ILLUMINATING THE FUTURE

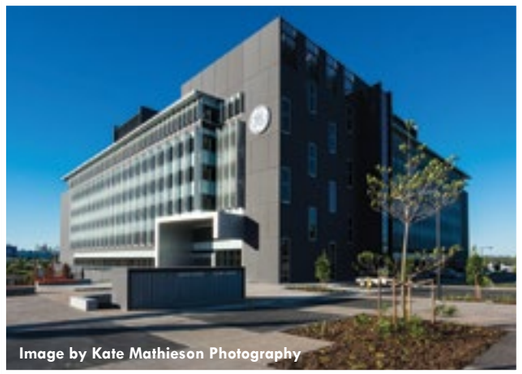


Image by Kate Mathieson Photography

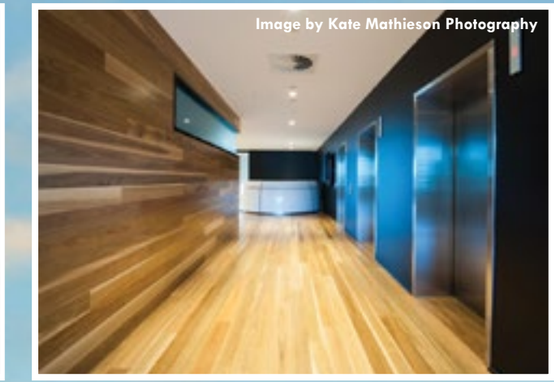


Image by Kate Mathieson Photography

MAIN CONSTRUCTION COMPANY : Kane Constructions
PROJECT END VALUE : $55 million
ARCHITECT : Conrad Gargett Architecture
STRUCTURAL ENGINEER : Meinhardt Australia
SURVEYOR : ML Surveyors

The $55m GE HQ is a 15,000m² office building consisting of six stories with two levels of basement carparking, as well as achieving a 5 Star Green Star and 4.5 Star NABERS rating.

In 2013 Kane Constructions commenced discussions about construction of General Electric's new Headquarters in Springfield Central. Consultation began from scratch which included the flexibility of the scope to accommodate ideas and creative suggestions to tackle the complex build. Kane's Queensland Director, David Rutter, believes that Kane's collaborative dialogue with the client and consultants from the outset were a remarkable mechanism that allowed value to be added throughout design and build phases. Ultimately those relationships have been a key factor in the project's successful delivery.

"We started the job with a written brief for a two stage lump sum Design and Construct contract," says Rutter. However, it was not tightly prescriptive. Azure Development Group were project managing for the client and set up the contract in this form, explaining the efficiencies of operating this way. It was a very collaborative, interactive process that resulted in particularly cooperative relationships between the client, contractor and subcontractors. We had a very happy client - right from the very beginning."

Having a happy client is not surprising given the project was completed 6 weeks ahead of schedule and 10% under Kane's originally-proposed budget. After working on the design phases together, parties formally kicked off construction of the 15,000m² commercial office building in June 2013. Construction was completed just prior to Christmas 2014. Five months prior to completion, Kane were engaged to complete the $12.5 million fit-out at the new headquarters. In fact, Kane completed the fit out activities, an area 10,000m², within the original contract period.

Kane were engaged by Springfield Land Corporation to build the new GE HQ building as part of the new Greater Springfield urban development, 30 minutes south of Brisbane CBD. By 2030, Greater Springfield is expecting an equivalent population of over 100,000 in a sustainable urban and business hub. The precinct is aiming for sustainability accreditation under the new Green Building Council of Australia Green Star Communities initiative.

The GE Headquarters building, solid and cubic in appearance, makes a bold and strong start to the development of the Greater Springfield business hub. It is laid out in an L shape to maximise staff visual exposure to connecting parklands. The six stories is built upon two basement car-parking levels. The build comprises pre-cast concrete panels with aluminium-framed windows and vertical, aluminium sun-shading panels extending from the facade. A soaring roof over an area between two parts of the building creates a striking foyer.

The building has a 5 star Green Star rating (as built) and 4.5 star NABERS rating. Kane sought design management expertise from Conrad Gargett Architecture regarding sustainable design of buildings, as well as Umow Lai's ESD team. Sustainable design principles have been applied to reduce maintenance and operating costs, such as reducing air conditioning needs through limiting sun penetration into the building. ESD principles were also applied to the build, for example incorporating the use of green concrete.

