

# MARR

## SPECIALIST SOLUTIONS FOR BRIDGES

MARR CONTRACTING  
ARE WORLD LEADERS  
IN THE DESIGN AND  
DELIVERY OF HEAVY LIFT  
CRANES AND COMPLEX  
CRANAGE SOLUTIONS.

Not just crane and crew for hire, we're big thinkers and problem solvers who love a challenge with a string of 'world firsts' to our name – including the design of the world's highest capacity tower crane, the 330-tonne capacity M2480D heavy lift luffing (HLL) crane.



# SPECIALIST SOLUTIONS FOR BRIDGES

**MARR'S CRANAGE SOLUTIONS FOR SUSPENSION AND CABLE-STAYED BRIDGE TOWER ERECTION ACCELERATE CONSTRUCTION BY PROVIDING HIGH-VOLUME AND HIGH-CAPACITY CRANES THAT:**

- reduce the number of critical path lifts required;
- maximise component sizes; and
- utilise high-speed winches to lift faster.

Leveraging the benefits of Marr's cranes on a project can facilitate significant improvements to programme time, cost and safety performance by allowing the ability to:

- lift larger precast and structural steel components;
- lift heavier pre-assemblies and modules; and
- maximise offsite fabrication and pre-assembly.

## UNIQUE FEATURES & BENEFITS

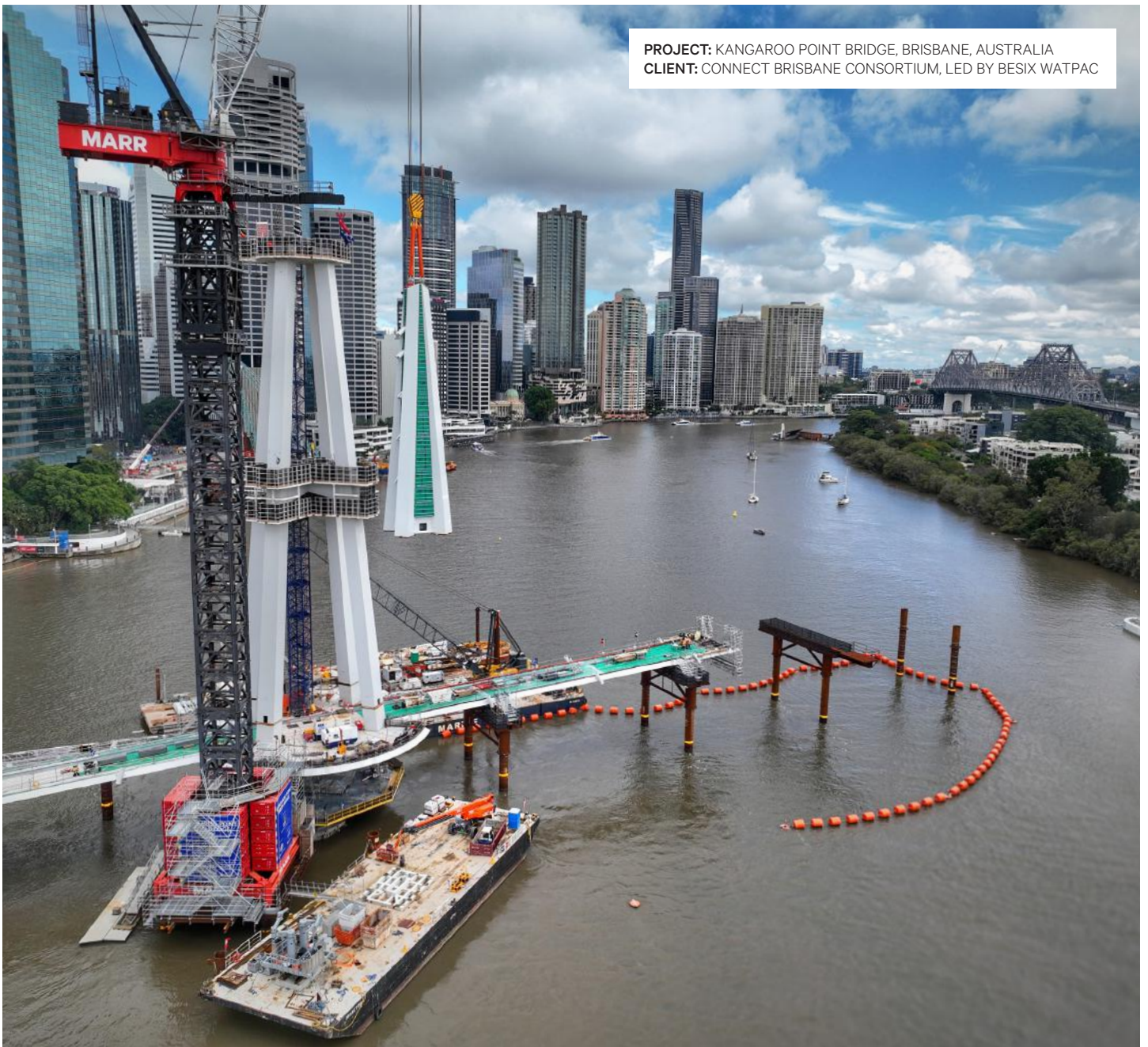
- Increased availability in high wind speeds – rated to operate in wind up to 20 m/s resulting in increased utilisation & availability
- Small base footprint – offering improved logistics on tower bases
- Low carbon offsite fabrication & pre-assembly possible
- Decrease in temporary works on bridge tower & critical path activities
- Reduction in working at height activities
- Crane tower size permits greater free-standing height
- M2480D lifting capacity: 330T@15m, 150T@30m, 100T@40m & 75T@50m.



