

TABLE OF CONTENTS

1.	BASIC INFORMATION	1-1
	Project Title	1-1
	Purpose and Nature of the Project	1-1
	Name of Project Proponent	1-1
	Location and Scale of Project	1-1
	History of Site	1-2
	Number and Types of Designated Project Covered by the Project Profile	1-2
	Name and Telephone Number of Contact Person(s)	1-2
2.	OUTLINE OF PLANNING AND IMPLEMENTATION PROGRAMME	2-1
	Project Implementation and Timetable	2-1
	Interactions with Other Projects	2-1
3.	POSSIBLE IMPACTS ON THE ENVIRONMENT	3-1
	Outline of Processes Involved	3-1
	Potential Environmental Impacts	3-1
4.	MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT	4-1
5.	ENVIRONMENTAL PROTECTION MEASURES TO BE INCORPORATED IN THE DESIGN AND ANY FURTHER ENVIRONMENTAL IMPLICATIONS	5-1
	Environmental Protection Measures	5-1
	Possible Severity, Distribution and Duration of Environmental Effects	5-2
	Further Implications	5-3
6.	USE OF PREVIOUSLY APPROVED EIA REPORTS	6-1

List of Tables

Table 4.1	Major Existing and Planned Sensitive Receivers	4-1
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List of Figures

Figure 1	Location Plan
Figure 2	Master Plan - The Waterfront
Figure 3	Master Plan - The Summit

1. BASIC INFORMATION

Project Title

- 1.1 The project is known as “Repositioning and Long Term Operation Plan of Ocean Park”.

Purpose and Nature of the Project

- 1.2 The project is to redevelop the existing Ocean Park at Aberdeen, Hong Kong, into a marine-based theme park, doubling the amount of attractions and firmly establishing itself as a world-class and must-see destination that will further strengthen Hong Kong as a premier tourist destination.

Name of Project Proponent

- 1.3 The project will be undertaken by Ocean Park Corporation.

Location and Scale of Project

- 1.4 The proposed master plan for the project is illustrated in Figures 1, 2 and 3. The project will largely be located within the existing Ocean Park area at Aberdeen, and will extend to cover the existing bus terminus and part of the existing Hong Kong School of Motoring site adjacent to the existing Ocean Park.
- 1.5 The current Ocean Park is built on the northern and southern sides of Nam Long Shan and composed of three areas – Lowland, Headland and Tai Shue Wan. The Lowland is situated on the northern side of Nam Long Shan whereas both the Headland and Tai Shue Wan are on the southern side. The main entrance of the Park is at the Lowland and there is another secondary entrance at Tai Shue Wan. A cable car system serves as the main mode of transport for the visitors between the Lowland and the Headland.
- 1.6 Under the project, a new entry plaza with public transport interchange (PTI) and car parking facilities underneath will be constructed partly on the existing Hong Kong School of Motoring site. The new entry plaza will be provided with direct pedestrian link to the proposed Ocean Park Station of MTRC South Island Line. Provisions for a possible hotel development above the entry plaza will also be catered for.
- 1.7 The Lowland, which will be renamed the Waterfront under the project, will be redeveloped with the reconstruction and addition of new attractions and facilities, including new aquarium, shark tanks, lagoons, and new rides.
- 1.8 The Headland, which will be renamed the Summit under the project, will be extended to cover part of the hill slope adjacent to Nam Long Shan. New attractions and facilities such as Ocean Dome Whale Stadium, new Panda House, brand new theatres for shows, new rides, and accommodations for new animals will be incorporated. Some of the existing facilities such as Ocean Theatre and Pacific Pier will be upgraded. Overall, the amount of attractions will be doubled under the project.
- 1.9 The project will also include a new Summit Express (funicular train) in tunnel to provide a weather-proof connection between the Waterfront and the Summit for the visitors.
- 1.10 Associated with the provision of new attractions, the facilities for the Park will also be upgraded. These facilities include administration offices, back-of-house facilities, service roads, utility services, life supporting systems for animals, drainage, sewerage, waterworks, retail shops, and restaurants.
- 1.11 The existing cable car system, which is already a signature mode of transport of the Park, will be retained as an alternative mode of transport between the Waterfront and the Summit for the visitors.