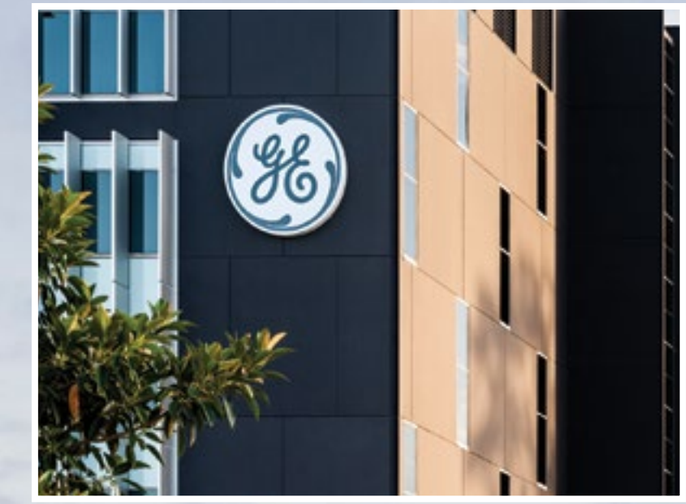
The early Contractor involvement process resulted in significant efficiencies being incorporated into the building process including a two-storey tilt-panel basement, flat plate suspended slabs and a crane assisted jumpform for the core that resulted in the structure topping out in six months.

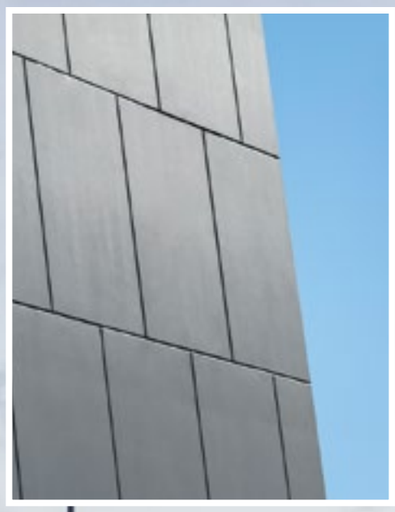
Being the third building up in the Parkside precinct meant that Kane had to coordinate all the incoming services. They also completed some external works such as roadworks and landscaping. At peak, Kane had around 200 workers on the project.

Nationally, Kane have over 250 staff and annual turnover of $500m, with offices in Victoria, NSW and Queensland. Other projects that Kane are currently working on include the Epworth Richmond Redevelopment, the Geelong Library and Heritage Centre in VIC and the Carnes Hill Recreation and Community Precinct at Hoxton Park NSW.

For more information contact Kane Constructions Pty Ltd, 14 Fox Street, Albion Qld 4010, phone 07 3054 1555, fax 07 3054 1556, email smercer@kane.com.au, website www.kane.com.au

Below Austral Precast suppled Greenstar concrete pre-fabricated panels to the GE Headquarters.





The project in Springfield, now the headquarters for General Electric, was constructed using precast concrete solutions and installation expertise from the team at Austral Precast. As Australia's largest supplier and installer of innovative precast concrete solutions, Austral Precast was chosen after a competitive tender due to extensive experience in commercial construction.

The GE HQ required a suitably experienced precast concrete supplier to provide a range of tailored solutions, from the green star concrete panels required to reach energy efficiency targets, through to project management skills required to fit within a tight installation schedule. In all cases Austral Precast delivered.

To achieve the goal of reaching a 5 star Green Star rating and 4.5 Star NABERS rating Austral Precast offered a solution in the form of green star concrete panels which reduce the need for heating and cooling by adding thermal mass to the structure. The panels, which are made using reduced cement levels in concrete and recycled water, reflect a shift in the construction industry to giving greater consideration to the environment, both when constructing buildings and in their ongoing operation once built.

As a result, Austral has expanded the scale and scope of its business to embrace Environmentally Sustainable Design Initiatives and the changing economic climate of the market place. Their precast concrete panels are manufactured in each plant throughout Australia under strict environmental guidelines. Emissions from the pre-fabrication plants are monitored in accordance with government guidelines and as a member of the National Precast Concrete Association of Australia the company and its skilled employees are helping to promote the special environmental benefits of precast concrete.

