
- (c) the third advertisement to be placed 10 days after the second advertisement.

The Format and Size of Advertisement

The format of the advertisement should follow Appendix 3. If the Director requires any other information relating to the project to be set out in the advertisement, the applicant will be informed of the requirements.

Re-advertisement

If the applicant fails to comply with the requirements for advertising the availability of the EIA report, the Director may require the applicant to re-advertise or extend the period of public inspection for up to another 30 days.

Period and Place of Public Inspection of EIA Report

The applicant should make available at least two copies of the EIA report at a location in his or her office that is accessible to the public during normal office hours. The advertisement notice should be attached to the EIA report so that the public can know the duration of the public inspection period and the address to which his or her written comments can be sent.

The applicant should provide sufficient copies of the EIA report for the Director to place them at the following locations for the public to inspect for 30 days:

- (a) The EIA Ordinance Register Office, Environmental Protection Department, 27th

floor, Southorn Centre, 130 Hennessy Road, Wan Chai, Hong Kong (Opening hours: Monday to Friday 0900 to 1700, closed on Saturday, Sunday and Public Holidays);

- (b) Wan Chai Environmental Resource Centre, 221 Queen's Road East, Wan Chai, Hong Kong (Opening hours: Monday, Wednesday to Sunday Friday 1000 to 1700, closed on Tuesday, Saturday, Sunday and Public Holidays) [Note: Temporarily closed due to renovation.]; and
- (c) the relevant District Offices in those districts where the designated project will be located (Opening hours: normal office hours of District Offices).

The Director will also upload the EIA report to the EIA Ordinance website (<https://www/epd.gov.hk/eia>).

Before the public inspection period expires, the public may forward written comments to the Director by post or fax or email to the EIA Ordinance Register Office at the address given in this guidance note.

4. Confirmation of Advertisement

The applicant should confirm that the advertisement have been placed as required by filling in Appendix 4 or 5 and faxing it back on the day of the advertisement to the EIA Ordinance Register Office at fax. no. 21470894, together with copies of the advertisements.

5. Further Enquiries

Any further enquiries could be made to the EIA Ordinance Register Office.

END

Appendix 1 - Format of Advertisement for Application for EIA Study Brief

ENVIRONMENTAL IMPACT ASSESSMENT ORDINANCE (CHAPTER 499) **Application for Environmental Impact Assessment Study Brief under Section 5.(1)(a)**

An application for environmental impact assessment (EIA) study brief to proceed with EIA study for << *title of the proposed designated project* >> has been submitted by << *name of the applicant* >> to the Director of Environmental Protection under section 5.(1)(a) of the EIA Ordinance.

The project profile prepared by the applicant is now available for inspection from << *date of this advertisement* >> to << *date of this advertisement + 13 calendar days* >> at the following locations:

- i. The EIA Ordinance Register Office, Environmental Protection Department, 27th floor, Southorn Centre, 130 Hennessy Road, Wan Chai, Hong Kong (Opening hours: Monday to Friday 0900 to 1700, closed on Saturday, Sunday and Public Holidays); and
- ii. << *relevant District Office(s)* >> during normal office hours.

The project profile will also be uploaded to the EIA Ordinance website (<https://www.epd.gov.hk/eia>).

The public may forward written comments on the project profile to the Director of Environmental Protection on environmental issues covered by the Technical Memorandum on EIA Process within 14 days of this advertisement. The Technical Memorandum can be obtained from the EIA Ordinance Register Office or the EIA Ordinance website. The comments from the public may be forwarded to any relevant parties in processing of the application. Any written comments should be sent to the following address by post or fax or email:

The EIA Ordinance Register Office
Environmental Protection Department
27th floor, Southorn Centre,
130 Hennessy Road,
Wanchai, Hong Kong.

Fax. no.: 2147 0894

Email address: eiaoccomment@epd.gov.hk

<< *Date of advertisement* >>

Appendix 2 - Format of Advertisement for Application for Permission to Apply Directly for Environmental Permit

ENVIRONMENTAL IMPACT ASSESSMENT ORDINANCE (CHAPTER 499)

Application for Permission to Apply Directly for Environmental Permit under Section 5.(1)(b) and << either Section 5.(9), 5.(10) or 5.(11), use one number only in this box >>

An application for permission to apply directly for environmental permit has been submitted by << name of the applicant >> for the << title of the proposed designated project >> to the Director of Environmental Protection under section 5.(1)(b) and << section 5.(9), 5.(10) or 5.(11), fill in one section number only in this box >> of the Environmental Impact Assessment (EIA) Ordinance.

The project profile prepared by the applicant is now available for inspection from << date of this advertisement >> to << the date of this advertisement + 13 calendar days >> at the following locations:

- i. The EIA Ordinance Register Office, Environmental Protection Department, 27th floor, Southorn Centre, 130 Hennessy Road, Wan Chai, Hong Kong (Opening hours: Monday to Friday 0900 to 1700, closed on Saturday, Sunday and Public Holidays); and
- ii. << relevant District Office(s) >> during normal office hours.

The project profile will also be uploaded to the EIA Ordinance website (<https://www.epd.gov.hk/eia>).

The public may forward written comments on the project profile to the Director of Environmental Protection on environmental issues covered by the Technical Memorandum on EIA Process within 14 days of this advertisement. The Technical Memorandum can be obtained from the EIA Ordinance Register office or the EIA Ordinance website. The comments from the public may be forwarded to any relevant parties in processing of the application. Any written comments should be sent to the following address by post or fax or email:

The EIA Ordinance Register Office
Environmental Protection Department
27th floor, Southorn Centre,
130 Hennessy Road,
Wanchai, Hong Kong

Fax. no.: 2147 0894

Email address: eiaocomment@epd.gov.hk

<< Date of advertisement >>

Appendix 3 - Format of Advertisement for Application for Approval of EIA Report

ENVIRONMENTAL IMPACT ASSESSMENT ORDINANCE (CHAPTER 499)

Public Inspection of Environmental Impact Assessment Report under Section 7.(1)

An application for approval of environmental impact assessment (EIA) report for the << *title of the proposed designated project* >> has been submitted by << *name of the applicant* >> to the Director of Environmental Protection under section 6.(2) of the EIA Ordinance.

The EIA report prepared by the applicant is now available for the public to inspect under section 7.(1) of the Ordinance from <<*date of the first advertisement*>> to <<*date of the first advertisement + 29 calendar days*>> at the following locations:

- i. The EIA Ordinance Register Office, Environmental Protection Department, 27th floor, Southorn Centre, 130 Hennessy Road, Wan Chai, Hong Kong (Opening hours: Monday to Friday 0900 to 1700, closed on Saturday, Sunday and Public Holidays);
- ii. << *the applicant's office address and opening hours* >>; and
- iii. << *relevant District Office(s)* >> during normal office hours.

The EIA report will also be uploaded to the EIA Ordinance website (<https://www.epd.gov.hk/eia>).

The public may seek clarification or assistance in understanding the EIA report from the << *name of the applicant* >> at <<*telephone numbers*>> during office hours <<*the applicant's office opening hours*>>. The public may forward written comments on the EIA report to the Director of Environmental Protection on environmental issues covered by the Technical Memorandum on EIA Process before the public inspection period expires. The Technical Memorandum can be obtained from the EIA Ordinance Register office or the EIA Ordinance website. The comments from the public may be forwarded to the applicant or any relevant parties in processing of the application. Any written comments should be sent to the following address by post or fax or email:

The EIA Ordinance Register Office
Environmental Protection Department
27th floor, Southorn Centre,
130 Hennessy Road,
Wanchai, Hong Kong.

Fax. no.: 2147 0894

Email address: eiaoccomment@epd.gov.hk

Date of the first advertisement: << *Date of the first advertisement* >>

Date of this advertisement: << *Date of this advertisement* >>

**Environmental Impact Assessment Ordinance
Confirmation of Advertisement for the Availability of Project Profile**

From: To: EIA Ordinance Register Office
(Fax. no.: 2147 0894)

Date:

Tel. no.:

Please complete the following and return it by fax to 21470894, with a copy of the advertisements appeared in the newspapers, on the day the advertisement has been made.

1. Title of the Designated Project:

2. Reference No. of Application:

3. The Name of the Chinese Newspaper and the Date of Advertisement:

4. The Name of the English Newspaper and the Date of Advertisement:

5. Number of pages faxed:

Environmental Impact Assessment Ordinance

**Confirmation of Advertisement for the Availability of
Environmental Impact Assessment Report**

From:

To: EIA Ordinance Register Office
(Fax. no.: 2147 0894)

Date:

Tel. no.:

Please complete the following and return it by fax to 21470894, with a copy of the advertisements appeared in the newspapers, on the day the advertisement has been made.

1. Title of the Designated Project:

2. Reference No. of Application:

3. Please tick one of the following:

- ☐ the first advertisement during the public inspection period
☐ the second advertisement during the public inspection period
☐ the third advertisement during the public inspection period

4. The Name of the Chinese Newspaper and the Date of Advertisement:

5. The Name of the English Newspaper and the Date of Advertisement:

6. Number of pages faxed:

**MODUS OPERANDI OF THE
ENVIRONMENTAL IMPACT ASSESSMENT SUBCOMMITTEE OF
THE ADVISORY COUNCIL ON THE ENVIRONMENT**

Purpose

This paper sets out the *modus operandi* of the Environmental Impact Assessment (EIA) Subcommittee of the Advisory Council on the Environment (ACE) so as to facilitate smooth proceedings of subcommittee meetings. The current *modus operandi* was last updated and endorsed by ACE in July 2009.

Background

2. ACE is the Government's principal advisory body on matters relating to environmental protection and nature conservation. The terms of reference of ACE are –

- (a) to keep under review the state of the environment in Hong Kong; and
- (b) to advise the Government, through the Secretary for Environment and Ecology, on appropriate measures which might be taken to combat pollution of all kinds, and to protect and sustain the environment.

3. The EIA Subcommittee is set up under ACE to study EIA reports of major development projects. It also comments on strategic environmental assessment reports of major planning projects. The terms of reference of the EIA Subcommittee are –

- (a) to receive and study EIA reports of major development projects; and
- (b) to report on its deliberations and findings and make recommendations to ACE.

EIA Process

4. ACE and the EIA Subcommittee are involved in three main stages of the EIA process, namely commenting on the project profiles for designated projects, selection of EIA reports for submission to ACE and commenting on selected EIA reports. In accordance with ETWB Technical Circular (Works) No. 13/2003, the statutory gazetting of a project under the relevant ordinances can be done in parallel with the EIA process. Separately, consultation with District Councils and other relevant parties may proceed in advance of or in parallel with the submission of EIA reports to the EIA Subcommittee.

Project Profiles

5. Under section 5 of the EIA Ordinance, ACE and members of the public may comment on the project profile of a designated project within 14 days of it being advertised. It is hence not necessary for the EIA Subcommittee to present to the Director of Environmental Protection (DEP) the collective view of the EIA Subcommittee on project profiles. To ensure that comments on project profiles, if any, are given to DEP within the statutory time limit, individual ACE Members would write to DEP directly. Where necessary, the ACE Member may copy his/her comments to the Chairman and Members for information.

Selection of EIA Reports

6. Project proponents of designated projects will have to present their EIA reports to ACE if they are required to submit the reports to the Council. Members of the EIA Subcommittee will be asked to select those projects which they consider should require a presentation to the EIA Subcommittee by the project proponent. The selection outcome is for internal planning of the schedule of the EIA Subcommittee and will not be divulged to the project proponent. Only those projects selected by half or more of EIA Subcommittee Members will be selected. The project proponent concerned will be notified of the selection outcome only after DEP has decided that the EIA report is ready for public inspection and submission to ACE for advice.

7. During the project selection process, if individual EIA Subcommittee Member has special concerns/comments on a certain project, he/she could draw the EIA Subcommittee Chairman's attention to his/her concerns/comments and the Chairman would consider the need to review the decision on selection of the EIA report for submission to ACE.

