環境影響評估**非技術摘要** Environmental Impact Assessment Non-Technical Summary

新界元朗米埔錦壆路以東丈量約份第104約多個地段和鄰近政府土地的 低層數和低密度住宅發展項目

Proposed Low-rise and Low-density Residential Development

at Various Lots and their Adjoining Government Land in D.D. 104, East of Kam Pok Road, Mai Po, Yuen Long, N.T.

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__零一六年八月 August 2016

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1.0 PURPOSE OF NON-TECHNICAL SUMMARY AND CONTENT



Figure 1.1: Proposed Development Blending in the Environment

This zone is intended primarily for improvement and upgrading of existing temporary structures within the rural areas through redevelopment of existing temporary structures into permanent buildings. It is also intended for low-rise, lowdensity residential developments...

Source: Approved Mai Po & Fairview Park OZP S/YL/-MP/6

Purpose

This Non-Technical Summary aims to explain in brief the result of the Environmental Impact Assessment ("EIA") for the proposed low-rise and low-density residential development at various lots and their adjoining government land in DD 104, East of Kam Pok Road, Mai Po, Yuen Long, New Territories (Subject Site). (Please refer to the EIA report for details of the assessment.)

Main objectives of the Project are:

- i. Fulfilling the EIAO requirements for proposed residential development within Deep Bay Buffer Zone 2 so as to ensure no significant adverse impact on the ecological, drainage, sewerage, traffic and environmental aspects of the Mai Po Marshes Nature Reserve and Inner Deep Bay area;
- ii. Following the basic principles of environmental protection to avoid, to minimize and to mitigate any environmental impact arising from the proposed scheme; and
- iii. To implement the Project in accordance with the environmental monitoring and audit requirements.

2.0 DEEP BAY BUFFER ZONE 2

Government has adopted Buffer Zone approach for protection of Inner Deep Bay area in terms of development control. The proposed residential development is located within Deep Bay Buffer Zone 2 (**Figure 2.1**) in which low-density residential development may be considered subject to no significant adverse impacts to the Mai Po Marshes Nature Reserve (MPMNR) and the Inner Deep Bay area.

The Subject Site, despite its Buffer Zone 2 designation, is surrounded by suburban residential development as well as abutting urban roads and is relatively remote from Deep Bay, about 1,200m away from MPMNR. (Figures 2.2)

Therefore the planning intention of prevailing statutory town plan has also set the scene as a suburban settlement area. (Figure 2.3)

Since the proposed residential development falls within Buffer Zone 2, the EIA shall be conducted to assess and mitigate possible adverse environmental impacts arising from the project. Through the EIA process, environmental impact could be either avoided or minimized and with the proposed mitigation measures, there is no significant adverse residual impact.