When achieving the goal of fitting within a tight installation schedule, precast concrete was an ideal choice. Because precast concrete is manufactured off site and made to client specifications, manufacture and site preparation can occur simultaneously with quick and straight forward installation. This ensures faster enclosure of the structure, minimal delay to work being carried out by other trades, and limited site congestion with no delays resulting from external weather conditions. For the GE HQ this meant installation on time and with minimal fuss, all under the meticulous gaze of Austral Precast's installation team.

Easy and fast installation is just one of many benefits that makes precast concrete an ideal construction material and which has seen its increased use in the high rise residential, commercial, and industrial construction. Along with outstanding durability resulting from the use of concrete in various densities and compositions, precast concrete is a strong, low maintenance, cost-effective material that will endure the ravages of weather, time, pollution, and other external forces with minimal degradation or damage.

To assist in reducing the ravages of weather, time and pollution, external precast panels can be pre finished with Austral Precast's innovative PermaTint finishing system which applies a solid colour that is warranted for 25 years. Available in a vast range of monotone colours and unique colour effects, PermaTech offers great advantages over on site colour applications like painting because PermaTint actually penetrates into the panel's surface for a more stable, longer lasting colour finish. PermaTint is also applied during manufacture so there is no need for additional trades on site to colour panels.

Austral Precast also offers PermaForm which can imprint three dimensional shapes into the panel using form liners and PermaGraf which allows images with photo realistic detail to be etched into the panels face. PermaTint, PermaForm, and PermaGraf are all part of the PermaTech finishing system and can be used individually or together for a unique finish.

Austral Precast operates from four plants located across Australia using state-of-the-art technology and production techniques to produce a diversified range of customised wall, floor, column, and client-specific precast solutions, many of which were applied with diligence and detail to the GE Headquarters Development.

Austral Precast services a range of markets focusing primarily on the industrial, commercial, multi-residential and community sectors. The business provides a full product and service package with the ability to design, detail and manufacture a diverse range of precast products and provide industry-leading installation services.

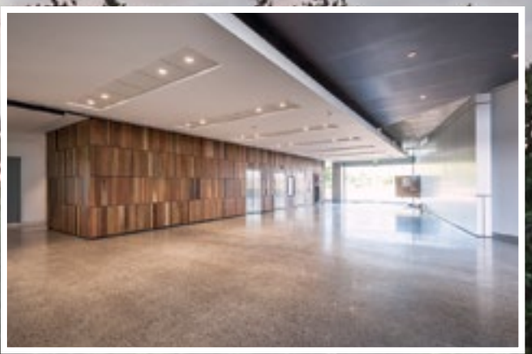
Other projects Austral Precast have supplied their world-class, custom designed, thermally efficient precast concrete panels to include Westfield Garden City, VIDA Apartments, Patrick Port Botany Development and Transcity – Eastern Portal Bypass in Brisbane.

For more information contact Austral Precast Pty Ltd, 364 Fairlie Terrace, Salisbury QLD 4107, phone 1300 778 668, website www.australprecast.com

GE Headquarters Springfield, QLD

Below EMES completed the mechanical wiring to HVAC plant and equipment on GE Headquarters.

Below Conrad Gargett provided architectural services on the GE Headquarters Building.



EMES (Essential Mechanical Electrical Solutions) was established in 2011 by its Manager David Baker who has an excess of 25 years experience in the mechanical electrical industry.

As experts in design and construct within the HVAC industry the electrical contracting company has already gained an impressive list of significant projects to it's name.

Key projects EMES has been involved in include Suncorp Stadium (mechanical switchboard upgrades), the fitout for Singapore Airlines at the International Airport and the Queensland Eye Institute commercial redevelopment. They also worked on the Coolangatta Showcase on the Beach shopping centre refurbishment (The Strand), UQ Goddard building upgrade, 126 Margaret Street commercial re-development, 280 Adelaide Street chiller plantroom and upgrades to the Brisbane and Gold Coast Airport extensions.

Added to this list is Springfield's GE Headquarters Development where EMES undertook a number of works on the project. "We have successfully completed the mechanical wiring to HVAC plant and equipment such as within the roof plant room areas," David Baker said.