**PROJECT:** 1915ÇANAKKALE BRIDGE, TÜRKİYE  
**CLIENT:** DL E&C-LIMAK-SK ECOPLANT-YAPI MERKEZI JOINT VENTURE (DLSY JV)



**PROJECT:** KANGAROO POINT BRIDGE, BRISBANE, AUSTRALIA  
**CLIENT:** CONNECT BRISBANE CONSORTIUM, LED BY BESIX WATPAC



# OUR UNIQUE APPROACH

**DELIVERING VALUE THROUGH THE UNIQUE COMBINATION OF OUR KNOWLEDGE, EXPERTISE, PROVEN SERVICE DELIVERY AND PEOPLE, WE WORK WITH YOU TO FIND A CRANAGE SOLUTION THAT WORKS – NO MATTER HOW BIG OR COMPLEX THE JOB IS.**

Through early engagement with us, we can work with you to develop innovative solutions that are specific to your project and deliver the best outcome for your preferred construction methodology.

And with a belief that anything is possible, we push the boundaries to deliver solutions that:

- reduce complexity & de-risk construction
- improve productivity, efficiency & safety
- enable more sustainable construction.



THE KEY TO ACHIEVING MAXIMUM EFFICIENCY IS EARLY ENGAGEMENT WITH US – AND THE EARLIER THE BETTER.



**SIMON MARR, MANAGING DIRECTOR,  
MARR CONTRACTING**



# EXPERTISE

WITH ALMOST 100 YEARS' EXPERIENCE WORKING ON LARGE-SCALE CONSTRUCTION PROJECTS IN AUSTRALIA, THE MIDDLE EAST, EUROPE, LATIN AMERICA, SOUTHEAST ASIA AND THE UNITED KINGDOM, OUR EXPERTISE SPANS: LARGE-SCALE CONSTRUCTION, MINING, OIL AND GAS, POWER GENERATION, MAJOR TRANSPORT INFRASTRUCTURE, MARINE AND TECHNOLOGY.

## OUR SERVICES INCLUDE:

- heavy lift crane solutions & design
- heavy lifting mobile & luffing tower cranes hire
- engineered lift studies & job site planning
- resourcing for project crane solutions including:
  - crane superintendents
  - crane coordinators
  - crane operators
  - dogmen/slinger signallers
- recovery crane systems
- crane asset management
- a full range of towers, static & travel bases, internal climbing systems, grillages & other accessories.



# OUR FLEET

**FROM THE WORLD'S HIGHEST CAPACITY TOWER CRANE, THE M2480D HEAVY LIFT LUFFING (HLL) CRANE, TO THE TINY M40R RECOVERY CRANE, WE OFFER THE WORLD'S MOST UNIQUE FLEET OF HEAVY LIFT TOWER CRANES.**

Engineered and constructed by our partner of more than 50 years, Favelle Favco, our fleet combines the heavy lift capability of mobile and crawler cranes with the high performance of tower cranes. But it's our heavy lifting crane solutions, and the way we approach a project that sets us apart.