8. For projects not selected, the project proponent will be required to send the Executive Summary of the EIA report to the EIA Subcommittee. Members would pass their comments, if any, to DEP directly within the prescribed public inspection period and if necessary, copy his/her comments to the Chairman and Members of the EIA Subcommittee for information. At the ACE meeting immediately following the issue of the Executive Summaries of the EIA reports, the EIA Subcommittee Chairman will report to ACE about the submission of these Executive Summaries for information of Members and record as projects not selected for discussion.

Meeting Arrangements

9. The EIA Subcommittee will basically meet on a monthly basis. Meetings will be held when there is submission of EIA report(s) or issue(s) to be discussed.

10. To facilitate focused discussion, the EIA Subcommittee will generally consider no more than two EIA reports in each meeting. EPD will prepare a paper on each EIA report to be submitted to the EIA Subcommittee highlighting the key environmental issues and major findings of the EIA study. Upon expiry of the report inspection period by the general public, EPD will summarize all public comments received during the period for consideration of the EIA Subcommittee. The project proponent, where applicable, will provide the EIA Subcommittee with a report on the site selection process of the project, setting out the alternative sites that have been considered and the reasons of the selection of the particular site when such information is not provided in the EIA report. The paper, the EIA report and the site report, if any, will normally be issued to EIA Subcommittee Members two weeks before the scheduled meeting. The summary of public comments will also be given to Members before the meeting. Members will be asked to indicate whether it is necessary for the project proponent to attend the meeting or the report could be considered by circulation. Project proponents will be informed accordingly before the scheduled meeting.

11. Summary of the public comments will also be provided to non-EIA Subcommittee Members for reference to facilitate their discussion of the EIA Subcommittee's recommendations at the next ACE meeting before the Council tenders its comments to DEP on the EIA report as provided for under the EIA Ordinance.

12. Members of the EIA Subcommittee may raise questions in writing on an EIA report before the scheduled meeting and the project proponent should provide written response to the Secretariat at least three working days before the meeting.

13. Each discussion item on an EIA report would include a Presentation Session by the project proponent, a Question-and-Answer Session and Internal Discussion Sessions. The Presentation Session and the Question-and-Answer Session are open up for broadcasting and members of the public can view the sessions real time in the public viewing room. The EIA Subcommittee would allocate as much time to the Question-and-Answer Session as possible.

14. The presentation by the project proponent should cover, inter alia, the major conclusions and recommendations of the EIA study. In addition, the project proponent should provide a concise and objective account of the main concerns of the general public and interest groups made known during the EIA study and the public inspection stages, and explain how these concerns are addressed in the EIA study.

Criteria for Assessing EIA Reports

15. EIA reports will be assessed by the EIA Subcommittee according to the requirements of the Technical Memorandum on the EIA Process and the study brief of the individual projects issued by DEP.

Recommendations to the Full Council

16. The EIA Subcommittee can make one of the following recommendations to the full Council –

- (i) endorse the EIA report without condition; or
- (ii) endorse the EIA report with condition(s); or
- (iii) reject the EIA report and inform the proponent the right to go to the full Council.

17. If the EIA Subcommittee cannot reach a consensus (i.e. if two or more Members do not agree with the conclusion of the EIA Subcommittee) during the meeting, it may –

- (i) ask for a second submission to the EIA Subcommittee; or
- (ii) defer the decision to the full Council and highlight issues or reasons for not reaching a consensus for the full Council's deliberation.

18. Other than the scenario in paragraph 17 above or the EIA Subcommittee Chairman considers it appropriate, the recommendations of the EIA Subcommittee will not be discussed in detail in the full Council.

Other Rules that apply to EIA Subcommittee Meetings

19. Apart from the procedures mentioned above, the following rules also apply to EIA Subcommittee meetings –

- (i) the quorum for EIA Subcommittee meetings should be half of the number of EIA Subcommittee Members, including the Chairman;
- (ii) ACE Members who are not EIA Subcommittee Members may attend EIA Subcommittee meetings and participate in the discussion of the meetings but they shall not vote when votes are taken;
- (iii) Council Members and EIA Subcommittee Members should declare direct and indirect interest before deliberating on agenda items so that the EIA Subcommittee Chairman could decide whether they should take part in the discussion or in the case of EIA Subcommittee Members to vote;
- (iv) the confirmed minutes of the EIA Subcommittee (with Members' names deleted) are uploaded on the ACE's website for public inspection;
- (v) the Presentation Session and Question-and-Answer Session of a discussion item on an EIA report at the EIA Subcommittee meeting requiring the attendance of the project proponent team will be opened to the public. The opening up of these sessions is an administrative arrangement only. The open meeting arrangements are not applicable to internal discussion sessions of a discussion item on an EIA report and all other sessions of the meetings of the EIA Subcommittee;
- (vi) special meetings may be called to consider urgent items. The EIA Subcommittee will consider each case individually should there be requests for direct submissions to the full Council;
- (vii) there will not be a limit on the number of professionals/experts to be invited to each EIA Subcommittee meeting for items requiring their assistance. In these cases and where votes are taken, these professionals/experts shall not vote; and
- (viii) to facilitate effective deliberation at meetings of the EIA Subcommittee, the EIA Subcommittee may appoint Members to

advise the EIA Subcommittee on specific subject areas of EIA reports. The appointed Members would consider the assigned subjects of an EIA report, and seek advice from the relevant authorities designated under the EIAO as necessary before EIA Subcommittee meetings.

20. The revised *modus operandi* of the EIA Subcommittee has taken effect in April 2013 upon endorsement of ACE.

[Note: Government official title in paragraph 2 is updated as a result of the organisational changes in the Government with effect from 1 July 2022.]

EIA Subcommittee Secretariat
April 2013

Environmental Impact Assessment Ordinance (Cap. 499), Section 5(7)

Environmental Impact Assessment Study Brief No. ESB-377/2025

**Project Title: Hong Kong Section of Hong Kong – Shenzhen Western Rail Link (HSWRL)
(Hung Shui Kiu – Qianhai)
(hereinafter known as the “Project”)**

**Name of Applicant: Highways Department
(hereinafter known as the “Applicant”)**

1. BACKGROUND

- 1.1 An application (No. ESB-377/2025) for an Environmental Impact Assessment (EIA) study brief under Section 5(1)(a) of the Environmental Impact Assessment Ordinance (EIAO) was submitted by the captioned Applicant on 5 June 2025 with a Project Profile (No. PP-687/2025) (the Project Profile).
- 1.2 Being a part of the HSWRL, the Project comprises mainly (i) an approximately 7.3km long underground railway line connecting Hung Shui Kiu Station with the Shenzhen section of HSWRL; (ii) 3 underground stations (i.e. Hung Shui Kiu, Ha Tsuen and Lau Fau Shan); (iii) an at-grade depot at Ha Tsuen; (iv) system-wide facilities, such as signaling system, operation control and monitoring facilities, passengers facilities and off-board fare collection system, electrical and mechanical installations, and rolling stocks, etc. necessary for the railway operations; and (v) associated civil, geotechnical, landscape, road and drainage works, ancillary buildings such as ventilation buildings and power supply buildings, tunnels, pedestrian connection facilities, passengers facilities and off-board fare collection system, traffic control and surveillance system, electrical and mechanical installations, re-provisioning of facilities affected by the proposed infrastructural works, environmental mitigating measures and associated works. The trains to be operated on the Project are electrically powered. The location of the Project is shown in the figure attached in the Project Profile which is reproduced as shown in **Appendix A** of this EIA study brief.
- 1.3 Based on the information provided in the Project Profile, the Project constitutes the designated projects (DPs) in Part I, Schedule 2 of the EIAO which include the following:
- (i) Item A.2 – A railway and its associated stations;
 - (ii) Item A.4 – A railway siding, depot, maintenance workshop, marshalling yard or goods yard;
 - (iii) Item A.7 - A railway tunnel more than 800 m in length between portals;
 - (iv) Item I.1 – A drainage channel or river training and diversion works (b) located less than 300m from the nearest boundary of an existing or planned (i) site of special scientific interest; (ii) site of cultural heritage; (iii) marine park; (iv) marine reserve; (v) fish culture zone; (vi) wild animal protection area; (vii) coastal protection area; or (viii) conservation area.

- 1.4 Pursuant to Section 5(7)(a) of the EIAO, the Director of Environmental Protection (the Director) issues this EIA study brief to the Applicant to carry out an EIA study.
- 1.5 The purpose of this EIA study is to provide information on the nature and extent of environmental impacts arising from the construction and operation phases of the Project and associated activities that will take place concurrently. This information will contribute to decisions by the Director on:
- (i) the overall acceptability of any adverse environmental consequences that are likely to arise as a result of the Project;
 - (ii) the conditions and requirements for the detailed design, construction and operation of the Project to mitigate against adverse environmental consequences wherever practicable; and
 - (iii) the acceptability of residual impacts after the proposed mitigation measures are implemented.

2. OBJECTIVES OF THE EIA STUDY

2.1 The objectives of the EIA study are as follows:

- (i) to describe the Project and associated works together with the requirements and environmental benefits for carrying out the Project;
- (ii) to identify and describe the elements of the community and environment likely to be affected by the Project, and/or likely to cause adverse impacts to the Project, including both the natural and man made environment and the associated environmental constraints;
- (iii) to identify and quantify emission sources and determine the significance of impacts on sensitive receivers and potential affected uses;
- (iv) to identify and quantify any potential losses or damage to flora, fauna and natural habitats;
- (v) to identify any negative impacts on sites of cultural heritage and to propose measures to mitigate these impacts;
- (vi) to propose the provision of infrastructure or mitigation measures to minimize pollution, environmental disturbance and nuisance during construction and operation of the Project;
- (vii) to investigate the feasibility, effectiveness and implications of the proposed mitigation measures;
- (viii) to identify, predict and evaluate the residual (i.e. after practicable mitigation) environmental impacts and the cumulative effects expected to arise during the construction and operation phases of the Project in relation to the sensitive receivers and potential affected uses;
- (ix) to identify, assess and specify methods, measures and standards, to be included in the detailed design, construction and operation of the Project which are necessary to mitigate

these residual environmental impacts and cumulative effects and reduce them to acceptable levels; and

- (x) to design and specify the environmental monitoring and audit requirements.

3. DETAILED REQUIREMENTS OF THE EIA STUDY

3.1 The Purpose

- 3.1.1 The purpose of this EIA study brief is to set out the purposes and objectives of the EIA study, the scope of environmental issues which shall be addressed, the requirements that the EIA study shall need to fulfil, and the necessary procedural and reporting requirements. The Applicant shall demonstrate in the EIA report whether the criteria in the relevant sections of the Technical Memorandum on the Environmental Impact Assessment Process of the Environmental Impact Assessment Ordinance (hereinafter referred to as “the TM”), are fully complied with.

3.2 The Scope

- 3.2.1 The scope of this EIA study shall cover the Project and associated works mentioned in Sections 1.2 and 1.3 of this EIA study brief. For the purpose of assessing whether the environmental impacts shall comply with the criteria of the TM, the EIA study shall address the issues described below:

- (i) potential air quality impacts on existing and planned air sensitive receivers (ASRs) during construction of the Project;
- (ii) potential noise impacts on existing and planned noise sensitive receivers (NSRs) due to the construction and operation of the Project;
- (iii) potential water quality impacts caused by the Project on water sensitive receivers (WSRs) and relevant water system(s) in the vicinity due to the construction and operation of the Project;
- (iv) potential waste management implications arising from the construction of the Project;
- (v) potential land contamination within Project area for development works and relevant mitigation measures;
- (vi) potential sewerage and sewage treatment implications to cope with discharges during operation of the Project, taking into account the capacity requirements for the existing, committed and planned developments within the same sewage catchment;
- (vii) potential ecological impacts (terrestrial and aquatic (i.e. freshwater and marine)) due to the construction and operation of the Project;
- (viii) potential fisheries impacts due to construction and operation of the Project;
- (ix) potential landscape impacts due to the construction and operation of the Project;
- (x) potential visual impacts due to the operation of the Project;

- (xi) potential cultural heritage impacts due to the construction and operation of the Project;
- (xii) potential hazard to life impacts during the construction and operation of the Project; and
- (xiii) potential cumulative environmental impacts of the Project through interaction or in combination with other existing, committed and planned projects that may have a bearing on the environmental acceptability of the Project.