- 1.12 The proposed hotels, for which there is not definite programme at the moment, are not part of the project.
- 1.13 The existing facilities at Tai Shue Wan will be cleared for other uses.

History of Site

- 1.14 The project will be implemented mostly within the existing Ocean Park area which has been developed and used as a marine based theme park since 1977. Part of the area for the proposed new entry plaza is being temporarily used as a motoring school, and part of the new facilities will cover the existing bus terminus next to the Park. At the Summit, the redevelopment will take place on the existing Headland area of the Park, with extension to cover the adjacent natural hill slope.

Number and Types of Designated Project Covered by the Project Profile

- 1.15 The project is a single project, comprising the following designated project elements as specified under A.3, A.7, E.1 and O.8 in Schedule 2 Part 1 of the Environmental Impact Assessment (EIA) Ordinance (Cap. 499):

- the funicular train and its associated stations (A.3)
- the tunnel (more than 800m in length between portals) for the funicular train (A.7)
- the theme park with a site area of more than 20ha in size (O.8)

Name and Telephone Number of Contact Person(s)

- 1.16 For details of the project please contact:

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2. OUTLINE OF PLANNING AND IMPLEMENTATION PROGRAMME

Project Implementation and Timetable

2.1 The proposed timetable for the implementation of the project is:

EIA Study	May 2005 – December 2005
Approval of EIA Study Report	April 2006
Detailed Design	June 2005 – June 2006
Commencement of Construction	July 2006
Completion of New Attractions and Facilities	August 2010
Completion of Remaining Support Facilities	July 2011

2.2 An Environmental Impact Assessment (EIA) will be undertaken by environmental consultants, providing interactive environmental inputs to the design of the project. Environmental monitoring of the project will also be carried out during the implementation of the project.

Interactions with Other Projects

2.3 No significant interfacing with other projects have been identified, other than possibly with the MTR Southern Island Line (SIL) project. The status and timing of the SIL project is currently not certain.

3. POSSIBLE IMPACTS ON THE ENVIRONMENT

Outline of Processes Involved

Construction of the Project

3.1 The envisaged method of construction for various elements of the works included:

- Construction of the entry plaza (its lowest structural finished level about half of a storey below the existing ground) by conventional open cut excavation, and reinforced concrete and steel substructures and superstructures.
- Forming the site for the Waterfront area by conventional excavation and filling.
- Construction of the structures for the attractions, rides, facilities, and funicular train station at the Waterfront area with reinforced concrete, precast concrete, and steel substructures and superstructures.
- Construction of the funicular train tunnel by drill-and-blast method.
- Forming the new park area at the Summit by open excavation, rock to be excavated by blasting.
- Construction of the structures for the attractions, rides, facilities, reservoir, viaduct for the funicular, and funicular train station at the Summit area with reinforced concrete, precast concrete, and steel substructures and superstructures. Some structures may involve fabric canopies.
- Construction of service roads which would follow the existing topography as far as possible. Some slope works and stabilization works are expected.
- The project will be implemented in phases. During construction phase of the project, the park will be partially open to the public.

Operation Plan for Ocean Park

3.2 Upon completion of the project, it is envisaged that:

- The opening hours of the Park at the evening may be extended to 10 p.m.
- The number of attractions and rides will be doubled.
- Some night shows are expected but measures will be devised to confine the noise and light generated from the shows. There would not be fireworks as one of the regular attraction according to the preliminary design plan.
- Apart from about 300m at the Summit area, the funicular train will be operated within the funicular train tunnel.

Potential Environmental Impacts

3.3 Potential environmental impacts associated with the construction and operation of the project have been identified based on the preliminary project design information, as presented below.

