

Kowloon Station, Hong Kong

The project

The brief for the masterplan, as well as for the Kowloon railway station, required extensive mixed uses (1.1 million sq. ft) including residential, office, retail and hotel accommodation as well as public spaces, recreation areas and 22 towers (Seex and Erickson, 2001). The premise behind the development was the establishment of a high-quality connected area, both locally through pedestrian bridges, nationally via the train station and globally via the airport (Terry Farrell and Partners, 1998). By 2010, this transport interchange would be 'contained within a new town to sustain a population of 50,000' (*op. cit.*, p. 59). It forms part of a dense new city district instigated in 1989 by Hong Kong's government to replace its congested airport at Kai Tak with a new £12 billion airport on the man-made island of Chek Lap Kok (Figure C.8) (Seex and Erickson, 2001).

Sustainability features

Lau *et al.*'s chapter about Multiple and Intensive Land Use (MILU) highlights the

sustainability of the urban form and strategic planning. In addition, the efficiency of the transportation itself makes a significant contribution to the overall sustainability of the project. Along the rail axis, 34 escalators and 71 staircases descend 14 metres, through a grand escalator hall, from ground level to the Tung Chung mass transit railway (MTR) Line platforms at the station's lowest level. This will be the most intensively used space, with 43,500 passengers arriving and departing from the platforms at peak hours. This project demonstrates how a very high-density transit (Figure C.9) development zone can be achieved.

References and links

Seex, D. and Erickson, B. (2001) Case studies. In: *Approaching Urban Design: The Design Process* (eds. Roberts, M. and Greed, C.), Pearson Education Limited, Harlow.

Terry Farrell and Partners (1998) *Kowloon: Transport Super City*, Pace Publishing Limited, Hong Kong.

Terry Farrell and Partners (no date) *Kowloon Station and Masterplan, Hong Kong*. Retrieved from the World Wide Web 1st August 2004. http://www.terryfarrell.co.uk/projects/masterplanning/mp_kowloon.html



Figure C.9
The multi-level city. (Source: Terry Farrell and Partners, 1998.)

Pudong, Shanghai, China

The project

Pudong, with an area of 533.44 km², is located on the east bank of the Huangpu River that runs through Shanghai. Shanghai's population is 13.3 million, of which Pudong is home to 1.68 million people. The development objective of Pudong was to create a 'multi-functional, export-oriented and cosmopolitanized new urban area of Shanghai' (PNA, 2000). The complete redevelopment of the Pudong area, including infrastructure installation, had a significant focus on transportation to and from the wider Shanghai area (Zhao *et al.*, 2003).

Sustainability features

While much of Pudong's development is far from sustainable (it has included the displacement of local communities, and aggressive urban growth with unsustainable buildings), the transportation system is leading edge, and well worthy of note. The development includes the Pudong International Airport, the Pudong International Deep Water Harbour, a light transit railway, a river crossing project

which includes the automated Lujiazui Pedestrian Tunnel carrying people between Pudong and West Shanghai. It also includes the Maglev, the world's first commercial magnetic elevated railway which uses highly efficient electromagnetic systems forces to uplift trains and propel them. Built from German technology at a cost of \$1.2 billion, the Maglev train (Figure C.10) links the new Shanghai Pudong International airport to the centre of Pudong. The system has a length of about 30 kilometres with a maximum speed of about 440 km/hr. It takes about 8 minutes to go from one end to the other, making it the fastest urban transit system in the world.

References and links

- Pudong New Area Administration (PNA) (2000) *Geographic Location*. Retrieved from the World Wide Web on 25th August 2004.
<http://pudong.shanghaichina.org/basi.html>
<http://people.hofstra.edu/geotrans/eng/ch3en/app13en/ch3a2en.html>
- Zhao, B., Nobukazu, N., Chen, J. and Kong, L. (2003) The Impact of Urban Planning on Land Use and Land Cover in Pudong of Shanghai, China. *Journal of Environmental Sciences*, **15(2)**: 205–214.



Figure C.10
 The ultra-efficient Maglev. (Source:
<http://people.hofstra.edu/geotrans/eng/ch1en/conc1en/maglevshanghai.html>)