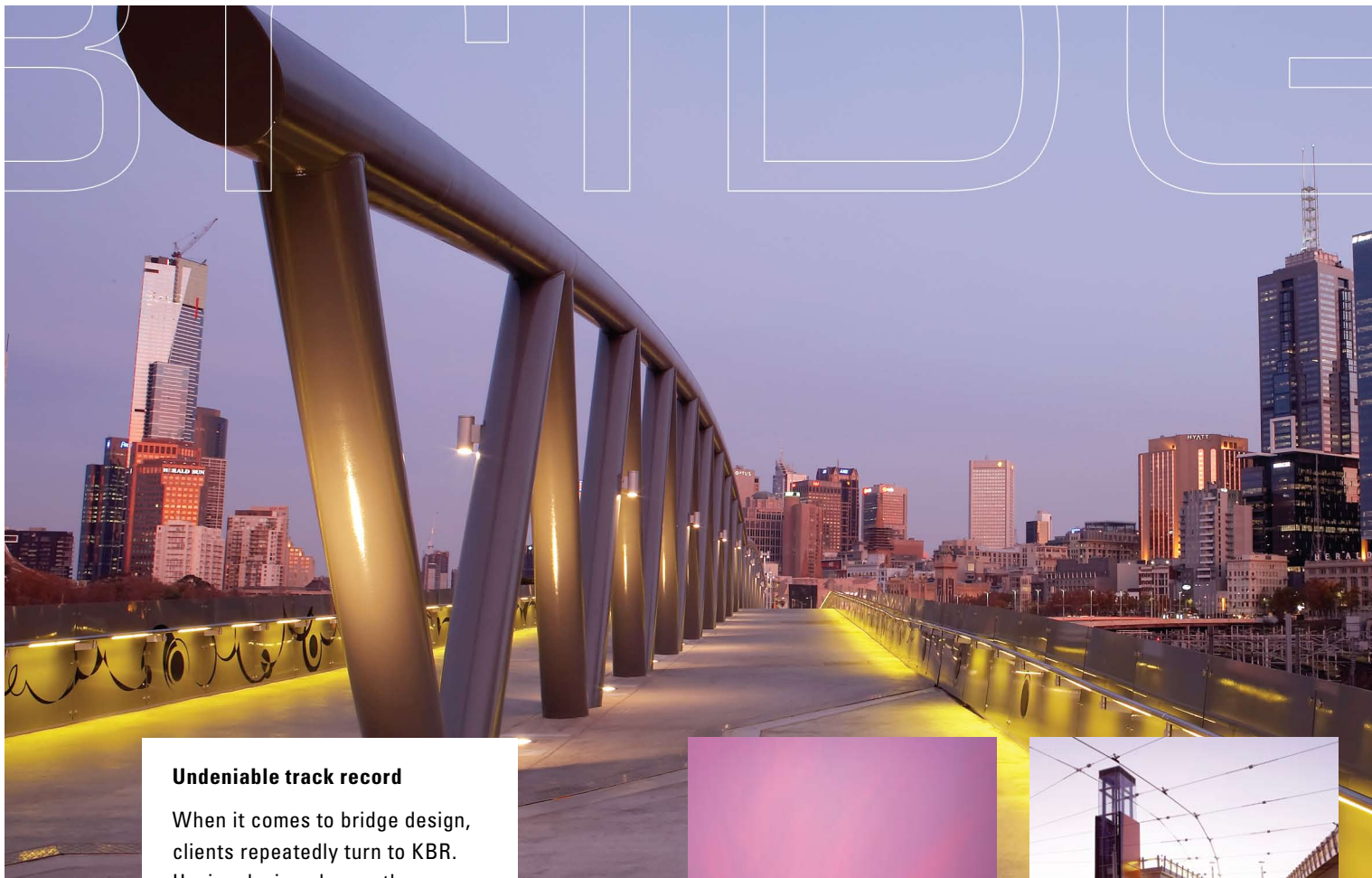


**KBR**



# DOCS Bridges

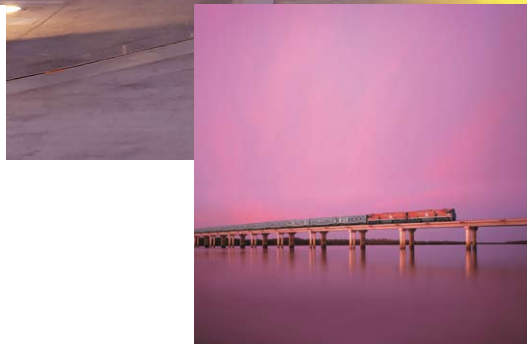


### Undeniable track record

When it comes to bridge design, clients repeatedly turn to KBR. Having designed more than 900 bridges throughout Australia and the Asia Pacific region, KBR has overcome complex constraints in some of the world's most rugged environments.

