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1. BASIC INFORMATION

1.1 PROJECT TITLE

Proposed pontoon system at Royal Hong Kong Yacht Club at Shelter Cove Lot No. 341 DD212 Sai Kung.

1.2 PURPOSE AND NATURE OF PROJECT

The purpose of the Project is to construct a fixed pontoon system at the Royal Hong Kong Yacht Club (RHKYC), Shelter Cove Lot No. 341 DD212 Sai Kung. Figure 1 shows the site location and surrounding area.

In response to increasing demand for rental moorings at the Shelter Cove site, the RHKYC has proposed replacing existing swing moorings with a fixed pontoon system. Currently there is a waiting list of members wishing to rent moorings. It should be noted that the RHKYC only accepts applications from members and therefore, the actual demand for moorings is likely to be significantly greater than the current waiting list suggests.

The proposed pontoon design will provide a total of 44 berths of varying lengths giving greater flexibility in the size of boat which can be accommodated and improved utilization of space. The proposed design effectively enables more boats to be housed in the same space. The removal of some of the existing swing moorings will in turn result in more space for recreational water sports within Port Shelter. Figure 2 shows the location of the proposed pontoon system.

It is noted from the draft Hebe Haven OZP (S/SK—HH/1) that it is the general planning intention in the area “to promote marine-related recreational uses along the coastal front of Hebe Haven”.

1.3 NAME OF PROJECT PROPONENT

Name: Royal Hong Kong Yacht Club

Address: Kellet Island, Causeway Bay, Hong Kong

1.4 LOCATION AND SCALE OF PROJECT

The Royal Hong Kong Yacht Club is located in the north east of Hebe Haven (Pak Sha Wan); an inlet in Port Shelter. The existing RHKYC facility comprises a small clubhouse, two small amenities buildings, car parking, boat hard standings and three pontoons - one attached to the seawall which is used for gaining access to and from boats during sailing events and two anchored offshore.

A 161.4m long pontoon is planned to provide a total of 44 berths. The number and size of the berths is presented in Table 1.1.

Table 1.1 Berth Schedule

Berth Size (m)	Number
12	6
14	14
17	13
20	8
23	3
Total	44

The marina system will be modular and able to be broken down again into its individual components or partially dismantled and removed from the site. The proposed pontoon system will be secured to the seabed by 39 piles. A detailed pile schedule is shown in Table 1.2. The project will also involve the removal and disposal of two of the existing pontoon structures and a number of private fixed buoy moorings.

Table 1.2 Pile Schedule

Pile Type	Specification	Minimum Embedment (m)	Quantity
A	457 Dia. X 12.7 Thick wall Grade 350 Steel Pile	9.2	12
B	457 Dia. X 12.7 Thick wall Grade 350 Steel Pile	8.7	6
C	457 Dia. X 9.5 Thick wall Grade 350 Steel Pile	7.8	6
D	406 Dia. X 12.7 Thick wall Grade 350 Steel Pile	8.0	4
E	406 Dia. X 12.7 Thick wall Grade 350 Steel Pile	6.0	1
F	406 Dia. X 9.5 Thick wall Grade 350 Steel Pile	7.0	7
G	457 Dia. X 9.5 Thick wall Grade 350 Steel Pile	6.2	3

1.5 NUMBER AND TYPES OF DESIGNATED PROJECTS TO BE COVERED

The proposed works comprise one Designated Project under Schedule 2; Part 1 O.2 of the EIA Ordinance; “A marina designed to provide moorings for not less than 30 vessels used primarily for pleasure or recreation”.

1.6 CONSULTANT

Name: Hyder Consulting Limited, Environmental Division.

Address: 3/F, Somerset House, Taikoo Place, 979 King's Road, Quarry Bay, Hong Kong.

