

High Speed Craft Consultative Committee
Local Vessels Advisory Committee
Pilotage Advisory Committee¹
Port Operations Committee

Detailed Design of the Proposed Marine Park
for the Integrated Waste Management Facilities Phase 1

1. Purpose

1.1 The purpose of this paper is to brief and seek members' views on the Environmental Protection Department (EPD)'s proposal on detailed design of the proposed marine park for the Integrated Waste Management Facilities (IWMF) Phase 1.

2. Background

2.1 The proposed IWMF Marine Park is a mitigation measure for the potential permanent loss of important habitat for Finless Porpoise (FP) as a result of the proposed reclamation works and breakwater construction for the IWMF Phase 1 project (the Project), as required in the Environmental Impact Assessment Report and the condition 2.8 under the Environmental Permit (EP-429/2012) issued for the Project. The EP has stipulated that the proposed marine park shall be in the waters between Soko Islands and Shek Kwu Chau with an area of at least 700 hectares.

2.2 EPD commenced a detailed study in June 2015 to investigate the technical and practical aspects of the proposed marine park in the waters between Soko Islands and Shek Kwu Chau (i.e. the Marine Park Study Area (MPSA)) and to prepare for the submission of its detailed design.

2.3 The draft boundary of the proposed marine park was derived in April 2016 covering about 797 hectares of waters based on considerations of the important habitats for FP in the MPSA (**Figure 1**), fisheries resources (**Figure 2**), compatibility with existing, planned and potential marine facilities and future usage (**Figure 3**), size requirement and the ease of management.

2.4 A Marine Traffic Impact Assessment (MTIA) was carried out by the Consultant in September 2015 to assess the potential marine traffic impacts and

¹ Same content as LVAC Paper No. 13/2017

navigational risks imposed by the proposed marine park, and to propose mitigation measures addressing any identified impacts and risks. The MTIA included review of marine facilities, infrastructures and metocean conditions within and in the vicinity of the MPSA, visual surveys and analysis of automatic identification system (AIS) and radar data. The visual surveys were conducted during October 8 to November 9 2015 at Shek Kwu Chau to capture marine traffic using time lapse video recording during daylight hours (**Figure 4**). In addition, analysis of AIS and radar data of October 2015 were conducted with data provided by Marine Department to estimate vessel traffic density in the MPSA.

2.5 The findings and recommendations of the MTIA have already been considered when deriving the draft boundary of the proposed marine park by leaving a buffer zone of at least 603 m in width between the draft boundary and the nearby recommended Traffic Separation Schemes at South of Lantau (SLTSS) / Hong Kong Special Administrative Region (HKSAR) boundary to allow for safe navigation and to minimise potential impacts on marine users.

3. Stakeholder Consultation

3.1 The waters between Shek Kwu Chau and Soko Islands are used by different stakeholders, in particular marine operators, fishermen and villagers in outlying islands in the southern waters of Hong Kong. It is thus important to address and balance the concerns of these stakeholders for the successful implementation of the proposed marine park. The first round stakeholder consultation on the draft boundary and management plan was conducted during May to November 2016. The stakeholders involved in the stakeholder consultation are listed in **Figure 5**. In general, stakeholders had no major comments on the boundary, location and size of the proposed marine park.

3.2 On 21 September 2016, the proposed IWMF Marine Park was presented to members of four Marine Department advisory, statutory and consultative committees, namely High Speed Craft Consultative Committee, Local Vessels Advisory Committee, Pilotage Advisory Committee and Port Operations Committee. Members discussed on the proposal and expressed views on the proposed marine park. Members' main comments are summarized as follows:

- Members expressed their concerns about marine safety as the proposed marine park is close to the SLTSS; and

- Members asked the Consultant to provide more details on methodologies of the MTIA.

3.3 The comments received during the first round stakeholder consultation have been taken into account in revising the interim design of the proposed marine park. The second round stakeholder consultation on the detailed marine park design commenced in April 2017 and will continue till August 2017. Comments received during the second round stakeholder consultation will be considered in revising the detailed marine park design.