3.3 **Qualified Professionals**

- 3.3.1 The EIA report shall be prepared, checked and signed by qualified professionals listed as either EIA Experts of the Hong Kong Institute of Qualified Environmental Professionals or Engineering EIA Professionals of the Hong Kong Institution of Engineers.

3.4 **Description of the Project**

3.4.1 Purpose(s) and Objectives of the Project

The Applicant shall provide information on the Project, including the purpose(s), objectives and environmental benefits of the Project, and describe the need of the Project and scenarios with and without the Project.

3.4.2 Details of the Project

The Applicant shall indicate the nature and status of the Project for which the EIA study is undertaken. The Applicant shall describe the proposed land uses, design, scale/size, construction methods, sequence of construction works and other major activities involved in the Project, using diagrams, plans and/or maps as necessary. The estimated duration of the construction phase and operational phase of the Project together with the programme within these phases shall be given. The land to be taken by the Project, construction sites, and any associated access arrangements, auxiliary facilities and landscaping areas shall be shown on a scaled map. The land uses of the Project shall be described and the different land use areas shall be demarcated as appropriate.

3.4.3 Background and History of the Project

The Applicant shall provide information on the site location and site history of the Project, interactions with other projects, and the consideration of different development options. The options might include alignment, design, scale/size, siting and design for depot, stations and associated/ancillary facilities such as ventilation buildings and other station associated facilities, and the works areas/site offices, if any, construction methods and sequence of construction works for the Project. An account on the rationale for selecting the preferred development option(s) and the part environmental factors played in the selection shall be provided. The main environmental impacts of the different development option(s) shall be compared with those of the Project and without the Project.

3.5 **Technical Requirements**

- 3.5.1 The Applicant shall conduct the EIA study to address the environmental aspects of the activities as described in the scope as set out above.

- 3.5.2 The Applicant shall include in the EIA report details of the construction programme and methodologies. The Applicant shall state in the EIA report the time frame and work programmes of the Project and associated works and other concurrent projects, and qualitatively and/or quantitatively assess the cumulative environmental impacts from the Project with interacting projects, including staged implementation of the Project and associated works. The EIA study shall follow the technical requirements and methodologies specified below and in the Appendices of this EIA study brief.

3.5.3 Air Quality Impact

- 3.5.3.1 The Applicant shall follow the criteria and guidelines for evaluating and assessing air quality impact as stated in Section 1 of Annex 4 and Annex 12 of the TM respectively.
- 3.5.3.2 The assessment area for the air quality impact assessment shall include areas within 500 metres from the boundary of the Project and its associated works as identified in the EIA study. The assessment shall include major existing, committed and planned air pollutant emission sources identified to have a bearing on the environmental acceptability of the Project. The assessment shall include the existing, committed and planned ASRs within the assessment area as well as any proposed ASRs within the Project as identified in the EIA study. The assessment shall also take into account the impacts of emission sources from nearby concurrent projects within the assessment area.
- 3.5.3.3 The assessment of the air quality impact arising from the construction of the Project shall follow the requirements and methodologies given in **Appendix B** of this EIA study brief.

3.5.4 Noise Impact

- 3.5.4.1 The Applicant shall follow the criteria and guidelines for evaluating and assessing noise impact as stated in Annexes 5 and 13 of the TM respectively. The Applicant shall also take into account the EIAO Guidance Note No. 9/2023 "Preparation of Construction Noise Impact Assessment Under the EIAO" and EIAO Guidance Note No. 16/2023 "Preparation of Fixed Noise Sources Impact Assessment Under the EIAO", as published on the website of the Environmental Protection Department.
- 3.5.4.2 The assessment area for the noise impact assessment shall include areas within 300 metres from the boundary of the Project and its associated works as identified in the EIA study. The assessment shall cover the potential noise impacts due to the construction and operation of the Project, including construction noise, rail noise and fixed noise sources on the existing, committed and planned NSRs.
- 3.5.4.3 The noise impact assessment for the construction and operation phases of the Project shall follow the requirements and methodologies given in **Appendix C** of this EIA study brief.

3.5.5 Water Quality Impact

- 3.5.5.1 The Applicant shall follow the criteria and guidelines for evaluating and assessing water pollution as stated in Annexes 6 and 14 of the TM respectively.
- 3.5.5.2 The Project falls within the Deep Bay Water Control Zone as designated under the Water Pollution Control Ordinance (Cap. 358). The assessment area for the water quality impact assessment shall include areas within 500 metres from the boundary of the Project and its associated works as identified in the EIA study.

3.5.5.3 The water quality impact assessment for the construction and operation phases of the Project shall follow the requirements and methodologies given in **Appendix D** of this EIA study brief.

3.5.6 Waste Management Implications

3.5.6.1 The Applicant shall follow the criteria and guidelines for evaluating and assessing waste management implications as stated in Annexes 7 and 15 of the TM respectively.

3.5.6.2 The assessment of the waste management implications arising from the construction of the Project shall follow the requirements and methodologies given in **Appendix E** of this EIA study brief.

3.5.7 Land Contamination

3.5.7.1 The Applicant shall follow the guidelines for evaluating and assessing potential land contamination issues as stated in Sections 3.1 and 3.2 of Annex 19 of the TM.

3.5.7.2 The assessment of the potential land contamination issues shall follow the requirements and methodologies given in **Appendix F** of this EIA study brief.

3.5.8 Sewerage and Sewage Treatment Implications

3.5.8.1 The Applicant shall follow the criteria and guidelines for evaluating and assessing the impacts on the downstream public sewerage, sewage treatment and disposal facilities as stated in Annex 14 of the TM.

3.5.8.2 The assessment of the sewerage and sewage treatment implications for the Project during operation phase shall follow the requirements and methodologies given in **Appendix G** of this EIA study brief.

3.5.9 Ecological Implication (Terrestrial and Aquatic (Freshwater and Marine))

3.5.9.1 The Applicant shall follow the criteria and guidelines for evaluating and assessing ecological impact as stated in Annexes 8 and 16 of the TM respectively. The Applicant shall also take into account the EIAO Guidance Note No. 10/2023 “Methodologies for Terrestrial and Freshwater Ecological Baseline Surveys”, EIAO Guidance Note No. 11/2023 “Methodologies for Marine Ecological Baseline Surveys”, EIAO Guidance Note No. 7/2023 “Ecological Baseline Survey for Ecological Assessment”, and EIAO Guidance Note No. 6/2010 “Some Observations on Ecological Assessment From the Environmental Impact Assessment Ordinance Perspective” as published on the website of the Environmental Protection Department.

3.5.9.2 The assessment area for the purpose of the terrestrial and aquatic (i.e. freshwater and marine) ecological impact assessment shall include areas within 500 metres from the boundary of the Project and its associated works as identified in the EIA study. Ecological field surveys shall be conducted over a 12-month period covering both wet and dry seasons.

3.5.9.3 The ecological impact assessment for the construction and operation phases of the Project shall follow the requirements and methodologies given in **Appendix H** of this EIA study brief.

3.5.10 Fisheries Impact

- 3.5.10.1 The Applicant shall follow the criteria and guidelines for evaluating and assessing fisheries impact as stated in Annexes 9 and 17 of the TM respectively. The Applicant shall also take into account the EIAO Guidance Note No. 15/2023 “Methodologies for Fisheries Baseline Surveys” in relation to fish ponds as published on the website of the Environmental Protection Department in conducting the fisheries baseline surveys.
- 3.5.10.2 The assessment area for fisheries impact assessment shall include areas within 500 metres from the boundary of the Project and its associated works as identified in the EIA study. Fisheries baseline surveys in the form of site visits shall be conducted over a 9-month period for supporting the assessment of fisheries impacts.
- 3.5.10.3 The fisheries impact assessment for construction and operation phases of the Project shall follow the requirements and methodologies given in **Appendix I** of this EIA study brief.

3.5.11 Landscape and Visual Impact

- 3.5.11.1 The Applicant shall follow the criteria and guidelines for evaluating and assessing landscape and visual impacts as stated in Section 1 of Annex 10 and Annex 18 of the TM respectively, and the EIAO Guidance Note No. 8/2023 “Preparation of Landscape and Visual Impact Assessment under the EIAO” as published on the website of the Environmental Protection Department.
- 3.5.11.2 The assessment area for the landscape impact assessment shall include areas within 100 metres from the boundary of the Project and its associated works as identified in the EIA study, while the assessment area for the visual impact assessment shall be defined by the visual envelope of the Project. The extent of the defined visual envelope shall be shown on a plan and documented in the EIA report.
- 3.5.11.3 The landscape impact assessment for the construction and operation phases of the Project and the visual impact assessment for the operation phase of the Project shall follow the requirements and methodologies given in **Appendix J** of this EIA study brief.

3.5.12 Impact of Cultural Heritage

- 3.5.12.1 The Applicant shall follow the criteria and guidelines for evaluating and assessing the cultural heritage impacts on the site of cultural heritage defined under the EIAO, as stated in Section 2 of Annex 10 and Section 2 of Annex 19 of the TM respectively.
- 3.5.12.2 The assessment area for the cultural heritage impact assessment (CHIA) shall include areas within 300 metres from the boundary of the Project and its associated works as identified in the EIA study. The CHIA shall include built heritage impact assessment and archaeological impact assessment, and shall cover items as listed in paragraph 1(i)(a)–(e) of **Appendix K** of this EIA study brief.
- 3.5.12.3 The CHIA for the construction and operation phases of the Project shall follow the requirements and methodologies given in **Appendix K** of this EIA study brief.

3.5.13 Hazard To Life

- 3.5.13.1 The Applicant shall follow the criteria for evaluating hazard to life as stated in Section 2 of Annex 4 of the TM.

3.5.13.2 The hazard to life assessment for construction and operation phases of the Project associated with dangerous goods in the hazardous facilities, including LPG cum Petrol Filling Station at Ping Ha Road, shall follow the requirements and methodologies given in **Appendix L** of this EIA study brief.

3.6 **Environmental Monitoring and Audit (EM&A) Requirements**

3.6.1 The Applicant shall identify and justify in the EIA study whether there is any need for EM&A activities during the construction and operation phases of the Project and, if affirmative, to define the scope of the EM&A requirements for the Project in the EIA study.

3.6.2 Subject to the confirmation of the EIA study findings, the Applicant shall comply with the requirements as stipulated in Annex 21 of the TM.

3.6.3 The Applicant shall prepare a project implementation schedule (in the form of a checklist as shown in **Appendix M**) containing the EIA study recommendations and mitigation measures with reference to the implementation programme.

3.7 **Presentation of Summary Information**

3.7.1 Summary of Environmental Outcomes

The EIA report shall contain a summary of environmental outcomes arising from the EIA study, including estimated population protected from various environmental impacts, environmentally sensitive areas protected, environmentally friendly options considered and incorporated in the preferred option, environmental designs recommended, environmental problems avoided, compensation areas included and the environmental benefits of environmental protection measures recommended.

3.7.2 Summary of Environmental Impacts

To facilitate effective retrieval of pertinent key information, the EIA report shall contain a summary table of environmental impacts showing the assessment points, results of impact predictions, relevant standards or criteria, extents of exceedances predicted, impact avoidance measures considered, mitigation measures proposed and residual impacts (after mitigation). This summary shall cover each individual impact and shall also form an essential part of the executive summary of the EIA report.

3.7.3 Documentation of Key Assessment Assumptions and Limitation of Assessment Methodologies

The EIA report shall contain a summary including the assessment methodologies and key assessment assumptions adopted in the EIA study, the limitations and adequacy of these assessment methodologies/assumptions, the validity of the assumptions and the assessment results.

