

Pohokura Natural Gas Project, New Zealand

The task: repaint an offshore natural gas platform that is the country's largest gas resource, while keeping everyone safe and not spilling a single drop into the sea. Keep the natural gas flowing to the market, and complete the project in 100 days. ›



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➤ After 10 years of safely delivering up to 40% of New Zealand's natural gas supply, the Shell-operated Pohokura field, which was located offshore near the North Island of the country, needed refurbishment. This included painting the entire platform and the legs situated in 115 feet of water, and performing well interventions and a complete equipment overhaul and replacement. All while ensuring security of the natural gas supply.

The high-tech 40-by-50-foot Pohokura platform is designed to be remotely operated for enhanced safety; there are no people on board and no space for offices, workshops or crew comfort. Its routine maintenance consists of a few day-long visits each year, using a small specialized boat. This meant that the project team had to position a jack-up rig beside the platform and integrate it via a custom stair tower for this maintenance campaign. The rig would not be used for drilling, but rather, for housing people and equipment to service the multiple work fronts on the platform.



BrandSafway sent trainers to New Zealand to work with the on-site installation team.

The bigger challenge, however, was to provide a safe, smooth surface from which to paint the entire structure. On top of that, the environmental regulator and local indigenous people were insistent that not the slightest bit of debris or residual paint would fall into the sea.

"They first considered laying steel I-beams on top of the platform and suspending scaffold towers from these, then using a modular scaffold system to build a suspended deck beneath the topsides," said Jerry Dolly, general manager of BrandSafway's Infrastructure Services Group. "But that would have taken months just to install, before work could even start. And it would have taken a small army to erect and dismantle."

Perfect solution a world away

The good news was, there was a great access solution readily available, in BrandSafway's QuikDeck® system. The bad news was that it was

on the other side of the world, and WorleyParsons, the engineering firm charged with solving the access challenge, didn't know it existed – yet. But one of WorleyParsons New Zealand's designers, Harold Balicao, had heard inklings of a new modular suspended access product (QuikDeck), provided by an American company and used in a wide variety of demanding circumstances. Indeed, QuikDeck is used on bridges, offshore energy facilities and a range of other difficult access challenges from Japan to the Arabian Peninsula to Newfoundland.

➤ **"QuikDeck provided full and complete environmental containment for the duration of the project."**



QuikDeck delivered a safe, smooth surface to paint the entire offshore natural gas platform.

The designer's inklings were the first anyone at WorleyParsons had heard of QuikDeck. With no other good options, the team turned to the internet to find videos showing QuikDeck being installed. They were intrigued enough by what they saw to make a cold call to BrandSafway's Houston office.

"Our engineers talked to their engineers and it was apparent to us that we could safely solve one of their bigger problems," said Dolly. "Still, this was completely new technology to the owner of the offshore platform, and we knew they would take some convincing."

But in the end, WorleyParsons found a perfect solution, even if it was 9,000 miles away. "One of our designers became aware of the QuikDeck concept from BrandSafway, and this was the beginning of a journey that ended up with finding the perfect solution, backed up by a great

engineering team and product,” said Steve Walton, the project engineer with WorleyParsons New Zealand, a branch of the Australian engineering giant.

“We looked at traditional access methods, but they were too slow and wouldn’t provide full containment,” said Walton. He noted that any time that could be shaved from set-up would allow more time for actually refurbishing the natural gas platform.

Engineering, safety and service critical

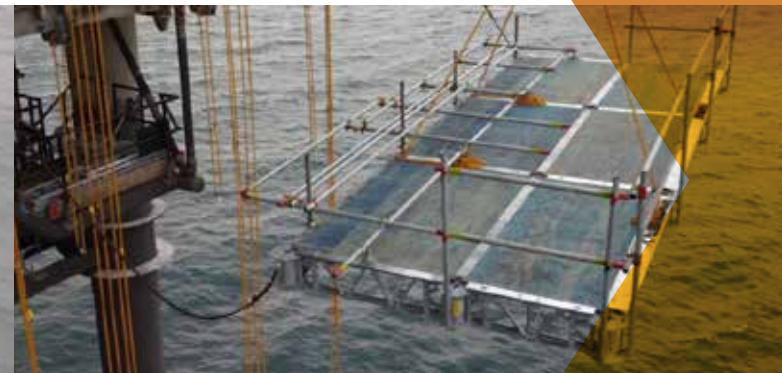
Of course, having good equipment is one thing. Using it well is another. There, Walton cited BrandSafway’s engineering skill, safety focus and customer-centered service model, qualities that construction firms in the Western Hemisphere have come to know very well.

“BrandSafway’s knowledge of the product was exceptional, which helped us to optimize the physical benefits that the QuikDeck system could bring to the project. The BrandSafway team gave us direct access to their engineering team and installation lead.

