

Warren  
Smith

Consulting Engineers

# HYDRAULIC SERVICES EXPERTISE STATEMENT

HYDRAULIC

FIRE

CIVIL

UTILITIES INFRASTRUCTURE

# BUSINESS AND GOALS



DARLING HARBOUR INTERNATIONAL CONVENTION CENTRE (ICC) HOTEL

Warren Smith Consulting Engineers (Hydraulic, Fire, Civil and Utilities Infrastructure), was founded on the 10th August, 1981.

We have been involved with over 6,000 projects of all development classifications and scale.

Our project experience extends to not only NSW, ACT and VIC, but throughout Australia and abroad.

## Company Core Values:

- Partnerships and collaborations with our delivery partners
- Commitment to innovation and excellence
- Advancement of our staff through training and development
- Treat others like you would want to be treated

## Our objectives are to:

- Produce and deliver excellent cost effective design
- Provide dependable professional service with unquestionable integrity
- Continually research and develop new design techniques
- Maintain our position as leaders in our profession
- Be friendly and approachable
- Co-operate within a team



# THE TEAM

**Our key personnel and directors have comprehensive industry experience and knowledge.**

Our managers, without exception are all long-term employees of the firm. Our key personnel are:



**Warren Smith**  
*Managing Director*  
Years in Industry: 55  
Years with WSCE: 40



**Michael Cahalane**  
*Director –  
Civil & Water Engineering*  
Years in Industry: 23  
Years with WSCE: 14



**Tom Wise**  
*Director –  
Hydraulic*  
Years in Industry: 12  
Years with WSCE: 10



**David Bolt**  
*Director –  
Fire*  
Years in Industry: 26  
Years with WSCE: 25



**Dirk Nagelschmidt**  
*Director – Victoria  
Project and Technical Manager  
Hydraulic*  
Years in Industry: 29  
Years with WSCE: 24



**Campbell Hazelton**  
*Partner –  
Hydraulic*  
Years in Industry: 25  
Years with WSCE: 13

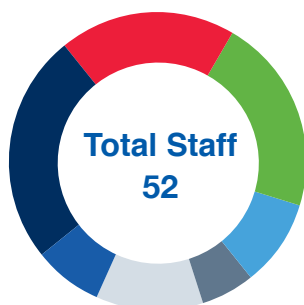


**Grahame Barnes**  
*Design Manager –  
Hydraulic*  
Years in Industry: 40  
Years with WSCE: 35



**Daniel Power**  
*Project Manager  
– Hydraulic*  
Years in Industry: 18  
Years with WSCE: 7

Currently, Warren Smith Consulting Engineers consists of the following directly employed staff:



- Engineers & Designers, Hydraulic
- Engineers & Designers, Fire
- Engineers, Technologists & Designers, Civil
- Water Servicing Coordinators, Water & Sewer
- BIM/CAD Operators
- Support Staff
- Directors

Our engineers, technologists and designers are qualified profession members of the following organisations:-



# WHAT WE DELIVER

Warren Smith Consulting Engineers offer skilled professionals, who are effective communicators and valued members of any team. Our team is supported by our progressive design and quality assurance systems.

With access to decades of design and engineering experience, matched by our young innovative staff, we present a dynamic team capable of delivering significant projects.

Our team has a thorough understanding of both common and unique engineering design challenges. Through our experience, we have developed design knowledge and strategies to maximise the usable space and minimise the cost of the development.

Our team applies our design skills to ensure that the documentation we produce, and the advice we provide, is tailored to meet individual project goals and challenges.

We focus on the delivery of a premium product to our clients, which in the long term, is proven to be the most cost effective, aesthetically pleasing and space efficient. We also recognise that it is not only engineering that makes for an effective outcome. Engineering needs to be backed up by astute management and understanding of the project timeline and deliverables.

## Warren Smith Consulting Engineers provide specialist engineering services:

- Due diligence, compliance, condition and investigation reporting
- Master planning, concept, and schematic design
- Design development and contract documentation
- Sustainable and strategic system capex and opex analysis
- Construction administration
- Project management
- Feasibility studies
- Risk management
- Safety in design analysis
- Fit for purpose analysis

***We hope you enjoy the open, friendly, yet professional and skilled culture of our team, when embarking on your next project.***



WESTMEAD HOSPITAL REDEVELOPMENT STAGE 1



Warren Smith Consulting Engineers hydraulic services team has a proud history of providing accurate and cost effective innovative documentation and advice including negotiations with authorities for cost saving dispensations for our clients. The excellent and thorough service we provide is reflected in the number of repeat clients that our practice continues to work closely with.

### Hydraulic services specialise in:

- Cold water services
- Heated water services
- Non-drinking water services
- Sanitary plumbing systems
- Sanitary drainage systems
- Roof drainage systems (internal to the building)
- Surface and subsurface drainage systems (internal to the building)
- On-site wastewater management systems
- On-site liquid trade waste systems
- Natural gas services
- Liquid petroleum gas services
- Speciality water systems, sanitary plumbing systems, sanitary drainage systems and on-site treatment systems for facilities

### Software for design and analysis:

- Revit – design documentation and analysis
- Pipes building services – water pipe network hydraulic analysis
- Gas – gas pipe network analysis
- HW – domestic hot water system fuel energy analysis

### Key personnel

Tom Wise  
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Daniel Power  
Project Manager – Hydraulic  
61 401 382 024  
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# HYDRAULIC SERVICES – PROJECTS