3.7.4 Documentation of Public Concerns

The EIA report shall contain a summary of the main concerns of the general public, special interest groups and the relevant statutory or advisory bodies received and identified by the Applicant during the course of the EIA study, and describe how the relevant concerns have been taken into account.

4. DURATION OF VALIDITY

- 4.1 The Applicant shall notify the Director of the commencement of the EIA study. If the EIA study does not commence within 36 months after the date of issue of this EIA study brief, the Applicant shall apply to the Director for a fresh EIA study brief before commencement of the EIA study.

5. REPORTING REQUIREMENTS

- 5.1 In preparing the EIA report, the Applicant shall refer to Annex 11 of the TM for the contents of an EIA report. The Applicant shall also refer to Annex 20 of the TM, which stipulates the guidelines for the review of an EIA report. When submitting the EIA report to the Director, the Applicant shall provide a summary, pointing out where in the EIA report the respective requirements of this EIA study brief and the TM (in particular Annexes 11 and 20) have been addressed and fulfilled.
- 5.2 To facilitate the updating of the ecological information of the Hong Kong Environmental Database, the Applicant shall provide the raw data of the ecological habitat maps including the project location and boundary, types and locations of habitats, findings of ecological field surveys and species of conservation interest in the assessment area in shapefile or GeoJSON or other format as agreed with the Director. The data shall be submitted in 3 copies of CD-ROM, DVD±R or other suitable means as agreed with the Director.
- 5.3 The Applicant shall supply the Director with hard and electronic copies of the EIA report and the executive summary in accordance with the requirements given in **Appendix N** of this EIA study brief. The Applicant shall, upon request, make additional copies of the above documents available to the public, subject to payment by the interested parties of full costs of printing.
- 5.4 To facilitate enhanced public engagement in the EIA process, the Applicant shall produce 3-dimensional electronic visualisations of the findings of the EIA report, including baseline environmental information, the environmental situations with or without the Project, associated works, supporting facilities and essential infrastructures, key mitigated and unmitigated environmental impacts, and key recommended environmental mitigation measures so that the public can better understand the Project and the associated environmental issues. The visualisations shall be based on the EIA report findings and shall be developed and constructed such that they can be accessed and viewed by the public through an internet browser and/or other tools of 3-dimensional electronic visualisations (i.e. Virtual Reality, Augmented Reality, Mixed Reality) at a reasonable speed and without the need for software license requirement at the user's end. The visualisations and the corresponding raw data with necessary setting(s) that enable full migration into EPD's platform shall be submitted in 10 copies of CD-ROM, DVD±R or other suitable means as agreed with the Director.

6. OTHER PROCEDURAL REQUIREMENTS

- 6.1 If there is any change in the name of the Applicant for this EIA study brief during the course of EIA study, the Applicant must notify the Director immediately.
- 6.2 If there is any key change in the scope of the Project mentioned in Sections 1.2 and 1.3 of this EIA study brief and in Project Profile (No. PP-687/2025), the Applicant must seek confirmation from the Director in writing on whether or not the scope of issues covered by this EIA study brief can still cover the key changes, and the additional issues, if any, that the EIA study must

also address. If the changes to the Project fundamentally alter the key scope of the EIA study brief, the Applicant shall apply to the Director for a fresh EIA study brief.

7. LIST OF APPENDICES

7.1 This EIA study brief includes the following appendices:

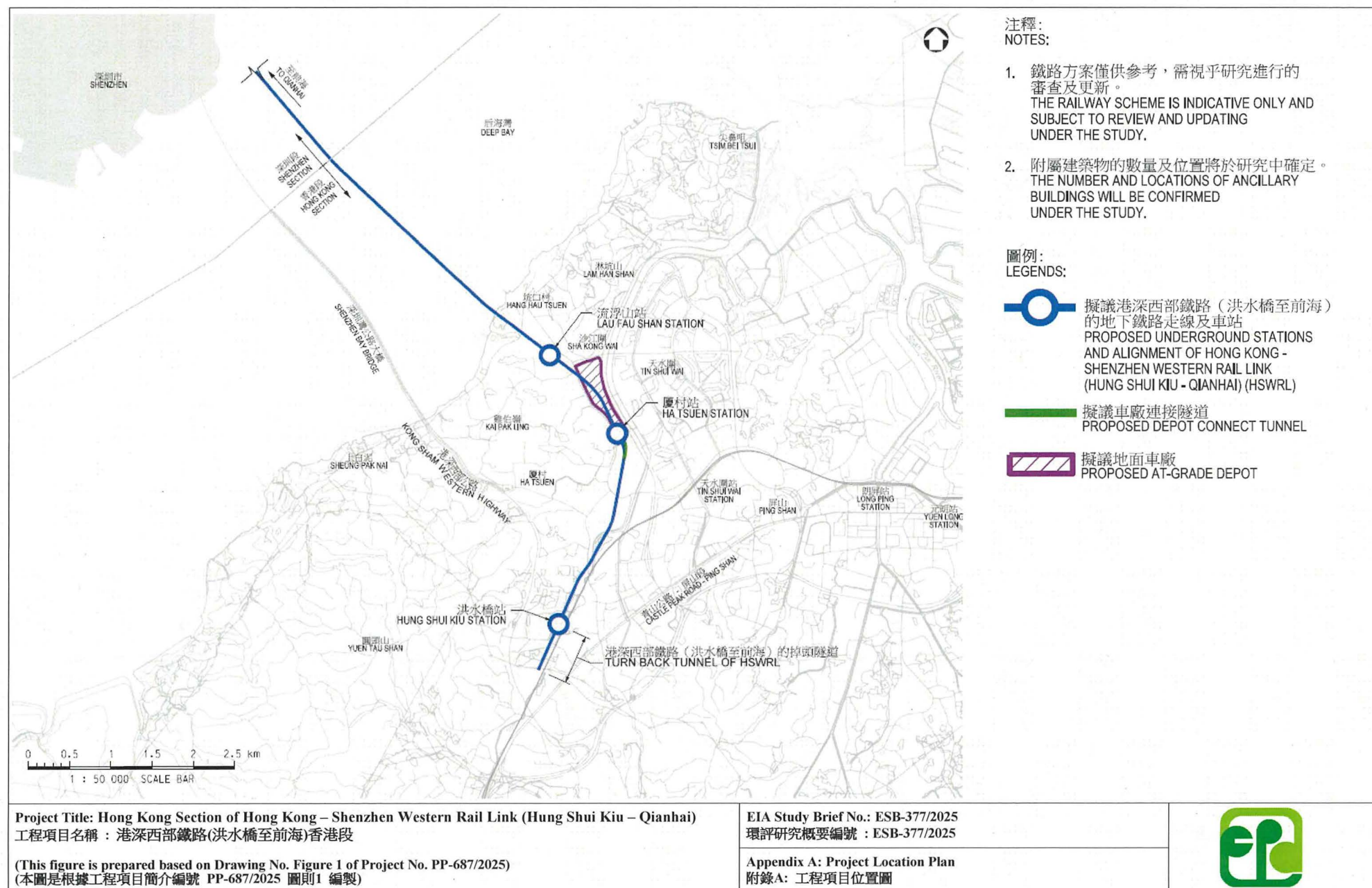
- Appendix A** – Project Location Plan
- Appendix B** – Requirements and Methodologies for Air Quality Impact Assessment
- Appendix C** – Requirements and Methodologies for Noise Impact Assessment
- Appendix D** – Requirements and Methodologies for Water Quality Impact Assessment
- Appendix E** – Requirements and Methodologies for Assessment of Waste Management Implications
- Appendix F** – Requirements and Methodologies for Land Contamination Assessment
- Appendix G** – Requirements and Methodologies for Assessment of Sewerage and Sewage Treatment Implications
- Appendix H** – Requirements and Methodologies for Ecological Impact Assessment (Terrestrial and Aquatic (i.e. Freshwater and Marine))
- Appendix I** – Requirements and Methodologies for Fisheries Impact Assessment
- Appendix J** – Requirements and Methodologies for Landscape and Visual Impact Assessment
- Appendix K** – Requirements and Methodologies for Cultural Heritage Impact Assessment
- Appendix L** – Requirements and Methodologies for Hazard to Life Assessment
- Appendix M** – Implementation Schedule of Recommended Mitigation Measures
- Appendix N** – Requirements for EIA Report Documents

– END of EIA STUDY BRIEF –

July 2025

Environmental Assessment Division
Environmental Protection Department

Appendix A



Appendix B

Requirements and Methodologies for Air Quality Impact Assessment

The air quality impact assessment shall include the following:

1. Construction Air Quality Impact Assessment

1.1 Identification of Air Sensitive Receivers (ASRs) and Examination of Emission/Dispersion Characteristics

- (a) Provision of background information relating to air quality issues relevant to the Project, including description of the types of activities of the Project that would affect air quality during construction phase of the Project.
- (b) Provision of an account of the consideration/measures that have been taken into consideration during the planning of the Project to minimise the air pollution impact.
- (c) Identification and description of existing, committed and planned ASRs that would be affected by the Project, including those earmarked on the relevant Outline Zoning Plans, Development Permission Area Plans, Outline Development Plans, Layout Plans and land use and development applications approved by the Town Planning Board. The Applicant shall select the assessment points of the identified ASRs that represent the worst impact point of these ASRs. A map showing the location and description including name of buildings, their uses and height of the selected assessment points shall be given. The separation distances of these ASRs from the nearest emission sources shall also be given.
- (d) Provision of a list of air pollution emission sources, including the nearby emission sources which would have impact related to the Project based on the analysis of the construction activities in Section 1.1(a) above. Confirmation regarding the validity of assumptions and the magnitude of activities shall be obtained from the relevant government departments/authorities, and documented in the EIA report.
- (e) The emissions from the concurrent projects identified shall be taken into account. The impacts at the existing, committed and planned ASRs within the assessment area shall be assessed.

1.2 Construction Air Quality Impact Assessment Methodology

The Applicant shall follow the requirements stipulated under the Air Pollution Control (Construction Dust) Regulation and good site practice to ensure that construction air quality impacts are effectively controlled. Construction air quality assessment within the assessment area should be conducted qualitatively.

1.3 Mitigation Measures for Construction Air Quality Impacts

- (a) The Applicant shall consider and evaluate direct mitigation measures for fugitive dust and gaseous emission control. The Applicant shall also consider connecting construction plant and equipment to mains electricity supply and avoid use of diesel generators and diesel-powered equipment to minimise air quality impact arising from the construction machinery. The Applicant shall describe the means of transportation and their routings involved, with a view to addressing potential constructional air quality impact caused by transportation

activities. The mitigation measures and good practice recommended for constructional air quality impact should be well documented in the EIA report.

- (b) A monitoring and audit programme for the construction phase of the Project shall be devised to verify the effectiveness of the proposed control measures so as to ensure proper control of constructional air quality impact.

Appendix C

Requirements and Methodologies for Noise Impact Assessment

1 Construction Noise Impact Assessment

1.1 Identification of Construction Noise Impact

1.1.1 Identification of Assessment Area and Noise Sensitive Receivers (NSRs)

- (a) The assessment area for the construction noise impact assessment shall include areas within 300 metres from the boundary of the Project and its associated works as identified in the EIA study.
- (b) The Applicant shall identify the existing, committed and planned NSRs reflected on the relevant Outline Zoning Plans, Development Permission Area Plans, Outline Development Plans, Layout Plans and land use and development applications approved by the Town Planning Board in the assessment area and select assessment points to represent identified NSRs for carrying out construction noise impact assessment.
- (c) A map showing the location and description including name of building, use, and floor of each and every selected assessment point shall be given. Photographs of existing NSRs shall be appended to the EIA report.

1.1.2 Inventory of Noise Sources

The Applicant shall identify an inventory of noise sources for representative construction equipment for the purpose of construction noise impact assessment and document in the EIA report.

