

HONG KONG : HONG KONG INTERNATIONAL AIRPORT

- **Client:**
Engineering Development
Department
Hong Kong Government
- **SWK appointment:**
1952 - 1981
- **Scope of work:**
Complete airport including
runway, taxiways, terminal
buildings, services and
later extensions
- **Construction cost:**
Kai Tak Airport -
HK\$120 million (1962)
Extension works -
HK\$180 million (1974)

Hong Kong's International Airport at Kai Tak, located in the heart of Kowloon, offers one of the most spectacular landings in the world.

SWK was appointed initially to investigate the engineering feasibility and later to design and supervise the construction of the entire development which included a 2.5km long single runway, adjoining taxiways and airport buildings.

Construction started in 1955 and the runway was operational three years later. The project involved building some 5.5km of rubble mound sea walls and handling over 10 million cubic metres of material obtained mainly by dredging the seabed and by the excavation and removal of hills on the airport approach path.

Special care was taken to select good quality materials for the seawalls and foundations and for the filling under the aircraft pavements to ensure maximum stability and minimum settlement.

The runways and taxiways were constructed in high density asphalt overlying a base of graded, crushed granite and a sub-base of densely compacted sand. A comprehensive drainage system was laid along the edge of the 2km promontory.

Other facets of this phase of work at Kai Tak included the installation of runway, taxiway and approach lighting systems, aircraft navigation aids and fire-fighting equipment. An 8.5ha extension to the concrete aprons, new passenger and freight terminals, a control tower and fire station were also built.

Within a decade, further airport expansion was required to cater for a new generation of wide-body jets. In 1970 work started on a 770m extension of the runway promontory. This involved an extra 2km of seawalls. The runway was lengthened and additional taxiways and apron pavements were built. During night closures, the main taxiway was widened and the existing runway strengthened with an asphalt overlay so that larger aircraft of the future, some with all-up weights of 700 tonnes, could be accommodated.

A road tunnel, designed to run under the airport development, was constructed during this period. The airport remained operational throughout the development of both the airport extension and the tunnel.

The extension works were completed in 1974 and in 1981 the approach lighting system was improved and an automatic taxiway route setting scheme installed under SWK's planning and supervision ■