Construction Phase

Air Quality

- Dust from construction activities e.g. demolition of existing structures, excavation and material handling, blasting for bulk excavation in rock, drill-and-blast for funicular train tunnel and gaseous emissions from construction plant and vehicles.

Noise

- Construction noise generated from construction activities such as demolition, piling, site formation, and blasting for bulk excavation in rock and for funicular train tunnel.

Water Quality

- Construction runoff and drainage from land-based construction activities.
- Sewage effluents from the construction workforce.
- Modification of an existing boat jetty. Impact is expected to be minor as no dredging work is envisaged.

Waste Management

- Construction and demolition (C&D) materials from the site formation and excavation works, general refuse from the workforce, and chemical waste from any maintenance of construction plant and equipment.
- Potential land contamination issues in relation to possible use of part of the existing motoring school, subject to further study and investigation.

Ecology

- Direct impacts to undeveloped and semi-natural habitats including shrubland.
- Indirect disturbance impacts to habitats and communities adjacent to works areas, including the Coastal Protection Area around the Headland. Impacts could potentially result from noise generating construction activities and increased human activity.
- Indirect impacts to aquatic communities resulting from sediment-rich site run-off and potential accidental spills of fuel/other chemicals.

Landscape and Visual

- Impact on loss of shrubland in terms of landscape and visual value, eyesore of construction works, exposed slope surfaces and works areas.

Cultural Heritage

- Potential disturbance to historic buildings.

Operation Phase

Air Quality

- Impact from vehicle exhausts from nearby road networks, internal service roads and the proposed facilities (e.g. the loading and unloading area and PTI).

Noise

- Operational noise from fixed plant e.g. ventilation shafts, tunnel ventilation fans along the tunnel alignment for the funicular system and mechanical equipment at the cable car and funicular stations.
- Noise from Ocean Park operation including rides, shows, performances, cable car operations and traffic induced. Noise from funicular operations would be expected to be minor as much of the funicular route would be in tunnel.

Water Quality

- Stormwater runoff from hilly grassy land and concrete paved area, and wastewater discharges from the aquarium, tanks, pools, toilet facilities and restaurants to the public sewer.

Ecology

- Indirect disturbance impacts to habitats and communities adjacent to the Park, including Coastal Protection Area around the Headland. Impacts could potentially result from operation of park facilities and increased human activity.

Landscape and Visual

- Style, layout, scale, material, colour and finishes of proposed facilities and structures, extent of planting areas.

Cultural Heritage

- Indirect vibration impact to historic buildings; and
- Potential visual impact to historic buildings.

4. MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT

- 4.1 The major existing and planned sensitive receivers and parts of the natural environment that might be affected by the proposed project are highlighted in Table 4.1.

Table 4.1 Major Existing and Planned Sensitive Receivers

Type of Sensitive Uses	Sensitive Receivers/Sensitive Parts of Natural Environment
Residential Development	Police Quarters, Wong Chuk Hang San Wai, Residences at Shouson Hill Road, Island Road, Ocean Park Road and Sham Wan Road.
Educational Institutions	Schools at Nam Long Shan Road and Police Training School.
Water Bodies	Seasonal streams on the hill-slopes of the headland and the seawater abstraction point for the pumping station located on the eastern coast of Nam Long Shan.
Ecologically Significant Areas	Shrubland at the Nam Long Shan peninsula, seasonal streams within and adjacent to the proposed redevelopment area, Coastal Protection Area along the Nam Long Shan Peninsula, Aberdeen Country Park (which lies over 500m north of Ocean Park) and Nam Fung Road Site of Special Scientific Interest (SSSI) (which lies over 600m north of Ocean Park).
Places of High Visual Value	Coastal Protection Area along the Nam Long Shan Peninsula coastline.
Sites of Cultural Heritage	Wong Chuk Hang San Wai

5. ENVIRONMENTAL PROTECTION MEASURES TO BE INCORPORATED IN THE DESIGN AND ANY FURTHER ENVIRONMENTAL IMPLICATIONS

5.1 Broad mitigation measures for the project to minimise potential environmental impacts are indicated below, subject to further detailed assessment in the EIA study.