1.2 Construction Noise Impact Assessment Methodology

1.2.1 The Applicant shall carry out construction noise impact assessment (excluding percussive piling) of the Project during daytime, i.e. 7am to 7pm, on weekdays other than general holidays in accordance with methodology in Section 5.3 and Section 5.4 of Annex 13 of the TM.

1.2.2 The Applicant shall conduct a qualitative assessment in the EIA to demonstrate no adverse construction noise impact would be associated with the Project by adopting quieter construction method and equipment during the construction phase. The Applicant shall firstly identify the noise sources/activities, then propose the corresponding quiet construction methods and noise mitigation measures, and commit to submitting a Construction Noise Management Plan (CNMP) to the Director.

1.3 Mitigation of Construction Noise Impact

1.3.1 The Applicant shall consider and evaluate the application of direct mitigation measures in accordance with Section 6.1 of Annex 13 of the TM. The feasibility, practicability, programming and effectiveness of the recommended mitigation measures shall be qualitatively assessed. Any direct mitigation measures recommended shall be well documented in the report. Specific reasons for not adopting certain direct mitigation measures to maximise the protection for the NSRs should be clearly substantiated and documented in the EIA report.

1.4 Construction Noise Management Plan (CNMP)

- 1.4.1 The Applicant shall commit to submit a CNMP to the Director. The CNMP shall contain the quantitative construction noise impact assessment, the adopted quieter construction method and equipment, noise mitigation measures and the construction noise impact monitoring and audit programme, with reference to the updated and identified noise mitigation measures once available and in any case before the tender invitation if there is any change to the construction noise mitigation measures recommended in the EIA report and before the commencement of construction of the project. Any technical constraint that would hinder the use of these quieter construction method and equipment shall be evaluated and clearly recorded in the assessment.
- 1.4.2 The CNMP shall include an implementation schedule clearly listing out the mitigation measures, the implementation party, location and timing of implementation. Mitigation measures recommended and requirements specified in the CNMP shall be fully implemented.

2 Fixed Noise Sources Impact Assessment

2.1 Identification of Fixed Noise Sources Impact

2.1.1 *Identification of Assessment Area and Noise Sensitive Receivers (NSRs)*

- (a) The assessment area for the fixed noise sources impact shall include areas within 300 metres from the boundary of the Project and its associated works of the Project as identified in the EIA study.
- (b) The Applicant shall identify the existing, committed and planned NSRs reflected on the relevant Outline Zoning Plans, Development Permission Area Plans, Outline Development Plans, Layout Plans and land use and development applications approved by the Town Planning Board in the assessment area and select assessment points to represent identified NSRs for carrying out the fixed noise sources impact assessment.
- (c) A map showing the location and description including name of building, use, and floor of each and every selected assessment point shall be given. Photographs of existing NSRs shall be appended to the EIA report.
- (d) For planned noise sensitive land uses without committed site layouts, the Applicant shall use the relevant land use and planning parameters and conditions to work out representative site layouts for fixed noise sources impact assessment purpose. However, such parameters and conditions together with representative site layouts and any constraints identified shall be confirmed with the relevant responsible parties including Planning Department and Lands Department.

2.1.2 *Inventory of Noise Sources*

- (a) The Applicant shall identify an inventory of noise sources for fixed noise sources impact assessment. The inventory of noise sources shall include existing noise sources (including both permanent and temporary fixed noise sources) and planned fixed noise sources (including electrical and mechanical equipment at stations, depot, tunnel, and ancillary buildings, maintenance works and shunting train movement at the depot, test tracks and stabling sidings, and fixed noise sources from other concurrent projects).

- (b) The Applicant shall provide document or certificate for the sound power level of each type of fixed noise sources and documented in the EIA report.

2.2 Fixed Noise Sources Impact Assessment Methodology

- 2.2.1 The Applicant shall conduct prevailing background noise surveys to determine the standards for evaluating noise impact from fixed noise sources. The respective noise environment shall be documented in the EIA report.
- 2.2.2 The Applicant shall carry out fixed noise sources impact assessment from the Project in accordance with methodology in Section 5.2 of Annex 13 of the TM.
- 2.2.3 The Applicant shall conduct a qualitative assessment in the EIA to demonstrate no adverse fixed noise sources impact would be associated with the project by committing to adopt noise mitigation measures during the operation periods. The Applicant shall identify all noise sources/activities, and commit to submitting a Fixed Noise Source Management Plan (FNMP) to the Director.

2.3 Mitigation of Fixed Noise Sources Impact

- 2.3.1 The Applicant shall consider and evaluate the application of direct mitigation measures in accordance with Section 6.1 of Annex 13 of the TM. The feasibility, practicability, programming and effectiveness of the recommended mitigation measures shall be qualitatively assessed. Any direct mitigation measures recommended should be well documented in the report. Specific reasons for not adopting certain direct mitigation measures to maximise the protection for the NSRs should be clearly substantiated and documented in the EIA report.

2.4 Fixed Noise Source Management Plan (FNMP)

- 2.4.1 The Applicant shall commit to submit a FNMP to the Director. The FNMP shall contain the quantitative fixed noise source impact assessment, covering planned and existing fixed noise sources, noise mitigation measures and the fixed noise source impact monitoring and audit programme, with reference to the updated and identified inventories once available and in any case before commencement of construction of the Project.
- 2.4.2 The FNMP shall include an implementation schedule clearly listing out the mitigation measures, the implementation party, location and timing of implementation. Mitigation measures recommended and requirements specified in the FNMP shall be fully implemented.

3 Rail Noise Impact Assessment

3.1 Identification of Rail Noise Impact

3.1.1 *Identification of Assessment Area and Noise Sensitive Receivers (NSRs)*

- (a) The assessment area for the rail noise impact shall include areas within 300 metres from the boundary of the Project and its associated works of the Project as identified in the EIA study.
- (b) The Applicant shall identify the existing, committed and planned NSRs reflected on the relevant Outline Zoning Plans, Development Permission Area Plans, Outline Development Plans, Layout Plans and land use and development applications approved by the Town Planning Board in the assessment area and select assessment points to

represent identified NSRs for carrying out the rail noise impact assessment.

- (c) A map showing the location and description including name of building, use, and floor of each and every selected assessment point shall be given. Photographs of existing NSRs shall be appended to the EIA report.
- (d) For planned noise sensitive land uses without committed site layouts, the Applicant shall use the relevant land use and planning parameters and conditions to work out representative site layouts for rail noise impact assessment purpose. However, such parameters and conditions together with representative site layouts and any constraints identified shall be confirmed with the relevant responsible parties including Planning Department and Lands Department.

3.1.2 *Inventory of Noise Sources*

- (a) The Applicant shall identify and quantify an inventory of noise sources for rail noise impact assessment (for ground-borne noise and air-borne noise assessment, if applicable). The inventory of noise sources shall include the existing and planned railways within assessment area.
- (b) The Applicant shall allow for deterioration in rail and rolling stock condition from brand new to an operating level in the prediction of noise impact.

3.2 Rail Noise Impact Assessment Methodology

- (a) For air-borne rail noise impact, the Applicant shall conduct a qualitative assessment in the EIA to demonstrate no adverse rail noise impact would be associated with the Project by having the whole alignment fully underground in tunnel.
- (b) For ground-borne rail noise impact, the Applicant shall conduct a quantitative assessment in the EIA in accordance with the procedures outlined in U.S. Department of Transportation Federal Transit Administration (FTA) (FTA Guidance Manual).
- (c) The Applicant shall commit to submit an operational ground-borne noise review report to the Director. The operational ground-borne noise review report shall include a tunnel impact test verifying the overall findings of the quantitative ground-borne noise assessment, and review for any additional noise mitigation measures required.

3.3 Prediction and Evaluation of Rail Noise Impact

3.3.1 *Scenarios*

- (a) The Applicant shall quantitatively assess the ground borne rail noise impact of the Project, with respect to the criteria set in Annex 5 of the TM, of unmitigated scenario and mitigated scenario at assessment year(s) of various operation modes including
 - (i) the worst operation mode which represents the maximum noise emission in connection of identified railways taking into account any other planned noise sources;
 - (ii) the interim/ transient operation mode due to the phased/part implementation of the Project; and
 - (iii) the emergency operation mode.

3.3.2 *Prediction of Noise Impact*

- (a) The Applicant shall present the predicted noise levels in Leq(30min) during the day and evening, and at night at the NSRs at various representative floor levels (in m P.D.) on tables and plans of suitable scale.
- (b) The assessment shall cover the cumulative rail noise impact associated with the existing and planned railways, and with other planned fixed noise sources of the Project on the existing, committed and planned NSRs within assessment area.
- (c) The potential rail noise impact under different scenarios and operation modes shall be quantified by estimating the total number of dwellings, classrooms and other noise sensitive receivers that will be exposed to noise impact exceeding the criteria set in Annex 5 of the TM.

3.4 Mitigation of Rail Noise Impact

- 3.4.1 Where the predicted rail noise impact exceeds the criteria set in Annex 5 of the TM, the Applicant shall consider and evaluate the application of direct mitigation measures in accordance with Section 6.1 of Annex 13 of the TM. The feasibility, practicability, programming and effectiveness of the recommended mitigation measures shall be assessed. Any direct mitigation measures recommended should be well documented in the report. Specific reasons for not adopting certain direct mitigation measures to reduce the noise to a level meeting the criteria in the TM or to maximise the protection for the NSRs should be clearly quantified and documented in the EIA report.

3.5 Evaluation of Residual Rail Noise Impact

- 3.5.1 Upon exhaust of direct mitigation measures, if the mitigated noise impact still exceeds the relevant criteria in Annex 5 of the TM, the Applicant shall identify, predict and evaluate the residual rail noise impact in accordance with Section 4.4.3 of the TM and estimate the total number of dwellings, classrooms and other noise sensitive elements that will be exposed to residual noise impact.

3.6 Submission of Noise Calculation Details and Model Files

- 3.6.1 All input and output file(s) of model run(s) shall be submitted to the Director in electronic format together with the submission of the EIA report.

Appendix D

Requirements and Methodologies for Water Quality Impact Assessment

1. The Applicant shall identify and analyse physical, chemical and biological disruptions of the water system(s) arising from the construction and operation of the Project.
2. The Applicant shall predict and assess any water quality impacts arising from the construction and operation of the Project.
3. The assessment shall include the following :
 - (i) collect and review background information on affected existing and planned water systems, their respective catchments and water sensitive receivers which shall be affected by the Project;
 - (ii) characterise water quality of the water systems and water sensitive receivers, which shall be affected by the Project based on prevailing information and through site survey and tests when existing data are insufficient;
 - (iii) identify and analyse relevant existing and planned activities, beneficial uses and water sensitive receivers related to the affected water system(s);
 - (iv) identify pertinent water quality objectives and establish other appropriate water quality criteria or standards for the water system(s) and the water sensitive receivers identified in (i), (ii) and (iii) above;
 - (v) review the specific construction methods, programmes and configurations, and operation of the Project to identify and predict the water quality impacts arising from the Project;
 - (vi) identify any alteration of any water courses, natural streams, ponds, wetlands, change of water holding/flow regimes of water bodies, change of catchment types or areas, erosion or sedimentation due to the Project in the assessment area;
 - (vii) identify and evaluate existing and future water pollution sources, including point discharges and non-point sources discharges generated from the construction and operation of the Project;
 - (viii) identify existing and future water pollution sources within the assessment area. Field investigation and laboratory test shall be conducted to fill relevant information gaps;
 - (ix) predict and evaluate the impacts on the water system(s) and its/their sensitive receivers due to those alterations and changes identified in (vi) above, and the pollution sources identified in (vii) above. The prediction shall consider both construction and operation of the Project;
 - (x) assess the cumulative water quality impacts due to other related concurrent and planned projects, activities or pollution sources within the assessment area that shall have a bearing on the environmental acceptability of the Project;

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- (xi) analyse the provision and adequacy of existing and planned future facilities to handle or reduce water pollution arising from the point and non-point sources identified in (vii) above;
 - (xii) develop effective infrastructure upgrading or provision, contingency plan, water pollution prevention and mitigation measures to be implemented during construction and operation phases, so as to reduce the water quality impacts to within standards. Effluent generated from the Project shall require appropriate collection, treatment and disposal in considering the Deep Bay catchment. Requirements to be incorporated in the Project contract document shall also be proposed;
 - (xiii) investigate and develop management practices to reduce storm water and non-point source pollution;
 - (xiv) identify and evaluate residual impacts on water system(s) and the water sensitive receivers with regard to the appropriate water quality objectives, criteria, standards or guidelines. If the mitigated water quality impact still exceeds the relevant criteria in Annex 6 of TM, the Applicant shall identify, predict and evaluate the residual water quality impact in accordance with Section 4.4.3 of the TM and estimate the significance of the residual impact to the water system(s) and the water sensitive receivers.

