

## **1. INTRODUCTION**

### **1.1 Background of the Study**

**1.1.1** After relocating Kai Tak Airport in July 1998, the Kai Tak Airport site together with reclamation at Kai Tak Approach Channel, Kwun Tong and Kowloon Bay Typhoon Shelter was made available for urban development and renewal.

**1.1.2** In September 1995, the Territory Development Department commissioned the South East Kowloon Development Feasibility Study (SEKDFS) to establish the detailed feasibility of SEKD as proposed in the South East Kowloon Development Statement Study and to make adjustments to the Outline Master Development Plan to formulate solutions for the phased and integrated development/redevelopment of SEKD, and proposals to enable implementation of the Early Development Packages.

**1.1.3** The main recommendations of SEKDFS were endorsed by the Committee on Planning and Development (CPLD) in December 1997. The Outline Zoning Plans based on the findings of SEKDFS gazetted on 4 September 1998 were objected to by the public mainly due to concerns over the extent of reclamation. Subsequently, an Outline Concept Plan giving an outline for a revised scheme was formulated in May 1999 upon a series of public consultations.

**1.1.4** In November 1999, Territory Development Department commissioned the Comprehensive Feasibility Study for the Revised Scheme of South East Kowloon Development. The prime objectives of the Study are:

- To revise the Outline Concept Plan prepared after SEKDFS taking into account public views;
- To formulate an optimum development plan;
- To establish its feasibility;
- To recommend the implementation framework; and
- To prepare preliminary design so as to allow detailed design to proceed.

### **1.2 Objectives of the Study**

**1.2.1** The prime objective of the Feasibility Study is to formulate an optimum development plan for the revised scheme taking into account the public views on the Outline Concept Plan to establish its feasibility, to recommend the implementation framework, and to prepare preliminary design for all infrastructure and civil engineering and associated landscape works in sufficient details so as to allow detailed design to proceed at the next stage.

**1.2.2** The Revised Scheme of South East Kowloon Development falls within Item 1 of Schedule 3 of the Environmental Impact Assessment Ordinance (EIAO) and is a Designated Project (DP) requiring an environmental impact assessment (EIA) report to be approved under the EIAO (S.1.5). An EIA Study Brief (No. ESB-039/1999) for this project was issued by the Environmental Protection Department (EPD) under the EIAO. An EIA Report satisfying the requirements of the EIA Study Brief has been produced.

**1.2.3** The EIA Report satisfies the EIA Study Brief for the Schedule 3 Designated Projects. Depending on the design details of specific items that are established in this study, the environmental impacts of some of the items that fall within Schedule 2 DPs of the EIAO are assessed in this EIA study. Prior to the application of the Environmental Permit for the construction and operation of any of these Schedule 2 DPs, a detailed EIA should be

undertaken with reference to the EIA Report for those assessed impacts. The environmental impacts should be reviewed for any material change defined under the EIAO during the design stage of the project. Other Schedule 2 DPs, of which the environmental impacts largely depend on the detailed design, should be fully assessed in further detailed EIA studies to be carried out at a later stage.

**1.2.4** This EIA Executive Summary summarises the findings, conclusions and recommendations of the EIA Report on the construction and operational phase impacts on the following aspects:

- air quality impact;
- noise impact;
- water quality impact;
- sediment contamination
- sewerage and sewage treatment implications;
- waste management implications;
- land contamination impact;
- hazard to life;
- ecological impact;
- fisheries impact;
- heritage impact; and
- landscape and visual impact.

**1.2.5** The approach in carrying out the EIA followed the criteria and guidelines stated in the *Technical Memorandum on Environmental Impact Assessment Process* together with the EIA Study Brief and other relevant legislation, policies, and guidelines.

**1.2.6** The EIA presents detailed assessment of various environmental issues of concern for the SEKD. Environmental impact mitigation measures, where considered necessary during construction and operational phases of the development, are recommended in the EIA Report. Details of the proposed environmental monitoring and audit program for the development are provided in a separate Environmental Monitoring and Audit Manual (EM&A Manual).

### **1.3 Planning Theme**

**1.3.1** The scheme for SEKD has been designed on the basis of sustainable planning concepts in line with international practice (see **Figure A**):

- People-orientated - distinct neighbourhoods will be created, each with their own identity and defined in respect of walking distance from rail-based transit modes. Pedestrians will be able to walk freely without having to cross major roads. Views of the harbour and Kowloon Hills will be maintained by incorporation of view corridors and stepped building heights.
- Balanced - a full range of community facilities and open space will be provided within each neighbourhood. Some 70,000 jobs will be created for a total population of 250,000 persons.
- Sustainable - the extent of reclamation will be reduced from 161 hectares to 133 hectares. Each neighbourhood will be served by state-of-the-art recycling and energy-efficient facilities. The open space system will create new habitat to contribute to Hong Kong's bio-diversity.
- Non-road based - the development will be essentially rail-based, promoting public transport usage to the maximum extent possible. 'Green finger' open space corridors will encourage pedestrian movement and cycling.
- Environmentally friendly - the extent of surface road space will be reduced to 23% of the development area (compared to over 30% in typical urban area), minimising the impacts

of fossil-fuelled vehicles. Important items of heritage will be incorporated within the development.

- Tourism- and leisure-orientated - a new tourism node will be created at Kai Tak Point maintaining the tip of the former runway as a feature. The node will be complemented by the Metropolitan Park, waterfront promenade, town centre development, and international stadium.
- Waterfront enhanced - some 5.4km of new waterfront promenade will be created allowing Hong Kong residents and tourists to enjoy a significant new amenity in the heart of the city.