Some of the key Hydraulic Services Projects that we have provided consultancy services on include:



## Barangaroo South, International Towers Sydney T1, T2 & T3 (2011 – 2017)

**Client:**

Lend Lease

**Project Value:**

\$2.1B

**Contact:**

Paul Elkington  
(02) 9236 6111

**Scope of works:**

- Develop the hydraulic services documents through concept, schematic, design development and construction documentation phases.
- The hydraulic services systems for the commercial and retail components of the project included: sewer drainage, trade (grease) waste drainage, stormwater drainage, sanitary plumbing, trade waste plumbing, urinal waste plumbing (yellow pipe urea harvesting), domestic cold water, domestic hot water, recycled (black) water, rainwater re-use, natural gas.
- Coordination of all hydraulic services with other building trade services, structure and architecture, using 3D Revit 'BIM' modelling software with Navisworks 'clash detection'.



## Barangaroo South, Stage 1B Residential Towers (2014 – Current)

**Client:**

Lend Lease

**Project Value:**

\$1B

**Contact:**

Greg Smith  
0412 054 902

**Scope of works:**

- Develop the hydraulic services documents from schematic design through to design development and the maximum tender pricing.
- Hydraulic services for residential and retail included: sewer drainage, stormwater drainage (internal), trade waste drainage, sanitary plumbing, trade waste plumbing, domestic cold water, domestic hot water, natural gas and rainwater reuse.
- Coordinate all hydraulic services with all building services in Revit. Provide Quantity Take Off (QTO) information to assist in comparing hydraulic tenders.



## Sydney Opera House Western Foyer (2010), Building Renewal Project (2017)

**Client:**

Sydney Opera House

**Project Value:**

\$300M

**Contact:**

Paul Shumack  
(02) 9250 7361

**Scope of Works:**

- Develop the hydraulic services documents through concept, schematic, design development and construction documentation phases.
- Hydraulic services included: sewer drainage, stormwater drainage (internal), trade waste plumbing and drainage, sanitary plumbing, domestic cold water, domestic hot water, non potable hot and cold water and natural gas.

# HYDRAULIC SERVICES – PROJECTS

Some of the key Hydraulic Services Projects that we have provided consultancy services on include:



## University of Sydney – Nanoscience Hub (2010 – 2014)

**Client:**  
Lend Lease

**Project Value:**  
\$90M

**Contact:**  
Cherylene Teoh  
(02) 9277 2438

### Scope of Works:

- Assist AECOM and Architectus with building rainwater drainage requirements for the new western road overland flow.
- Provide overland flow strategy, levels and rainwater flow calculations for building overland flow paths and disposal of roof drainage system.
- Attend necessary meetings and site inspections.
- Re-coordinate services in Revit for raised ceiling to level 3 and level 4 areas based on new revised architecturals.

- Attend necessary coordination meetings.
- Redesign, document and coordination hydraulic services due to mechanical plant increase as requested by Sydney University.
- Recalculate water and gas services.
- Provide additional drainage services.
- Design and document condensate stacks for additional mechanical fan coil units.



## Blacktown & Mt Druitt Hospitals, Stages 1 & 2 (2014 – Current)

**Client:**  
Health Infrastructure

**Project Value:**  
\$586M

**Contact:**  
Andrew Paris  
0427 211 604

### Scope of works:

- Develop the hydraulic services documents through the schematic development, design development, construction documentation phases.
- Construction administration phase.
- Hydraulic services included: sewer drainage, stormwater drainage (internal), trade waste drainage, sanitary plumbing, trade waste plumbing, domestic cold water, domestic hot water, non potable hot and cold water, reverse osmosis water, natural gas, rainwater reuse.

# HYDRAULIC SERVICES – PROJECTS

Some of the key Hydraulic Services Projects that we have provided consultancy services on include:



## Top Ryde City (2010 – 2013)

**Client:**

Lend Lease

**Project Value:**

\$700M

**Contact:**

Kevin Weston  
0407 245 500

**Scope of Works:**

- Stormwater system diversion
- Sanitary plumbing
- Trade waste plumbing
- Potable hot and cold water systems
- Provision for future residential buildings



## ELF Kapooka, Wagga Wagga (2010)

**Client:**

Sinclair Knight Merz Pty Ltd

**Project Value:**

\$200M

**Contact:**

Simon Raper  
(02) 8079 6400

**Scope of Works:**

- Sewer drainage
- Potable hot and cold water systems
- Fire hydrant system
- Fire hose reel system
- Trade waste plumbing
- Roof drainage
- Natural gas service



## SICEEP Hotel, Darling Harbour Live (2012 – 2017)

**Client:**

Lend Lease

**Project Value:**

\$250M

**Contact:**

Madeleine Macdessi  
(02) 9236 6111

**Scope of works:**

- Sewer drainage (incl. connection to Sydney Water infrastructure)
- Trade waste drainage including the design of the commercial kitchen and laundry as well as the required trade waste pre-treatment
- Stormwater drainage to connect to external civil drainage system
- Sanitary plumbing
- Trade waste plumbing
- Sizing of roof gutters
- Syphonic roof rainwater downpipes to rainwater reuse tank
- Domestic cold water service including point of entry filtration system
- Reused rainwater reuse pipe distribution system
- Domestic hot water service including heat exchangers
- Natural gas service
- Sanitary fixtures and tapware
- Connections contacts from pumps and valves for wiring to the BMS.



# CONTACTS

## DIRECTORS

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## KEY PERSONNEL – NEW SOUTH WALES

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