Our bridge portfolio extends across the full range of bridge configurations, including cable-stayed, balanced cantilever, arch, suspension and incrementally launched bridges, as well as the traditional short to medium-span rail and road bridges.

No matter the scale or complexity of the design challenge, our team has applied their extensive knowledge to deliver innovative solutions for the simplest and most challenging bridges.



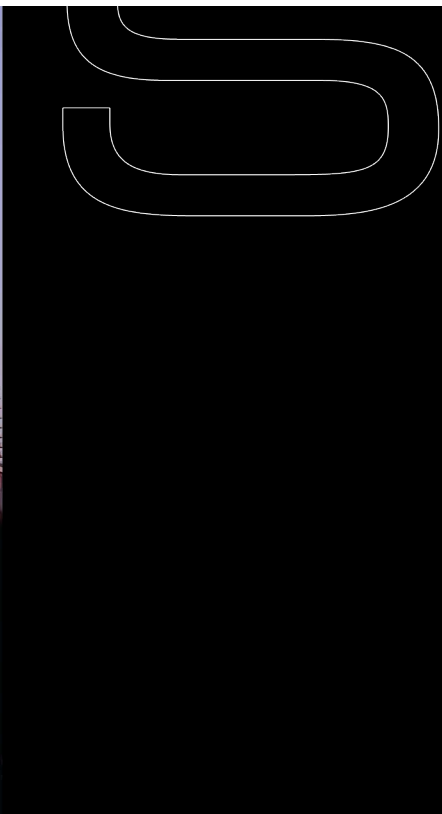
### Alice Springs to Darwin Railway, Northern Territory

This 1420 km railway includes 94 bridges, designed for rapid construction in remote locations. Five of the bridges cross major waterways between Katherine and Darwin, and are in multiple 30 m spans, the longest being the 510 m Elizabeth River bridge. The remaining 84 rail bridges and five road bridges are generally in multiple 12 m spans; designed with prefabricated components to minimise site works, they significantly contributed to construction coming in 12 months ahead of schedule.



### William Barak Bridge, Melbourne

Built for the Melbourne 2006 Commonwealth Games, the 525 m William Barak Bridge connects Melbourne's major sports and entertainment facilities with the central business district and adjoining parkland. Incorporating a series of bridge structures and a pedestrian plaza, the bridge spans two roads, a tram route and Melbourne's busiest rail corridor. KBR overcame the complex geotechnical conditions and designed the bridge to be constructed without disrupting road or rail traffic.



Bridge design

Construction superintendence

Construction surveillance

Feasibility studies

Proof engineering



**Houghton Highway duplication, Queensland**

KBR drew together specialists in road, maritime, coastal, geotechnical, hydrology and bridge engineering to duplicate the 78-span Houghton Highway bridge – the longest in the southern hemisphere. KBR reduced the number of piles from over 1000 to just 154, with a design that provides for a minimum 100-year life and is capable of withstanding a 1-in-2000 year storm. The 2.7 km bridge will provide motorists with three extra lanes and a dedicated pedestrian and cycle pathway.



**Maroochy River Bridge, Queensland**

This bridge duplication and upgrade was the first Early Contractor Involvement project undertaken by Queensland Department of Transport and Main Roads. The new three-lane bridge features a striking 'fishbone' and glass noise reduction barrier, while the existing bridge was widened to three lanes. Traffic management on the approaches was critical to the smooth operation of the parallel bridges. The collaborative working relationships between all parties saw the project delivered ahead of schedule and within budget.



**Hegigio Gorge Bridge, Papua New Guinea**

This award-winning bridge over remote Hegigio Gorge is the world's highest bridge (428 m above the Hegigio River) and the world's longest pipeline suspension bridge (470 m). It was built to carry oil from the South-east Mananda field, enabling that resource to be finally opened up for development. As well as being remote, the site is steep, geologically complex and very difficult to access – much of the bridge was erected on site by helicopter.

Facilities

Minerals

Transport

Water

**KBR**

KBR is a leading provider of engineering, construction and project management services, with a global reputation for reliability and technical excellence, and an unswerving commitment to workplace safety.

As engineering designers we are at the forefront in helping to improve the communities we serve, incorporating safety and sustainability factors into the planning, design and construction of our work.

Our aim is to build a healthier and safer world—meeting the needs of today's communities in a way that considers the needs of tomorrow.



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