



# Maritime Capability Statement

06 / 06 / 2021

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**Project:** NBC Maritime Structures Condition Assessment

**Job No:** 21.02021

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**For:** Mr Bruce Wilson

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Land and Marine Engineering Consulting Pty Ltd specialises in providing structural design and documentation and planning services for the maritime industry, as well as condition assessments for marine structures.

LM works on a wide range of projects from design of Wharves; Pontoons and Mooring Pens; Hydraulic Ramps, Marinas, Shipyards, Dry-docks, Travel-lifts; Bridges and Buildings.

We design structures in materials that last longer in the marine environment including fiberglass, plastic and HDPE. Specifically structures such as boat-skids and timber landing steps have been a focus for these materials.

We also design in aluminium and stainless steel and have pioneered designs including hydraulic access ramps for vessel access and aluminium cradles for slipways.

LM has worked on several notable specialist structures such as the Balmain Shipyard Drydock Gate and the Manly and Circular Quay hydraulic passenger ramps. He designed an underwater pre-cast concrete fuel bund for Rose Bay Marina.

We provide a broad range of skills in the fields of maritime structural engineering design and documentation; planning and approval; asset and facilities management; repairs and maintenance; project management, risk management and stakeholder communication.

LM will design and deliver a maritime facility from start to finish ensuring that the final structure is of good quality with adequate Construction Supervision.

Please Refer to selected projects attached to this document.

Yours sincerely

Steve Fitzhenry  
MIEAust CPEng NER





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## 1 Services offered

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- Structural Design and documentation
- Drawings and Specifications.
- Condition Reports and inspections.
- Planning and Approvals documentation
- Permission to Lodge, Development Application and Construction Certificate
- Statement of Environmental Effects
- Review of Environmental Factors for self determining state bodies.
- Preparation of Tender documentation.
- Evaluation of Tenders.
- Construction Supervision and Certification
- Contract administration, site inspections, contractor liaison, monitoring and certification.
- Risk Assessment and risk management.

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## 2 Typical Projects

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Please refer to project data sheets attached to this document.

### Typical Structural Maritime Projects

- Private Residential and Commercial projects.
- Public Commuter and Private wharves, jetties and pontoons.
- Use of long life materials design using Fiberglass beams, plastic beams and HDPE
- Mooring Pens and Dolphin Piles
- Hydraulic Access Ramps and Jetties
- Slipways and cradles
- Boat ramps
- Dredging
- Seawalls
- Ferry wharves and Pontoons
- Private Marinas
- Commercial Marinas – floating and piled
- Fuel Storage facilities
- Travel-lift wharves
- Sea-pools and Tidal Pool

### Typical Structural Residential Projects

- Stormwater and OSD.
- Houses and light industrial buildings.

### Typical Environmental Maritime Projects

- Sediment and pollution studies.
- Marine Habitat Reports
- Salvage



### 3 Business information

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- Name Land and Marine Engineering Consulting Pty Ltd
- ABN ABN 63 638 078 823
- Address 33 Hordens Lane Bundeena NSW 2230
- Contact person B.Eng. (Civil) Sydney – Maritime Civil & Structural Engineer
- Telephone 0411 316 315
- Email [steve@landmarine.com.au](mailto:steve@landmarine.com.au)
- Annual turnover Approximately \$350,000
- PI Insurance \$2 million (Solution Underwriting Agency 9009597PIN)  
Expires 22 February 2021
- Public and Products \$10 million Public  
Liability Insurance \$10 million Products  
CGU Insurance Australia Limited  
Expires 8 December 2022
- Bank Details Land and Marine Engineering Consulting Pty Ltd  
Commonwealth bank  
BSB 062-688  
Account 1017 4886



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## 4 Management systems

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### **Work Health and Safety Management Plan**

WH&S is a strong focus for our company. LM staff have Workcover Australia Construction Induction (green) cards for construction work.