With operations in Australia and the UK, and projects around the globe, our fleet includes mobile and tower cranes for hire on everything from high-rise to large-scale construction and major infrastructure projects.

See our fleet & load charts at [marr.com.au/our-cranes](http://marr.com.au/our-cranes)

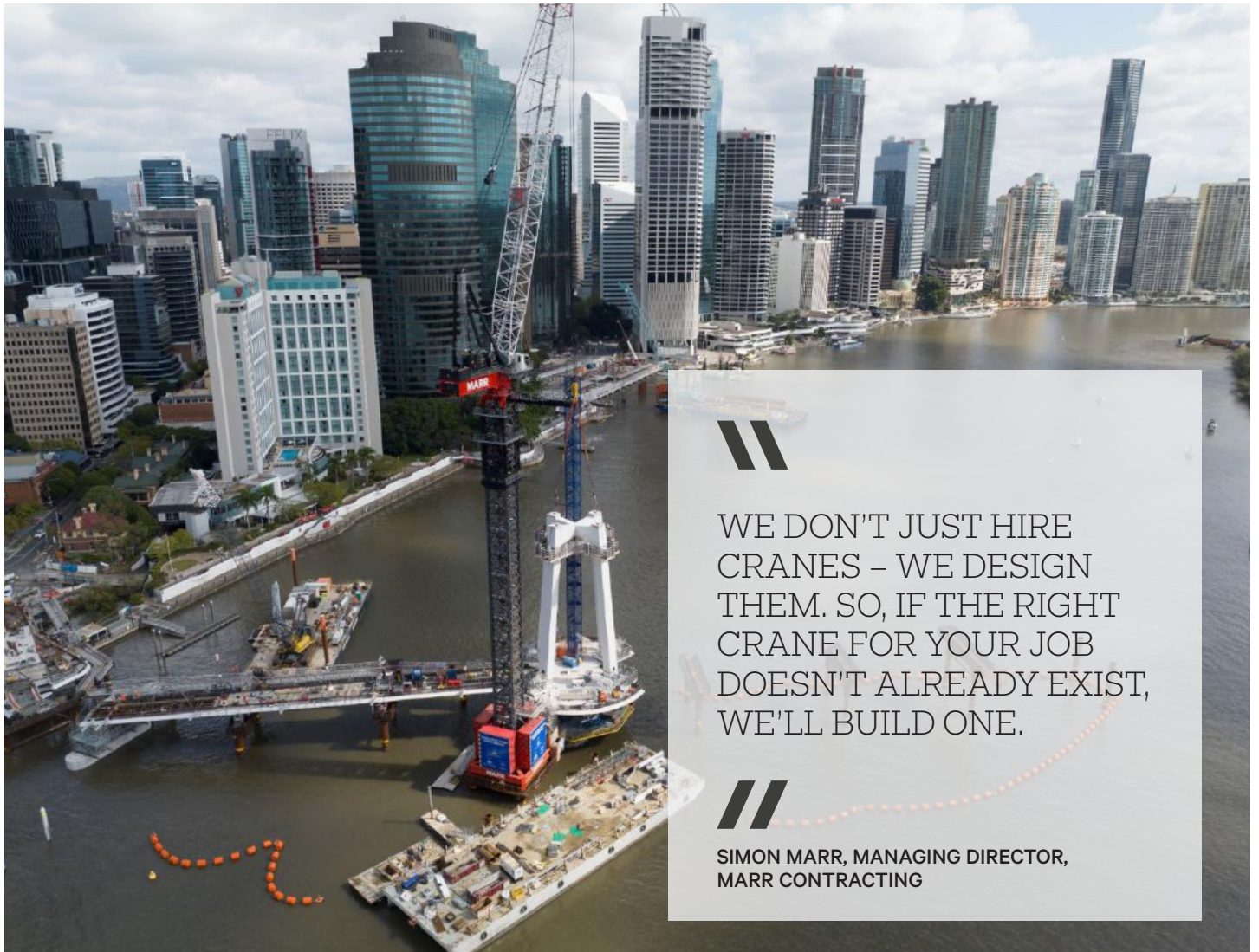


## UNIQUE FEATURES & BENEFITS

- High lift capacity – capable of lifting 330T (M2480D), allowing upsized components, increased modularisation & more extensive offsite prefabrication & pre-assembly
- Long reach capability – boom lengths of up to 120m delivering greater hook availability over a larger area for scheduled and unscheduled lifting
- Marr Transit System (MTS) – modular rail system that extends longitudinal reach with no loss of capacity – full operation between site limits
- Small base footprint – equivalent to two cars parked side-by-side, freeing up much needed construction space & requiring reduced building stand-off
- Innovative 3-beam climbing system - ability to climb the crane 20m in under 2 hours
- Recovery Crane System - enables the dismantling of both core & externally climbed cranes
- Operational in winds of up to 20m/ second - increased availability in higher wind speeds and weather vane capability in extreme weather eliminates site laydown requirements
- HVO100-compatible - up to 80% reduction in CO<sup>2</sup> emissions when using 100% renewable diesel.



COMPATIBLE WITH  
100% RENEWABLE  
DIESEL (HVO100)



WE DON'T JUST HIRE  
CRANES – WE DESIGN  
THEM. SO, IF THE RIGHT  
CRANE FOR YOUR JOB  
DOESN'T ALREADY EXIST,  
WE'LL BUILD ONE.



SIMON MARR, MANAGING DIRECTOR,  
MARR CONTRACTING

## CASE STUDY: 1915ÇANAKKALE BRIDGE, TURKEY

# A GAME CHANGING SOLUTION FOR THE WORLD'S LONGEST SPAN SUSPENSION BRIDGE

**THE CONSTRUCTION OF THE 1915ÇANAKKALE BRIDGE'S TWO 318-METRE TOWERS WAS THE PROJECT OF A LIFETIME FOR MARR'S TEAM WITH TWO RECORD-BREAKING LIFTS AND AN APPROACH THAT COULD CHANGE THE FUTURE OF HOW BRIDGES AND OTHER MEGA INFRASTRUCTURE PROJECTS ARE BUILT AROUND THE WORLD.**

Working with joint venture partners, DL E&C–Limak–SK ecoplant–Yapi Merkezi (DLSY), Marr's team developed a game-changing craneage solution for the construction of what will be the world's longest span suspension bridge connecting Europe with Asia. Stretching 4.6km long the bridge has a central span of more than 2 km, supported by 318-metre-high bridge towers.

