

Hornsby Aquatic Centre

Case Study



masonry.
style and
function

HORNSBY AQUATIC CENTRE

GETS A SPLASH OF COLOUR
THANKS TO AUSTRAL MASONRY



Coloured concrete masonry adds distinction and practicality to Hornsby aquatic centre.

Project: Hornsby Aquatic & Leisure Centre

Location: Hornsby NSW

Owner: Hornsby Shire Council

Architect: Peter Hunt Architect

Structural engineer: Geoff Ninnes Fong and Partners

Builder: ADCO Constructions

Blocklayer: Conrina Masonry Contractors

Photography: Alex Mayes

Water is the enemy of any building structure, a fact known to every builder and architect, and the occasional unfortunate home owner. So you can only imagine the challenge of designing and constructing an aquatic centre, not just in waterproofing the pool structure, but also from condensation and extensive wet areas such as pool halls and change rooms.

The original Hornsby aquatic centre on Sydney's Upper North Shore succumbed to "concrete cancer" and other water-related issues in 2010 after 52 years of community service. Four years and \$26 million later the new Hornsby Aquatic & Leisure Centre was officially opened by the Prime Minister. The new centre is sited largely on the old footprint but with the expectation of well and truly exceeding a 50 year life span without major maintenance issues.

The new complex has a reinforced concrete structure and makes extensive use of glass and coloured concrete masonry. "Our design intention was to create a very modern, light environment without dominating the park behind," says project architect Michael Cook. He adds that concrete masonry is often specified in aquatic and leisure centres "because of its robustness and durability."

Michael worked on this project with Peter Hunt and Brian Lafontaine who were in the design architect's seat. Peter Hunt Architects Sydney office – the practice is headquartered in Perth – specialises in aquatic and leisure centres, local government facilities and, paradoxically, secure environments such as detention centres. "We go from places you want to be in like a leisure centre to those you wouldn't want to be in!" Cook says wryly.

The site backs onto a heritage park and is sited in a shire that is prone to bushfires. The old centre was reportedly peppered by embers in a 1994 bushfire. This created some challenges, the most important being that the centre was vulnerable to fire from the west, which necessitated a highly fire-resistant wall along this boundary. "Being on the back of a reserve and on the top of an escarpment, a fire could rush up to it very quickly," Cook explains.

Blockwork was the obvious choice, the rugged texture of split face units fitting into the bushland context and creating a robust, fire-resistant barrier. The surrounds of the small window were finished in smooth face blocks, to both define the reveals and allow gap-free attachment of protective mesh.



Blockwork is also used extensively throughout internal areas, from the change rooms and gym which line the west wall, in the wall separating these facilities from the pool hall, and in offices and meeting rooms on the upper level.

These areas make good use of coloured blocks with a polished face, the glamorous cousins of the familiar grey concrete blocks that have been a building industry staple for many years. "We used a change of colour with the blocks, sometimes to differentiate a change of use or on a different wall to give some relief and articulation to it," Cook says. "Coloured blocks were used everywhere that blockwork was visible, including wet areas. In an aquatic centre you have to consider all spaces as wet areas. Now that there is a wider range of colours and surface textures available in concrete masonry we don't have to tile or finish those blocks off."

As well as looking great, concrete masonry has the additional advantage of high impact resistance, important in a facility teeming with excited kids. It is also a proven performer in damp, saline environments such as coastal locations.

Underpinning the Hornsby Aquatic & Leisure Centre is a 110-vehicle car park excavated into

the embankment. "Even though the site had been previously excavated, we had to remove quite a lot of sandstone to get down to the basement level," says Cook. The basement car park also presented some potential bushfire issues requiring it to be enclosed with concrete masonry. Economical grey blocks were specified in this instance.

As well as a gym and all the facilities demanded in a modern leisure facility (including childminding), the Hornsby centre houses an Olympic-sized pool and a heated 25 metre leisure pool. There is another pool outdoors flanked by lawns and seating for 500 spectators.

A low retaining wall was required to tame the undulating site. The architects originally specified a segmental gravity retaining wall, a mortarless system using specially-engineered interlocking concrete blocks that are set back slightly from vertical. However at the suggestion of the builder this specification was altered to a conventional mortared blockwork retaining wall constructed in Austral Masonry Architec Split Face masonry in Pearl Grey, the same units used on the west-facing external wall. "By using a vertical system we were able to get some more space on the lawn area above

the walls," says Michael Cook.

The Hornsby Aquatic & Leisure Centre was opened to the public in August 2014. Sadly its main designer, Peter Hunt, died after a protracted illness just 10 days before the Prime Minister cut the ribbon to officially open the facility on 22 November.

Austral Masonry Head Offices National

Gympie

Cnr Woondum Rd and
Bruce Highway
Gympie QLD 4570

Tel. (07) 5489 6900
Email. sales@gbmasonry.com.au

Queensland

184 Burnside Rd
Yatala QLD 4208

Tel. (07) 3441 7500
Fax. (07) 3807 0954
Email. sales@australmasonry.com.au

New South Wales

44 Clunies Ross St
Prospect NSW 2148

Tel. (02) 9840 2333
Fax. (02) 9840 2344
Email. sales@australmasonry.com.au

Victoria

59 Elliott Rd
Dandenong VIC 3175

Tel. (03) 9791 6988
Fax. (03) 9791 1644
Email. sales@australmasonry.com.au

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