PileJax – Example Worldwide Reference Projects

Doha Port Redevelopment, Qatar

PileJax was selected as the specified marine pile rehabilitation and long term protection system for all piles being remediated in the major US$549 Million Doha Port Redevelopment project.

The PileJax System incorporated full jacket encapsulation of all piles incorporating high strength epoxy resin grout to provide the optimal sealing and long term durability for the pile structures supporting the port decks.

The Doha Port Development is a major part of the Government of Qatar's investment in advance to hosting the prestigious football world cup in 2022 and the port will continue extended mixed use for decades into the future.

Holcim Jetty Terminal, Philippines

Global building materials and cement company HOLCIM selected the PileJax Systems to remediate and protect all 103 piles to extend the working life of their key regional asset in the international loading terming jetty located in Batangas, Philippines.

The piles were fully encapsulated with PileJax for all jetty infrastructure piles from land to outlying berthing and mooring dolphin structures.

The fully encapsulated design incorporated the durable fully composite system form sea floor right to underside of concrete deck superstructure.

Ship loading Terminal, Papua New Guinea

Critical supply and loading terminal in Papua New Guinea has undergone numerous technical and commercial feasibility studies to determine how to best rehabilitate and protect the jetty infrastructure for the future.

After a rigorous selection process the PileJax systems were chosen for all 144 piles due their superior long-term durability and protection criteria and ease of installation in such a remote location. Thereby slashing works schedule times from months back to weeks and further extra costs were eliminated as the lightweight PileJax systems did not require any additional marine works equipment or specialist personnel.

FMC Foret Chemical Terminal, Spain

Azul Constructions carried out the repairs to the large diameter steel piles and installation of the PileJax jackets onto the loading terminal jetty and mooring dolphins without issue to the mooring and berthing piles located at global chemical company FMC Foret's chemical facility located on the Atlantic coast of Southern Spain.

The piles were heavily corroded having sustained decades of constantly changing wave action form busy shipping and loading schedules. Full loss of surface protection for many years has meant broad effects of surface corrosion and erosion with flaking corrosion and deep pitting of the steel pile walls.

Conrail Rail Bridge, USA

ConRail, the major New Jersey based rail network operator needed to quickly and effectively repair and protect the steel piles supporting one of their critical rail bridges to ensure no disruption to the commuter and cargo rail transit network would occur.

After years of service, and several failed protective repairs using old methods (see picture at left), Conrail looked to PileJax to provide a fast, cost-effective way to remediate and protect the rail bridge piles to ensure many years of safe operation was possible without disruption to their rail services. Using PileJax, the bridge piles were repaired in only 2 days without any train disruption or track closure.

30 South Wharf Melbourne, Victoria, Australia, Port of Melbourne Corporation

Port of Melbourne Corporation, owner of the 30 South Wharf required the repair of 26 timber piles. PileJax encasement jackets were selected for rapid installation on the existing timber piles to provide a durable repair but with a minimum of disturbance to the vessel movements and within tight project time frames. This extended the life expectancy of the entire 30 South Wharf.

Local diving company East West Divers prepared the piles then installed a range of lengths, from 1.5m to 7m. Minimal handling by the local dive company assured costs were kept in control and without issues or delays. The PileJax systems and method also allowed the project to be completed well within the maintenance budget.

Port of Mackay, Queensland, Australia, North Queensland Bulk Ports (NQBP)

Owner-operator of the Port of Mackay, NQBP selected PileJax encasement jackets for installation on steel piles for the Oil & Fuel Terminal 1 located at the Port of Mackay, Australia.

The PileJax system was chosen to provide durable corrosion and marine growth protection and provide a side-by-side comparison to some of the piles on the wharf that had been fitted with conventional petrolatum wrap materials which had been susceptible to damage from marine growth (oysters), wave action and other issues.

The PileJax jacket sections were fully installed within seven minutes per jacket, followed by only 40 minutes total pump operation for the full 8.7m heights, delivering considerable savings in labour and site costs.

Hamelin Bay, Western Australia, Australia, Main Roads Western Australia

Main Roads Western Australia selected PileJax encasement jackets for rehabilitation works for heavily deteriorated heritage listed timber piles located in Hamelin Bay, Australia.

Being a heritage-listed structure in a conservation area, critical to the selection was also the fact that the PileJax system provided fast installation with minimal disturbance and zero harm to the environment.

The PileJax system was successfully installed in several minutes per pile and pumped easily in one operation. The result is a long term, strengthening rehabilitation of the timber piles.

Port of Geelong, Victoria, Australia, Patrick Ports Corporation

Joinlox was engaged by Patrick Ports to supply a PileJax encasement jacket for a system trial on an octagonal concrete pile located at fuel terminal at Port of Geelong.

The contractor, Marine and Civil Maintenance, prepared the piles, removing the marine growth by hand ready for installation. Due to the geometry of the pile, an octagonal clamp type bottom seal was chosen to be the most suitable clamp.

The PileJax system was successfully installed and deemed by the contractor to be fast and easy to install. Marine and Civil Maintenance found they could perform pile rehabilitation activities with lower skilled labour, dramatically reducing labour costs.

