



33/F, Revenue Tower, 5 Gloucester Road, Wan Chai, Hong Kong
香港灣仔告士打道5號稅務大樓33樓

ACE-EIA Paper 1/2022
For advice on 10 January 2022

Environmental Impact Assessment Ordinance (Cap. 499)
Environmental Impact Assessment Report

Mai Po Nature Reserve Infrastructure Upgrade Project

PURPOSE

This paper presents the key findings and recommendations of the Environmental Impact Assessment (EIA) report on “Mai Po Nature Reserve Infrastructure Upgrade Project” (“the Project”) submitted under Section 6(2) of the Environmental Impact Assessment Ordinance (EIAO) (Application No. EIA-274/2021). The Project is a Designated Project by virtue of Item Q.1, Part I, Schedule 2 to the EIAO, as the Project involves building works in a Site of Special Scientific Interest (SSSI). The World Wide Fund for Nature Hong Kong (“the Applicant”) and their consultants will present the EIA report at the meeting of the EIA Subcommittee.

ADVICE SOUGHT

2. Members’ views are sought on the findings and recommendations of the EIA report. The Director of Environmental Protection (DEP) will take into account comments from the public and the Advisory Council on the Environment in deciding whether or not to approve the EIA report under Section 8(3) of the EIAO.

BACKGROUND

3. Mai Po Nature Reserve (MPNR) is an internationally recognised important wetland providing habitats for birds and supporting the East-Asian Australasian Flyway migrations. The MPNR also showcases the practice of gei wai as an example of traditional wise-use of wetlands, and is a regional centre for knowledge and awareness on wetland conservation.

4. The Applicant submitted on 10 September 2021 the EIA report for the Project for approval. DEP, in conjunction with all relevant authorities, considers that the EIA report has met the requirements of the EIA Study Brief and the Technical Memorandum on EIA Process (TM), for the purpose of its exhibition for public inspection under Section 7(4) of the EIAO.

NEED FOR THE PROJECT

5. Most of the existing facilities within the MPNR have been in use for more than 30 years and are showing their age. The Project will facilitate universal access and provide new education components through the widening of the existing footpaths with wooden boardwalks and the provision of two new tower hides.

ENVIRONMENTAL BENEFITS

6. The provision of the two new tower hides and six Education Areas (EAs) along the improved footpaths could benefit the scientific research and public education programmes in the MPNR. The raised wooden boardwalk design for the footpaths is more aesthetically compatible with the surrounding natural landscapes.

DESCRIPTION OF THE PROJECT

7. MPNR is located in Yuen Long District in the North of Hong Kong. The Project site is within the Mai Po Marshes SSSI. **Figure 1** shows the location and general layout of the Project.

8. The Project consists of mainly the following elements, which are shown in **Figure 2**:

- (i) Upgrading of approximately 987m long concrete footpath of about 1.5m wide to a raised wooden boardwalk of 1.65m wide;
- (ii) Construction of a new three-storey tower hide (TH2 shown in Figure 2) and the associated access wooden boardwalk of 156m long and 1.65m wide; and
- (iii) Construction of a new three-storey tower hide (TH3 shown in Figure 2) and the associated access wooden boardwalk of 85m long and 1.65m wide.

CONSIDERATION OF ALTERNATIVE OPTIONS

9. The EIA report considered different options for the development of the Project, including alternative design schemes, construction methods and sequence of works, in order to avoid and minimise environmental impacts. Since the issue of the EIA Study Brief in 2017, the Project scope has been revised and reduced from six elements to three (i.e. the three elements in paragraph 8 above), by taking into account various potential environmental impacts resulting from the proposed works and the feedback from stakeholders during the engagement exercises conducted by the Applicant. Key alternative considerations of these three Project elements and the outcomes are provided below:

Avoidance and Minimisation of Impacts by Alternative Design

- (i) the original design was to break up and remove the existing concrete footpath and replace it with a new widened concrete footpath. The alternative design of a raised wooden boardwalk over the original concrete path was adopted so as to avoid demolition of the existing concrete structure and thus minimise the construction activities in the MPNR;
- (ii) to minimise potential visual impact, the building height of the two new tower hides was reduced from 4 storeys to 3 storeys;

