

## 1. INTRODUCTION

### 1.1 Background and History of the Project

The Civil Engineering Department (CED) has commissioned **Scott Wilson (Hong Kong) Limited** in association with Ecosystems Ltd and Dredging Research Limited to undertake Environmental and Drainage Impact Assessments for the Tai O Sheltered Boat Anchorage Study (Agreement No CE 41/98).

Tai O was formerly one of the largest fishing villages in Hong Kong and was a historical base for fishing boats in the western approaches of Lantau Island and the Pearl River estuary. However, the importance of the fishing industry in Tai O has declined in recent decades, which has resulted in a degradation of its population base. The formation of the Tai O sheltered boat anchorage is fully supported by the Islands Provisional District Board members and is widely seen as a means of reviving the town's local fishing industry and contributing to the revitalisation of Tai O. The Tai O sheltered boat anchorage will also assist in meeting the shortfall of available typhoon shelter space in Hong Kong.

The Tai O sheltered boat anchorage scheme comprises an 8 hectare (ha) anchorage for 220 vessels and a 1 hectare (ha) reclamation for boat maintenance facilities, parking area, bus terminus and a loading/unloading bay. The scheme has been pending implementation for several years, however, Territory boundary issues have resulted in a project delay. Such boundary issues were resolved in July 1997 upon signing of the Memorandum of Understanding on setting the revised boundary between the Special Administrative Region (SAR) and Guangdong. The anchorage scheme is now scheduled for implementation in July 2001 and completion in December 2003. In addition, it has been decided to combine anchorage development with a mangrove restoration scheme. The construction of Chek Lap Kok airport and associated port and airport developments on the northern shore of Lantau may result in the loss of 7ha of mangroves. As part of the New Airport Master Plan Study (Greiner Maunsell 1991), recommendations were made to provide a new mangrove habitat - the area highlighted and subsequently investigated by the Agriculture and Fisheries Department (AFD), comprises the Tai O salt pans. The integration of these two schemes has the potential to generate significant economic, social and environmental benefits to the Tai O community.

### 1.2 Study Objectives

The Project Profile prepared by CED and subsequently assessed by the Environmental Protection Department (EPD), indicated that the Study is a Designated Project as defined by the Environmental Impact Assessment (EIA) Ordinance and thus an EIA is required. In undertaking the EIA, the following key components need to be undertaken:

- construction noise assessment;
- water quality impact assessment;
- terrestrial/marine ecology impact assessment;
- fisheries impact assessment; and

- historical, archaeological and cultural heritage impact assessment.

The key objectives of the EIA are detailed below. In addition, due to the historic problems associated with flooding in the Tai O area, a Drainage Impact Assessment (DIA) has also been undertaken - the drainage aspects of this Assignment have been submitted in the separate DIA Report (Scott Wilson 1999).

### 1.2.1 EIA Objectives

A main objective of this Assignment is to determine the potential environment impacts associated with the construction and operation of the Tai O sheltered boat anchorage. In order to achieve this, the following EIA objectives will be met:

- 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 upon the Project, including both the natural and man-made environment;
- to identify and quantify emission sources and determine the significance of impacts on sensitive receivers and potential affected uses;
- to identify and quantify and potential ecological and fishery impacts associated with the Project;
- to identify and assess the potential impacts on historical, archaeological and cultural resources associated with the Project;
- to identify, predict and evaluate the residual (i.e. after practicable mitigation) environmental impacts and cumulative effects expected to arise during the construction and operation phases of the proposed Project in relation to sensitive receivers and potential affected uses;
- 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 impacts and reduce them to acceptable levels;
- to design and specify the environmental monitoring and audit (EM&A) requirements (including fisheries monitoring and audit programme);
- to assess the adequacy of the existing and proposed future sewerage infrastructure to receive wastewater discharges;
- to identify any additional studies necessary to fulfil the objectives of the EIA study;
- assess the potential benefits of the Project to the environment through the mangrove restoration;
- to assess the positive impacts of the breakwater to the marine ecosystem by providing a hard substrate habitat; and

- to examine and recommend an appropriate method of clearance of littoral refuse within the proposed sheltered boat anchorage.

### 1.3 Report Objectives and Content

This Final Assessment Report (FAR) presents the results obtained from the assessment and evaluation of the environmental impacts that may arise during the construction and operation of the sheltered boat anchorage and mangrove habitat creation development. Following impact prediction, the requirement for environmental remedial measures to address any unacceptable environmental impacts are presented. The FAR also highlights where environmental monitoring and audit (EM&A) programmes are considered to be required during anchorage construction and operation. Specific requirements for EM&A are presented in a stand alone EM&A Manual.

This EIA FAR includes the following key components:

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|------------|---|---|
| Section 2  | - | Tai O development and anchorage design/construction                         |
| Section 3  | - | Construction noise impact assessment  |
| Section 4  | - | Sediment contamination and disposal   |
| Section 5  | - | Water quality impact assessment   |
| Section 6  | - | Terrestrial and marine ecological impact assessment                         |
| Section 7  | - | Fisheries impact assessment   |
| Section 8  | - | Cultural heritage impact assessment   |
| Section 9  | - | Requirements for waste collection during sheltered boat anchorage operation |
| Section 10 | - | Summary and conclusions   |