4. Detailed Marine Park Design

4.1 After consideration of the results of the first round of stakeholder consultation, the Porpoise Habitat Index (PHI) of finless porpoise, the marine traffic impact assessment results and the fisheries resources survey, the proposed boundary (**Figure 6**) of the marine park remains unchanged.

4.2 The proposed boundary adequately covers important habitats for FP and has also avoided the identified recommended SLTSS and areas with high density of marine traffic activities and will not encroach into other existing, planned and potential uses such as the South of Cheung Chau Sediment Disposal Area. There is no zoning in the proposed marine park.

5. Proposed Management Plan

5.1 The proposed marine park will be managed and controlled in a similar manner as the existing marine parks in accordance with the *Marine Parks Ordinance* and the *Marine Parks and Marine Reserves Regulation* for conservation, recreation, education and scientific research purposes. Under the *Marine Parks Ordinance*, all vessels operating within the proposed marine park will be required to adhere to a maximum speed limit of 10 knots.

5.2 The Agriculture, Fisheries and Conservation Department (AFCD) would be the key government department for the operation, management and law enforcement within the proposed marine park. An enforcement team will be set up for the enforcement of regulations within the proposed marine park. Boundary buoys are essential to be installed for clear indication of the area of the proposed marine park for the purposes of management and enforcement. The installation of boundary buoys at suitable locations would be subject to

agreement of the Marine Department from marine safety point of view. The locations of the proposed boundary buoys are shown in **Figure 7**. These buoys are considered acceptable from a marine safety perspective.

6. Proposed Fisheries Enhancement Measures

6.1 In order to enhance fisheries resources in the South Lantau waters, deployment of artificial reefs (ARs) and release of fish fry are recommended as additional enhancement measures. EPD will deploy ARs in the core area of the adjacent proposed Soko Islands Marine Park (**Figure 8**). Navigation safety has been considered when identifying the deployment location and design for ARs. A minimum water depth of 4.5 m below Chart Datum will be maintained over the ARs to ensure safe navigation of marine vessels.

7. Potential Implication on Marine Usages

7.1 The waters between Soko Islands and Shek Kwu Chau are currently used by the public and the Government. However, the MTIA has identified no engagement of busy marine traffic within the waters of the proposed marine park (**Figure 4**). Potential impacts will be mainly on small craft and fast launches at speed exceeding 10 knots passing through the proposed marine park area to and from Soko Islands, which have alternative route options. A buffer zone of at least 603 m in width between the boundary of the proposed marine park and the nearby recommended SLTSS/ HKSAR boundary is also expected to be sufficient in accommodating the nearby marine traffic.

7.2 According to the *Marine Parks and Marine Reserves Regulation (Cap 476A)*, vessels speed should not exceed 10 knots within marine parks. Apart from the 10-knot speed limit, there is no special restriction or regulation on the entry or passing through the proposed marine park for marine traffic. Whilst, no person shall moor or anchor a vessel in a marine park except under and in accordance with a permit or at mooring buoys or mooring sites provided by AFCD.

8. Way Forward

8.1 Subject to the views and comments recorded in this meeting as well as the remaining consultation with other stakeholders in the second round consultation, the detailed design of the proposed marine park will be reviewed and refined.

Subsequently, the detailed design of the proposed marine park would be reported to the Country and Marine Parks Board and its endorsement will be sought before proceeding with the statutory procedure under the *Marine Parks Ordinance* for designating the proposed marine park. It is expected that designation of the proposed marine park will be in effect before the completion of construction works of the IWMF Phase 1 project.

9. Advice Sought

9.1 Members are invited to comment on the proposal set out in this paper.

9.2 In case there is any enquiry on details of the proposal, please contact Ms. YUNG Ting Fong, Joanne of EPD by phone at 3529 2907, email tfyung@epd.gov.hk or fax at 3529 2991.

