For information

Legislative Council Panel on Economic Services

Environmental Impact Assessment
for the Development of Hong Kong Disneyland

Purpose

This paper briefs Members on progress of the Environmental Impact Assessment (EIA) studies in connection with the development of Hong Kong Disneyland (HKD).

EIA Studies

2. In accordance with the Environmental Impact Assessment Ordinance (EIAO), the Civil Engineering Department has completed the following EIA studies and submitted the reports to the Director of Environmental Protection (DEP) on 1 March 2000 -

(a) an EIA study under the Northshore Lantau Development Feasibility Study (NLDFS) which looked at, among other things, the cumulative environmental impacts of the proposed developments at north-east Lantau, including Penny's Bay, Tsing Chau Tsai East and Yam O, and the construction of the Chok Ko Wan Link Road; and

(b) an EIA study for the construction of an International Theme Park at Penny's Bay of North Lantau and its essential associated infrastructures, including reclamation, a water recreation centre, roads, a pedestrian walkway, a rail link, a public transport interchange, piers, stormwater drainage system, sewerage facilities, irrigation, water supply and utility services, slope formation and stabilization, screening and landscaping works.

3. Findings are set out in -

(a) Highlights of the two reports at Annexes I and II;

(b) Executive Summaries of the two reports at Annexes III and IV; and

(c) the full reports which have been deposited with the Secretariat.

Position To-date and Way Forward

4. On 11 March 2000, DEP decided that the two EIA reports had met the requirements of their respective Study Briefs and the Technical Memorandum of the EIAO. Following this, the reports have been made available for public inspection since 13 March 2000 for a period of 30 days. Members of the public can provide their comments to DEP within this period.

5. The two EIA reports are scheduled to be presented to the EIA Sub-Committee of the Advisory Council on the Environment (ACE) in early April 2000 and the ACE full Council in mid April 2000.

6. After receiving the comments of the public and the ACE, DEP will decide whether the EIA reports should be approved and Environmental Permits (EPs) should be issued. The reclamation contract for Penny's Bay will only be awarded after the EPs have been issued.

Civil Engineering Department
March 2000

Annex I

Northshore Lantau Development Feasibility Study
Environmental Impact Assessment

1. Highlights

1.1 In 1998, the Civil Engineering Department (CED) of the Hong Kong Special Administrative Region Government commissioned the Northshore Lantau Development Feasibility Study (NLDFS). As part of the Study, an Environmental Impact Assessment (EIA) report was prepared.

1.2 The Project is an integrated planning and engineering feasibility study which consists of two development packages, the Northshore Lantau Development and the preliminary design of Chok Ko Wan Link Road (CKWLR). NLDFS itself is a Designated Project under Schedule 3 of the Environmental Impact Assessment Ordinance (EIAO) as an engineering feasibility study of urban development with a Study Area of more than 2600 ha. CKWLR is an expressway, hence is classified as a Schedule 2 Designated Project under the EIAO.

1.3 A Draft Recommended Outline Development Plan (RODP) has been prepared in January 2000. The predominantly recreational and tourism proposals are largely to be built on reclaimed lands to be formed between 2000 to 2028. A plan showing the proposed developments is attached. An International Theme Park has been proposed at Penny's Bay under the Draft RODP. The Theme Park and its associated developments have been assessed under a separate EIA for their Environmental Permits application.

1.4 The air and noise impacts assessment predicted no exceedance of the statutory criteria for cumulative air pollutant and noise levels during either construction or operational stages of NLDFS and CKWLR at any of the identified Sensitive Receivers (SRs), after the provision of the recommended mitigation measures.

1.5 The water quality and hydrodynamic assessment concluded that the NLDFS developments could cause changes in tidal current patterns but that these changes in combination with the discharge of sewage effluent and stormwater would not result in adverse impacts to water quality.

1.6 Reclamation for the NLDFS development and CKWLR require large amounts of fill materials and therefore offers a very good opportunity to utilise the public fill generated in the HKSAR. The intention to maximise the use of public filling material has thus been incorporated, to the greatest degree, into the engineering design of the reclamation. Operationally, with incorporation of recommended waste avoidance and recycling measures, it is considered that the solid waste arising from the Draft RODP developments will not cause insurmountable impacts.

