Hong Kong Offshore Wind Farm in Southeastern Waters - Executive Summary

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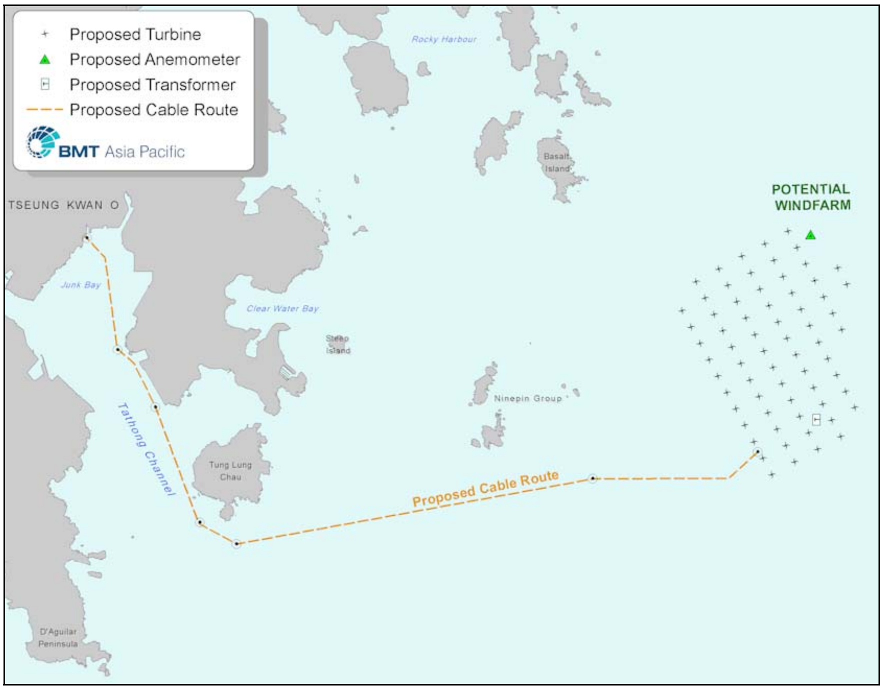
1 The Project

1.1 Background & Key Benefits

1.1.1.1 "The Project" refers to the development of the proposed 200MW Hong Kong Offshore Wind Farm (HKOWF) in Southeastern Waters of the HKSAR.

1.1.1.2 The Project is proposed to be located approximately 9 km and 5km east of the Clearwater Bay peninsula and East Ninepin Island, respectively. Figure 1.1 displays the Project location and finalised layout of the turbine array.

Figure 1.1 Project Location and Configuration



1.1.1.3 Section 1.2 summarises the site selection process, and its importance in avoiding impacts, which is of preference to attempting to mitigate them.

1.1.1.4 Up to 67 turbines will be arranged in a grid, and each will be affixed to the seabed by a foundation consisting of a jacket structure with suction caissons. The suction caisson foundation avoids the need for dredging or marine piling, thereby minimising potential adverse ecological impacts on marine sensitive receivers.

1.1.1.5 The turbine substructure also offers the opportunity for artificial reef development.

1.1.1.6 To ensure maritime safety, access to the wind farm by unauthorized marine traffic, including major fishing vessels, shall be restricted and actively managed, enabling the Project to function as a fisheries protection area and thereby contribute to sustainable fisheries management in the HKSAR.

1.1.1.7 The key strategic benefits of the Project include:

- Capacity to produce ~1% of total HKSAR annual electricity needs. The energy required to build a wind farm is typically recovered in the first year of operation, thus bringing a net positive effect on greenhouse gas emissions.[1]
- Significant benefits to local air quality, with every year of Project operation offsetting approximately: [2]
  - 343,000 - 383,000 tonnes of carbon dioxide;
  - 54 - 60 tonnes of sulphur dioxide;
  - 394 - 440 tonnes of nitrogen oxides; and
  - 14 - 16 tonnes of particulate material.
- A substantial contributor to the HKSAR's renewable energy target of 1 - 2% of all energy from renewable sources by 2012.

1.2 Project Components

1.2.1.1 Key Project components shall include:

- Up to 67 wind turbines
- An offshore transformer platform
- Sub sea collection and transmission cables
- Research Mast

1.2.1.2 The base scenario for Project development assumes that 67 nos. of 3MW turbines shall be installed, the EIA Study also allows for installation of a smaller number of larger turbines – in this case, 40 nos. of 5MW turbines – that would approximately generate the same power and occupy the same total sea area.

[1] Life Cycle Assessment of Onshore and Offshore Sited Wind Power Plants based on Vestas V90-3MW turbines, June 06, Vestas.

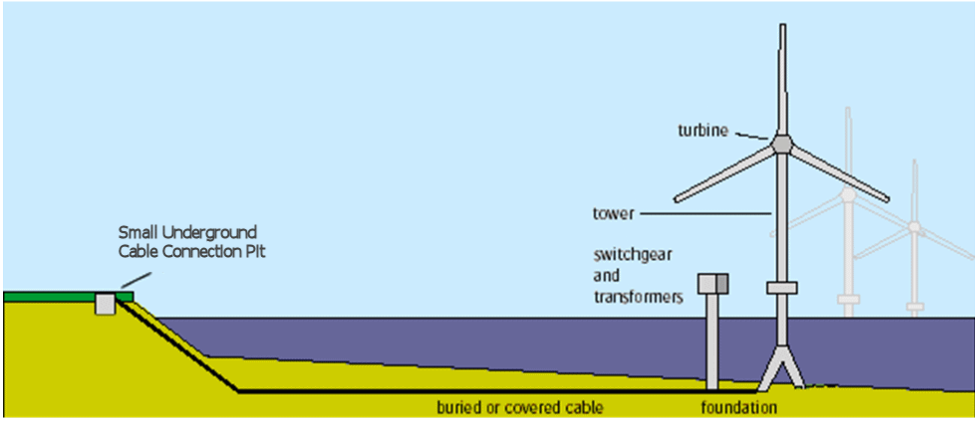
[2] Based on offsetting predicted emissions from Castle Peak Power station after installation of FGD unit:

1.2.1.3 The turbines will be arranged in a grid, and each will be affixed to the seabed by a foundation consisting provisionally of a jacket structure with suction caissons.

1.2.1.4 The turbines will be linked by collection cables to an offshore transformer platform from which electricity shall be transmitted to shore via two 132kV cables where the cables will connect into a small underground cable connection pit (onshore works are not part of this EIA). A research mast will also be installed to collect data on the offshore environment.

1.2.1.5 Figure 1.2 presents a schematic of the components of a typical offshore wind farm and Figure 1.3 shows a typical onshore underground cable connection pit.