Environmental Protection Department

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Figure 1 Habitat Ratings of Finless Porpoises in the South Lantau Waters between 2005 and 2014

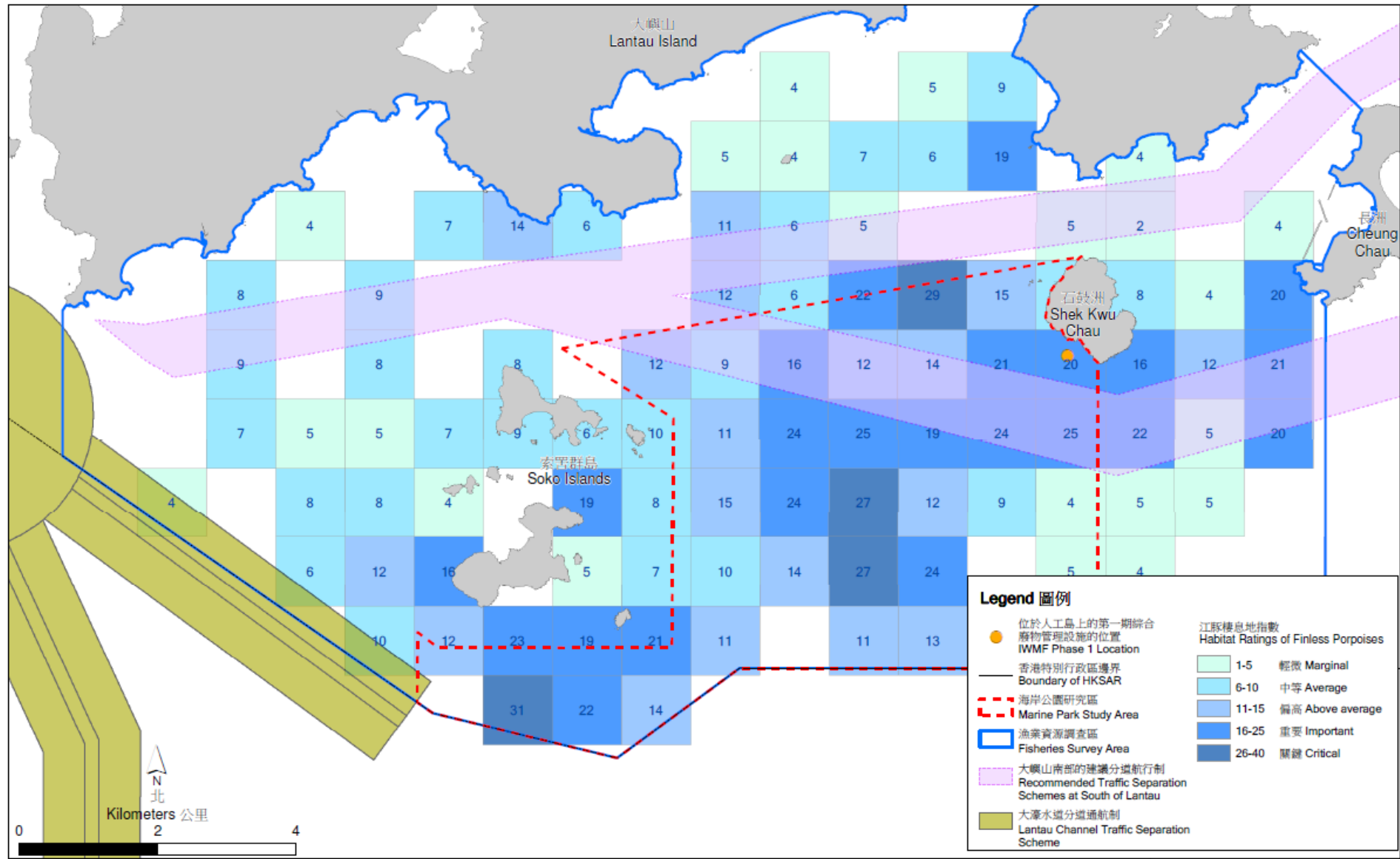


Figure 2 Distribution of Fisheries Production (Adult & Fish Fry) in Hong Kong based on AFCD's Port Survey 2006