1.7 The proposed developments associated with the NLDFS and CKWLR will generally lead to a loss of terrestrial habitats with low ecological value. Mitigation measures for the development are recommended to avoid or reduce the potential impacts on the secondary woodlands, backshore vegetation, natural streams, rare/restricted/protected plant species, Rice Fish and the White-bellied Sea Eagle. Loss of woodland and stream habitats would be compensated with woodland planting and stream recreation.

1.8 The cumulative impacts to benthic, subtidal and intertidal habitats and capture fisheries as a result of the NLDFS developments will be mitigated through the deployment of specially designed sloping seawalls which allow recolonisation, with Artificial Reefs (AR) recommended as an additional enhancement measure. Review of monitoring data shows the waters near the proposed NLDFS reclamation sites are not highly utilized by Chinese White Dolphins, though mitigation and monitoring have been recommended to prevent any construction and operation impacts on marine mammals. The Ma Wan Fish Culture Zone is also not predicted to be impacted by adverse water quality impacts as a result of either the Project construction or operation.

1.9 Based on the identified potential hazard sources and their distance from the proposed developments, and taking into account the additional population due to the developments, it is considered that the proposed developments do not contribute to any significant increase in overall risks from the hazard sources and are compatible with Hong Kong Risk Guidelines.

1.10 Following implementation of the recommended mitigation measures, the impacts to the cultural heritage resources are considered acceptable and in accordance with statutory criteria. Similarly, the residual landscape and visual impacts are acceptable after mitigation.

1.11 Cheoy Lee Shipyard (CLS) has been identified as the only industrial operation that has the potential to cause soil and groundwater contamination within the Project Area. A separate subsequent EIA Study will be completed prior to the decommissioning of the CLS to satisfy all the EIAO requirements. After the remedial measures prescribed by the CLS site Schedule 2 EIAO are conducted in accordance with appropriate protocols, there will be no potential residual negative impacts, and no insurmountable conditions for the future use of the former CLS site for the proposed developments.

1.12 An Environmental and Audit (EM&A) Manual has been prepared for the Project which contains detailed monitoring and audit arrangements for the construction of CKWLR. As it is envisaged that there may be multiple contracts underway in the area during the construction of CKWLR an Environmental Projects Office (ENPO) will be set up to integrate EM&A with the concurrent reclamation and construction works in the Penny's Bay area.

1.13 Overall, the EIA Final Report for NLDFS and CKWLR has concluded that the Projects will comply with all environmental standards and legislation after the proposed construction and operational stage mitigation measures are implemented and has thus demonstrated the acceptability of residual impacts. The EIA has also recommended statutory means to ensure the implementation of necessary mitigation during Project construction and operation. The EIA has concluded the acceptability of any post mitigation impacts from the Project and has made recommendations for the protection of the population and environmentally sensitive receivers. Comprehensive EM&A has been recommended to verify the accuracy of the EIA predictions and the effectiveness of recommended mitigation measures. The EIA has also concluded that the preferred CKWLR alignment and its associated reclamation at Tsing Chau Tsai East are considered to be environmentally acceptable.

Annex II

Hong Kong Disneyland
Environmental Impact Assessment (EIA)

Introduction

The Theme Park EIA study is one of the most comprehensive and thorough ever completed in Hong Kong. The Report is over 1,500 pages, covering 16 separate sections, and 13 annexes.

2. The Project site has been analysed at length over the past seven years due to the Government's previous plans to develop container terminals in the area. Four separate container terminal EIA Reports on the project site, which were endorsed by the Environmental Pollution Advisory Committee (EPCOM) and its successor the Advisory Council on the Environment (ACE), confirmed that the land reclamation was possible with appropriate mitigation measures. Despite the previous EIA Reports, a new EIA Report for the Theme Park has been prepared because of the change of land use.

Project Description

3. The Project encompasses 290 hectares of land to be formed in and adjacent to Penny's Bay in the Northeast area of Lantau Island. On completion of the two phases of the Project, the development will include two theme parks, individually themed hotels and a retail, dining and entertainment complex. In addition to these primary land use areas, the Project includes a water recreation centre and other public service facilities.

