

Waterfall Station Upgrade



Faster trains call for fast solutions.

Forty kilometres south of the Sydney CBD, the Sutherland Shire's Waterfall railway station is where the South Coast line joins the Illawarra line, entering the Sydney rail network. It is undergoing an upgrade and precast concrete is key to the project.

The Waterfall works are part of the NSW Government's More Trains, More Services Program, a \$600 million package to modernise infrastructure on the rail network and cater for new and more frequent suburban and intercity trains. Waterfall is the only station on the line which comprises an island platform instead of two side platforms. It has sidings on both sides of the main line just north of the station, for stabling trains and a loop track for passing trains on either side of the platforms.

With new, longer and faster trains on the way and planned efficiency improvements in sight, widening the rail corridor for a new rail loop, extensions to platforms and a new stabling yard were required.

Cost savings, speed and durability all key

According to Michael Waeger, Managing Director of National Precast Master Precaster Waeger Constructions, precast has been specified because it would deliver cost savings and importantly, cut the works programme to minimise commuter disruption. Precast's customisation, long life and durability were also high on the client's agenda.

"Most of the works needed to be undertaken during rail track possessions, so time was of the essence. Precast offered the fast and efficient construction method that was needed to suit the limited time frames on site. The extensively detailed planning and prefabrication certainly were a key reason for the project's success," Mr Waeger commented.

Master Precaster
Waeger Constructions

Industry Supplier
Peikko Group

Project
Waterfall Station Upgrade

Location
Waterfall, NSW

www.nationalprecast.com.au



Mr Waeger's company has been involved in the project from the outset, supplying columns, headstocks and stairs for the pedestrian overbridge and also fabricating culverts, L-walls and slabs for the upcoming platform upgrade. In total, when complete, approximately 240 precast items will have been installed.

Leading the way as a Master Precaster

Based at Rutherford in the Hunter Region, Waeger Constructions specialises in manufacturing precast and civil construction. As a National Precast Master Precaster, the company has been audited to the highest standards in quality, safety and environmental compliance.

According to National Precast CEO Sarah Bachmann, Master Precasters have passed the Association's minimum requirements, not just in the QSE space, but also ensuring they are active industry players with good Corporate Social Responsibility, and importantly, with the appropriate expertise and facilities that are needed to manufacture for clients like government authorities.

"It should not all be about price," says Ms Bachmann.

"Using a Master Precaster mitigates risk, ensuring that the risks of unsatisfactory quality, delays, safety breaches and the like, are minimised."

Walking the walk

Master Precasters like Waeger Precast are demonstrably setting the bar and are known for high profile and very often, award-winning projects. In Waeger's case, probably its most notable project is the Newcastle Memorial Walk. The Walk is an impressive, elevated walkway that connects Strzelecki Lookout to Sheppard's Hill Reservoir at Bar Beach, NSW, which recognises the 11,000 local men and women who contributed to the World War 1 war effort and commemorates 100 years of steel making in Newcastle, established to provide steel rail to the war effort.

For that project Waeger manufactured and constructed seven "Y" shaped sandblasted precast pylons that are up to 8.8m high and 3.4m wide, which hold the bridge span above the cliffs.



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Innovating change

According to Ms Bachmann, being plugged in to industry networks - enabled by, for example membership of National Precast – means that member precasters become aware early on of new or innovative products and technologies that are available from suppliers who are also involved.

“Our national conferences are often where members hear about new products, which transfers across to client benefits. Everyone wins in instances like these. Local communities are supported, sites become safer, construction is hastened, and structures have unsurpassed durability” Ms Bachmann says.

In this case, Waeger is leading innovation by engaging with Industry Supplier member Peikko to deliver efficiency improvements. Mr Waeger says that in the Waterfall Station project, Peikko column shoes have been integrated into the precast columns.

Column shoes are commonly used in Europe and their use is on the rise here in Australia. They provide a fast and safe connection between precast columns and foundations, or between two precast columns. The shoes are cast into the column and unlike alternative connections, columns require no temporary bracing during installation.

Without connections of this type, the required fast and efficient construction required on the project could not be achieved. In this project a total of 108 connections were used and all installed to the required tolerances to allow seamless installation on site.

Precast from a Master Precaster means wins all round

According to Ms Bachmann, precast elements are frequently used for rail and other infrastructure projects as they have been long recognised as offering a myriad of benefits for the client, contractor and end user.

“Being manufactured offsite generally means reliable and on-time delivery of high quality, well designed products” Ms Bachmann comments.

“In Waterfall Station’s case, use of Master Precaster Waeger has not only done this, it has innovated as well. It’s a win-win for both the client and commuters.”

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