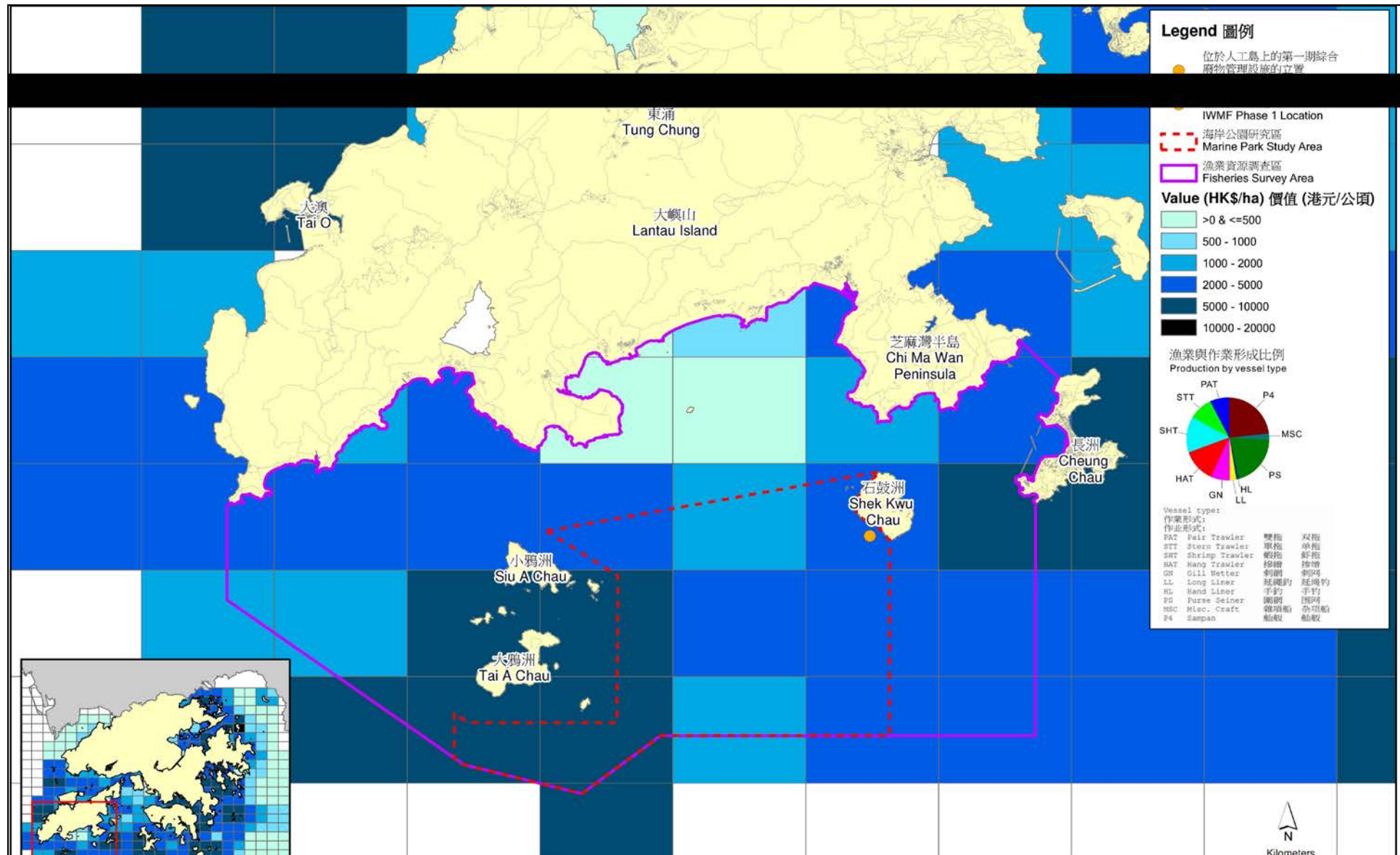


Figure 3 Major Existing and Planned Marine Facilities and Development Projects

