

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 a crew and cranes 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 largest capacity tower crane, the 330-tonne capacity M2480D heavy lift luffing (HLL) crane.



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



OUR UNIQUE APPROACH

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

Through early engagement 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:

- de-risk construction
- reduce complexity, time & cost
- improve safety.

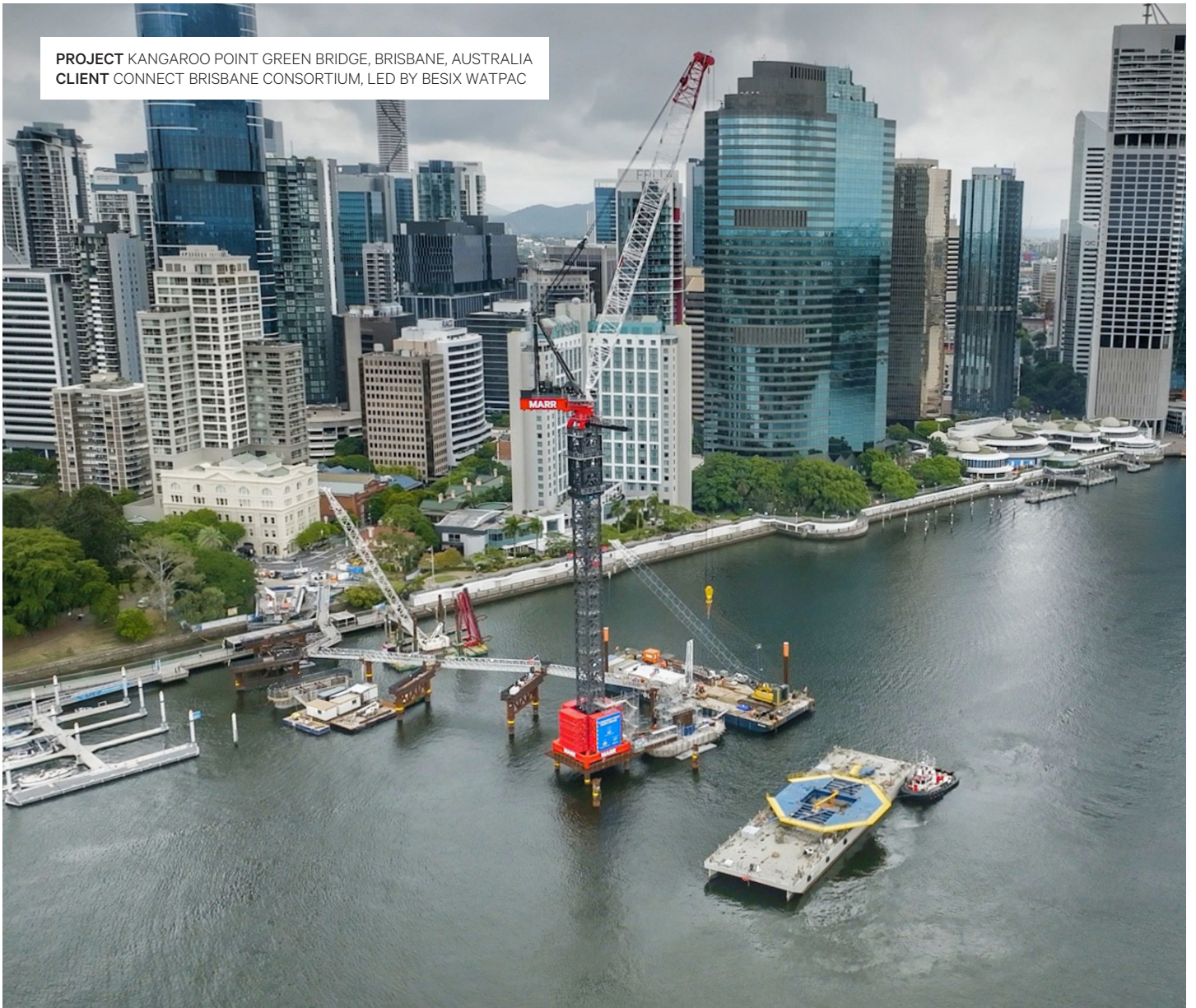


THE KEY TO ACHIEVING MAXIMUM EFFICIENCY IS EARLY ENGAGEMENT WITH US – AND THE EARLIER THE BETTER.



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

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



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.

