

City Talk

CEREMONY FOR THE COMPLETION OF THIRD RUNWAY PAVEMENT



Then SAR chief executive Carrie Lam presides at a third runway ceremony and a Cathay Pacific 747-400F gets a first go at the third runway.

LAND IS THE PROBLEM FOR BUILDING AIRPORTS

It may sound ironic to talk about a new airport facility when travel is still restrained by Covid-19, but the recent opening of the third runway marks a significant enhancement of the capacity of our airport.

That expansion was made in anticipation of a projected increase in passenger volume when the pandemic eventually subsides and business and leisure travel gets back to previous patterns.

Building airports by large-scale reclamation is no longer a new science, but the need for a large tract of flat land to house the long runway and terminal facilities often involves substantial civil engineering works.

The work involved in building this new extension is almost equivalent to building an airport in terms of its scale.

Around 650 hectares north of the existing airport was created by a novel reclamation method, called deep cement mixing, to avoid disturbing the soil, which consisted of a lot of contaminated mud previously dumped in that bay.

It was a civil engineering innovation and practical way to create land and had proven to be effective in preserving the environment.

This additional tract of land also allowed massive replanning of the terminal facilities, moving the “center of gravity” of the airport from between the previous north and south runways to between the new north runway and the previous runways.

A new terminal with more commercial outlets was built to meet the new demands and expectations of travelers.

Together with the 3,800-meter-long runway and supporting taxiway systems, a new extension of the automated people mover system facilitates the flow of passengers to the new terminal with a capacity of 10,000 per hour.

With the previous north runway becoming the central runway, plus the existing south runway, the airport can



Nuts and bolts

Edmund Leung

now cater for 120 million passenger trips and 10 million tonnes of cargo every year.

Hong Kong is not the only city engaged in airport expansion, despite difficulties in finding a suitable site.

Chongqing Wushan Airport is even more typical of such civil engineering wonders.

The terrain in Chongqing is hilly, and Wushan is a hilly suburb with no flat areas. It is not possible to find a large tract of flat land to construct an airport at or near ground level.

Chongqing already has four airports, but to meet the demand for the ever-increasing air travel traffic, this new airport will significantly shorten the time and distance to reach the scenic areas in the city, boosting the tours sector and helping to grow the economy.

This airport was built by cutting out seven mountain tops, filling up six valleys, creating 3,000 hectares of flat land for the base of this airport, perched at 1,771 meters above sea level.

An advantage of building this airport at such a high elevation is its ability to offer a breathtaking views of scenic areas.

Quick access to cities is a key element for growth of economy. The rapid growth of the high-speed rail in China has offered an extremely efficient link for intercity transport, but air transport still has its place, especially in accessing suburban touring sites where it is not on level ground, and where the traffic volume is below that for large volume rail transport.

Transport planners and engineers need to weigh up the different parameters and decide on the optimal mode of transport for efficiency and low costs.

Veteran engineer Edmund Leung Kwong-ho casts an expert eye over features of modern life