Figure 1.2 Typical Offshore Wind Farm Components



Source: UK DTI

Figure 1.3 Typical Onshore Underground Cable Connection Pit

1.3 Site Selection

1.3.1.1 The site selection process is probably the single most important method for mitigating potential environmental impacts from a wind farm. By choosing the right site it is possible to largely eliminate many potential impacts before they arise.

1.3.1.2 The potential for large-scale land-based RE development in the HKSAR is limited due to lack of land availability – most land being already developed, under conservation protection, and / or simply ill-suited for large-scale deployment of RE. This is well demonstrated in the EIA's recently completed by CAPCO for its Commercial Scale Wind Turbine Pilot Demonstration at Hei Ling Chau and Hong Kong Electric for their wind turbine on Lamma Island (http://www.epd.gov.hk/eia/).

1.3.1.3 As detailed in section 2 of the main EIA, HKSAR offshore waters offer more usable space, and of the offshore technologies available, wind power is viable for large-scale development.

1.3.1.4 There are several factors that need to be considered when assessing the location of a potential offshore wind farm, including:

- Physical Location: Mean wind speed, water depth, seabed character, sub-surface geology, coastal processes, and seascape / landscape assessment.
- Biological Environment: Protected areas, benthic, demersal and pelagic marine life, and birds.
- Human Environment: Utility infrastructure, economic development opportunities, tourism / leisure, archaeology, navigation, fisheries, port facilities, civil and military aviation, radar facilities (aviation and marine).

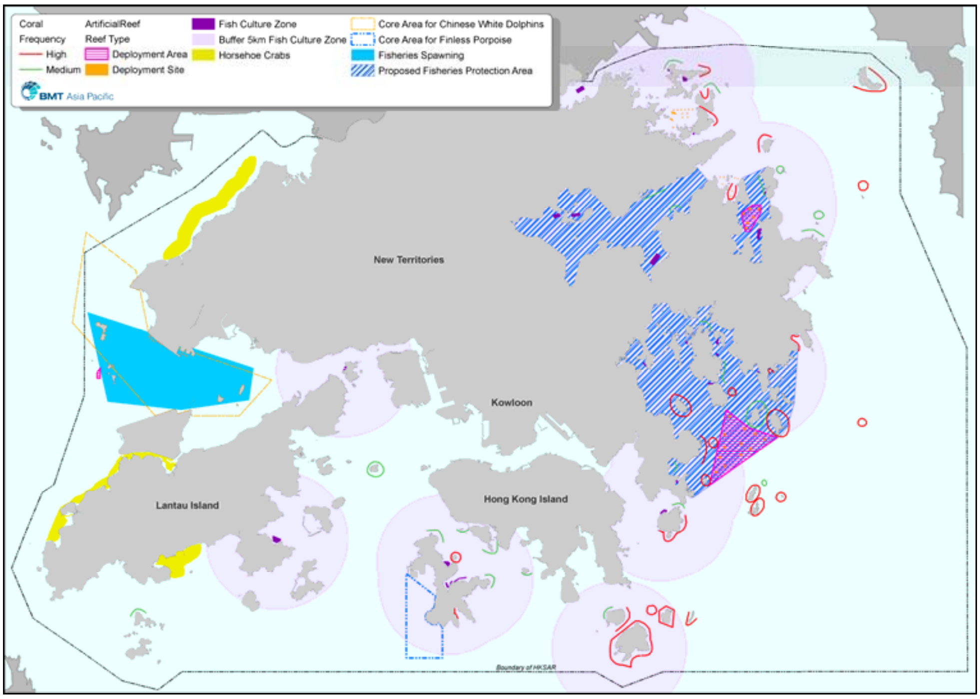
1.3.1.5 For any potential development location there are also likely to be insurmountable issues (e.g., water too deep to build in) and other issues that, subject to study and adequate mitigation may be surmountable (e.g., habitat management). Marine environment criteria were thus selected that represented absolute or relative constraints for Project development, including:

- Physical Infrastructure, (e.g., Bridges and tunnels, Marine Parks);
- Shipping lanes, Fairways & Anchorages;
- Productive fisheries areas; and
- Marine conservation areas, including core habitat for marine mammals.
- Important coral sites

1.3.1.6 These various constraints (surmountable and insurmountable) were entered into a Geographic Information System (GIS) for analysis, from which it was possible to identify potential areas for project development. Where appropriate, buffers were added to some selection criteria. During the course of the Study the branding of an area of coastline as a "Geopark" has been announced by Government. This area lies within the coastline constraints previously identified.

1.3.1.7 Figure 1.4 displays the consolidated ecological constraints that formed one component of the overall constraints map produced through this analysis.

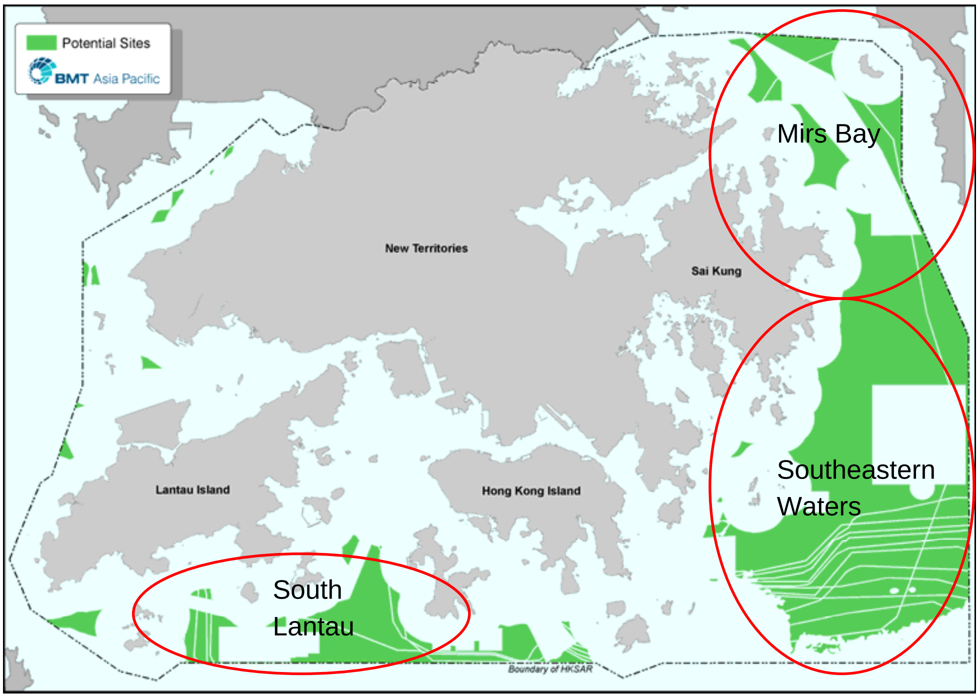
Figure 1.4 Ecological Sensitive Receivers



1.3.1.8 Figure 1.5 displays the output of the consolidated constraints mapping exercise - the identification of three broad areas relatively constraint-free for potential wind farm development:

- South Lantau
- Mirs Bay
- Southeastern Waters

Figure 1.5 Potential HKSAR Sites for Offshore Wind Farm Development



1.3.1.9 The Southeastern Waters was considered to offer the best potential for a commercial scale offshore wind farm development due to the large area of contiguous seabed, the relative lack of environmental sensitivity indicated by the site screening exercise and the anticipated higher relative wind speed.