Construction Methods and Sequence of Works

- (iii) to avoid disturbance to the migratory birds during the winter dry season by scheduling the external construction works in the wet season;

- (iv) to minimise potential water quality and ecological impacts during the construction of the two new tower hides, the foundation works of TH2 and TH3 will be carried out in dry condition by draining down the adjacent gei wais during April to October; and
- (v) to minimise the potential air and noise impacts caused by the Project during the construction phase, preventive measures such as off-site pre-fabrication of building elements, off-site concrete mixing and maintenance or repair of construction plant will be implemented to avoid generating polluted runoff and emissions from the works areas.

SPECIFIC ENVIROMNETAL ASPECTS TO HIGHLIGHT

Ecology

10. A 12-month ecological field survey covering both dry and wet seasons was conducted by the Applicant from November 2016 to December 2017 to provide ecological information concerning MPNR and the surrounding 500m assessment area. Additional field surveys were carried out from September 2019 to August 2020 and verified that the ecological conditions in the MPNR and adjacent areas remained broadly similar to the previous findings.

11. Permanent and temporary habitat loss is considered small compared to the area of these habitats within MPNR (i.e. only 0.033% and 0.15% respectively). The permanently lost habitat of about 0.07 hectare of bund will be converted to developed areas for locating the two new tower hides and the associated new footpaths as well as widening of the main footpath with formation of Educations Areas. The impact is of low to moderate severity in both construction and operational phases of the Project in view of the very small areas involved.

12. Impacts on the species of conversation importance have been evaluated in the EIA report. No unacceptable residual ecological impacts from the Project are anticipated with the implementation of the recommended mitigation and precautionary measures, such as:

- (i) to avoid impacts on the roost sites and associated pre-roost gatherings of Collared Crow, all construction activity for TH2 and its associated access path, including the passage of construction vehicles, will cease two hours before sunset in the wet season construction period (between mid-April and mid-October); and

- (ii) to reduce disturbance to Eurasian Otter during the construction and operation phases, installing a 2m high solid opaque screen around works areas and planting of 2m high bamboo screen with sufficient depth along the access to the new tower hides will be provided. Adequate pre-construction checks will also be conducted by a qualified ecologist at and in the vicinity of the works sites prior to commencement of works. If roosting or breeding species are found, measures such as adjustments to the timing of works should be taken to avoid adverse impact.

Water Quality

13. In order to avoid water pollution at gei wais within MPNR and subsequently the Deep Bay through the regular water exchange and gei wai drain-down (as part of the normal operation of the gei wai), the foundation works at TH2 and TH3 will be carried out after the drain-down of adjacent gei wais as scheduled in the latest MPNR Management Plan 2019-2024. The drained gei wais will be fully isolated from surrounding water bodies. Perimeter bund will be in place around the work sites of TH2 and TH3 so that any runoff generated from the construction works will not enter the surrounding water bodies.

14. As mentioned in paragraph 9(v) above, measures such as off-site prefabrication, concrete mixing and maintenance or repair of plants are also recommended in the EIA report to avoid generating polluted runoff from the works areas. With the implementation of recommended approach and measures, no adverse water quality impact during the construction phase is anticipated.

Other Environmental Impacts

15. Other environmental impacts, including air quality, noise, waste management, fisheries and landscape & visual have been assessed in the EIA report. With the implementation of recommended mitigation measures, the Project will comply with relevant requirements set out in the TM.

ENVIRONMENTAL MONITORING AND AUDIT

16. The EIA report includes an Environmental Monitoring and Audit (EM&A) Manual, which recommends an EM&A programme during the construction and operational phases of the Project. Key recommended EM&A requirements cover air quality, noise, water quality, waste management, ecology, fisheries and landscape and visual issues.

