



ROAM MARINE

Z Marine Pty Ltd
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Curriculum Vitae

Mark Robert HANNAFORD

BE Civil (1st Class Honours)

Position

Managing Director, Z Marine

Experience

40 years

EXPERTISE

Management of a structural design team for a major project
Design of jetties, piling, offshore structures and pipelines
Engineering of loadouts, heavy lifts and temporary works
Design for constructability
Design of steel and concrete structures for oil and gas plants

BORN

1960

CITIZENSHIP

Australian

LANGUAGES

English, Indonesian (basic)

TERTIARY EDUCATION

University of Western Australia (1978-1981)
Bachelor of Civil Engineering (First Class Honours)

SECONDARY EDUC.

Scotch College (1973-1977) Dux and Physics Exhibition

WORK EXPERIENCE

Z Marine Pty Ltd

Managing Director

2020

Construction methods, access, bracing and temp works designs for the Cape Lambert Dolphin replacement with 500t, 400t and 250t jackup barges.

Design of formwork system and temporary works for 1m thick concrete wharf and 1.5m thick dolphins. Wharf 33m wide stripped in 2 sections with C beam

Design of form system over the water for Brisbane cycleway and dolphins in Gladstone.

Design of demolition of timber wharf, access, piling frames, forms etc for 2.2m monopile dolphins.

Design of piling and drilling frames at Shute Harbour wharf

2019

Design of ~3500m² of suspended access decking beneath Hedland wharf, demolition method / sequence and lifting of 60t concrete deck panels, lifting frames for 25t fenders.

Design of navigation aids for Woodside, incl seafastening and barge stability.

Construction methods and alternative designs for components of the Cape Lambert Dolphin replacement tender

2018

Engineering management of design and installation of 35 navigation aid piles at Port Hedland + design of a navigation pile in 15m of water 30km offshore.

Inspection of Cape Lambert service jetty and report on upgrade and maintenance including recent cyclone damage

Review of construction methods and design of numerous temporary works for a major wharf construction in Chennai

Design of haulpack dump slab and support steel at diamond mine in Africa.

2017

Temporary works design for Barangaroo piling

Lift studies for fender replacement and stacker erection

Access scaffolds and boat landings for marine works in Hedland and Cape Preston

Piling frame modifications for 2m piles at FMG tug harbour

Temporary jetty design for 300t crawler crane

Alternative design for Eden wharf

Design verification of a trolley for a 200t crane operating on a dam wall

2016

Temporary works design Hunt Point piling

Port modelling, preliminary design and budget costing of a 1000t/hr grain shiploader, piled radial rail beam and berthing dolphin at Albany

Detailed design of a ship access platform at Dampier for vessels up to 250,000DWT

Preliminary design of piled structure in Port Hedland for tugs to test their 80t bollard pull

Assessment of the pile corrosion, pile capacity and cyclonic loads on the EII ore wharf in Dampier

Lift engineering for lift, roll up and installation of fully assembled 40t fenders

2015

Detailed design of line boat pontoon at Cape Lambert

Design of boardwalk at Penguin Island using replas and frp sections

BHP tug harbour - constructability and marine design expertise to Lend Lease

Design of float in under deck suspended work platforms, piling frame, pile top access platforms, pile repainting access decks, miscellaneous access platform and lifts at various marine projects

Temporary works - design of 5t slewing davit crane, pile supported piling frame, lifts, access and scaffolds for marine structures including suspended platforms for pile and headstock painting.

Roy Hill - lift engineering for various items including 220t bin, multiple crane lifts with cranes up to 1250t.

Integrity inspection of landing barge ramp and barge berth at Dampier

2014

Construction support for Elizabeth Quay bridge including lift engineering, cofferdam design, 3D rebar detailing and scheduling.

Design of piling gate and skate frame for Webb Dock combi wall

Temporary works for LNG wharfs at Inpex and Wheatstone including lifts, seafastening, crane verification and access platforms.

Alternative designs, temporary works, method statements, gantry crane, piling gates and lift studies for Austral to replace 9 dolphins at Rio's EII wharf, MOF wharf, vessel access

Design of floating dock for AME and piling gates at BAE

Tender alternative design of transshipment wharf for IOH

EPC of a floating ramp for canoe club

2013

Port feasibility studies for iron ore in Liberia including transshipment, bauxite in Solomons, iron ore at Cape Preston and Albany

Temporary works design for Saipem Leighton on the Gorgon LNG wharf construction, including barge access ramp for 80t trucks, jackup barge access, crane boom rest and 40m personnel gangway.

Building and 650t crusher moves on SPMT for Alcoa

Lift engineering (up to 300t) for 1800t reclaimer and two 700t stackers at Jimblebar.

2012

Design of floating pens and associated piling access and services for 24 tugs and line boats in Port Hedland

Design procure and construct repairs to wharf deck and installation of ~250t plate for crane access on Mermaid Marine wharf in Dampier

2010-11

Seconded to John Holland for temporary works design for Cape Lambert Wharf including dolphin piling frame and personnel access.

Concept development and/or review for proposed wharfs for Wheatstone LNG, Browse LNG, Anketell Point iron ore and BHP iron ore.

Design of Rio tug harbour pontoon and finger jetty + services.

Roam Pty Ltd (12years)

Manager Roam Marine

1998-2010

Worked on numerous marine projects including design / construct secondments to Leighton, FMG and Mermaid.

Design of tug berths / pontoons for Austral / Rio

Jetty construction temporary works design and shiploader installation method statements etc for Barclay Mowlem in New Caledonia.

Engineering for assembly lifts, loadout, seafastening and installation lift of a 1300t Shiploader for Clough

Other clients include Watercorp. Evans Peck, John Holland, PHPA, Leighton, Wesfarmers(Bangladesh), Technip,

Design of temporary works for 3 major bridges in Perth

Review of pile load tests and geotechnical data for wharf extensions at Port Hedland

Clough (17years)

Structural Engineer

1982-1998

Principal structural engineer on various jetty projects including Rio iron ore, coal terminal in New Zealand, LPG import jetties in Pakistan and Bangladesh, import/export jetties for steel mill in southern Java, Dalrymple Bay Coal Terminal

Oil and gas projects include Woodside Liquids Expansion project, Gas plant and SPM Indonesia, Dhodak gas plant Pakistan, subsea pipelines and the Harriet A platform including 1560t lift.

Site based temp works designer on marine projects in Dampier, Qld, SA and Indonesia and Harriet Oil platform

Design of jack lifting system for 600t Perth airport control tower and 2000t Yokine water tower, WA