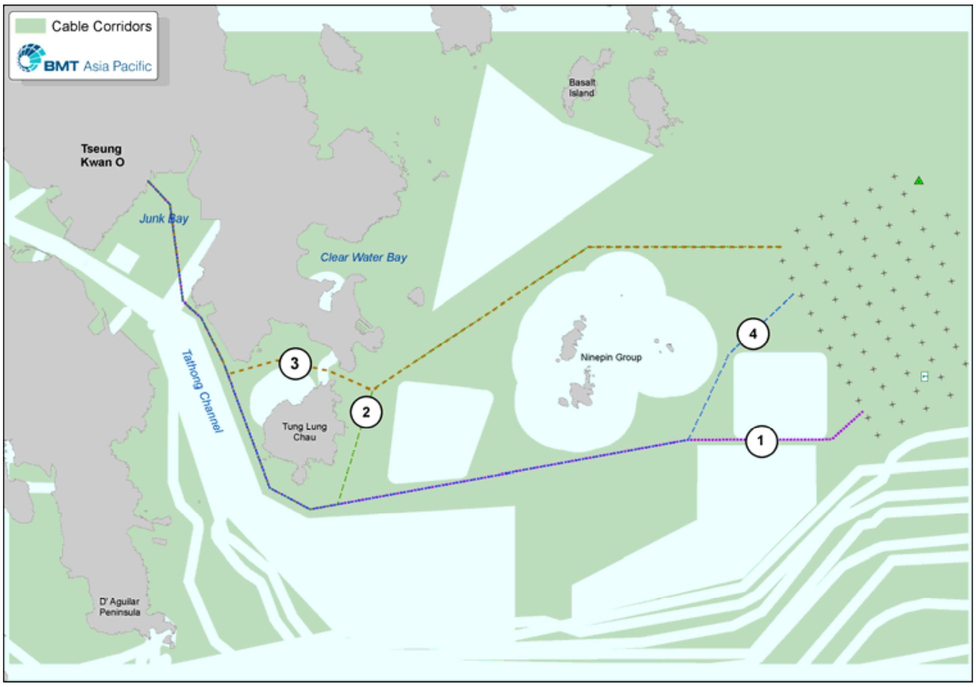
1.3.1.10 In order to define a more specific location and turbine layout within this broad area a number of criteria were subject to further assessment. These included optimising grid connection (to minimise offshore cabling works and electrical losses), visual sensitivity (using landform to screen the Project) and wind direction (to maximise advantage of prevailing wind direction).

1.3.1.11 During this refinement process, the Project was also re-located further away from the Ninepin Islands and Basalt Island without moving closer to the ecologically sensitive Victor Rock, with the final location and layout as presented in Figure 1.1.

1.3.1.12 The constraints mapping exercise was repeated to refine the transmission cable route, with four landing options analysed. The Junk Bay landing option was preferred, as the others would involve passage through Country Park, with four route options into Junk Bay subsequently analysed as displayed by Figure 1.6.

1.3.1.13 Route option 1 was preferred as it comprises the shortest route; it enables the offshore transformer to be positioned in the least visually sensitive location, and requires the fewest crossings of existing submarine cables.

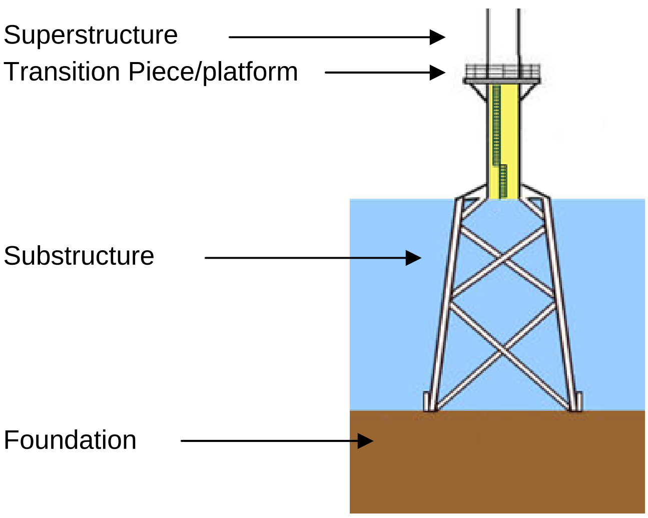
Figure 1.6 Cable Route Options into Junk Bay



1.4 Construction Options and Method Selection

1.4.1.1 The wind farm components of most relevance to construction phase impact assessment are the foundation and substructure that may affect the seabed and associated marine life. The "foundation" is the component that penetrates into the seabed and the "substructure" links the foundation with the "superstructure" via a transition piece. Figure 1.7 illustrates the concept.

Figure 1.7 Conceptual Foundation & Substructure Arrangement



1.4.1.2 A preliminary review of the various foundation and substructure options was completed to assist the EIA Study. Table 1.1 summarises the relative environmental merits of each option and combination.

Table 1.1 Summary of Foundation & Substructure Options

Type	Technical and Environmental benefits	Technical and Environmental Disbenefits
Pile Foundation	Well understood and proven technique No seabed preparation required	Underwater noise from piling can impact pelagic species May not be feasible in deep water / shallow rock-head sites
Suction Caisson Foundation	Less marine plant required Easy to commission and decommission No seabed preparation, piling or dredging required	No major disbenefit
Gravity Base Foundation	Well understood and proven technique	Significant amounts of dredging and site preparation works can impact water quality and therefore affect ecology Unlikely to be economically viable
Monopile sub-structure	Well understood and proven technique Small structure	Not technically feasible at site due to water depth/ground condition combination
Tripod / jacket sub-structure	Complex structure allows for more marine growth Suitable for water depth at site	No major disbenefit

1.4.1.3 Table 1.1 shows that gravity foundations would require significant ground preparation and dredging, whilst pile foundations would create more noise impact through hammering and driving. Suction caissons (shaped like an over-turned bucket) can be installed into the ground or seabed through a combination of self-weight and suction without any sediment removal. Figure 1.8 displays the concept.