4. As a part of the Project, infrastructure improvements to the water, sewer, electric, gas, and transportation networks will be constructed to ensure the Project has the necessary utilities. Through an integrated transportation network guests will be able to access the Project site via rail, ferry, bus, motor coach or private car. The majority of the guests to the Theme Park will utilise rail and bus. The North Lantau Highway and MTR Tung Chung Line and Penny's Bay Rail Link will help transport guests and employees to the site without substantial additional transportation investment.

Environmental Impacts

5. The EIA Report evaluates the Project's impacts on the environment as well as the cumulative impacts of the infrastructure and related projects that support the theme park. Where impacts were considered significant, feasible mitigation measures were recommended. The findings in the EIA Report are summarised below.

Air Quality

- The assessment of air quality concluded that during both construction and operation the standard would meet Hong Kong Air Quality Objectives.
- Specifically, emissions from firework shows and Project-related vehicular trips were not significant.

Noise

- Disney have designed a special mid-level fireworks display to meet Hong Kong's noise standards.
- There will be stringent noise monitoring during construction and operations to ensure that noise standards are met.

Water Quality

- The existing Sewage Treatment Works in Siu Ho Wan has the capacity to accommodate the Project's waste water, which will be properly treated at the facility before being discharged. (Additional capacity will be required later.)
- The water quality impact assessment demonstrated that, even under the worst case construction scenario, the predicted cumulative increases in suspended sediment concentrations would not cause adverse effects.
- The assessment also determined that the discharges from the operation of the Theme Park would have no adverse impacts on tidal current patterns or marine water quality.

Solid Waste

- The existing North Lantau Transfer Station will be able to accommodate the Project's solid waste.
- The Report recommends Hongkong International Theme Parks Limited (HKITP) implement a significant recycling programme as part of the Theme Park operations.

Terrestrial Ecology

- The potential disturbance to a pair of White-bellied Sea Eagles near the Theme Park area would be minimised through controlling construction practices and maximising the distance between the nesting site and the Theme Park. A buffer zone comprising an area of open water of about 10 hectares surrounding the woodland, where the White-bellied Sea Eagles were found, is also recommended.
- The behaviour of the sea eagles will be monitored once reclamation and construction commences.

Marine Ecology

- The waters near the proposed Theme Park are not highly utilised by Chinese White Dolphins but dolphins will be monitored during the land reclamation and project construction phases.
- Construction will be designed and implemented to minimise any potential impacts

on dolphins.

Fisheries

- An artificial reef will be created to enhance the ecological and in-shore fisheries resources.
- Sloping seawalls will be designed which can be colonised by marine resources.

Hazards

- With the incorporation of the design and operating safety measures suggested in the Report, the risks due to dangerous goods (fireworks and sodium hypochlorite) storage, transport and use would be acceptable.

Cultural Heritage

- The construction works, including the temporary access road from Yam O to Penny's Bay, will be planned to an alignment to preserve any potential archaeological resources.

Landscape and Visual Impact

- The EIA indicates that there are no significant impacts from the Project in terms of landscape and visual impact, subject to suitable mitigation measures.
- There would be some losses of natural coastline and natural features. However, the creation of new landscape character based on a suburban, tourist and resort setting would enhance the attractiveness of the area.

Land Contamination

- Cheoy Lee Shipyard (CLS) has been identified as the only industrial operation that has the potential to cause soil and groundwater contamination within the Project area.
- A separate subsequent EIA Study will be completed prior to the decommissioning of the CLS to satisfy all the EIAO requirements.
- After the remedial measures prescribed by the CLS site Schedule 2 EIAO are conducted in accordance with appropriate protocols, there will be no potential residual negative impacts, and no insurmountable conditions for the future use of the former CLS site for the proposed developments.

Fill Material

- Reclamation for the Theme Park and its associated development will provide a prime opportunity to utilise the inert construction and demolition material (public fill) generated in the HKSAR. This will not only alleviate the demand for fill material but also reduce the pressure of disposing such materials at the strategic landfills.
- Both the Penny's Bay Stage II and Yam O reclamation will use over 50% public fill.

Conclusion

6. Overall, the Report concluded that, even under the worst case scenario, there would be full compliance with all relevant environmental standards/legislation after the proposed mitigation measures are implemented.