### **Quality**

Steve Fitzhenry has hands-on experience with the preparation and implementation of quality systems to ISO 9001:2008 Quality management systems. He has experience as facilities manager for Sydney Ferries, in which role he implemented quality systems.

### **Environment**

LM have experience in applying strict environmental control to our projects. In his previous role as facility manager Steve Fitzhenry developed experience in applying applicable standards including the EPA Act and NSW Government WRAPP policy. When required we apply ISO 14001 2004 Environment Management Standard to our services.

### **Electronic data systems**

We have a high quality IT installation. All data is protected by automatic back up daily with off site storage. We use industry standard software and communicate all drawings using .pdf files and hardcopies. We have also developed a comprehensive suite of in-house design programs based on Excel.

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## 5 Subconsultants

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We utilize the assistance of expert sub consultants with whom we work regularly. We manage and coordinate the team. The documentation is presented as a single integrated document both in appearance and content. We provide a single point of contact for the client.

### **Marine habitat Surveys**

BIO-ANALYSIS Pty Ltd

Dr D. E. Roberts -

Mob: 0414477066

### **Hydrographic Surveys**

Richard Cullen 0431 209 080

### **Diving Services**

Seadragon Pty Ltd

Mr Carl Fallon 0425 259 989

## 6 Selected Projects

### 6.2. Wharves - Timber

#### Tathra Deep Sea Wharf – Refurbishment - Design and Documentation

Transdev Sydney Ferries Mr David Buckley Project Manager Bega Valley Shire Council

Approximate Cost = \$7,000,000

- Timber deep sea wharf Condition Report;
- Design and Document Repairs Heritage work
- Pile replacements and repairs, beams and decking



## Balmain Shipyard Jetties 1,2 and 3 – Refurbishment - Design and Documentation

Transdev Sydney Ferries Mr Chris Pejosi Assets manager 2019 - 2020

Approximate Cost = \$2,000,000

- 3 off timber wharves Condition Report; Design and Document Repairs
- Pile replacements and repairs, beams and decking
- Forklift and crane load certification and load plans





## Lavender Bay Boardwalk and 3 finger jetties Refurbishment - Design and Documentation

North Sydney Council Mr Robert Esdaile 2018

Approximate Cost = \$1,250,000

- Public boardwalk and 3 off finger jetties off timber jetties
- Pile replacements and repairs, beams and decking
- Planning REF and construction supervision



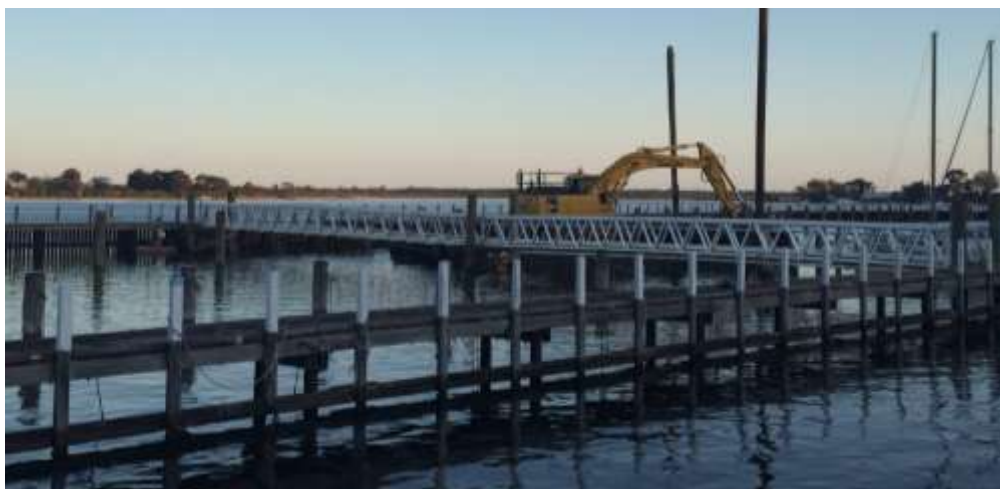


## Metung Marina – New timber wharf Design and Document

Mr Greg Stockley GPM Constructions 2013-14

Approximate Cost = \$1,000,000

- Wavebreak wall - Timber wharf – steel sleeved piles HDPE – weldlok mesh decking - Aluminium ramps