1.4.1.4 For this reason suction caisson foundations represent the least impact option the suction caisson foundation is the preferred solution and were adopted as the 'base case' for Project development - this conclusion has since been validated by site specific testing and monitoring.

1.4.1.5 For the suction caisson substructure options, a 4-legged jacket would have marginally higher impact (due to being slightly larger with one extra suction caisson) than a 3 legged tripod / jacket and has therefore been adopted as the base case option for this EIA Study.

1.4.1.6 In May 2008, project partner CLP led on the testing of a suction caisson at the proposed project location. The test was carried out under the supervision of various Government Departments, including the Buildings Department (structural aspects) and EPD (environmental aspects).The test involved the installation of a full scale suction caisson foundation. The foundation was left for 45 days and then removed. During the installation water quality sampling and video monitoring was carried out to inform the EIA water quality modelling assumptions. Building Department was also there to verify the tension test carried out to verify load bearing parameters - all of which met or exceeded design requirements. Figure 1.9 shows the test barge with the suction caisson onboard.

Figure 1.8 Suction Caisson Foundation Installation

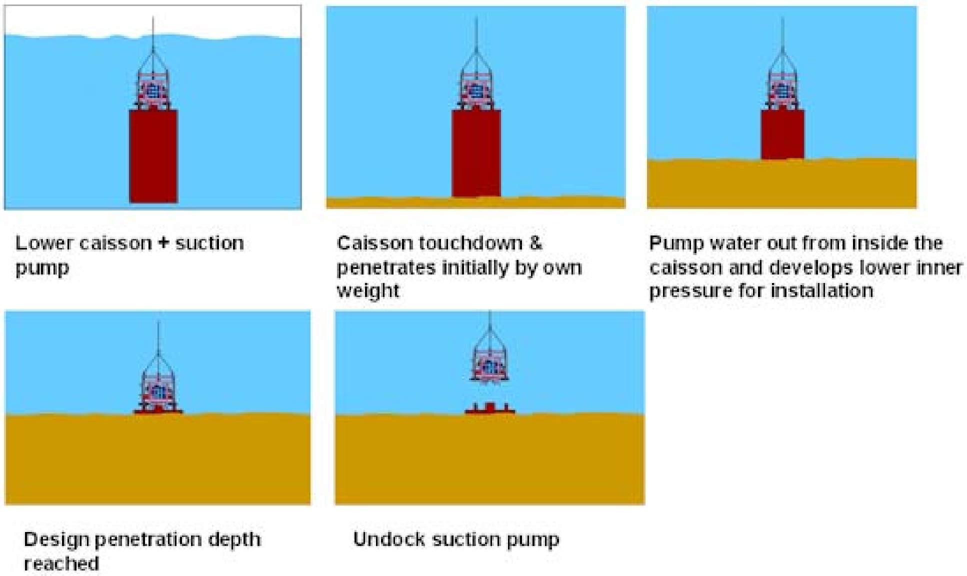


Figure 1.9 Suction Caisson Test

1.4.1.7 The indicative dimensions of the suction caisson foundation / jacket substructure combination to be installed are as follows:

- Suction caisson diameter: ~ 12 - 15m
- Substructure + foundation weight: 1,000 - 1,300 tons
- Seabed penetration: ~ 12m (incl. ~ 5m self-weight penetration)
- Overall height: ~ 57m (12m penetration + 30m water depth + 15m above mean sea level)

1.4.1.8 Full details of the wind farm components, evaluation of their relative merits and details of installation can be found in section 2 of the EIA Study report.

1.5 EIA Study Objectives

1.5.1.1 The purpose of this EIA Study is to provide information on the nature and extent of environmental impacts arising from the construction and operation of the Project and related activities taking place concurrently. This information will contribute to decisions by the Director of EPD on:

- The overall acceptability of any adverse environmental consequences that may arise as a result of the Project and the associated activities of the Project;
- Any conditions and requirements for the detailed design, construction and operation of the Project required to mitigate against adverse environmental consequences wherever practicable; and
- The acceptability of residual impacts after implementation of the proposed mitigation measures.

1.5.1.2 Satisfying the aims of the EIA Study has been managed by achieving a number of more specific objectives as listed in the EIA Study Brief (ESB-146/2006). The objectives of the EIA study are to:

- Describe the Project and associated works together with the requirements and environmental benefits for carrying out the Project;
- Identify and describe elements of community and environment likely to be affected by the Project and/or likely to cause adverse impacts to the Project, including natural and man-made environment and the associated environmental constraints;

- Consider alternative options with a view to avoiding and minimising the potential environmental impacts to ecological sensitive areas in the Mirs Bay, Port Shelter, Junk Bay, Eastern Buffer and Southern Buffer Water Control Zones and other sensitive uses; to compare the environmental benefits and dis-benefits of each of the different options; to provide reasons for selecting the preferred option(s) and to describe the part of environmental factors played in the selection;
- Identify and quantify any potential loss or damage and other potential impacts to ecology and fisheries resources, flora, fauna and natural habitats and to propose measures to mitigate these impacts;
- Identify and quantify emission sources and determine the significance of impacts on sensitive receivers and potential affected uses;
- Identify and quantify any potential landscape and visual impacts and to propose measures to mitigate these impacts;
- Identify the negative impacts on any historical and archaeological resources and to propose measures to mitigate these impact;
- Propose the provision of mitigation measures so as to minimise pollution, environmental disturbance and nuisance during construction and operation of the Project;
- Investigate the feasibility, practicability, effectiveness and implications of the proposed mitigation measures;
- Identify, predict and evaluate the residual environmental impacts (i.e. after practicable mitigation) and the cumulative effects expected to arise during the construction and operation of the Project in relation to the sensitive receivers and potential affected uses;
- 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 environmental impacts and cumulative effects and reduce them to acceptable levels;
- Investigate the extent of the secondary environmental impacts that may arise from the proposed mitigation measures and to identify constraints associated with the mitigation measures recommended in the EIA study, as well as the provision of any necessary modification; and
- Design and specify environmental monitoring and audit requirements to ensure the effective implementation of the recommended environmental protection and pollution control measures.

1.5.1.3 The technical summaries in Section 2 present how the above study objectives have been achieved.

1.6 The Project Team

1.6.1.1 The Project Proponent for this Environmental Impact Assessment (EIA) Study is Hong Kong Offshore Wind Limited (HKOWL) – a 100% subsidiary of Wind Prospect (HK) Limited, itself a subsidiary of the Wind Prospect Group.

