ARCHITECTURE | DESIGN | PEOPLE

PERSPECTIVE

DECEMBER 2018

PLANS FOR THE FUTURE

BARRIE HO'S NEXT 20 YEARS

A BRIDGE TOO FAR?
HONG KONG-ZHUHAI-MACAU LINK

ALL ABOARD
WEST KOWLOON TERMINUS

\+ AUTO INTERIORS
DESIGNERS' CHRISTMAS GIFT IDEAS

HKD 60

9 771606 255002

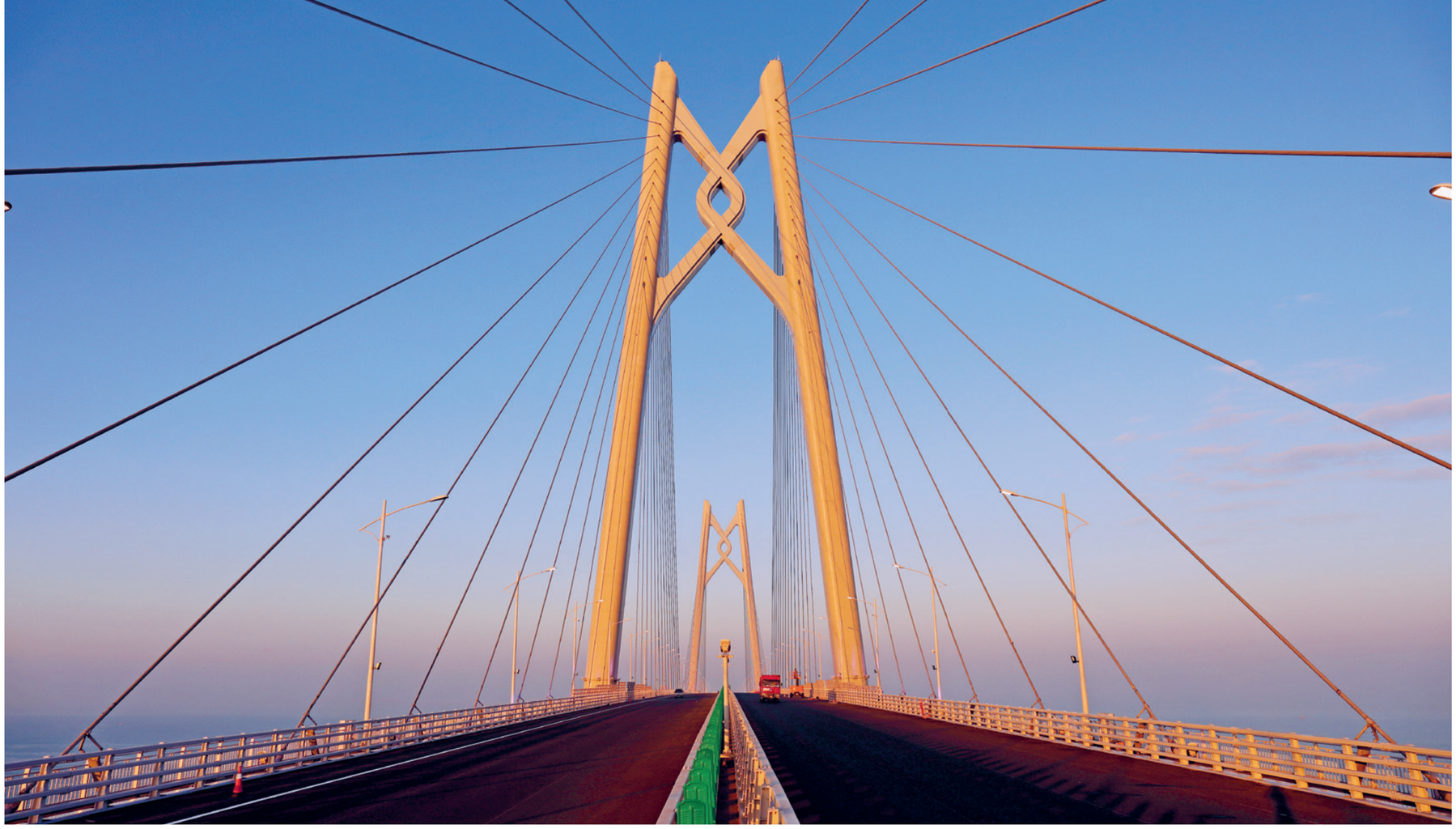
A BRIDGE TOO FAR?