### 6.3. Wharves - FRP

#### FRP landing Steps at Currawong Wharf Pittwater - Design and documentation

Northern Beaches Council – Mr Bruce Wilson Approx \$150,000

- New FRP beams, APR plastic planks
- HDPE sleeved and capped piles



### Timber Wharf and FRP landing Steps at Sawmillers Jetty - Design and documentation

North Sydney Council – Mr Robert Esdaile Approx \$1,000,000

- New Timber deck and beams and piles
- FRP landing steps, beams, APR plastic planks
- HDPE sleeved and capped piles







## 6.4. Wharves – Steel

### Opera Australia Stage at Lady Macquarie's Chair - Design and documentation

Mr Chris Bothwell *Project Manager* Opera Australia

Develop and Fabricate and Install new Temporary, removable and reusable Piling supports to stage.

Project now in 10<sup>th</sup> year and we complete annual review and certification as loads change

Working with VDM engineers who are responsible for the stage platform superstructure







## 6.5. Wharves - Concrete

### Rose Bay Marina – New underwater Fuel Tank

Mr Ned O'Neil      Director      Addenbrooke Pty Ltd

Design and documentation including:

- Approximately \$500,000
- Steel piles with plastic sleeves and REID couplers
- 50T Precast concrete bund tank atop steel piles (underwater chamber)
- Concrete Jetty with precast and insitu elements



## 6.6. Pontoons

### Coolawin Rd Northbridge – pontoon and mooring pen - Design and Documentation

Mr Brendon Reilly

- stepped kayak landing fiberglass pontoon
- Gal steel Ramp 7m
- Steel Mooring piles with plastic sleeve.
- Plastic sleeved timber jetty piles.





### North Shore Rowing Pontoon – Design and Document new Pontoon and Ramp and Wharf

Mr Nic Johnson 2018 Approximate Cost = \$500,000

- new 20m\*10m timber wharf and rigging deck atop 20 piles
- 10m\*7.5 aluminium ramp
- 24\*4m pontoon HDPE roto molded floats
- No Piles restraining pontoon – restrained by chains and ramp



## 17 Wunulla Rd Pontoon - Design and documentation

Private owner

Approx \$150,000

- New concrete prestige pontoon and restraint piles
- Construction supervision
- Ramp with shore tidal - lift hinge





### Brooklyn Police Wharf – Design and Documentation

BGIS - Approx \$200,000

- Repair and refurbishment
- 



### Balmoral Boatshed – New Floating Marina Design and Document

Mr Steven Hedge 2019 - 2020

Approximate Cost = \$500,000

- 2 off 12m aluminium ramp; IPS pontoons and fingers; Steel restraining piles; Hiab and support
- Use of long life materials including HDPE pontoon pipes, FRP and Plastic beams Wavebreak wall



## Sydney Seaplanes Marina at Rose Bay - Design and documentation

Mr Aaron Shaw *Director* Sydney Seaplanes

Approx \$1,000,000

- New 225T concrete pontoon marina and floating breakwater.
- IPS outrigger pontoons
- Mooring blocks and chains restraint system
- design new concrete control center / terminal
- Helicopter Landing pontoon
- Construction supervision
- 





### **Birkenhead Point Marina – New Marina Design and Documentation**

Mirvac Pty Ltd and Mr David Mann Project Manager DMann Corporation

Approx \$2,000,000

- Timber boardwalk with 32 piles
- Floating wharf with 3 new arms and 70 steel piles and mooring piles
- New underground fuel tanks and seawalls



## Kirribilli Marina – New floating marina and mooring pens - Design and Documentation

Mr Charles parsons      Director      Marine Advisory Services

- Aluminium Ramps with FRP Weldlok deck,
- Steel Mooring and pontoon restraint piles with plastic sleeve.
- Concrete deck pontoon with hdpe wrapped poly floats
- Plastic pipe pontoons with FRP weldlok decking for wavebreak pontoons.