1.6.1.2 Wind Prospect (www.windprospect.com) is a leading international vertically integrated wind farm development, construction and operation company that has worked on over 45 wind farms around the world. Examples of Wind Prospect projects being constructed in 2007/08 include the 90MW offshore Burbo Bank Wind Farm in the UK and over 200 MW of onshore wind farms in Europe and the Asia-Pacific Region.

1.6.1.3 Wind Prospect always works in partnership with leading local partners and for the proposed HKOWF will work with CLP Power Hong Kong Limited (CLP) – the HKSAR's largest energy utility and a leading investor in wind power and other clean energy technologies.

1.6.1.4 The lead consultant for the EIA Study was BMT Asia Pacific Limited - part of the BMT Group of companies (www.bmt.org). BMT is a leading international multi-disciplinary engineering, science and technology consultancy offering services to clients in range of sectors including the energy and marine transportation sectors.

1.6.1.5 The Project Team was supported by specialists from Hyder Consulting Limited, Cosine Limited, IGGE (HK) Limited, Asiatic Marine Limited, Urbis Limited, City University, Lam Geotechnics Limited, ALS Limited, Hong Kong Coastal Activities Centre Limited, E-connect Limited, Strategic Access Limited and Pinsent Masons; and also Messers Yu Yat Tung and Wan Po.

2 Technical Summaries

2.1 Waste & Materials Management

2.1.1.1 The proposed use of suction caisson foundations avoids the need for any marine excavation or dredging in offshore Eastern Waters. The key potential impact during construction is therefore limited to the management of dredged sediments from within Junk Bay in relation to the laying of a portion of the transmission cable. Up to 135,000 m^3 of marine sediment would be dredged and preliminary estimates are that up to 65,000m^3 may require Type 2 confined marine disposal.

2.1.1.2 Other waste types associated with Project development include minor amounts of chemical wastes, sewage and general refuse. No significant environmental impacts from the handling and disposal of these waste types are anticipated, subject to the full implementation of the relevant waste management guidelines and best practices.

2.2 Water Quality

2.2.1.1 The potential for water quality impacts was greatly reduced from the outset by conducting a site selection process taking into account potential impacts, as well as by selecting suction caisson foundation technology, thereby eliminating the need for offshore dredging or major water quality impacts.

2.2.1.2 The key water quality issues and potential construction and operational phase impact of the Project have been assessed. The main concern relates to sediment dispersion during construction, particularly suspended sediment and possible contaminants, and the direct and secondary impacts of this on biological sensitive receivers.

2.2.1.3 An onsite test of a suction caisson carried out in May 2008 verified that the predicted impacts of the turbine foundations being proposed would not produce any adverse impacts. The key area for potential impact was identified as the cable transmission route in Junk Bay where dredging would be required.

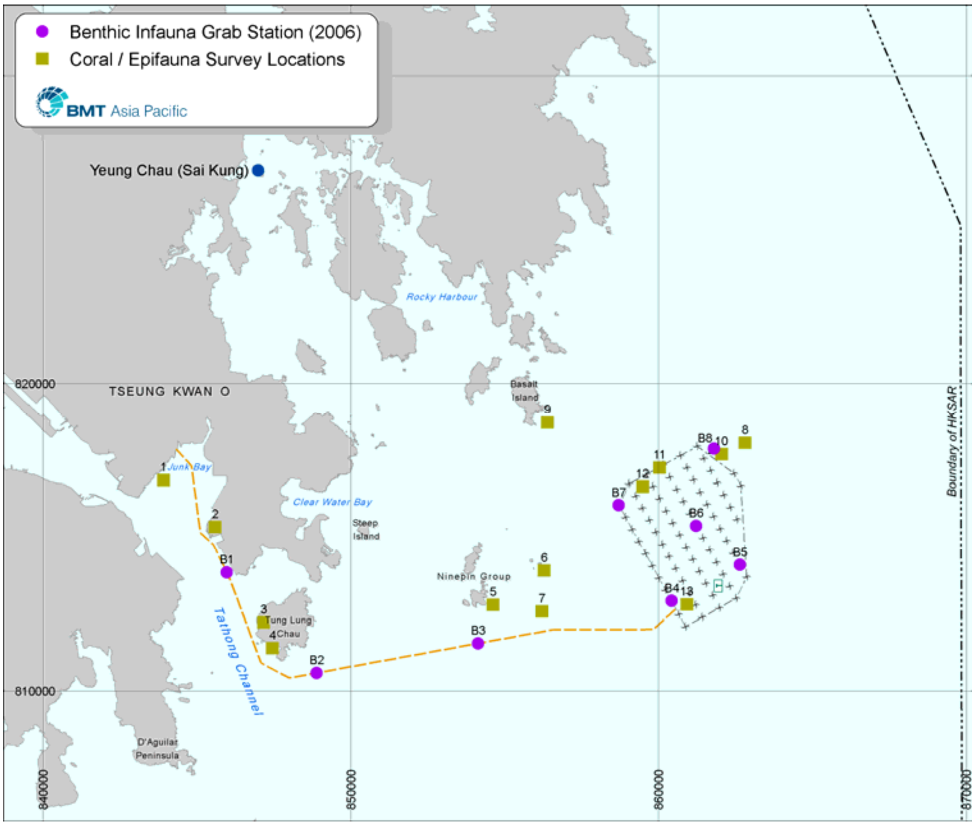
2.2.1.4 Mitigation measures including limits on dredging rate have been determined for the transmission cable works in Junk Bay, and with proper implementation of the recommended measures no adverse impacts are anticipated.

2.3 Benthic Ecology

2.3.1.1 The potential for impact on benthic ecology was greatly reduced from the outset by conducting a site selection process taking into account potential impacts, as well as by selecting suction caisson foundation technology which avoids dredging.

2.3.1.2 Following desk-top review a series of field surveys (shown in Figure 2.1) were conducted that reaffirmed Eastern Waters as being of generally high marine benthic conservation interest, although not within the wind farm footprint which is composed of silty mud of low ecological value. The conservation importance of the benthic community in Junk Bay and the Tathong Channel is relatively low.

Figure 2.1 Benthic Survey Locations



2.3.1.3 Numerical modelling predicted adverse impacts at minor coral communities in Junk Bay from the dispersion and settlement of suspended sediment resulting from the dredging of the cable route there, although implementation of the recommended control measures is expected to effectively avoid adverse impacts. Silt curtain deployment and reductions in jetting speed at Tung Lung Chau are the key mitigation measures identified as being required. While no adverse unmitigated impacts are anticipated precautionary monitoring will also be conducted at this site. Adverse direct impacts on seabed habitat from temporary displacement and cable jetting activities shall be of short duration and reversible, with anticipated re-colonisation of the affected areas within a short period of time.