**QuikDeck
platforms
can be built
in a staging
area and then
hoisted into
position. ▾**



A jack-up rig was positioned beside the platform and integrated via a custom stair tower.



“The engineering teams from both our companies worked well together using the Navis and AutoCad software. The use of these made it very easy for the WorleyParsons structural team to update and share the 3D model with our construction team and contractors,” Walton said.

The on-site customer service made an impression on Walton as well. “It was great to have two key trainers from BrandSafway come to New Zealand to help familiarize the installation team with the new product,” he said. When it came to the actual work, WorleyParsons’ initial assessment of QuikDeck’s potential was born out.

“The decks were perfect, as they were flat and provided full containment while the painting work was being carried out. The environmental regulator gave their approval of the design early on and also visited us on site. They were very impressed with our innovative containment method.” ▸



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Value Proof

Project Dates:	2016
Location:	New Zealand
Project :	Pohokura Natural Gas Project
Scope of work:	Painting, well interventions and equipment overhaul/replacement on an offshore platform
Product/Services:	QuikDeck® Suspended Access System, Engineering and Labor
Safety record:	Incident-free
Value	\$70 million

Even given the small area of the platform and multiple work fronts, the QuikDeck system was a winner, team members said, thanks to the close collaboration between everyone involved. “BrandSafway provided an expert crew to guide the Pohokura team to install the technology. It was really great to have that type of commitment to our project,” Walton said.

WorkSafe New Zealand

Walton explained the one remaining hurdle, which was not an engineering challenge but a bureaucratic one. QuikDeck was something new to the New Zealand construction industry and required WorkSafe New Zealand (that country’s version of the Occupational Health and Safety Administration or OSHA) to be engaged and informed as the project went along.

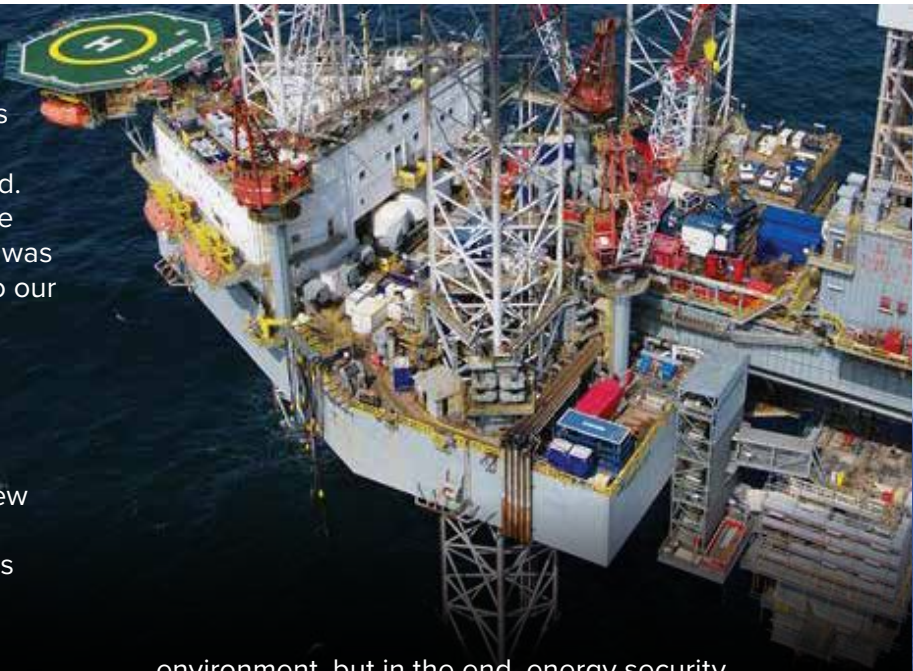
“We knew there’d be some learning required between OSHA standards in America and New Zealand scaffold standards. But there again, BrandSafway was on top of it. They provided a comprehensive gap analysis that identified and quantified these differences, which was presented to WorkSafe,” he said.

Dolly, who traveled to the site for the installation, said it was gratifying to help with such an important project. “We love it when BrandSafway can provide a smart, incident-free solution for a job like this. It means not only a safe, productive work

environment, but in the end, energy security for millions of people.”

Kerry Williamson, Shell’s New Zealand Maintenance, Engineering and Project Manager agrees. “Nothing is more important to us than safety and looking after our beautiful New Zealand coastline. We are delighted the Pohokura offshore campaign caused zero harm to people and the environment. The innovative BrandSafway technology played a key role in our environmental management.”

The \$70 million Pohokura project was completed on time, on budget and while maintaining supply, to keep New Zealand’s economy ticking.



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