## Castlecrag Marina – New floating Marina - Design and Documentation

Mr Mike Lapin

Director

Castlecrag Marine Pty Ltd

Approx \$250,000

- PTL, DA and CC plans and designs
- Steel sleeved piles
- IPS poly pipe plastic pontoons with timber decking
- Aluminium Ramps
- Hiab crane footings
- Construction supervision



## Toft Monks Marina – Repairs to Marina & New Marina – Design and Documentation

Mr Jeremy Colville      Project Manager      NSW Maritime

Approx \$750,000

Design and documentation including:

- Emergency repairs to existing facility prior to demolition to allow for ongoing use while planning approvals occurred.
- PTL, DA and CC plans and designs for replacement marina
- Floating pontoon marina
- Steel sleeved piles
- Aluminium Ramps



## 9 Elamang Rd Kirribilli – New Private Marina – Design and Documentation

Mr Graham Lambert                      Owner

Mr Paul Whitmarsh                      AWB Contractors

Approx \$300,000

Design and document new floating marina

- Piles, UMS Marina System, Aluminium Ramps, Timber wharf.
- PTL, DA and CC plans and designs for replacement marina





### **Glebe Island Commuter Ferry Wharf 2013**

For Pacific Pontoon and Pier - Mr John Maher General Manager Mob: 0401 181 250

Design and documentation including:

- New piles
- Pontoon layout



## 6.7. Private Landing Steps

### Typical examples





## Hydraulic Landing Steps



## 6.8. Hydraulic Ramps

### Hydraulic Ramp Jetty – 9 Wharf Rd Vacluse

Approximate Cost = \$250,000

- New Timber Jetty
- New Aluminium Ramp and Hydraulics
- Steel restraining piles
- Concrete suspended boatshed slab and Boatshed



## Hydraulic Ramp Jetty - Woolwich - Design and documentation

Mr David Fite Owner 65 The point Road woolwich

Approx \$150,000

Design and Document:

- New Timber Jetty
- New Aluminium Ramp and Hydraulics
- Berthing piles





### Hydraulic Skid – Wentworth Rd Vaocluse

Approximate Cost = \$75,000

- 6m aluminium skid – ramp with Teak decking
- Hydraulic cylinder supports
- Steel restraining piles



### **Kirribilli Wharf – Design and Documentation New Hydraulic Ramp**

Sydney Ferries Corporation, Mr Bob James

Project value \$1.5m

Design and Document new wharf including:

- Structural design of 16m aluminium hydraulically operated passenger boarding ramp
- Steel berthing dolphin pile pairs
- Motion dampened hanging beam and ramp support frame
- Construction supervision



### **HCF Hydraulic Ramps – Replacement to 6 Loading Ramps Circular Quay and Manly**

Approximate Cost = \$3.5 million

Mr Carl Groom      Facilities Manager      Sydney Ferries

Design and document and construction supervision

- New ramps and hydraulic system
- Construction supervision





## 6.9. Skids

### FRP Skid at Bay St Hunters Hill - Design and documentation

Mr Dulhunty Approx \$50,000

- New FRP beams, APR plastic planks
- HDPE sleeved and capped piles
- HDPE fishplates and stainless steel rail clamps



### Stepped skid at Edinborough Rd Castlecrag

Approximate Cost = \$40,000

- New Timber skid with steps



### FRP and modwood Skid - Fitzwilliam Rd Vacluse

Mrs Ros Kelly

- FRP posts and beams with stainless steel fixings.
- Modwood plastic deckboards upper - Weldlok lower deck