1.7 NAME AND TELEPHONE NUMBER OF CONTACT PERSON

2. OUTLINE OF PLANNING AND IMPLEMENTATION PROGRAMME

The proposed extension to the pontoon system has been planned by the Royal Hong Kong Yacht Club in association with marina development specialists. The piling works would be carried out by a contractor according to the plans of the marina development consultant, and Hyder will provide environmental consultancy services. All design works and planning are completed and the project is ready to commence pending issue of an Environmental Permit by Government.

It is anticipated that prior to commencement of the piling works the two existing floating structures licensed as Class III vessels, namely 30036K and 30037K, and a number of existing private moorings would be removed. It is expected that the works would take no more than 12 weeks in total.

3. POSSIBLE IMPACTS ON THE ENVIRONMENT

The installation of the pontoon system has the potential to cause a range of short term environmental impacts, however no dredging is proposed thus precluding significant water quality, marine ecology, noise and waste management impacts.

No water intakes have been identified within the vicinity of the works area.

There is no history of contaminant (including nutrient) discharges into the north-east of Hebe Haven. No anti-fouling chemicals have been applied to vessels at the RHKYC. According to EPD Technical Circular No. 1-1-92 TC, the sediment around Hebe Haven Yacht Club to the south-west is classed as 'uncontaminated' (Class A).

3.1 WATER QUALITY

The piling work may potentially lead to a localized increase in suspended solids concentrations and turbidity which may lead to an aesthetic impact from the perspective of amenity users. Associated with the elevated concentration of suspended sediment there may also be decrease in the dissolved oxygen content of the water. The sediment had been identified as being anoxic at shallow depths, and consequently oxidation of disturbed sediment may have a localized impact on free oxygen availability.

3.2 MARINE ECOLOGY

There are no capture fisheries (near-shore breeding / nursery areas) in the north or the east of Hebe Haven, although the Sai Kung Hoi mangal at the north-west of the Haven may support a natural fishery and there is a Fish Culture Zone at Ma Nam Wat, south of the Pak Sha Wan peninsula.

The potential impacts of high concentrations of suspended solids on fish include gill abrasion which may lead to loss of protective mucus coatings and the onset of disease. Indirect impacts may arise from reduced visibility affecting feeding activities and reproduction, and from sediment deposition affecting habitats for fish (Impacts on juveniles will typically be greater than for adults). However, the absence of dredging in this Project will preclude any significant impacts.

Piling works also have the potential to affect sedentary benthos in the immediate vicinity, however it is considered unlikely that sufficient quantities of sediment would be disturbed to affect species further afield. Planktonic communities which form the basis of the marine food chain may also suffer localized disturbance from piling activities.

3.3 NOISE

Piling work will be undertaken prior to positioning and securing the pontoon. Thirty nine piles will be required to be secured into the seabed. This will generate noise which may adversely impact on the surrounding land. However as it is anticipated that the works will take only 12 weeks in total, any noise nuisance from the piling works will be short term.

3.4 WASTE

During the dismantling and removal of the existing moorings and construction of the new pontoon system construction waste will be generated. The non contaminated nature and low quantity of the waste which will be generated is not expected to pose a significant environmental impact.

4. MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT

The location of the proposed works is on the west coast of Pak Sha Wan peninsula at the northern end of Hebe Haven, Sai Kung. The RHKYC is situated adjacent to the Hong Kong Marina at the southern edge of Tsui Hang Hau hamlet. This hamlet is restricted to the flat and leveled portions of the steep slope around the north and east of Hebe Haven.

There are three streams which enter this area of Hebe Haven - the main streams situated to the north-east and the north-west of the inlet, and a concrete lined nullah which passes underneath a concrete-decked car-parking area outside the Hong Kong Marina offices.

The natural shoreline around the north of Hebe Haven is restricted to a few metres due to a concrete seawall which runs along its length. The shore is generally

comprised of sharp stones and coarse sand and consequently supports little in the way of biota. The predominant fauna are amphipods, and there are patches of *Kandelia candel* seedlings where there is sufficient fine sediment with organic matter.