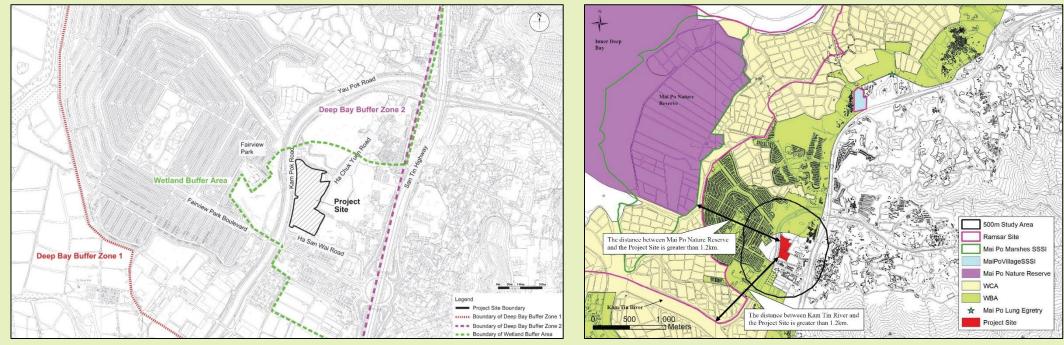


Figure 2.1: Subject Site located in Deep Bay Buffer Zone 2

Figure 2.2: Site Location and its Land Use Context

2.0 DEEP BAY BUFFER ZONE 2

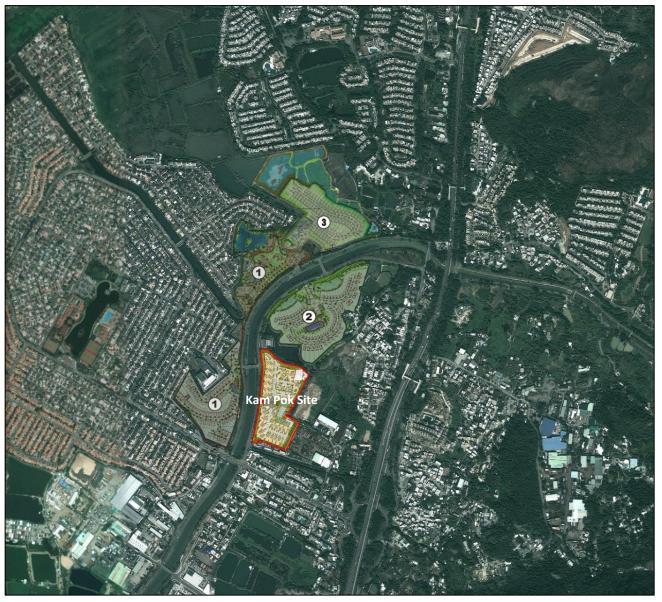


Figure 2.3: Site Location and Adjoining Compatible Residential Uses

- Proposed Residential cum Passive Recreational Development within "Recreation" Zone and "Residential (Group C)" Zone (The Rezoning Application Y/YL-MP/3 was agreed by TPB on 13.5.2016.)
- (2) Approved Planning Application for Proposed House Development, Minor Relaxation of Building Height Restriction and Filling and Excavation of Land (For Site Formation Only) - Case No. A/YL-MP/205
- (3) Comprehensive Development and Wetland Protection Near Yau Mei San Tsuen

3.0 CONSISTENT GOAL ON PLANNING INTENTION AND EIA'S REQUIREMENTS

Since 1994, town planning has utilized residential development as a driving force to phase out the incompatible land uses in Deep Bay Buffer Zone 2. (Figure 3.1) For this reason, the TPB has indeed approved with conditions a residential development scheme at this same location.

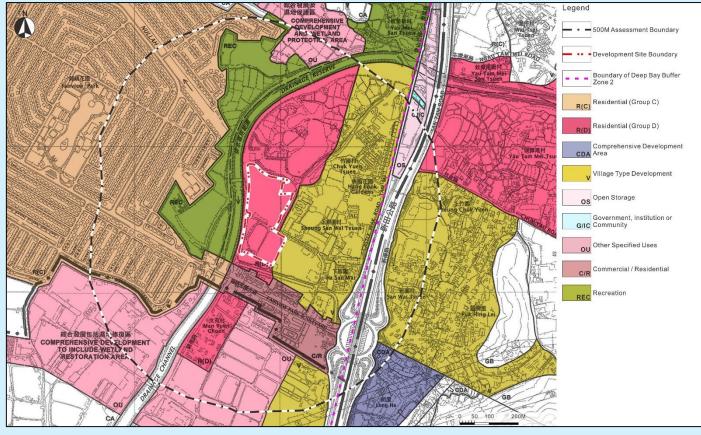


Figure 3.1: Residential Development in Deep Bay Buffer Zone 2

4.0 SELECTION OF APPROPRIATE DEVELOPMENT SCHEME

Under the EIAO process, two basic scenario, namely, 'with development' and 'no development' have to be assessed. Therefore, the EIA report will reveal the effect of the proposed development of subject site and its environmental impacts under the two basic scenario.

"No Development" Scenario (Existing Condition)

Under this scenario, most of the existing on-site land-use features, including the car-parking activities will likely be carried on. Also, the condition of existing abandoned pond, which is of low ecological value (also see Section 6.6), will definitely deteriorate further and may result in creating adverse environmental and hygiene problems on the local area.