2.3.1.4 The presence of the turbine foundations at the wind farm area will provide an artificial habitat for potential colonisation by benthic epifauna. The cumulative surface area of approximately 100,000 m^2 (based on current Base Case Development Scenario of 67 tripod structures with legs nominal 5m diameter in 30m water depth) of 'artificial reef' sub-structures shall more than make up for the permanent loss / displacement of 48,000 m^2 of silty mud of low ecological value, resulting in a significant enhancement effect at the wind farm area. The assessment in the water quality section identified that normal project operation will cause no significant changes in water quality, which indicates that there will be no adverse impacts on benthic ecology including infauna and epifauna communities during construction and operation phases of the project.

2.3.1.5 Figure 2.2 displays an example of a diverse community that has established on a submarine structure located south of the HKSAR in a period of less than 10 years.

Figure 2.2 Epifauna Community at South China Sea Oil Rig Structure

Source: Asiatic Marine Limited

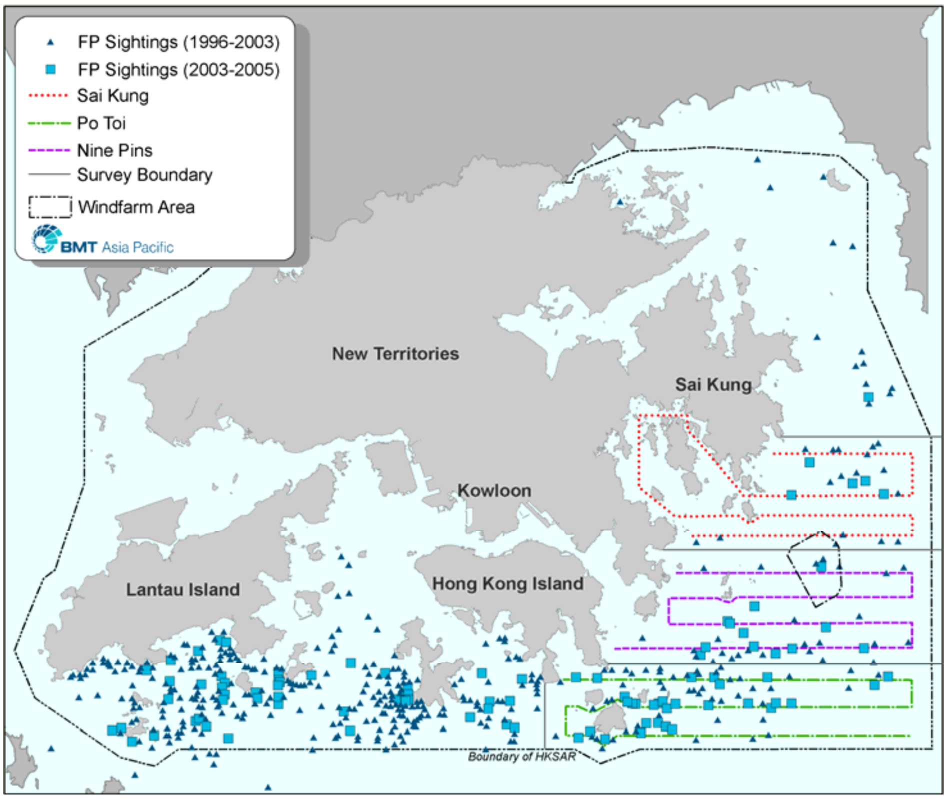
2.4 Pelagic Ecology

2.4.1.1 The potential for impact on pelagic ecology was greatly reduced from the outset by conducting a site selection process taking into account potential impacts, as well as by selecting suction caisson foundation technology, avoiding both areas known to be sensitive and eliminating the need for piling or dredging at the wind farm.

2.4.1.2 Based on desk-top review and field survey it is evident that the waters of the proposed wind farm are not frequented by Indo-Pacific hump-backed dolphins and are only lightly utilized by Finless porpoise – with this species preferring more sheltered coastal waters around the Ninepins and Po Toi islands, and other waters to the south.

2.4.1.3 Figure 2.3 displays the distribution of Finless porpoise sightings in the HKSAR between 1996 and 2005. The EIA field survey displayed a similar general distribution and variability of encounters as that identified from AFCD long-term survey data in Eastern Waters.

Figure 2.3 Finless Porpoise Sighting Records in the HKSAR, 1996-2005



Source: AFCD (2005).

2.4.1.4 Given this low usage of the Study Area and the preferred construction method, no adverse long-term impacts are anticipated on Finless porpoise from Project development, and no mitigation measures are proposed. Nevertheless, monitoring of marine mammals over a suitable period of time is recommended in order to be able to detect overall changes in use of the area. In addition, a 250m marine mammal exclusion zone will be implemented during installation of suction caissons and turbine substructures.

2.4.1.5 Regarding fishes, at worst only a marginal increase in suspended sediment above baseline levels is predicted at most locations during construction only. Although the worst-case assessment scenario of concurrent marine dredging and jetting at Junk Bay is predicted to result in elevated sediment levels at the reef fish community at Fat Tong Chau, levels remain significantly below the WQO criteria

2.4.1.6 A review of potential noise impacts has been completed, and this does not suggest any adverse impacts from marine vessel activity during Project construction or operation, or from underwater turbine noise. Suction caisson installation does not require piling.