A Site of Special Scientific Interest (SSSI), located along the Pak Sha Wan peninsula, was designated by virtue of its varied and well protected terrestrial habitat which is considered good as a teaching resource. The pinewood along the west of the Pak Sha Wan peninsula is considered to be of regional significance. Part of the SSSI also falls within the Ma On Shan Country Park (Extension).

To the north west of the RHKYC is a conservation area, Tsui Hang Special Area (also wholly terrestrial), which is alongside the Lions Nature Reserve operated by Agriculture, Fisheries and Conservation Department. Various coastal protection areas (CPAs) are located intermittently around Hebe Haven and are designated collectively by virtue of their “attractive natural character with interesting features”. The nearest CPAs to the RHKYC are located on the coarse sand ‘beach’ at the north of the Haven and at the Sai Kung Hoi mangal and mudflat in the north-western inlet.

Further afield from the RHKYC there are two receivers sensitive to potential changes in marine water quality. These are the gazetted Trio beach and the nearby Ma Nam Wat Fish Culture Zone, both of which are over 1km to the south of RHKYC and are afforded some shelter from the ebb tide current by the Pak Sha Wan peninsula which projects into Hebe Haven.

5. FURTHER INFORMATION

5.1 ENVIRONMENTAL PROTECTION MEASURES TO BE INCORPORATED INTO THE DESIGN

5.1.1 Piling

During piling noise mitigation measures will be incorporated. Above the water surface noise barriers and enclosures are recommended.

5.1.2 Construction Waste Management

Every effort should be made during the construction of the pontoon system to reduce waste arising, to recycle and to minimize waste disposed of to landfill. Good site practices including waste minimization through efficient use of materials, waste sorting and segregation and waste inventories should be incorporated into the construction work programme.

5.2 FURTHER ENVIRONMENTAL IMPLICATIONS

An EIA has been undertaken by Hyder Consulting Limited for a proposed reclamation and marina extension at the Hebe Haven Yacht Club, close to Pak Sha Wan on the western side of Hebe Haven. The EIA report was approved on 3 January 2000. Aspects of the report which are relevant to the RHKYC proposal are detailed in Section 6.