"With Development" Scenario

Under this scenario, it takes into account of relevant government department's technical requirements, 3 development options have been assessed and compared. (Figures 4.1-4.3) The evaluation bases on a continuous improvement process and finally arriving at the recommended option.

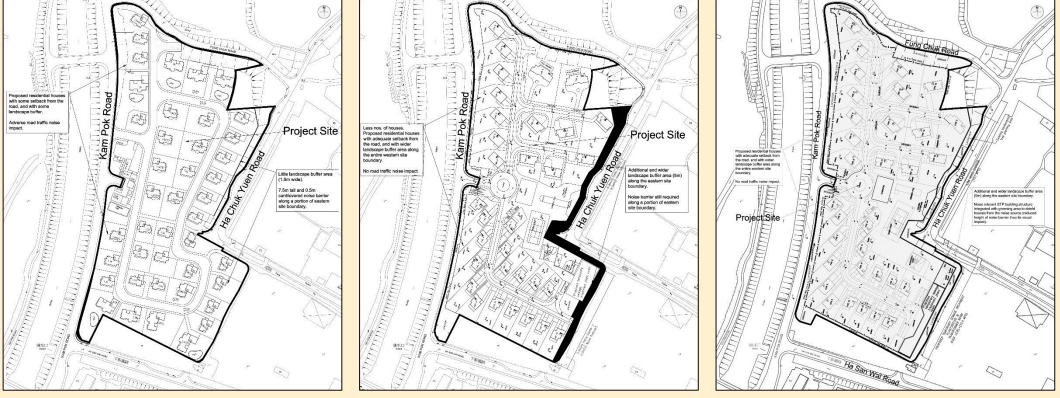


Figure 4.1: Alternative Layout Option A

Figure 4.2: Alternative Layout Option B

Figure 4.3: Recommended Layout Option

5.0 CONSIDERATIONS OF PROPOSED DEVELOPMENT SCHEME

To establish a recommended development with the basic principle of avoidance, minimization and mitigation of environmental impact, the special considerations are as follows: (Figure 5.1)

- i. To avoid tree felling along perimeter, a 5-8m landscape buffer is provided in the perimeter of the Project Site except tree planting along the southern boundary;
- ii. The sewerage treatment plant along the southeast side is set as a noise mitigation measures to mitigate the impact from adjoining industrial operation;
- iii. To minimize the traffic noise impact, further setback of the buildings from Kam Pok Road by more than 8m.
- iv. Adopting the latest sewage treatment technology to ensure that the quality of surrounding water source will not be affected; and
- v. Mitigation measures will be implemented and monitored to ensure no significant adverse residual impacts.



Figure 5.1: Design Merits of the Proposed Development Scheme

Designated Project under the EIAO

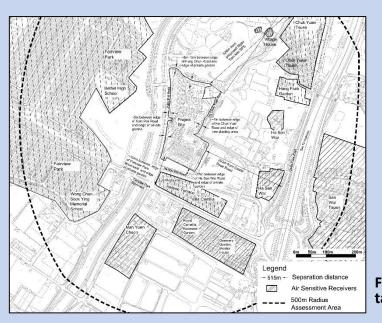
The Environmental Impact Assessment Ordinance (EIAO) requires residential or recreational developments within Deep Bay Buffer Zones 1 or 2 to carry out environmental impact assessment (EIA). The project is a residential development within Deep Bay Buffer Zone 2 and is subject to the provisions of the EIAO (An EIA report has been prepared). The potential environmental issues associated with the construction and operation of the Project have been assessed and addressed. Key findings are summarised in the following sections.

6.1 Air Quality

The nearby community will be concerned about air quality mainly during construction phase of the Project. (Figure 6.1) Fugitive dust emissions are envisaged from site formation works and various mitigation measures will be implemented to mitigate dust levels to meet the latest air quality objectives (AQOs)/ Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM) criteria. During the operational phase, appropriate mitigation measures will be proposed so as to avoid adverse air pollution or odour nuisance from vehicular emissions and interim sewage treatment plant.