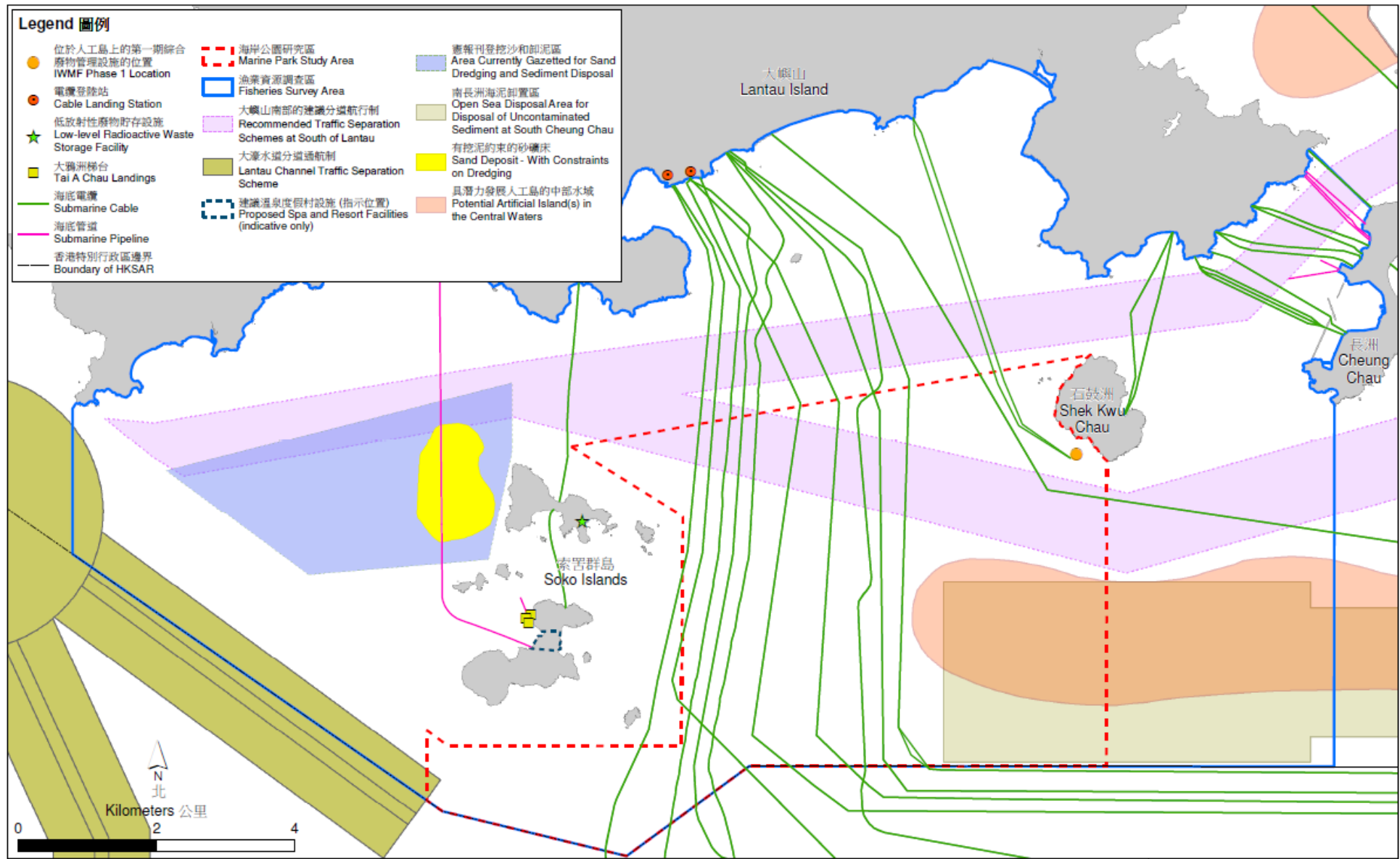


Figure 4 Daily Transits of All Classes Vessels based on Marine Department's AIS and Radar data in October 2015