Appendix E

Requirements and Methodologies for Assessment of Waste Management Implications

The assessment of waste management implications during construction phase shall cover the following:

1. Analysis of Activities and Waste Generation

- (i) The Applicant shall identify the quantity, quality and timing of the wastes arising as a result of the construction activities of the Project based on the sequence and duration of these activities, method and process of these activities, including construction and demolition (C&D) materials, chemical waste and other wastes which will be generated during construction phase.
- (ii) The Applicant shall adopt appropriate design, construction methods and programme to minimise the generation of public fill/inert C&D materials and maximise the use of public fill/inert C&D materials for other construction works.

2. Proposal for Waste Management

- (i) Prior to considering the disposal options for various types of wastes, opportunities for reducing waste generation, on-site or off-site re-use and recycling shall be evaluated. Measures that can be taken in the planning and design stages and in the construction phase for maximising waste reduction shall be separately considered.
- (ii) After considering the opportunities for reducing waste generation and maximising re-use, the types and quantities of the wastes required to be disposed of as a consequence shall be estimated and the disposal methods/options for each type of wastes shall be described. The disposal methods/options recommended for each type of wastes shall take into account the result of the assessment in item (iv) below.
- (iii) The EIA report shall state the transportation routings and the frequency of the trucks/vessels involved, the barging point or conveyor system to be used, the stockpiling areas and the disposal outlets for the wastes identified.
- (iv) The impact caused by handling (including stockpiling, labelling, packaging and storage), collection, transportation and re-use/disposal of wastes shall be addressed and mitigation measures shall be proposed.
- (v) In addition to the above, the EIA report shall also identify practicable means of avoiding illegal dumping and landfilling, particularly on ecological sensitive areas in the vicinity of the Project.

3. Excavation/Dredging and Dumping

- (i) The Applicant shall identify and estimate dredging/excavation, dredged/excavated sediment/mud transportation and disposal activities and requirements. Potential dumping ground to be involved shall also be identified. Field investigation, sampling and chemical and biological laboratory tests to characterise the sediment/mud concerned shall be conducted for marine disposal option. The ranges of parameters to be analysed; the number, type and methods of sampling; sample preservation; chemical and biological laboratory test methods to be used shall be documented in the EIA report. The categories

of sediment/mud which are to be disposed of in accordance with the Dumping at Sea Ordinance (DASO) shall be identified by both chemical and biological tests and their quantities shall be estimated. If the presence of contamination of sediment/mud which requires special treatment/disposal is confirmed, the Applicant shall identify the appropriate treatment and/or disposal arrangement and demonstrate its viability in consultation with relevant authorities;

- (ii) The Applicant shall identify and evaluate the practicable dredging/excavation methods to minimise dredging/excavation and dumping requirements based on the criterion that existing sediment/mud shall be left in place and not to be disturbed as far as possible.

Appendix F

Requirements and Methodologies for Land Contamination Assessment

1. The Applicant shall identify the potential land contamination site(s) within the scope of the Project site and within the boundaries of associated areas, including the work areas, of the Project.
2. The Applicant shall provide a clear and detailed account of the present land uses (including description of the activities, chemicals and hazardous substances handled, with clear indication of their storage and location, by reference to a site layout plan) and a complete past land uses history, in chronological order, in relation to possible land contamination (including accident records and change of land use(s)).
3. If contaminated land uses as stated in Sections 3.1 and 3.2 of Annex 19 of the TM are identified, the Applicant shall carry out the land contamination assessment as detailed from sub-section (i) to (iii) below in accordance with Sections 3.1.1 to 3.1.5 of Annex 19 of the TM, and propose measures to avoid disposal:
 - (i) The Applicant shall conduct a site appraisal to identify the potential contamination sources that would have impacted the Project site.
 - (ii) If potential land contamination sources are identified within the boundary and work areas of the Project, the Applicant shall plan and conduct site investigation for contamination assessment and prepare a Contamination Assessment Report (CAR). If land contamination is confirmed, a Remediation Action Plan (RAP) to formulate viable remedial measures with supporting documents shall be prepared. The remediation shall only be required for disturbed contaminated soil, and the remediation strategy proposed in the RAP shall follow the “Source-Pathway-Receptor Paradigm”. The Applicant shall remediate the contaminated land or site(s) according to the RAP, and a Remediation Report (RR) to demonstrate completion of remediation should be prepared prior to the commencement of any proposed development or works of the Project. Upon completion of the remediation of the contaminated land, the CAR, RAP and RR shall be documented in the EIA report.
 - (iii) If there are potential contaminated sites which are inaccessible for conducting sampling and analysis during the course of the EIA study, e.g. due to site access problem, the Applicant’s site appraisal shall include:
 - (a) a review of the available and relevant information;
 - (b) an initial contamination evaluation of these sites and possible remediation methods;
 - (c) a confirmation of whether the contamination problem at these sites would be surmountable;
 - (d) a sampling and analysis proposal which shall aim at determining the nature and the extent of the contamination of these sites; and
 - (e) a schedule of submission of revised or supplementary site appraisal, CAR, RAP and RR as soon as these sites become accessible.

Appendix G

Requirements for Assessment of Sewerage and Sewage Treatment Implications

1. The Applicant shall study and assess the need and impacts of discharging sewage to the existing/planned sewerage systems in Yuen Long District. The assessment shall include the following:
 - (iii) investigate and review the adequacy of the existing/planned sewerage and sewage treatment facilities for absorbing part or all of the sewage discharge from the Project within the scope of EIA study as defined in Section 3.2 above. The Applicant shall confirm in the EIA report that whether the existing/planned sewerage and sewage treatment facilities in Yuen Long District will provide adequate capacity for the Project. The appropriate treatment level of interim discharge, if required, shall be assessed;
 - (iv) the assessment should take into account any additional sewage flow and flow projections from other existing/planned developments to be connected to the existing/planned sewerage and sewage treatment facilities in Yuen Long District. The water quality impacts arising from the interim and ultimate effluent discharge, if any, shall be assessed;
 - (v) identify the appropriate alignment and layouts of the new sewerage to connect to the existing/planned/future sewerage in Yuen Long District; investigate and assess the technical feasibility of connection (e.g. technical feasibility and details for direct connection to public sewer and sewage pumping station); and
 - (vi) use/develop the latest version of the computer model "InfoWorks" or equivalent computer models to assess impacts of the development under different phases on the existing, planned or proposed sewerage networks in Yuen Long District, a copy of the model shall be submitted to EPD for record purpose.

Appendix H

**Requirements and Methodologies for Ecological Impact Assessment (Terrestrial and Aquatic
(Freshwater and Marine))**

Scope of Ecological Survey

1. Ecological field surveys shall be conducted over a 12-month period covering both wet and dry seasons within the 500m Assessment Area. The field surveys shall cover flora, fauna and any other habitats/species of conservation importance. Optimal time of the year, minimum survey frequency and optimal time of the day for conducting the ecological baseline surveys shall be determined in accordance with Appendix B of the EIAO TM Annex 16.
2. The ecological profile of the assessment area shall be established based on information collected in the ecological field surveys and review of the existing information, with the descriptions of the characteristics of each habitat found. The data set shall be comprehensive and representative covering the variations of the wet and dry seasons, and is up to date and valid for the purpose of this assessment.
3. The ecological profile shall include investigation and descriptions of the habitats and ecological resources within the Assessment Area including:
 - (a) natural and man-made wetland habitats including fishponds, ponds, marsh, intertidal mudflats, mangroves, seagrass bed, seasonally wet grassland and modified/semi-natural/natural watercourses (both seasonal and non-seasonal);
 - (b) roosting, breeding and/or feeding sites of resident and migratory birds in particular waterbirds and wetland-dependent species;
 - (c) bird flight lines over the Project site and between roosting/breeding and feeding sites of resident and migratory birds;
 - (d) woodlands, grasslands and shrublands;
 - (e) sub-tidal soft-bottoms habitat;
 - (f) Ngau Hom Shek Egrettry;
 - (g) Hung Shui Kiu Egrettry;
 - (h) Tin Shui Wai Hospital Egrettry;
 - (i) Tin Shui Wai Hospital Ardeid Night Roost (ANR);
 - (j) “Coastal Protection Area” zone;
 - (k) “Conservation Area” zone;
 - (l) Inner Deep Bay and Shenzhen River Catchment Important Bird Area (IBA); and
 - (m) Tin Shui Wai Nullah.

4. The assessment shall be conducted for the following wild faunal and floral groups in accordance with Annex 8 and Annex 16 of the TM. Should there be information gaps identified during the review of the existing information, the ecological survey shall be conducted for the following wild faunal and floral groups in accordance with Appendix B of Annex 16 of the TM and the Ecological Survey Methodology in Sections 5 to 6 below :

Terrestrial

- (a) Vegetation and higher plants;
- (b) Mammals ;
- (c) Birds (overwintering, oversummering, passage migrant and resident);
- (d) Reptiles;
- (e) Amphibians;
- (f) Butterflies;
- (g) Odonates;
- (h) Fireflies;

Freshwater

- (i) Fish;
- (j) Freshwater invertebrates;

Marine

- (k) Soft-bottom communities;
- (l) Intertidal communities; and
- (m) Horseshoe crabs.

Ecological Survey Methodology

5. The terrestrial ecological survey shall be conducted by walk-transects, freshwater sampling, and setting camera traps. The intertidal communities and horseshoe crab surveys shall be conducted by line transect with walk-through/active-search survey, while soft-bottom communities shall be conducted by grab sampling.
6. Where coverage by walk-transect is not possible (e.g. inaccessible areas within barrack areas where access is not allowed, hillside areas with limited accessibility and safety concern), high-power binoculars and/or aerial drone shall be used to determine the habitat structure, general vegetation composition, at a location as close as possible.

Habitat Mapping and Vegetation Survey

- (a) Terrestrial and aquatic (i.e. freshwater and marine) habitats within the Assessment Area shall be identified, sized and mapped. Ecological characteristics of each habitat type, including size, vegetation type, species present, dominant species found, species diversity and abundance, community structure, ecological value and inter-dependence of the habitats and species, and presence of any features of ecological importance shall be defined and characterised. Representative photographs of the habitat types and/or any important ecological features identified shall be taken. A habitat map of suitable scale (1:1000 to 1:5000) showing types and locations of terrestrial and aquatic (i.e. freshwater and marine) habitats within the Assessment Area shall be prepared from digital aerial photographs. The habitat map shall then be checked during ground truthing. For areas that are inaccessible, aerial drones shall be used to capture photographs and videos to survey ecological features and verify habitats.

- (b) Vegetation surveys shall be conducted by direct observation to record the diversity and dominance of plant species present in different habitat types. The locations of any plant species of conservation importance shall be recorded.

Terrestrial Mammal Survey

- (c) The surveys shall focus on areas that may be utilised by terrestrial mammals. Field signs including droppings, footprints, diggings or burrows left by mammals shall be actively searched for. Mammal identification shall be made from the field signs encountered. Any mammals directly observed shall be recorded. Camera traps shall be deployed.
- (d) Bat surveys shall be undertaken by surveyor(s) equipped with ultrasonic bat detector(s) at potential roosting, commuting, foraging and drinking sites. Bat species shall be identified through the detection of echolocation calls and direct observation. The acoustic information recorded shall be analysed using specialised software.