Environmental Protection Measures

Construction Phase

Air Quality

- Implement dust suppression measures set out in the Air Pollution Control (Construction Dust) Regulation, such as provision of wheel-washing facilities and watering of exposed ground.

Noise

- Implementation of good site practices to limit noise emissions at source.
- Use of quieter PME.
- Use of quieter alternative construction method (e.g. use of non-percussive piling methods such as bored piles by augering).
- Use of noise barriers / enclosure.

Water Quality

- Implement site practices as recommended in ProPECC PN1/94 "Construction Site Drainage".
- Install appropriate drainage facilities to control site runoff.
- Provide adequate treatment facilities to treat process water from construction activities prior to discharge.
- Provide proper toilet facilities.

Waste Management

- Implement waste management practices to minimize waste generation and maximize waste recovery and recycling.
- Sort and segregate waste for reuse and disposal.
- Dispose waste to landfills only as a last resort.

Ecology

- Avoid and minimise disturbance to any flora/fauna and habitats of conservation interest.
- Mitigate unavoidable impacts, e.g. transplantation and provision of compensatory habitats.
- Minimize indirect construction disturbance, e.g. fence off work areas.

Landscape and Visual

- Avoid and minimize disturbance to significant landscape resources such as Coastal Protection Area, e.g. minimise work areas.

- Mitigate unavoidable landscape impacts through compensatory planting or transplantation.
- Use decorative screen hoarding and control nighttime lighting.

Cultural Heritage

- Avoid and minimize disturbance to historic buildings.

Operation Phase

Air Quality

- Strategically design the entrances/exits of PTI and loading and unloading area to minimise queuing of vehicles.
- Minimize idling emissions by providing instructions to drivers using PTI and loading and unloading bay to switch off the vehicle engines while waiting.

Noise

- Use silencers, mufflers or acoustic shields for fixed plant.
- Use purpose-built noise barriers/enclosures.
- Use noise tolerant buildings (e.g. office buildings) to act as noise screening structures.
- Orientate the performance stage to point away from the nearby NSRs.
- Acoustic design of loudspeaker systems (e.g. use of a cluster of small power loudspeakers instead of a few large power loudspeakers and directional loudspeakers and orientate the speakers to point towards the audience and away from the nearby NSRs).

Water Quality

- Install appropriate treatment facilities, e.g. divert surface runoff and cooling water to silt traps and oil interceptors if considered necessary before discharge to existing local stormwater drainage system.

Landscape and Visual

- Landscape planting for the project and reinstatement of planted areas.
- Aesthetic architectural form, colour and finishes of visible structures.

Possible Severity, Distribution and Duration of Environmental Effects

- 5.2 The construction work is expected to last for about 5 years from July 2006 to July 2011. The severity and distribution of potential environmental impacts is described in Sections 3 and 4. In particular, water quality impact from the modification of the existing boat jetty, spoil management and ecology are expected to be the key environmental issues during the construction phase. The key issues during operation would be noise impacts e.g. from fixed plants at the attractions, rides and funicular stations, and visual impacts from the proposed aboveground structures.
- 5.3 A review of the potential environmental impacts during the construction and operation of the Project found that there are no insurmountable impacts. The Project Proponent is committed to the full integration of environmental issues within the project design and construction, and will ensure adoption of suitable environmental protection measures for full compliance with environmental legislation and standards.

Further Implications

5.4 The project has not been put forward for formal consultation.

6. USE OF PREVIOUSLY APPROVED EIA REPORTS

- 6.1 There are no previously approved EIA reports which have been undertaken for this project, but the following EIA report could be used for reference:
- Construction of an International Theme Park in Penny's Bay of North Lantau together with its Essential Associated Infrastructures – Environmental Impact Assessment (February 2000).