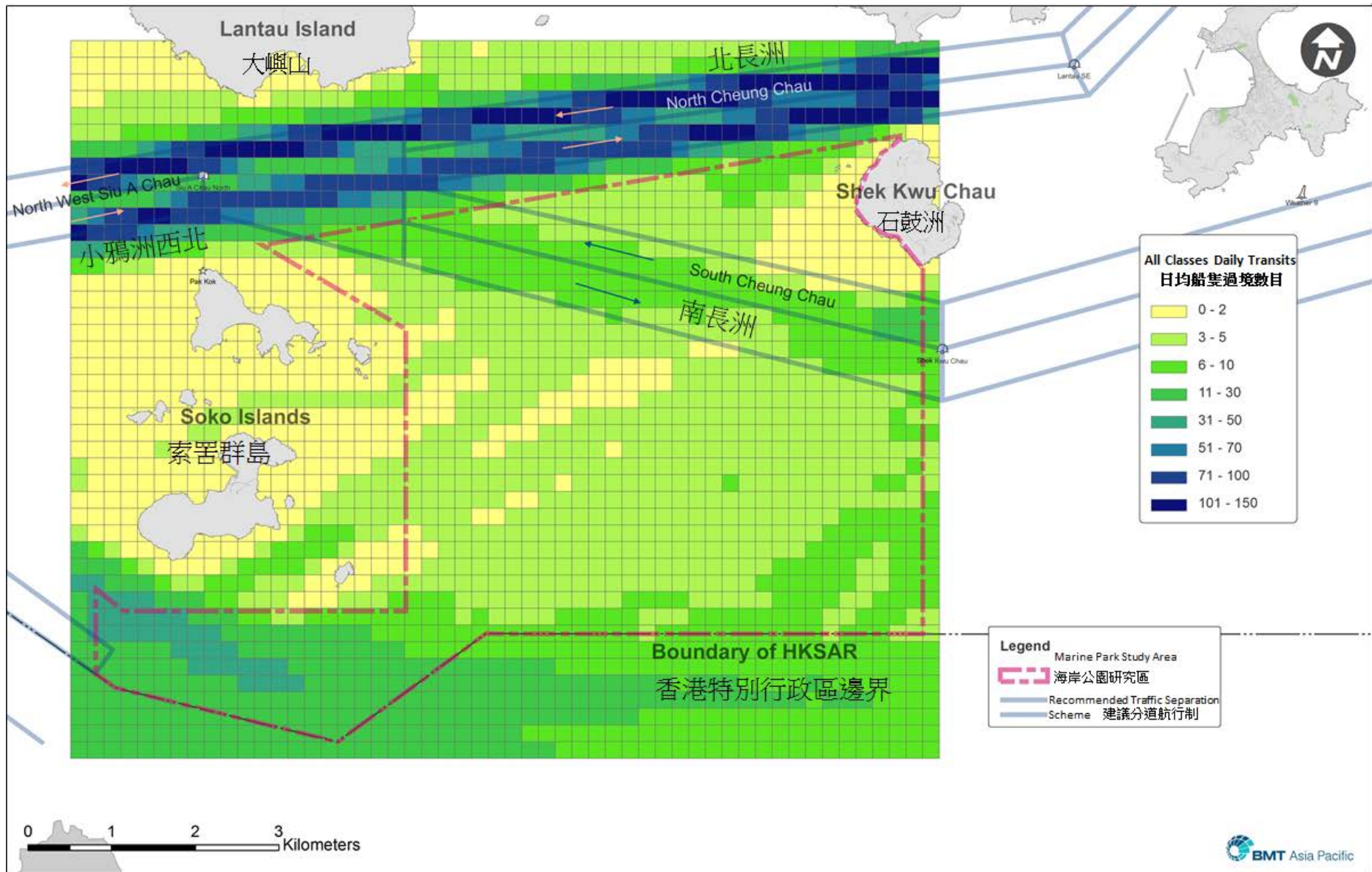


Figure 5 Stakeholders Involved in the Stakeholder Consultation