6.2 Noise

To ensure compliance with the relevant construction noise criteria, even including the nearby projects being implemented concurrently, various mitigation measures have been proposed. (Figure 6.2) For the operational phase, sufficient setback and special layout design to fully comply with the relevant noise criteria of day-time and night-time respectively.



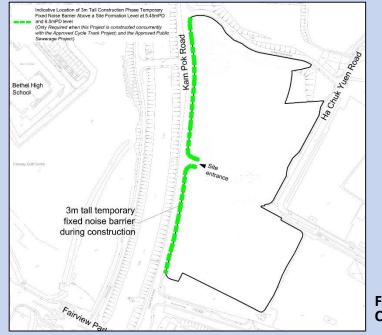


Figure 6.1: Location of Air Sensitive Receivers taken into Consideration during EIA Process



6.3 Water Quality

Prior to the commencement of the construction works, a temporary drainage system (with sand/silt removal facilities) will be constructed. The surface runoff will be properly treated prior to the discharge into Ngau Tam Mei Drainage Channel. The discharge will comply with the requirements in the discharge license under the "Water Pollution Control Ordinance" ("WPCO"). Before the operational phase, regular water quality monitoring and site inspections will be undertaken routinely in order to ensure that the discharge will comply with the terms and conditions. (Figure 6.3)

6.4 Sewerage and Sewage Treatment

An on-site interim sewage treatment plant (STP) will be provided to handle the sewage generated from the development until the planned public sewer is available for connection and discharge. (Figure 6.4) The interim Sewage Treatment Plant will adopt advanced treatment technologies capable of removing various pollutants in water compliance with the WPCO discharge license as well as meeting no net increase of pollution loads to Deep Bay as per Town Planning Board Guidelines. Ultimately, the sewage from the proposed development will be connected to the public sewer, no adverse environmental impacts arising from both interim and long-term sewerage scheme are anticipated.

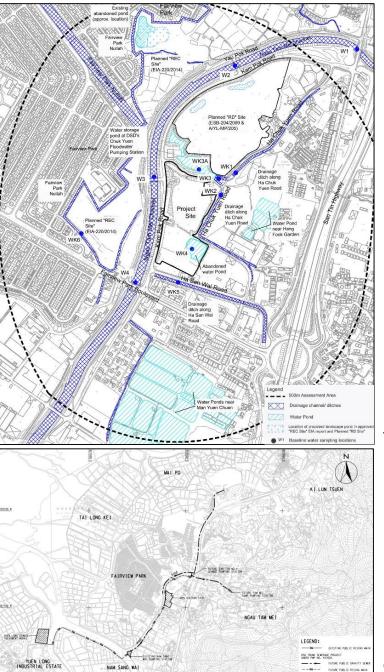


Figure 6.3: Location of Water Quality Surveys taken into Consideration during EIA Process

Figure 6.4: Government Proposed Sewerage Connection

6.5 Waste Management

The waste that would be generated during the construction phase of the Project will be treated through recovery, re-use or recycling. Environmental mitigation measures and good practices on site have been recommended in the EIA report in order to mitigate the environmental impacts. During the operational phase, waste generated will be collected and disposed of properly by a licensed contractor.

6.6 Ecology

The Project Area mainly comprises of urbanised/ disturbed area, and with small area of plantation and an abandoned pond. Habitats within the Project Area only support low diversity of plant and most of which are exotic species. The faunal diversity was also low. The existing ecological values of these habitats are ranked as "very low".

Within the 500m assessment area, apart from the Ngau Tam Mei Drainage Channel, all habitats were ranked as ecological values of "very low"/"low"/"low to moderate". (Figure 6.5)

The abandoned pond was not considered an important habitat of water birds as it is isolated from other wetland ecosystems in Deep Bay and is subjected to long-term disturbance from the adjacent car park. Loss of habitats will only result in "insignificant" ecological impact. No mitigation measure for loss of habitats is therefore required.

To minimize impacts on foraging birds along Ngau Tam Mei Drainage Channel, a number of mitigation measures were recommended in the assessment report, including uses of quiet construction method and machinery, erection of site hoardings outside wintering season of waterbirds between October and March, and provision of mobile noise barriers adjacent to construction plants.