6. USE OF PREVIOUSLY APPROVED EIA REPORTS

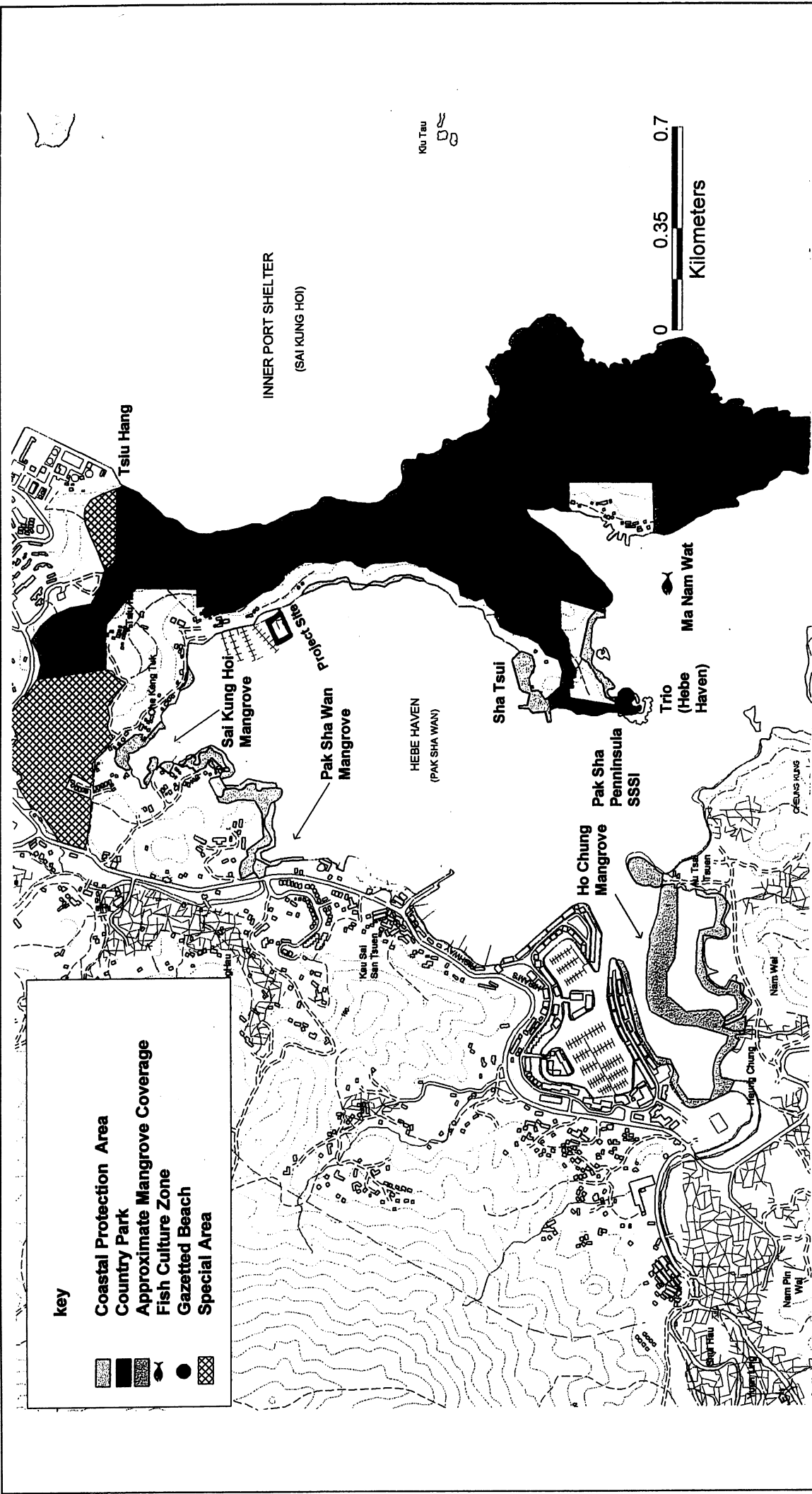
Hebe Haven Yacht Club Development - Phase 2 Environmental Impact Assessment Study Final Report, October 1999 (EIA028/1999)

Final Report approved 3 January 2000

The EIA report addressed the environmental impacts associated with:

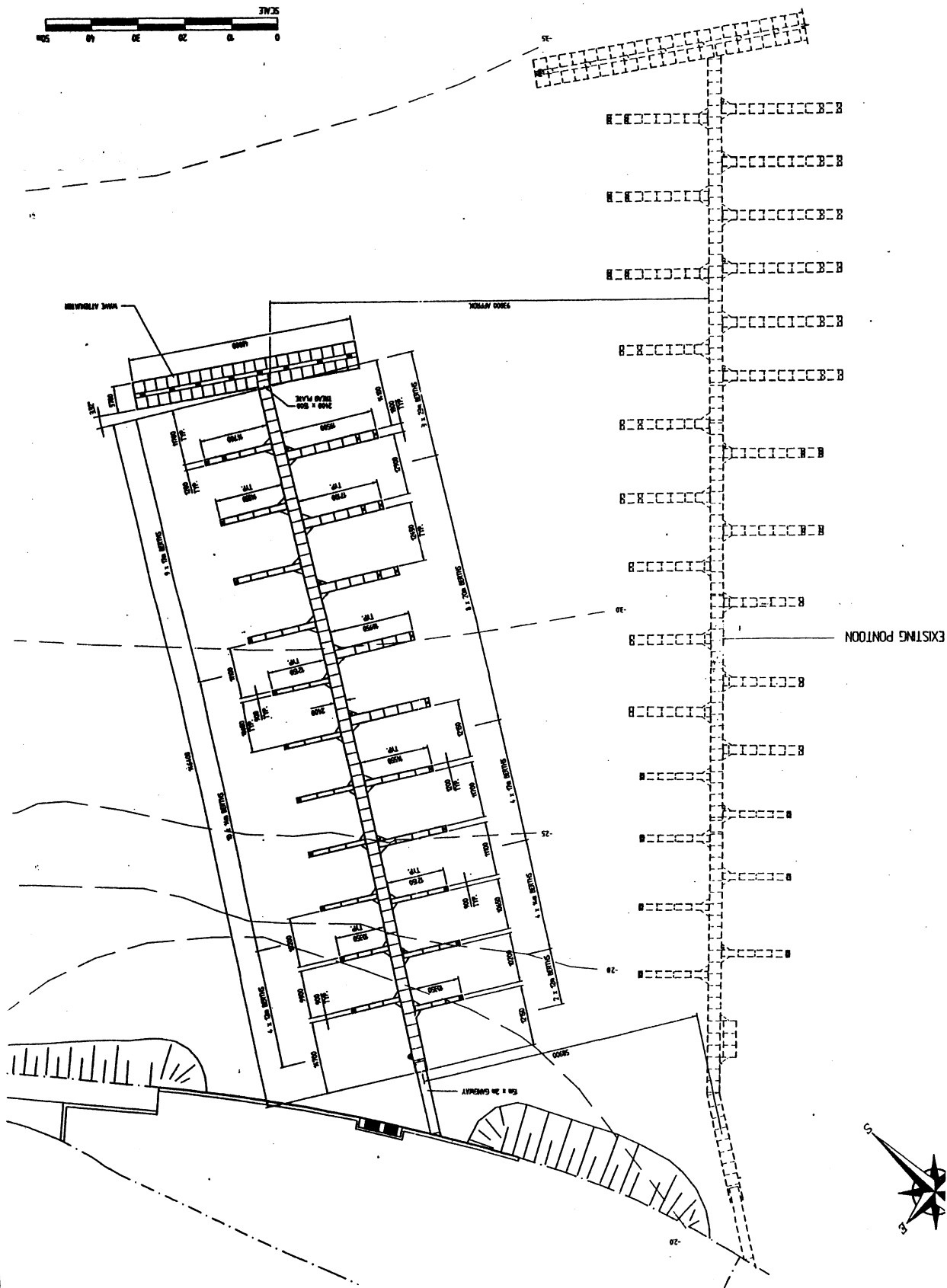
- dredging;
- demolition of existing slipway;
- seawall construction and backfill reclamation;
- paving and servicing of new reclamation; and
- piling works and placement of pontoon moorings.

The EIA report found that the environmental impacts which would potentially arise from the development can be managed to within acceptable levels. Although, the RHKYC project involves only one of the listed aspects: piling works and placement of pontoon moorings, the EIA report finding is directly relevant as the two sites are located only around 1000m apart on opposite shores of Hebe Haven. No dredging or reclamation work is proposed for this project and the scale and duration of works required are smaller than those at the Hebe Haven Yacht Club. Consequently the potential environmental impacts are anticipated to be less significant than those described in the EIA report. The EIA report recommended mitigation measures with regard to dredging, dust emissions, construction waste and landscape and visual impacts. Of these only the recommendations with regard to waste management are relevant to this project. These recommendations have been included in Section 5 of this Project Profile.



Proposed Pontoon System Royal Hong Kong Yacht Club at Shelter Cove Lot No. 341 DD212 Sai King

Figure 1 Site Location and Surrounding Area



Proposed Pontoon System Royal Hong Kong Yacht Club at Shelter Cove Lot No. 341 DD212 Sai Kung

Figure 2 Location of Proposed Pontoon System

Job No. EA00678

Hyder