Figure 6 Proposed Boundary of the Proposed IWMF Marine Park

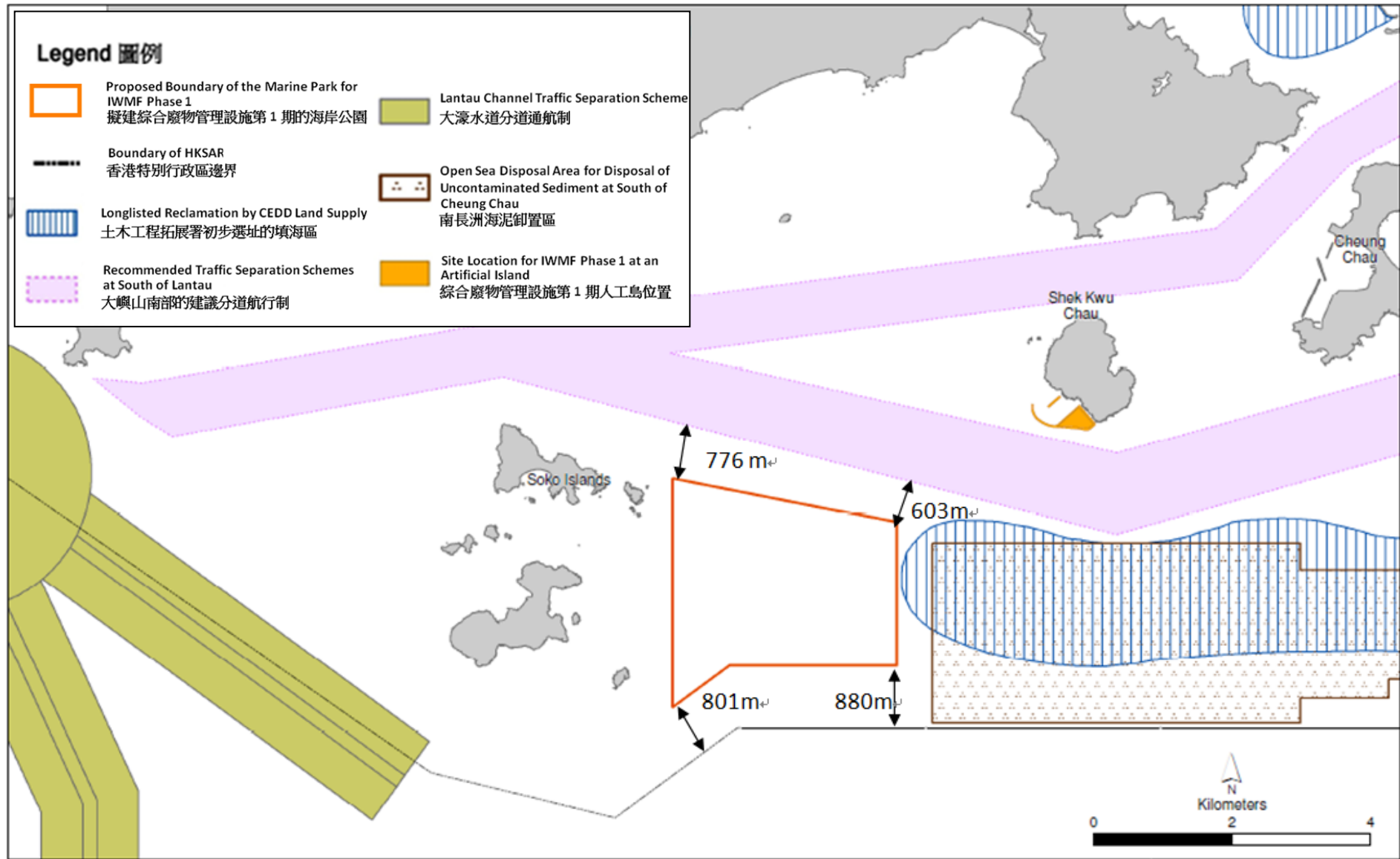


Figure 7 Proposed Boundary Buoys of