BY **CHRISTOPHER DEWOLF**

The Hong Kong-Zhuhai-Macao Bridge is up and running. And though an architectural marvel and triumph of engineering, the project continues to draw criticism about its cost, practicality and environmental impact

Photo: Shutterstock

The bridge starts on an artificial island near Hong Kong International Airport



The Zhuhai section of the bridge links up Hong Kong and Macau in a 45-minute drive

Photo: Shutterstock

“ NOBODY CAN DENY THE AMBITION OF THE PLANNERS”

The only glimpse most visitors will have of the Hong Kong-Zhuhai-Macao Bridge is when they fly into the nearby Hong Kong International Airport, because access to the bridge is limited to trucks, coaches, shuttle buses and a small handful of private vehicles. That’s one of the reasons critics have spent years blasting the US$18-billion link as an expensive white elephant driven by political, not economic, considerations.

It’s one of several new connections between Hong Kong and mainland China, including an equally controversial high-speed railway that opened in September and a new border crossing at Heung Yuen Wai slated to open by the end of this year. “The pressure is on to demonstrate that these new road links are not white elephants,” says Paul Zimmerman, co-founder and chief executive of urban design watchdog Designing Hong Kong.

Though many have cast aspersions on the need for such a long and costly bridge, nobody can deny the ambition of its planners. Property tycoon Gordon Wu first pitched the idea of a bridge between Hong Kong, Zhuhai and Macau to Chinese officials in 1988, but the Hong Kong government wasn’t convinced – at first. It had a change of heart in 2001, when it began to explore the possibility of building the bridge as a way to stimulate the city’s logistics business. It also worked well in the context of the government’s drive to draw Hong Kong closer to the mainland through new infrastructure projects.

Work began on the mainland section of the bridge in 2009, but the Hong Kong side was delayed by a court challenge from various environmental concern groups, who worried that it would destroy the last vestiges of Hong Kong’s endangered Chinese white dolphin population. The courts allowed bridge construction to proceed in 2011, but green groups were proven right as the number of dolphins off the coast of Lantau plummeted, with experts pointing squarely at the effects of the bridge’s construction.

At times, construction seemed as ill-fated as the dolphins. Twenty people died as they worked on the bridge, and another 600 were injured. Five contractors have been convicted of failing to maintain proper workplace safety, including two laboratory technicians who admitted to falsifying concrete safety tests; another 16 await trial. At one point, two trade unions staged a protest against the safety violations, describing the situation as “mass murder”. For a time, even the bridge seemed to shy away from itself, as an artificial island that housed technical facilities was found to be drifting out to sea.

Despite those serious hiccups, the bridge finally opened to the public on October 24 this year. From the Hong Kong side, bridge travellers first pass over a viaduct that leads to an artificial island housing immigration facilities and a bus terminal. From there, they skirt the airport before heading out to sea on a long viaduct that eventually plunges into an underwater tunnel to accommodate the passage of huge container ships above. The roadway then ascends to the cable-stayed main span of the bridge, distinguished by two towers that curve like sails in the wind. Another artificial island contains immigration facilities for Macau and mainland China.

The Passenger Clearance Building on the Hong Kong side houses immigration facilities and a bus terminal

Photos: Aedas and RSHP

The Hong Kong-Zhuhai-Macao Bridge Hong Kong Port by Aedas and RSHP

Global architecture firms Aedas and Rogers Stirk Harbour + Partners (RSHP) were responsible for designing the Hong Kong Passenger Clearance Building, known officially as the Hong Kong Port. "Efficiency, clarity of wayfinding and circulation, ample queue space, good sight lines and catering for future growth" were the main criteria for the 90,000sqm (968,750sqf) facility, says Aedas chairman and global design principal Keith Griffiths. "However, as with all great buildings, the pragmatic aspects are not the only considerations."

The architects wanted a design that reflected Hong Kong while also reducing the stress of travel. The result is what Griffiths describes as "gentle, flowing and sophisticated". Reflecting pools mitigate the vastness of the space while cultivating a sense of tranquillity. An undulating 60,000sqm (645,000sqf) roof evokes the waves of the surrounding sea while also making the building easy to navigate. "You only need to look up and follow the perspective of the light penetrating in through the roof lights and this naturally leads the traveller through the building," says RSHP partner Richard Paul. "You are constantly aware of this whenever you are within the space."

So far, the facility has been serving between 50,000 and 80,000 passengers a day, with mainland tour companies organising group visits to Hong Kong that make use of the shuttle buses that run between both sides of the bridge. That traffic is much lower than forecast. In 2008, the government estimated that between 9,200 and 14,000 vehicles per day would use the bridge; so far, peak traffic has been just 3,120 vehicles.

That has Zimmerman worried that the government will need to look for ways to justify the bridge's cost by allowing more and more vehicles to use it. During a recent Urban Land Institute conference in Hong Kong, former Hong Kong SAR Chief Executive CY Leung revealed that he is lobbying to have all Hong Kong vehicles permitted to drive in the Pearl River Delta. "That in turn would start demands for reciprocal rights," says Zimmerman. This could lead to tens of thousands of extra vehicles pouring onto Hong Kong's already congested roads.

Only one thing is certain: the bridge has a projected lifespan of 120 years. Whatever its impact, it will be felt for generations to come.