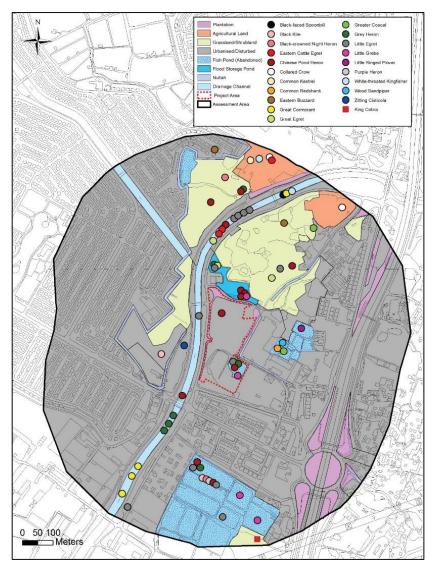


Figure 6.5: Habitats and Locations of Species of Conservation Importance

6.7 Fisheries

No active fish ponds would be affected by the Project.

6.8 Cultural Heritage

A Cultural Heritage Impact Assessment has been carried out for the Project. There is neither declared monument nor graded or proposed graded historic building identified within or adjacent to the Project Site. The proposed development will not encroach upon any known sites of archaeological interest or areas of archaeological interest, and will not have any direct or indirect impacts on any declared monuments, graded or proposed graded historic buildings, cultural landscape features, graves or historical village during construction and operational phases. No specific EM&A requirement is considered necessary.

6.9 Landscape and Visual

When compared with the existing car park, the proposed development would benefit the landscape and visual amenity of the area. During the construction phase, visual mitigation measures will be fully established, including the consideration of the size of works areas. There are innovative and responsive building disposition and design to integrate with the proposed noise barrier and temporary sewage treatment plant. Also, the use of vertical greening measures, creation of landscape berm, (**Figure 6.6**) and the restoration of the disturbed areas with roadside and amenity planting will be implemented. (**Figure 6.7**)



Figure 6.6: Vertical Greening & Landscape Berm



Figure 6.7: Restoration of perimeter planting

7.0 THE IMPORTANCE OF ENVIRONMENTAL MONITORING AND AUDIT

The success of the EIA process depends on An Environmental Team (ET) comprising suitably the effectiveness of the environmental monitoring and audit (EM&A) programme. An EM&Ă mechanism is to ensure compliance of the recommended mitigation measures with relevant statutory requirements and standards and effectiveness of their implementation.

qualified staff and specialists will be appointed to carry out the recommended EM&A works while an Independent Environmental Checker (IEC) will audit the EM&A results and advise the Engineer Representative (ER) on environmental issues related to the Project. (Figure 7.1)

Details of the EM&A programme, mitigation measures required during construction and operational phases, and requirements have been provided in the EM&A Manual of the EIA report.

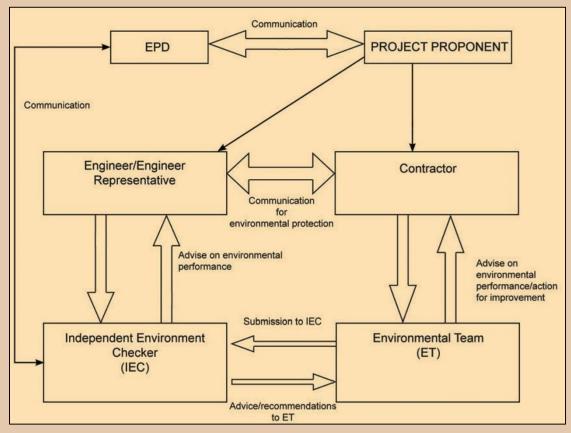


Figure 7.1: EM&A Monitoring Diagram

8.0 OVERVIEW

This proposed development meets the EIAO requirements for proposed residential development within Deep Bay Buffer Zone 2 and also is in line with the planning intention under Town Planning Ordinance. Taken into account of the basic principles of avoidance, minimization and mitigation of environmental impacts, the proposed residential development would not result in any significant adverse residual impacts.