Gold Coast, Queensland, Australia, Gold Coast City Council for Lands End

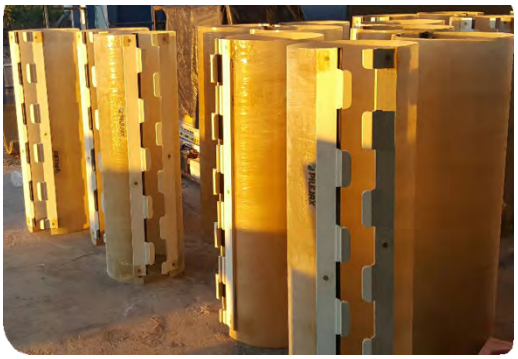
PileJax Jackets were successfully installed on the Lands End Bridge at the popular Marine Parade in the Gold Coast. The marine piles were very large and positioned in deep and fast flowing tidal wave conditions. Innovative concrete pumping methods were used to successfully complete the project in record time.

Fern Road Bridge, Welshpool, Western Australia

Joinlox was engaged by the Gold Coast City Council to supply a number of PileJax encasement jackets for the rehabilitation of a road Bridge located at the Gold Coast, Australia.

The PileJax system was successfully installed. Each PileJax jacket section was installed and locked up within approximately 20 minutes, followed by single pump operation only for the full 7m height. The installation was successful, delivered on-time and on-budget with sign-off by all stakeholders, engineers and contractors.

PileJax supplied to Anguilla, Caribbean



PileJax successfully delivered a large quantity of 50 PileJax Jackets to the Island Anguilla in the Caribbean. PileJax Jackets were used to repair a popular and supply critical loading jetty terminal. As pictured, PileJax Jackets are delivered to site ready to install saving hours of dive and labour time using only minimal equipment for a long term, custom fit solution.

Leader in Pile Repairs

PILEJAX™

Monterey Bridge, Queensland, Australia

PileJax systems were installed for the Monterey Bridge Project. The bridge was positioned over a waterway which experienced strong tidal flows in a very limited repair access space. The 26 cement piles were suffering from the effects of corrosion and cracking.

Alder Constructions prepared the piles. Concrete was scrabbled and removed and additional reinforcement steel was added to the existing piles. The entire project was completed twice as fast as other conventional pile repair methods with no environmental damage.

Gold Coast, Queensland, Australia, Gold Coast City Council

Joinlox was engaged by the Gold Coast City Council to supply a number of PileJax encasement jackets for the rehabilitation of a road Bridge located at the Gold Coast, Australia.

The PileJax system was successfully installed. Each PileJax jacket section was installed and locked up within approximately 20 minutes, followed by single pump operation only for the full 7m height. The installation was successful, delivered on-time and on-budget with sign-off by all stakeholders, engineers and contractors.

PileJax supplied to New Jersey, United States

PileJax was certified by the New Jersey DOT and successfully delivered GFRP Jackets to Raritan Engineering in New Jersey. As pictured, PileJax Jackets are conveniently stored nested and wrapped providing secure, space-saving transportation and delivery overseas. They are efficiently transported with a forklift and loaded into a truck with minimum storage space required.

Boat Passage Bridge, Queensland, Australia

The PileJax systems provided full pile FRP encapsulation and cementitious composite repair to extend the working life of this key crossing, enabling rail traffic to and from the essential Port of Brisbane. The bridge was designed and built using large concrete piles (1500mm) ranging from 6m to 7.5m in height, positioned in very restricted access areas. Located at the river mouth, the bridge waterway experienced strong tidal current flows in both the upstream and downstream directions.

The full underwater installation of the PileJax jackets was completed in a very rapid procedure during the ‘stand of the tide’. The jackets were fitted into place by one diver in a simple secure and seal process. Jacket installation times were less than one hour, and the entire encapsulation repair was completed in less than one day. All repairs were completed with no disruption to the environment and the rail bridge remained open during the entire repair time. Road and Marine traffic continued throughout the entire project.

Some of the Global Reference Organisations we have worked with include –

GHD	BASF	Arup
Aecom	US Army COE	Ch2m
Jacobs	HDR	Marine & Civil
SMC	Land & Marine Engineers	Solentanche Bachy
AW Marine	Worley Parsons	Beca
Lambert & Rehbein	Parsons Brinckerhoff	Royal Haskoning
TOD Engineers	WSP	NQBP
Freyssinet	Waterway Construction	PDS
Diving Co.	Parchem	Gilbert Diving
Chemrite Technologies	SMC	Rawworx
Fitzgerald Constructions	Giovenco	Alder Construction
Pacific Marine Group	Stopaq	East West Diving
Commercial Marine Group	Sika	Dive Works
Bellingham Marine	TLB Engineers	Queensland Bridge & Civil
Holcim	SMC Foret	FCC South Pacific
New Jersey DOT	Azul Constructions	Commodity Australian
Tasmania Ports	Winward Roads	Davtec Marine
Gold Coast City Council	Cimentaciones GBC	Pinnacle
Main Roads WA	Gandara	Gulf Synthetics
Queensland TMR	Al Jaber	Ecospec
Port of Melbourne Corp.	Qatar Supreme Comm.	Theidi
Patrick Corporation	Arrow	Noosa Council
QWA Parks & Wildlife	Sydney Ferries	Chembond

Joinlox
2/30 Walker Street,
Tennyson Brisbane QLD 4105
Australia
+61 7 3392 6172
www.joinlox.com

Available Worldwide

Disponible International
Disponible Internacionalmente
Erhältlich International
Disponibile In Tutto Il Mondo
利用可能なワールドワイド
全球供售