Avifauna Survey

- (e) The presence and abundance of avifauna species in various habitats shall be recorded visually and aurally. Avifauna shall be surveyed quantitatively using the transect count method along the walk-transects during early morning, dusk and night times. The location of any avifauna species of conservation importance encountered shall be recorded, along with notable behaviours (e.g. breeding behaviour such as nesting and the presence of recently fledged juveniles, roosting, and feeding activities).

General Waterbird Flight Line Survey

- (f) Flight line surveys for waterbirds shall be undertaken monthly during both dry and wet seasons at the proposed vantage points for at-grade or above ground structures to observe the flight line above the Project site. The survey shall start half an hour before sunrise and last for at least two hours. The flight path of waterbirds shall be followed by means of high-power binoculars to identify their landing locations, wherever possible. If the waterbirds fly out of sight prior to landing, the location at which they are lost from sight shall be recorded. Flight height of flight paths shall be recorded. The time of sunrise on the date of survey shall make reference to the Hong Kong Observatory.

Egretry and Flight Line Survey

- (g) Egrettry surveys shall be undertaken at Ngau Hom Shek Egrettry, Hung Shui Kiu Egrettry, Tin Shui Wai Hospital Egrettry during the ardeid breeding season from March to August to record the status and ardeid nesting activities. The extent of the egrettries shall be mapped and the physical environment shall be described, including identification of nesting substrate, their sizes, and any presence of human disturbance within or in close proximity to the egrettry. The distribution and abundance of nests from ardeid species shall be identified from ground level using binoculars as close to the egrettry as possible. The nest status (vacant or occupied), notable breeding behaviours (e.g. brooding, feeding of chicks), and presence of adult/juveniles shall be recorded.
- (h) Flight line surveys for the breeding ardeids shall be undertaken at the proposed vantages points for egrettries and shall start half an hour before sunrise and last for at least two hours. The flight line of ardeid individuals shall be followed by means of high-power binoculars to identify their landing locations, wherever possible. If the ardeids fly out of sight prior to landing, the location at which they are lost from sight shall be recorded. Flight height of flight paths shall be recorded. The time of sunrise on the date of survey shall make reference to the Hong Kong Observatory.

- (i) Given the potential presence of other egrettries within the Assessment Area, the field surveys shall focus on confirming the presence of any new egrettries, in particular trees adjacent to fishponds and wetland habitats. If new egrettries are identified, egrettry and flight line surveys shall be conducted.

Ardeid Roost and Flight Line Survey

- (j) Roost count and flight line surveys shall be conducted for Tin Shui Wai Hospital Night Roost at vantage points during the peak activity period of ardeids at the roost. The avifauna species, abundance, location and extent of the roosting area, and the tree species used by the roosting avifauna community should be recorded.
- (k) Flight line survey for night roost shall commence approximately one hour before sunset and continue until nightfall. The flight lines, flight height of the flight lines, the return times of the pre-roosting and night-roosting ardeids, and substrate used at the ardeid night roosts shall be recorded. The time of sunset on the date of survey shall make reference to the Hong Kong Observatory.
- (l) Given the potential presence of roosts for ardeids and other avifauna within the Assessment Area, the field surveys shall focus on confirming the presence of any new roosting sites, in particular trees adjacent to fishponds and wetland habitats. If new roosts are identified, night roost and flight path surveys shall be conducted.

Herpetofauna (Amphibian and Reptile) Survey

- (m) Herpetofauna shall be surveyed and counted along survey transects by active searching. Potential microhabitats (e.g. leaf litter, underneath of rotten logs) shall be searched. All reptiles and amphibians sighted shall be recorded.
- (n) Amphibian survey shall be conducted on evenings and night time, focusing on areas suitable for amphibians (including forests, shrublands, grasslands, streams, catchwaters, fishponds and marshes). Acoustic records of amphibians would likely constitute the majority of data collected, supplemented by visual observation of eggs, tadpoles and frogs / toads.
- (o) During reptile surveys, careful searches shall be conducted at the microhabitats and refugia of reptiles (including stones, pond bunds, crevices, leaf litter/debris, rotten log). All reptiles encountered shall be recorded. In addition to active searching, observation of exposed, basking and foraging reptiles shall also be made.

Butterfly and Odonate Survey

- (p) Butterflies and odonates (dragonflies and damselflies) shall be surveyed and counted along the walk-transects. Relative abundance of butterfly, dragonfly and damselfly shall be recorded and presented in the EIA report, along with any larvae and pupae encountered.

Fireflies

- (q) Fireflies shall be surveyed and counted along the walk-transects during dusk and night-time. Where site situation permits (e.g. under safe conditions), lighting devices shall be switched off during survey to allow detection of fireflies before progressing along the transects.
- (r) During the survey, any adult and larva firefly observed shall be identified. The abundance and distribution of fireflies shall be recorded and presented in the EIA report. Any sighting of mass occurrence and/or breeding behaviour of fireflies, along with the associated locations and habitats, shall be recorded and presented in the EIA report. Diurnal fireflies found during other day-time surveys shall also be recorded and presented in the EIA report.

Freshwater Invertebrates and Fish Survey

- (s) Freshwater invertebrates and fish survey shall be conducted through active searching and/or direct observation at representative freshwater sampling points. The sampling points shall be selected based on the likelihood of the impacts on the watercourses.
- (t) Freshwater invertebrates survey shall be conducted during daytime; whereas freshwater fish survey shall be conducted during day-time for diurnal species, and night-time for nocturnal species.
- (u) To avoid driving organisms away and disturbing the bottom substrate, direct observation from a suitable distance shall be conducted before active searching and kick sampling. Boulders within the watercourses shall be turned over to locate any aquatic animals beneath. Hand net shall be used to collect organisms along the watercourses.

Intertidal Communities and Horseshoe Crab Survey

- (v) Intertidal communities survey shall be conducted during suitable ebbing tides using the line transect method at representative sites. A quantitative survey shall be conducted to assess the species richness and diversity, abundance and density of flora and fauna along the shore, with transect lines set up seaward and perpendicular to the shore at representative sites. Along each transect, quadrats shall be placed at regular intervals, and all flora and fauna found within each quadrat shall be identified and counted. Mobile organisms shall be counted in terms of abundance per quadrat, while sessile organisms shall be estimated in terms of percentage cover per quadrat. At each survey site, a qualitative walk-through/active-search survey shall also be conducted along the transect during or after the quantitative survey. The survey sites shall be selected based on the likelihood of the impacts on the intertidal habitats.
- (w) In addition, core sampling method shall be used to assess the species diversity, abundance and density of animals living within the sediment in sandy and/or muddy shores. Cores shall be pushed into the sediment and then lift out and screen with sieves of suitable size.
- (x) Particular attention shall be paid to potential intertidal habitats that support horseshoe crabs. Searches for horseshoe crabs shall be conducted from April to October. If horseshoe crabs are found during the survey, their locations, numbers and sizes shall be recorded.

Soft-bottom Communities Survey

- (y) Soft-bottom communities survey shall be conducted using grab sampling from boats at representative sampling stations across different excavated depths. The grab shall be selected and designed to maximize efficiency while minimizing disturbance to the sediment surface, thereby the risk of losing surface fauna. The collected benthic samples shall be sieved on board the boat to separate the fauna from the sediment for subsequent sorting and analysis in the laboratory. The number of replicate samples taken at each sampling station shall be determined to achieve the best possible representation of species while considering the time required for collection and processing within the availability of sea time and study duration. The sampling stations shall be selected based on the likelihood of the impacts on the sub-tidal habitat.

Impact Identification and Evaluation

7. Using the above survey methodologies, and considering any works activities from the Project and other projects to occur at the time, identify and quantify impacts during construction and operation of the Project in accordance with Section 5.2 of Annex 16 of the TM, in particular the following highlighted in the public comments:

During Construction Phase :

- (a) Permanent or temporary loss of habitats, including mangrove, mudflat, fishponds, ponds, watercourses and shrubland;
- (b) impacts on fauna and flora;
- (c) light disturbance to wildlife in particular waterbirds and wetland-dependent species (such as Eurasian Otter *Lutra lutra*);
- (d) impacts due to potential changes in water quality and water holding/flow regimes of ponds and watercourses and alternation to riparian habitats;
- (e) impacts due to obstruction to wildlife corridor, habitat fragmentation and isolation;
- (f) impacts due to groundwater drawdown;
- (g) impacts on coastal protection area, conservation area and other ecologically sensitive areas (e.g. mudflat and seagrass beds) and the associated wildlife (e.g. horseshoe crabs); and
- (h) cumulative impacts due to other planned and committed concurrent development projects at or near the Project area.

During Operational Phase :

- (i) loss of habitats, including mangrove, mudflat, fishponds, ponds, watercourses and shrubland;
- (j) impacts on birds, including collision to transparent, semi-transparent or reflective building facades as well as disturbances to flight lines between breeding/roosting and foraging grounds by future buildings/ structures;
- (k) light disturbance to wildlife in particular waterbirds and wetland-dependent species (such as Eurasian Otter *Lutra lutra*);
- (l) impacts due to potential changes in water quality and water holding/flow regimes of ponds and watercourses and alternation to riparian habitats;
- (m) impacts due to obstruction to wildlife corridor, habitat fragmentation and isolation;
- (n) impacts on coastal protection area, conservation area and other ecologically sensitive areas and the associated wildlife; and
- (o) cumulative impacts due to other planned and committed concurrent development projects at or near the Project area.

8. Evaluate the ecological impacts using qualitative and/or quantitative approach covering both construction and operation phases of the Project.

Impact Mitigation

9. The Applicant shall :
- (a) recommend practicable mitigation measures (such as alternative design and configuration of the Project and modification/change of construction methods, etc.) to avoid, minimise and/or compensate for the adverse ecological impacts identified during construction and operation of the Project;
 - (b) evaluate feasibility and effectiveness of the recommended mitigation measures and define the scope, type, location, implementation arrangement, resources requirement, subsequent management and maintenance of such measures;
 - (c) determine and quantify the residual ecological impacts after implementation of the proposed mitigation measures;
 - (d) evaluate the significance and acceptability of the residual ecological impacts using well-defined criteria in Annex 8 of the TM and determine if off-site mitigation measures are necessary to mitigate the residual impacts and if affirmative, guidelines and requirements laid down in Annex 16 of the TM shall be followed; and
 - (e) review the need for and recommend any ecological monitoring programme required.

Appendix I

Requirements and Methodologies for Fisheries Impact Assessment

1. The fisheries impact assessment shall cover pond fish culture, oyster culture and capture fisheries during construction and operation phases. Existing information on fisheries resources within the assessment area shall be reviewed.
2. Fisheries baseline surveys in the form of site visits for fish ponds shall be conducted over a 9-month period for supporting the assessment of fisheries impacts, and to confirm and update the status of the fisheries resources and activities within the assessment area.
3. The fisheries impact assessment shall provide the following information:
 - (i) description of the physical environmental background;
 - (ii) description and quantification of existing fisheries activities;
 - (iii) description and quantification of existing fisheries resources/ production;
 - (iv) identification of areas within the assessment area that are important to fisheries and will be affected by the Project;
 - (v) identification, prediction and evaluation of all impacts on existing fisheries during the construction and operation phases of the Project, including fisheries production and operations, fisheries resources and habitats, and fish ponds;
 - (vi) evaluation of cumulative impacts on fisheries due to other planned and committed concurrent development projects at and within the assessment area;
 - (vii) proposals of feasible, practicable and effective alternatives and/or mitigation measures of fisheries impact; and
 - (viii) recommendations of the need for and the scope of fisheries monitoring and audit programme during the construction and operation phases of the Project and associated works.