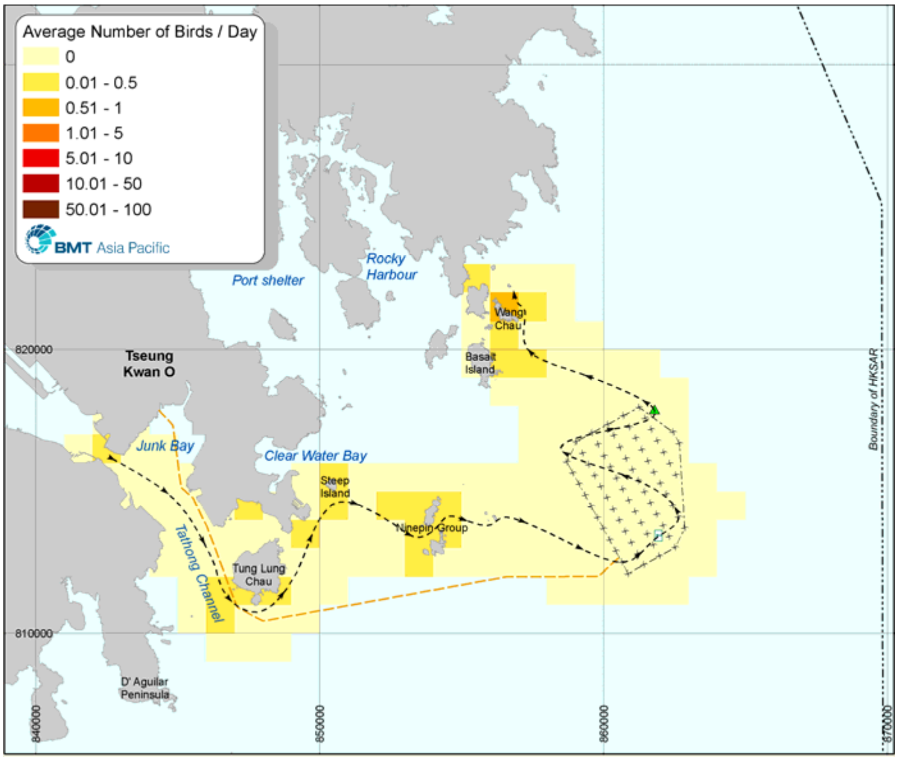
2.5 Avifauna

2.5.1.1 The potential for impact on avifauna was greatly reduced from the outset by conducting a site selection process taking into account potential impacts and avoiding areas known to be sensitive.

2.5.1.2 A total of 57 bird species were identified in the Study Area by boat surveys between May 2006 and December 2007, among which several species or species groups are considered of relatively higher sensitivity due to their conservation significance, distribution and / or abundance within the Study Area. These species include White-bellied Sea Eagle, the breeding terns, Red-necked Phalarope, Black-tailed Gull and Cattle Egret, Aleutian Tern and White-winged Black Tern.

2.5.1.3 Figure 2.4 displays the average cumulative distribution of White-bellied Sea Eagle through the Study Area.

Figure 2.4 Distribution of White-bellied Sea Eagle, May 2006 – Dec 2007



2.5.1.4 The impact assessment suggests that potential impacts on all birds resulting from construction and operation of the proposed wind farm will not be significant. In all cases, and as in the above example, the Project is not located near any significant feeding or roosting areas. Bird numbers recorded within the wind farm area were generally a small proportion of the recorded populations.

2.5.1.5 The widely-used model developed by Scottish Natural Heritage was used and predicts negligible collision risk for all of the most sensitive species in the Study Area based on their distribution and abundance. The significance of construction and operation impacts on avifauna is anticipated to be very low. Overall, the proposed wind farm is considered to have no adverse impacts on avifauna.

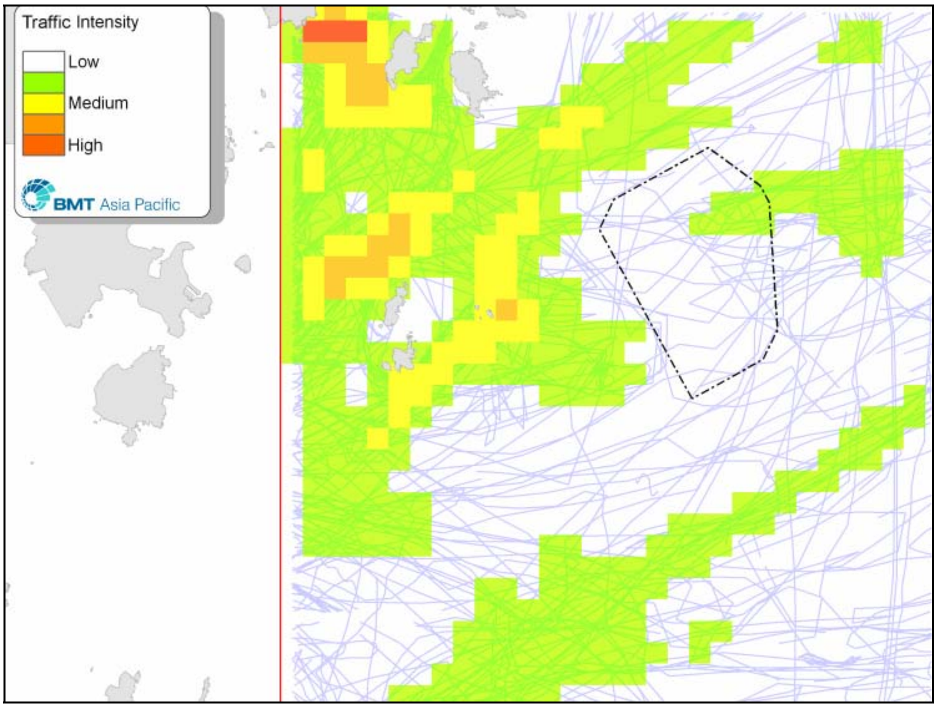
2.6 Fisheries

2.6.1.1 The potential for impact on fisheries was greatly reduced from the outset by conducting a site selection process taking into account potential impacts and avoiding areas known to be most productive.

2.6.1.2 The Project will lead to the permanent direct loss to commercial fishing of approximately 16 km^2 of relatively low productivity / value fishing ground within Hong Kong waters, although the potential for a significant net positive impact may be achieved with the implementation of management measures. There is also unrestricted fisheries habitat of similar character and value in waters contiguous with the proposed wind farm throughout the Study Area. No significant impacts to important spawning and nursery grounds are anticipated.

2.6.1.3 Surveys including radar data analysis suggest that fishing activity is more concentrated in near shore waters including around coastal islands rather than in the exposed and relatively unproductive waters of the Project location. Figure 2.5 highlights the distribution of fishing activity in June and July 2007 during the fishing moratorium in the South China Sea.

Figure 2.5 Fishing Intensity in the Study Area, June – July 2007



2.6.1.4 No significant water quality-induced impacts are predicted on the popular fishing area around the Ninepin Islands or any of the fish culture zones in the Study Area during Project construction.

2.6.1.5 Overall, the wind farm and the necessary restrictions on fishing activity provide an opportunity to reduce pressure on the heavily-exploited fisheries resources in Eastern Waters. Establishment of artificial reef communities on marine foundations may benefit the overall abundance and diversity of fisheries resources, and will complement sustainable fisheries management in the HKSAR.

2.7 Cultural Heritage

2.7.1.1 Following desktop study and marine geophysical survey, a total of eight partially buried targets with marine archaeological potential have been identified. It has been identified that one target within the wind farm footprint may potentially be impacted by array cable installation, and mitigation measures have been proposed accordingly. A buffer separation zone to avoid direct impacts on all targets during construction and operation has also been proposed as a best practice.