## 1.4 Planning and Development Context

1.4.1 The Outline Master Development Plan for SEKD is illustrated on **Figure B**.

1.4.2 The development will provide some 70,000 jobs for an ultimate population of some 250,000 persons within the main development area. The predominant uses are residential at 22% and open space at 28% of the total land area. Surface roads comprise some 24% of total land area.

1.4.3 The new development area of SEKD measures 413 ha, comprising:

- The former Kai Tak Airport apron and runway (280 ha);
- Reclamation area at Kai Tak Approach Channel and Kwun Tong Typhoon Shelter (65 ha);
- Reclamation area at Kowloon Bay (61 ha);
- Cruise terminal and other marine and waterfront facilities (7 ha).

The total reclamation area of 133 ha is significantly less than the 161 ha in the previous Outline Concept Plan discussed in mid 1999 public consultation.

1.4.4 The predominant use in the layout is residential development comprising a tenure mix of some 49% public and 51% private housing in population terms. Private housing is located on waterfront sites as well as above a railway depot located in the north-west of the site. Public housing is located mainly within North Apron area of the former Airport, which can be available early to meet HOUSCOM targets and where maximum plot ratio is allowed.

1.4.5 G/IC facilities are distributed throughout the development site in proximity to population concentrations, in locations suitable to the nature of the facilities. School sites have been distributed throughout the scheme in relation to population. A 50,000-person international stadium is located north of the Metropolitan Park. A hospital is located at the end of the reclamation in the former runway area.

1.4.6 Major commercial development is limited to two locations: the town centre adjacent to the To Kwa Wan Station and at the Kai Tak Point Tourism Node. The town centre would comprise a mixture of office and district-wide leisure/retailing and would provide an ideal location for a landmark building. Kai Tak Point would incorporate retailing and dining compatible with the tourism and recreation activities planned in that location. Speciality retail and al fresco dining is also to be provided along the promenade to assist in creation of a lively waterfront.

1.4.7 Kai Tak Point in the south of SEKD has been planned as a new tourist node, building on the unique history of Kai Tak. As such, the node will comprise an aviation/transport museum, children's discovery centre, IMAX theatre, fun park, cruise terminal, hotel, and supporting commercial development.

1.4.8 The layout incorporates a hierarchy of open space from local, pocket and neighbourhood parks through to District and Regional Open Space. The most significant elements of the

open space system are the proposed waterfront promenade and Metropolitan Park. The configuration of the Metropolitan Park abuts the waterfront and is intended to maximise frontage to adjacent residential development. View corridors extend through the development site to Lion Rock and Fei Ngo Shan. Other open spaces have been located so as to provide a community focus within each of the residential districts and to provide pedestrian-only linkages.

**1.4.9** A typhoon shelter is located in the southern part of the existing Kai Tak Approach Channel. A refuse transfer station (RTS), public filling barging point (PFBP), vehicular ferry pier, and marine refuse collection point are located in the south of the scheme. These facilities have been located at the previous vehicular ferry pier, remote from residential development and allowing routing of vehicles through an industrial area. Mitigation measures for possible visual impact could be adopted to shield off the RTS/PFBP from the view at the Tourist Node.

## **2. SUMMARY OF ENVIRONMENTAL OUTCOMES**

**2.1.1** The concept of 'green' development permeates the whole of SEKD. Landuse and transport planning has provided a proactive approach in minimizing the likely environmental impacts from road traffic, potential noisy uses namely stadium, public cargo working area (PCWA), and facilities with potential hazard to life including chlorine dock and dangerous goods (DG) godown. Besides, other 'green' initiatives like the application of solar energy, automated refuse collection system, and centralised district cooling system have been explored for SEKD (see **Figure C**).

**2.1.2** Environmental friendly transport system will serve as the backbone of SEKD connecting the future Shatin to Central Link and the three SEKD transportation hubs. It is estimated that the total daily car trips and bus trips to and from SEKD would thus be reduced by 20,000 veh-km and 22,000 veh-km respectively. This would accordingly reduce the daily nitrogen oxides and RSP emissions from SEKD by about 160 kg and 16 kg respectively based on 2011 vehicle emission factors. Major vehicular traffic will go through tunnels and depressed roads. The design of the road network also aim at reducing vehicular and noise emissions from internal traffic by discouraging through flow traffic across SEKD (see **Figure D**). The amount of vehicular traffic in SEKD has been much reduced with peak hour traffic flow on most of the planned distributor roads being less than 1,000 vehicles per hour in each direction. Including the existing Airport Tunnel, a total of 7.4 km of tunnel has been planned within SEKD to remove potential traffic noise and air quality impacts on about 80,000 future SEKD population alongside these tunnels.

**2.1.3** To minimize the residual traffic noise impacts on future development within SEKD, more than 7 km of vertical barriers, cantilever barriers, and semi-enclosures have been planned for the new roads to protect an additional 25,000 SEKD population. However, the SEKD would still be bounded by heavily trafficked existing trunks roads namely Prince Edward Road East and Kwun Tong Bypass which contribute to elevated traffic noise and air quality impacts at the peripheral of SEKD. Mitigation measures have been recommended in the current scheme to protect future SEKD population. The recommended measures include resurfacing of existing roads with low-noise surface, retrofitting additional noise panels on Kwun Tong Bypass, provision of buffer strips between existing trunk roads and future SEKD residential development, and noise-tolerant building design. With the above environmental transport design and mitigation measures, the current Outline Master Development Plan complies with the relevant air quality and noise standards.

**2.1.4** The planned stadium, a landmark facility, is also a potential noise source especially when using to hold multi purpose functions including concerts. The current scheme does not only provide about 200m buffer distance from the Stadium to future residential development, it also incorporates retractable roof design for the Stadium to eliminate any potential noise