### Wharf Rd Gladesville – stepped skid with FRP and Plastic beams

Approximate Cost = \$40,000

- New Timber skid with steps





## 6.10. Slipways

### Slipway at Wolsely Rd Point Piper - Design and documentation

Private owner

Approx \$100,000

- Piles, rails, Aluminium cradle, winch and pullys



### Slipway at Edinborough Rd Castlecrag - Design and documentation

Private owner

Approx \$100,000

- 30ft vessel at 7T
- Piles, rails, Aluminium cradle, winch and pullys



### Slipway at Carrington Rd Mosman - Design and documentation

Private owner

Approx \$100,000

- Sliding stainless steel door
- Piles, rails, Aluminium cradle, winch and pullys





### Slipway at Loch maree Rd Vaucluse - Design and documentation

Private owner

Approx \$100,000

- Sliding stainless steel door
- Piles, rails, Aluminium cradle, winch and pullys



## 6.11. Sea Pools

### Seapool at Little Manly Beach - Design and documentation

Northern Beaches Council – Mr Bruce Wilson

- HDPE piles
- Predator Pro Seagnet and Stainless fixings
- Wale beams



## Seapool at Taylors Pt - Design and documentation

Northern Beaches Council – Mr Bruce Wilson

- HDPE piles
- Predator Pro Seagnet and Stainless fixings
- Stainless net brackets





## 6.12. Seawalls

### Peacock Point Seawall - Design and documentation

For Leichhardt Municipal Council, Mr Julian Oon Approx \$1,000,000

- new seawalls in concrete lokablok and sandstone
- Groynes for beach enclosures, seapools – **development of tidal beach**
- landscaping and Sculptural elements including anchor
- Construction supervision



**Beach formed as part of works and seawall in concrete loc-a-blok and sandstone**



## St Georges Cr Seawall - Design and documentation

AWB Contractors Pty Ltd

Approx \$150,000

- Failed seawall repairs and rebuilding
- Rock 2m down
- concrete footing
- Sandstone blocks.





## Shellbank Ave Seawall - Design and documentation

AWB Contractors Pty Ltd

Approx \$200,000

Design and Document:

- Failed seawall repairs and rebuilding
- Deep water to front of wall
- Poor geotechnical conditions / marine mud and steep dropaway
- Timber piled concrete footing
- Sandstone blocks.



Failed wall





## 6.13. Boat Ramps

### Wonboyn Boatramp – Design and Documentation

Mr David Buckley - Project Manager - Bega Valley Shire Council - Approx \$500,000

- Precast concrete slabs and stainless hinge joints
- Pontoon and piles



## Mallacoota Boatramp – Design and Documentation

Mr Greg Stockley - Principal - GPM Constructions - Approx \$500,000

- Precast concrete slabs and stainless hinge joints





## Mogareeka Boatramp – Design and Documentation

Mr David Buckley - Project Manager - Bega Valley Shire Council - Approx \$500,000

- Precast concrete slabs and stainless hinge joints





## Beauty Point Boatramp – Design and Documentation

Mr David Buckley - Project Manager - Bega Valley Shire Council - Approx \$500,000

- Precast concrete slabs and stainless hinge joints



### Milsons Park Boatramp – Design and Documentation

North Sydney Shire Council - Approx \$75,000

- Precast concrete slabs and stainless hinge joints
- Grout mattress



## 6.14. Travellifts

### Travel-lift and Wharf at White Bay - Design and documentation

Mr Brett McMullen      *Director*      Baileys Marine Fuels      0411 968 872

- Approximately \$1 million
- New concrete wharf for high load boat cranes
- Travel-lift way concrete beams
- Piling
- Suspended formwork system







## 6.15. Drydocks

### Balmain Shipyard Drydock Gate Replacement - Design and Documentation

Transdev Maintenance Services Mr Sam Burley 2019

Approximate Cost = \$750,000

- 30 T steel gate design and documentation
- Rubber seals and "bicycle chain" double link hinges; pneumatic gate door raising system
- Paint systems and anode protection
- Construction Supervision
- Collaboration with Llyods Register Pty Ltd for Quality Control