DLSY Joint Venture partners, engaged with Marr early in the design stage of the project, seeking a craneage solution to match how they wanted to construct the project. The initial construction methodology was based around lifting panels of up to 20 tonnes and schedule was critically important.

Marr suggested a better alternative. If the panels were modularised and joined together in pieces weighing up to 160 tonnes, they could be lifted in one piece. Doing so was a faster method, allowing for greater precision in building the modules off-site, increased safety and de-risked the critical path. Marr deployed two M2480D heavy lift luffing tower cranes, each with a lift capacity of 330 tonnes. The cranes had to be available 24/7 with an average daily utilisation of 20 hours a day for both cranes. Remarkably, even through COVID-19 lockdown restrictions, all milestones were achieved.

In the first of two world-first engineering feats on the project, the two M2480Ds were placed 1km offshore in the Çanakkale Strait. The second record was the positioning of the upper cross beams on the bridge towers, 330 metres above the water – the world's heaviest lift at height.

Working over water in an environment of high winds, and in an area prone to earthquakes, Marr's solution reduced the number of lifts on the project to approximately one-eighth of the originally-proposed number. That being said, the lifting requirements across the project were still staggering with Marr completing 208 lifts of over 100 tonnes, 36 of over 150 tonnes and 8 of over 160 tonnes.

Completely different from traditional approaches to bridge building, the achievements on 1915Çanakkale were a huge success for Marr and the client, with the bridge opening more than 12 months ahead of schedule – and a possible game changer for the future of how similar projects can be built in the future.

SEE THE FULL CASE STUDY AT: [MARR.COM.AU/OURPROJECTS](https://marr.com.au/ourprojects)









MARR

KANGAROO POINT  
GREEN BRIDGE

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