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

UNIQUE FEATURES & BENEFITS

- Low carbon offsite fabrication and pre-assembly possible
- Decrease in temporary works on bridge tower and critical path activities
- Reduction in the need for working at height
- Increased availability in high wind speeds – our cranes are rated to operate in wind conditions of up to 20 m/s resulting in increased utilisation and availability
- Small base footprint – offering improved logistics on tower bases to improve efficiencies
- Larger crane tower design permits greater free-standing height.

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)



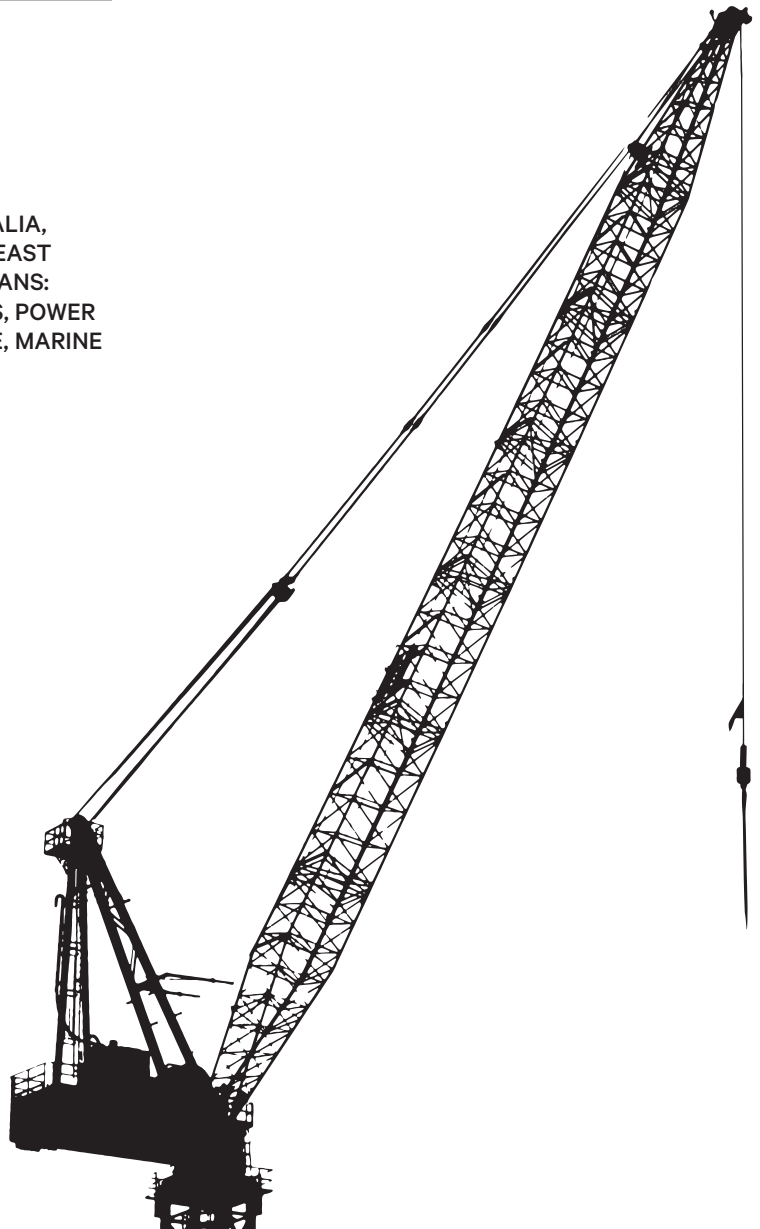


EXPERTISE

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:

- resourced program & project crane solutions
- heavy lift crane solutions & design
- heavy lifting mobile & luffing tower cranes hire
- crane asset management
- recovery crane systems
- complete rigging services with highly qualified & experienced personnel
- engineered lift studies & job site lift planning
- a full range of towers, static & travel bases, internal & external climbing frames, grillages & other accessories.





OUR FLEET

OUR FLEET OF THE WORLD'S LARGEST CAPACITY TOWER CRANES – RANGING FROM THE WORLD'S SMALLEST CRANE, THE TINY M40R, TO THE WORLD'S LARGEST CAPACITY TOWER CRANE, THE M2480D – COMBINES THE LIFTING CAPACITY OF MOBILE AND CRAWLER CRANES WITH THE HIGH PERFORMANCE OF TOWER CRANES.

As part of our commitment to sustainability, all Marr cranes are compatible with 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.



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