

Specification - Lifting Equipment: Reference BUS003_0081_2.2



1. Background

Penzance Dry Dock (PDD) is famously steeped in history, currently being the oldest operational dry dock of its type in Europe but requires drastic investment after decades of neglect and dilapidations. While the surrounding shipyards, across the county and country have seen investment, PDD has slipped through the net time and time again.

PDD plans to complete a large refit by March 2025. PDD will become the engineering powerhouse that it once was, but with more abilities than ever before. This facility has primarily been ship repair only, but now we are supporting multiple areas of the market, ship repair, ship building, mass fabrication and most importantly training and skill development.

This capital investment, part-funded by the UK Government through the UK Shared Prosperity Fund, will see the site brought up to an even playing field with the rest of industry, with new, safer lifting systems and the dilapidations being rectified. We will see our efficiency drastically increased which in turn will assist in reducing our carbon footprint.

As part of this refit, PDD wishes to purchase 6 cranes:

Goliath x1

Gantry (x4 - two 10T cranes per bay)

Quayside Jib Crane x1

PDD will supply:

- The foundations (specification needs to be provided by this successful tenderer).
- Suitable test weights.
- 3 phase supply to the end of the bus bar systems and quayside jib crane. The successful tenderer will be responsible for wiring into this 3 phase supply.
- If required, Penzance Dry Dock can provide a dedicated space in the workshops, 100v, 240, and 440V supplies to allow the appointed team to work onsite at the docks for fabrication purposes (see plan). Please clearly detail this requirement in your tender response.

The successful tenderer shall provide all consumables, raw materials, PPE and labour to fabricate the cranes.

2. General Specification

This commission is seeking the design, build, installation and commissioning of the following cranes (subject to planning). Specific requirements of this tender, which the tenderers will need to satisfy, the successful tenderer will be required to deliver on are:

- Evidence that the cranes and associated operating systems can operate in the marine environment akin with the drydock site.
- Compliance that all cranes will be used and operated in compliance with the Lifting Operations and Lifting Equipment Regulations 1998 (LOLER) and as such must be in line for being commissioned and ongoing inspections and testing in line with those Regulations.
- <https://www.hse.gov.uk/work-equipment-machinery/lole.htm>
- Costs to include:
 - o the supply of cranes, kit and associated parts to include shipping delivery and transportation costs to PDD site ([Wharf Road, Penzance TR18 4BW](#))
 - o Fabrication
 - o Installation
 - o Commissioning, including load testing and training.
- Supply of all cranes to include hooks, lifting equipment, remote controls suitable to the specific safe and compliant functioning of the crane and the purpose of its design.
- As part of the commissioning of the cranes, onsite training **must** be provided for all cranes. In addition, the appointed contractor shall, as part of ongoing support and maintenance, provide training as may be required from time to time by PDD.
- An ongoing annual maintenance contract for the servicing and Regulatory inspections compliance. This is to be scheduled and included in the costings provided. Suppliers must be able to provide ongoing maintenance, along the following:
 - o Emergency call out response times 4 hours.
 - o High priority - next working day (if before 3 pm) and
 - o Non-critical - non-operational support within 7 working days.
- Cranes to have an operational design life of 30 years minimum, subject to maintenance in line with the manufacturer's recommendations.
- The design, materials, installations, inspections, maintenance and operations of the cranes to comply with all relevant Regulatory requirements and standards e.g. British Standards (BS), European Standards / Norm (EN), international Standards Organisation (ISO) or equivalent.
- The design of the cranes to be covered by Professional indemnity insurance for a 12 year

period.

- Work to be carried out during normal working hours. Installation to be completed by February 2025.

3. Detailed Specification

3.1. Goliath Crane

- Minimum 50 ton (metric)
- Outdoor external marine environment continually open to the elements, and as such will require storm protection and earthing points offering lightening protection.
- Spanning between 15-17m, fitting in the boundary. This will be confirmed once intrusive site investigation and structural calculations have been finalised.
- 25m operation lift with clear height to underside of crane from quayside to be 20m, noting operational lift required to be a further 5m from bottom of dry dock (operational lift to be from the surface to crane hook).
- 2 lifting hooks (combined minimum 50T lift).
- Auxiliary lift - minimum 5T.
- Access to the top of the crane for maintenance - to include fixing/ anchoring points for safety purposes during maintenance.
- Finished in blue *[paint colour code to be provided on commission]* with Penzance Dry Dock company and county logos.
- Paints and steel to have anticorrosion guarantee noting the requirement to enable 30 year design life. Where repainting is required details of this maintenance regime to be provide as part of the supporting details of this tender response.
- Down lights.

3.2. Gantry Crane: Bay 1

- 10T gantry cranes (2x 10T cranes per bay)
- 65m run length
- Spanning 13m
- Vertical supports every 6m, sharing the middle rail with the bay running parrel to bay 2.
- Overall clear lifting height to be 7m.
- Down lights.
- Environment: Indoor workshop but exposed to marine environment.
- Finish in yellow *[paint colour code to be provided on commission]* with Penzance Dry Dock company and county logos.

- Paints and steel to have anticorrosion guarantee noting the requirement to enable 30-year design life. Where repainting is required, details of this maintenance regime to be provide as part of the supporting details of this tender response.
- Delivery, Installation, Commissioning, load testing

3.3. Gantry Crane: Bay 2

- 10T gantry cranes (2x 10T cranes per bay)
- 45m run length
- Spanning 7m
- Vertical supports every 6m, sharing the middle rail with the bay running parrel to bay 2.
- Overall clear lifting height to be 7m.
- Down Lights
- Environment: Indoor workshop but exposed to marine environment.
- Finish in yellow [paint colour code to be provided on commission] with Penzance Dry Dock company and county logos.
- Paints and steel to have anticorrosion guarantee noting the requirement to enable 30-year design life. Where repainting is required, details of this maintenance regime to be provide as part of the supporting details of this tender response.
- Delivery, Installation, Commissioning, load testing

3.4. Conductor System

The bidder will provide Bus bar systems to power and feed the cranes. These are required to be 45 meters long for the bay two and 65m for bay one and is to be complete with mounting brackets, associated fixings and two sets of current carrying collectors per system.

3.5. Quayside Jib Crane

- Safe working load: min. 8T on full reach.
- Control to be both local and remote.
- Reach will be confirmed once intrusive site investigation and structural calculations have been finalised.
- Operational clear lift height of the crane, Not including crane height, from the edge of the quay wall down at low tide is 5 meters.
- Down Lights
- Outdoor external marine environment continually open to the elements at quayside.
- Finished in blue [paint colour code to be provided on commission] with Penzance Dry Dock company and county logos.
- Paints and steel to have anticorrosion guarantee noting the requirement to enable 30-year design life. Where repainting is required, details of this maintenance regime to be

provide as part of the supporting details of this tender response.

4. Installation Timescales

Please detail your delivery/ installation timescales.

- The intention is to have all the cranes commissioned and operationally ready by February 2025.