the Proposed IWWMF Marine Park

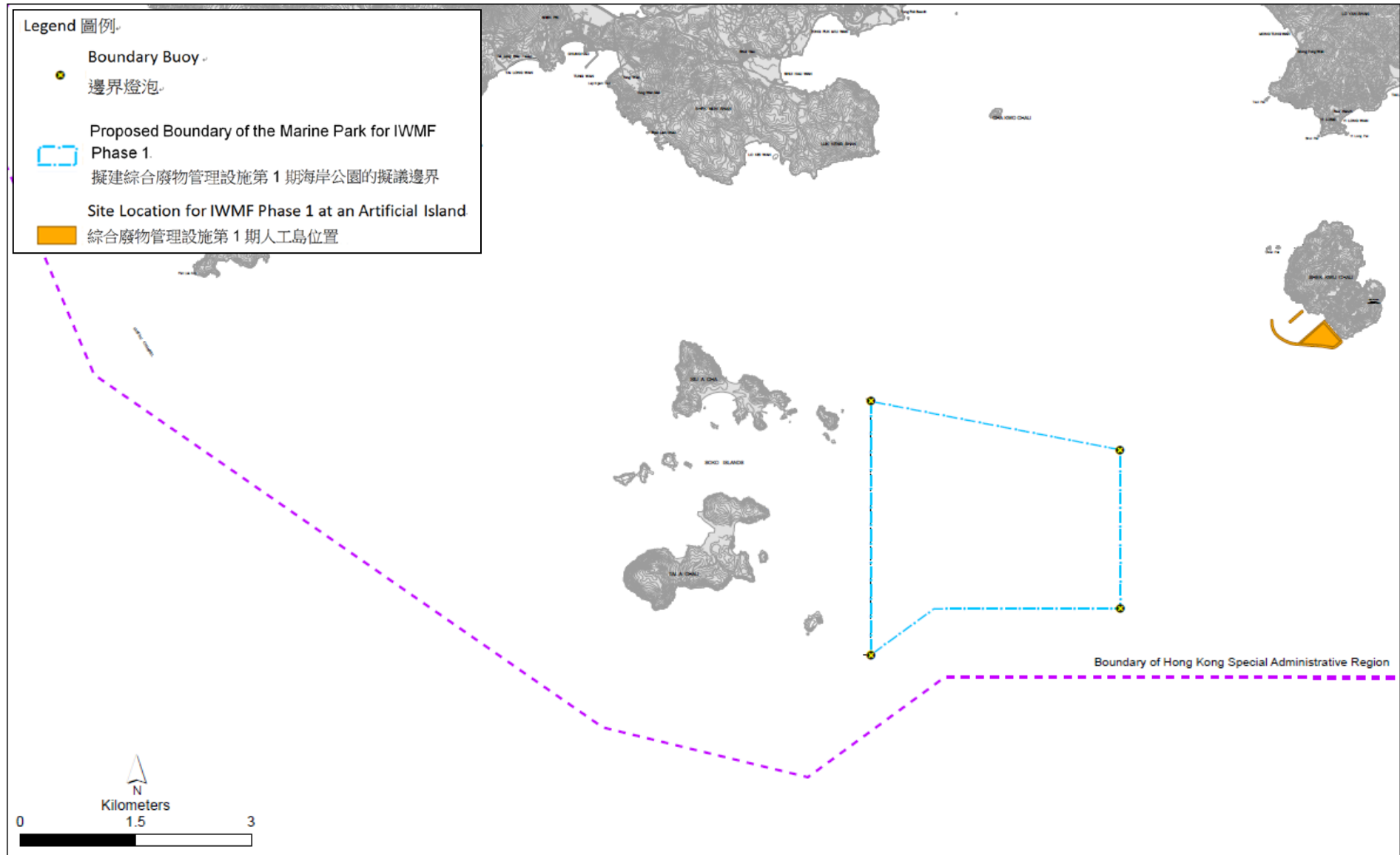


Figure 8 Proposed Artificial Reef Deployment Area