2.7.1.2 Further marine geophysical investigations adopting seismic surveys shall be conducted in parallel with the detailed engineering design prior to any site works. The planning approach has been a precautionary one of impact avoidance by sensitively locating turbines and marine cables, and re-locating if necessary. With this approach, no adverse impacts on cultural heritage are anticipated.

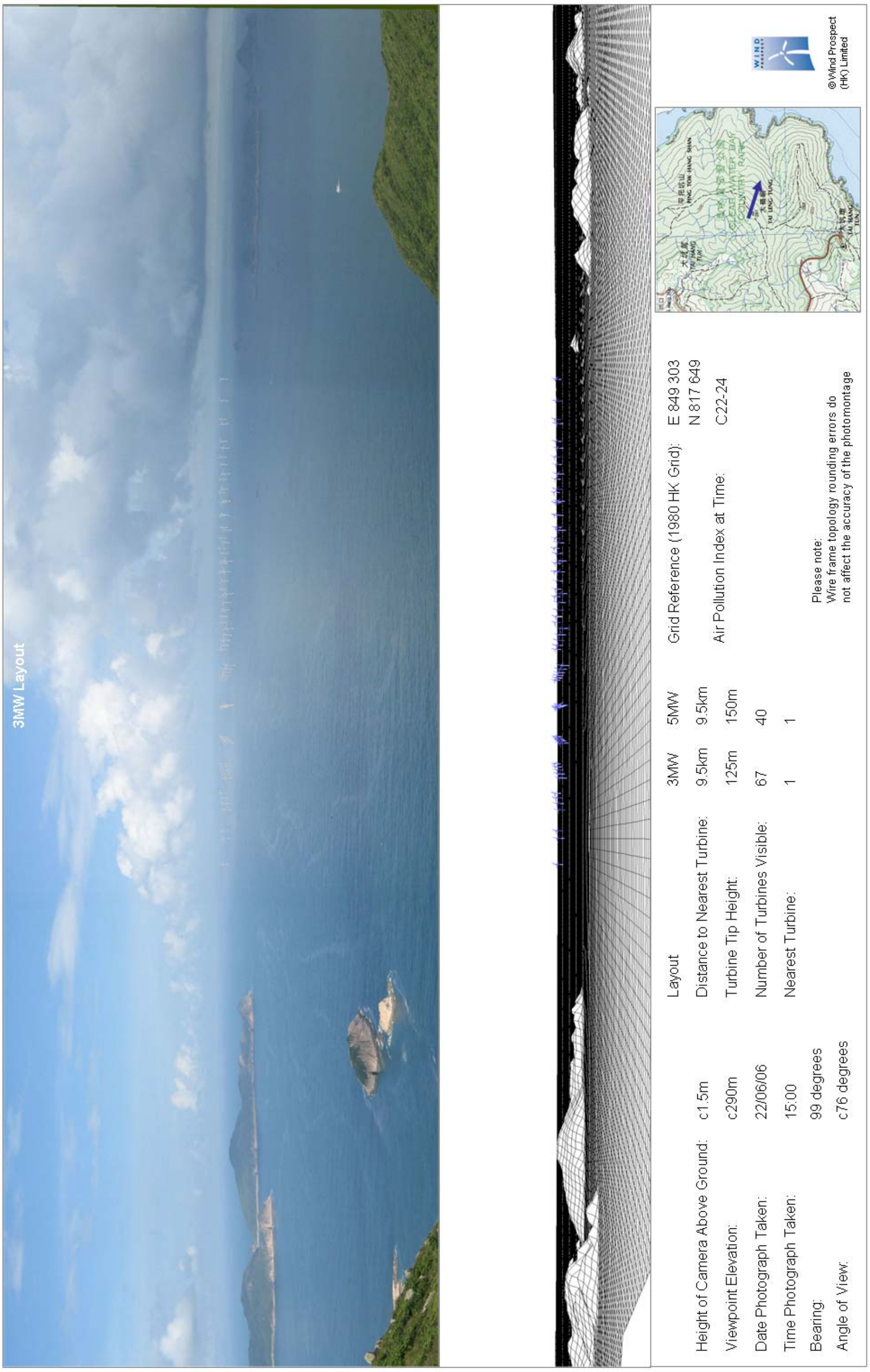
2.8 Landscape & Visual Impacts

2.8.1.1 The potential landscape and visual impact was greatly reduced from the outset by conducting a site selection process taking into account potential impacts.

2.8.1.2 Landscape and visual impacts should be acceptable with mitigation measures given the location of the Project and the use of existing landforms to shield the turbines from view where practicable. Figure 2.6 displays an indicative view of the Project during operation.

2.8.1.3 Although offshore wind turbines would be entirely new features in the local landscape, international research shows that a clear majority of the public have more favourable responses towards their appearance compared with other types of development. In the particular landscape and visual context of this Project, it is concluded that for most visual sensitive receivers the wind farm will not represent an unacceptable impact.

Figure 2.6 Indicative View of Project in Operation



3 Environmental Outcomes

3.1.1.1 The environmental outcome of the project is the development of a substantive renewable generating capability from an offshore windfarm in south-eastern waters of Hong Kong. Site selection and design have minimised and/or negated any significant environmental impacts of the project on the existing ecology and landscape of the site area, both the exposed offshore area of the windfarm site, and the waters and coastline adjacent to the cable route. Key outcomes include:

- Air Quality - Annual offset of approximately 350,000 tonnes of Carbon Dioxide, 55 tonnes of Sulphur Dioxide, 400 tonnes of Nitrogen Dioxide and 15 tonnes of particultes.
- Water Quality - Suction caissons adopted for windfarm foundations negating dredging, and jetted cable installation adopted for majority of route to minimise seabed disturbance.
- Benthic Ecology - Windfarm sited on low value seabed, with cable set away from coral communities; mitigation and monitoring to be conducted during construction.
- Pelagic Ecology - Minimally evasive construction negates adverse impact on fish stocks and other marine life (dolphins, turtles); while the creation of substantial habitat around the turbine foundations, coupled with fishing access controls within the windfarm footprint is anticipated to benefit the environment.
- Avifauna - Siting away from coastlines and known communities reduce distubance and negligible collision risk for the most sensitive species in the Study Area
- Fisheries – Windfarm sited in low fishing intensity and relatively unproductive waters, away from important spawning and nursery grounds. Restrictions on fishing activity and turbine foundations acting as artificial reefs may benefit overall fisheries resources, although some local fishermen (particularly trawlers) who habitually fish in the wind farm site will be affected to a limited extent.
- Landscape - While the windfarm will be a new feature in the landscape, it is sited away from habitation and will not develop unacceptable impacts on the character of the area.