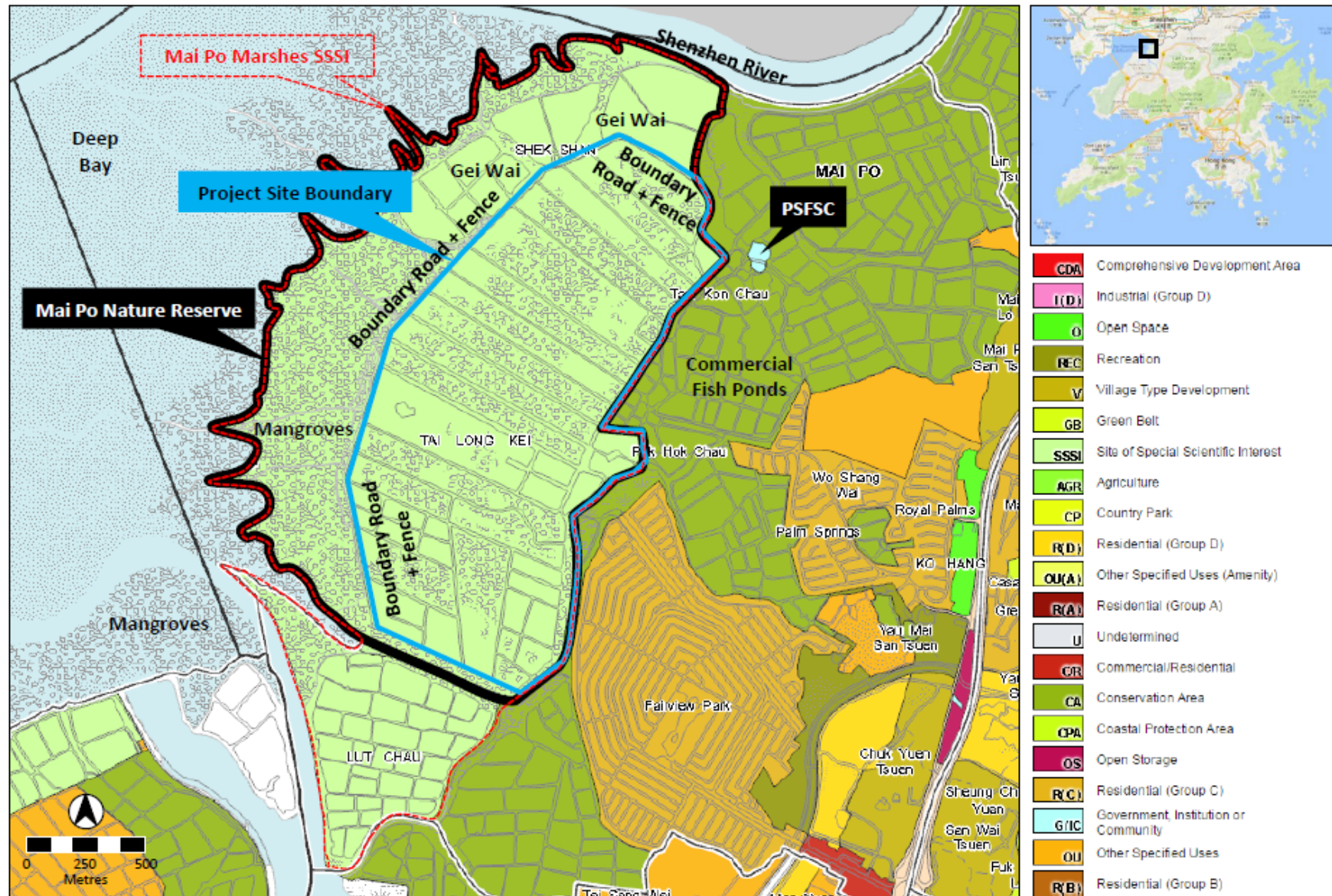
PUBLIC CONSULTATION

17. The Applicant has made the EIA report, EM&A Manual and Executive Summary available for public inspection under the EIAO from 19 November to 18 December 2021. No public comments were received during the public inspection period under the EIAO.

December 2021

Environmental Assessment Division

Environmental Protection Department



Project Title: Mai Po Nature Reserve Infrastructure Upgrade Project

Figure 1 – Location and layout of the Project
(based on Figure 1 of the Executive Summary of the EIA Report)

Application No.: EIA-274/2021





Project Title: Mai Po Nature Reserve Infrastructure Upgrade Project

Application No.:
EIA-274/2021



Figure 2 – Elements of the Project
(based on Figure 2 of the Executive Summary of the EIA Report)