Appendix J

Requirements and Methodologies for Landscape and Visual Impact Assessment

1. A system shall be derived for judging the landscape and visual impact significance as required under the Annexes 10 and 18 of the TM and the EIAO Guidance Note 8/2023 “Preparation of Landscape and Visual Impact Assessment under the EIAO” published on the website of the Environmental Protection Department. Landscape impact during both construction and operation phases, and visual impact due to the Project during operation phase within the assessment area shall be assessed. Cumulative landscape impacts of the Project with other existing, committed and planned developments in the assessment area shall be assessed.
2. The Applicant shall describe, appraise, analyse and evaluate the existing and planned landscape resources and characters of the assessment area including those landscape design proposed under the Project. Annotated oblique aerial photographs and plans of suitable scale showing the baseline landscape resources and landscape character areas and mapping of impact assessment shall be used to present the findings of impact assessment. Descriptive text shall provide a concise and reasoned judgment from a landscape point of view. The assessment shall be particularly focused on the sensitivity of the landscape character areas and resources and its ability to accommodate change. The Applicant shall identify the degree of compatibility of the Project with the existing and planned landscape setting. The landscape impact assessment shall qualify and quantify the potential landscape impact, so as to illustrate the significance of such impact arising from the Project. Cumulative landscape impacts of the Project with other committed and planned developments shall be assessed.
3. A broad brush tree/vegetation survey including distinctive landscape resources within the assessment area shall be carried out and the impacts on them shall also be assessed. Such broad brush survey could be quantified by estimation supported with on-site survey within the assessment area, rather than detailed survey of individual trees, such that it could assist a brief account of the landscape characters and resources of the assessment area. For the purpose of this EIA study, trees of particular interest shall include the following :
 - (a) Old and Valuable Trees (OVTs);
 - (b) Trees of 100 years old or above;
 - (c) Trees with trunk diameter equal to or exceeding 1.0 m (measured at 1.3m above ground level), or with height/canopy spread equal to or exceeding 25 m;
 - (d) Stonewall trees or trees of outstanding form (taking account of overall tree sizes, shape and any special features);
 - (e) Rare tree species listed in ‘Rare and Precious Plants of Hong Kong’ published by Agriculture, Fisheries and Conservation Department;
 - (f) Endangered plant species protected under the Protection of Endangered Species of Animals and Plants Ordinance (Cap 586);
 - (g) Tree species listed in the Forestry Regulations (Cap 96A) under the Forests and Countryside Ordinance (Cap. 96);
 - (h) Well-known Fung Shui trees; and
 - (i) Landmark trees with evidential records to support the historical or cultural significance of the trees.

Where there are site constraints (including inaccessibility of the areas) during the on-site survey of the broad brush tree/vegetation survey, the Applicant shall commit in the EIA report to conduct further survey and assessment before commencement of construction of the Project.

4. The Applicant shall assess the visual impact of the Project during operation phase. Clear illustrations including mapping of visual impact is required. The Visual Impact Assessment should take into account existing/planned/approved land uses as the baseline conditions. All direct impacts on existing/planned/approved land uses, and on future outlook of the area should be discussed. The assessment shall include the following:
 - (i) identification and plotting of visual envelope of the Project;
 - (ii) appraisal of existing visual resources and characters as well as future outlook of the visual system of the assessment area;
 - (iii) identification and justification of the key public viewing points within the visual envelope and their views at sea level, ground level and elevated vantage points, and clearly indicate the key public viewing points on a plan of appropriate scale;
 - (iv) evaluation of the magnitude of change in terms of visual composition, visual obstruction and visual change of the Project with the existing and planned visual context, and sensitivity of viewers in terms of types of viewers and value of existing views;
 - (v) the visual impact of the Project with and without mitigation measures during operation phase shall be included and illustrated so as to demonstrate the effectiveness of the proposed mitigation measures across time; and
 - (vi) evaluation and explanation with supportive arguments of factors considered in arriving the significance thresholds of visual impact. The visual impacts should include presentation of an evaluation matrix derived for judging impact significance.
5. The Applicant shall evaluate the merits of preservation in totality, in parts or total destruction of existing landscape and the establishment of a new landscape character area. In addition, alternative location, layout, development options, alignment, design, built-form and construction methods that would avoid or reduce the identified impacts on landscape, and/or visual amenity shall be examined before adopting other mitigation or compensatory measures to alleviate the impacts. The applicant shall recommend mitigation measures which shall not only focus on damage reduction but also potential enhancement of existing landscape and visual quality of the area. The recommendations shall also be illustrated in landscape design and landscape/visual impact mitigation measure plan.
6. The mitigation measures shall include preservation of vegetation and natural landscape resources, provision of buffer planting, re-vegetation of disturbed area, woodland restoration, compensatory planting, erection of decorative screen hoarding compatible with surrounding setting, provisioning/reprovisioning of amenity areas and open spaces, design and layout of structures, facade treatment, creation of interesting landscape or visual features and any measures to mitigate the impact on existing and planned land uses and viewers. Parties shall be identified for the ongoing management and maintenance of the proposed mitigation works to ensure their effectiveness throughout the implementation of the Project. Agreement from relevant authorities responsible for funding, implementation, management and maintenance of proposed mitigation measures have to be obtained before including into the landscape and visual impact assessment. A practical programme for the implementation of the recommended measures shall be provided. If any noise barriers/enclosures are proposed, the choice of their colours, design and materials should be compatible with the surrounding buildings and development context and their aesthetic designs should be considered.

7. Annotated illustration materials including coloured perspective drawings, plans and section/elevation diagrams, oblique aerial photographs, photographs taken at key public viewing points, and computer-generated photomontage shall be adopted to fully illustrate the landscape and visual impacts of the Project. In order to illustrate the landscape and visual impacts and to demonstrate the effectiveness of the proposed landscape and visual mitigation measures, photomontages at selected representative public viewing points shall be prepared to illustrate existing conditions and proposed development with and without mitigation measures at the operation phase. Computer graphics shall be in a common format compatible with desktop computers. The Applicant shall record the technical details in preparing the illustrations, which shall need to be submitted for verification of the accuracy of the illustrations.

Appendix K

Requirements and Methodologies for Cultural Heritage Impact Assessment

1. **Baseline Study for Cultural Heritage Impact Assessment (CHIA)**

The CHIA on the site of cultural heritage defined under the EIAO shall include both the built heritage impact assessment and archaeological impact assessment. A baseline study shall be conducted to:

- (i) compile an inventory on items as listed in (a) to (e) below, as published in the website of Antiquities and Monuments Office (AMO) (www.amo.gov.hk) and are within the assessment area for the CHIA; and
 - (a) List of Declared Monuments and Proposed Monuments, “*List of Declared Monuments and Proposed Monuments (as at 10 October 2024)*”;
 - (b) List of Graded Historic Buildings, “*List of Graded Historic Buildings (as at 26 June 2025)*”;
 - (c) List of New Items for Grading Assessment, “*List of New Items for Grading Assessment (as at 12 June 2025)*”;
 - (d) List of Sites of Archaeological Interest in Hong Kong, “*List of Sites of Archaeological Interest in Hong Kong (as at Nov 2012)*” and;
 - (e) List of Government Historic Sites Identified by Antiquities and Monuments Office, “*Government Historic Sites Identified by AMO (as at May 2022)*”
- (ii) identify impacts on items (a) to (e) arising from the Project.

2. **Built Heritage Impact Assessment**

- (i) The Applicant shall conduct a built heritage impact assessment on items as listed in paragraph 1(i) (a), (b), (c) and (e) above within the assessment area to determine whether the Project will result in impacts on those items. The Applicant shall demonstrate that efforts have been made to avoid or keep the adverse impacts on the items as listed in 1(i) (a), (b), (c) and (e) above to the minimum. The Applicant shall recommend protective/monitoring/mitigation measures in accordance with the assessment results.
- (ii) A checklist including the affected items, impacts identified, recommended mitigation measures as well as the implementation agent and period shall also be included in the EIA report.

3. **Archaeological Impact Assessment**

- (i) The Applicant shall conduct an archaeological impact assessment on items as listed in paragraph 1(i) (d) above within the assessment area to determine whether the Project will result in impacts on those items.
- (ii) The Applicant shall engage archaeologist(s) to conduct an archaeological impact assessment, taking the results of previous studies and other background of the site into

account, to evaluate the archaeological impact imposed by the Project and its associated works.

- (iii) In case the existing information is inadequate or where the assessment area has not been adequately studied before, the archaeologist shall conduct archaeological investigations to assemble data. The archaeologist shall obtain licences from the Antiquities Authority under the Antiquities and Monuments Ordinance (Cap. 53) prior to the commencement of archaeological investigations.
- (iv) Based on existing and collected data, the Applicant shall evaluate whether the proposed developments and works associated with the Project are acceptable from archaeological preservation point of view. In case adverse impact on archaeological heritage cannot be avoided, mitigation measures should be designed and recommended in the EIA report.
- (v) If mitigation measure(s) is/are required, the area and the practical programme for implementation of the mitigation measure(s) shall be recommended in the EIA report.

Appendix L

Requirements and Methodologies for Hazard to Life Assessment

Hazardous Facilities

1. The Applicant shall carry out hazard assessment as follows:
 - (i) Identify hazardous scenarios associated with the manufacture, transport, storage and use of dangerous goods in the hazardous facilities, including LPG cum Petrol Filling Station at Ping Ha Road, during construction and operation of the Project with a view to determine a set of relevant scenarios to be included in a Quantitative Risk Assessment (QRA);
 - (ii) Execute a QRA of the set of hazardous scenarios determined in 1(i) above, expressing population risks in both individual and societal terms;
 - (iii) Compare individual and societal risks with the criteria for evaluating hazard to life stipulated in Annex 4 of the TM; and
 - (iv) Identify and assess practicable and cost-effective risk mitigation measures to demonstrate the compliance with the Risk Guidelines stipulated in Figure 1 of Annex 4 of the TM.
2. The hazard assessment shall also include a cumulative risk assessment of the Project, through interaction or in combination with other existing, committed and planned developments involving hazardous facilities in the vicinity of the Project.
3. The methodology to be used in the hazard assessment should be consistent with previous studies having similar issues.

Appendix N

Requirements for EIA Report Documents

1. The Applicant shall supply the Director with the following number of copies of the EIA report and the executive summary:
 - (i) 30 copies of the EIA report and 30 copies of the executive summary (each bilingual in both English and Chinese) as required under Section 6(2) of the EIAO to be supplied at the time of application for approval of the EIA report.
 - (ii) When necessary, addendum to the EIA report and the executive summary submitted in item (i) above as required under Section 7(1) of the EIAO, to be supplied upon advice by the Director for public inspection.
 - (iii) 20 copies of the EIA report and 50 copies of the executive summary (each bilingual in both English and Chinese) with or without Addendum as required under Section 7(5) of the EIAO, to be supplied upon advice by the Director for consultation with the Advisory Council on the Environment.
2. In addition, to facilitate public inspection of EIA report via EIAO Internet Website, the Applicant shall provide electronic copies of both the EIA report and executive summary prepared in Hyper Text Markup Language (HTML) and in Portable Document Format (PDF), unless otherwise agreed by the Director. For both of the HTML and PDF versions, a content page capable of providing hyperlink to each section and sub-section of the EIA report and executive summary shall be included in the beginning of the document. Hyperlinks to figures, drawings and tables in the EIA report and executive summary shall be provided in the main text from where respective references are made. The EIA report, including drawings, tables, figures and appendices shall be viewable by common web-browsers including the latest version of Microsoft Edge, Mozilla Firefox, Safari, Google Chrome or any web browsers as agreed by the Director, and support languages including Traditional Chinese, Simplified Chinese and English.
3. The electronic copies of the EIA report and the executive summary shall be submitted to the Director at the time of application for approval of the EIA report.
4. When the EIA report and the executive summary are made available for public inspection under Section 7(1) of the EIAO, the content of the electronic copies of the EIA report and the executive summary must be the same as the hard copies and the Director shall be provided with the most updated electronic copies.
5. To promote environmentally friendly and efficient dissemination of information, both hardcopies and electronic copies of future EM&A reports recommended by the EIA study shall be required and their format shall be agreed by the Director.