"This included mechanical services switchboards wiring to chillers, pumps, cooling towers, chemical dosing, water treatment, air handling units and ventilation fans and variable speed drives."

"Typical levels included distribution boards serving variable air volumes, computer room units and gas suppression switchboard. We also provided the carpark supply and exhaust system which is controlled via mechanical services switchboards."

Providing their services to all areas of Brisbane, Gold Coast and Sunshine Coast, EMES also designs and installs circuits for chillers, motors, pumps, cooling towers, exhaust fans and control systems. The company also supplies a variety of options for design and construct projects.

EMES is currently working on the new Mater Private Hospital at Springfield, Queensland Rail Administration building at Albion, Robina Town Centre extensions on the Gold Coast, as well as numerous tenancy fitout works in and around the south east Queensland.

For more information contact EMES Pty Ltd, PO Box 737, Albany Creek QLD 4035, phone 0418 766 724, email david@emes.com.au, website www.emes.com.au

With a vibrant legacy of prominent and enduring designs, Conrad Gargett is at the forefront of architecture in Australia.

Following a limited design competition, the firm was awarded the architectural design of the GE Headquarters Building. The purpose-built, six-storey 14,000 square metre office building contains over 12,500m^2 of NLA arcing around a north facing courtyard which is orientated toward the adjacent parkland.

"The design forms a slender L-shape. Deep plan has been avoided and the majority of the workspace is within eight metres of the external façade," Conrad Gargett's John Flynn explains. "Occupants have access to good natural light and views into the landscaped plaza, parkland and beyond."

"A sense of arrival is important in siting GE HQ as a prime commercial space. Arrival from the Robelle Domain Parkland is through a north facing landscaped courtyard. A pergola roof over this space forms an outdoor room that responds to our Queensland environment. It allows the winter sun in and protects occupants from the summer sun. Retail spaces activate the courtyard." Entry from the street is identified with a two level folded canopy that extends into the foyer space. The metallic canopy contrasts with the recycled timber wrapping the lift core.

Connectivity to the Robelle Domain Parklands drove the overall design intent for the building. "Design consideration was given to the external courtyard with planning facilitating the parkland to be extended up into the building furthering the amenity for tenants," John Flynn added.

The project's greatest design challenge was maintaining the building's slender roof form, including ensuring the roof span was graceful and the entry courtyard was column free – linking the building to the external environment and providing filtered sunlight.

With offices in Brisbane, Sydney and Townsville, Conrad Gargett's expert and experienced team continuously exceed client expectations. They deliver high quality, innovative and pragmatic projects in a diverse range of sectors including health, heritage, research, defence, education and commercial.

For more information contact Conrad Gargett, Level 27/400 George Street, Brisbane QLD 4000, phone 07 3229 3555, fax 07 3221 7878, email mail@conradgargett.com.au, website www.conradgargett.com.au, twitter @conradgargett, linkedin Conrad Gargett

Below Allsafe Platforms & Scaffolding supplied scaffold and platforms during construction of the GE Headquarters Building.

Below North Coast Tanks team constructed a 112K Litre tank for the GE HQ.

Townsville

PS1 Commercial Building

Emerald Lakes Development

Allsafe Platforms and Scaffolding were contracted to supply the scaffolding and platforms for the GE Headquarters project in Springfield, Queensland.

The 6 Storey, 15,000m² commercial office development with two levels of basement parking, required scaffolding and platforms to be erected safely and efficiently within the tight project time frame.

When planning for the project, the varied dimensions of height and width from floor to floor were considered in detail by the highly experienced Allsafe Platforms and Scaffolding team.

During the construction of the GE HQ, careful and meticulous understanding of the stages and respective time lines were required to provide safe and code compliancies for the duration of the build. This was also ensured by the team at Allsafe Platforms for the external access on all levels of the structure.

By working closely with the developers and other sub-contractors, Allsafe Platforms ensured that not only was the temporary external structure safe for those working on the site, but that the ongoing maintenance and safety checks were completed to standard.

This structure was assembled by the sixteen-man strong team in a manner reflecting the companies impressive safety record and 15 years experience. Handrail and edge protection were also installed around the perimeter of the GE Headquarters Building, ensuring the project met or exceeded Australian Safety Standards.

Scaffolding and platforms have many applications in industrial and commercial building. These include supports for painting, concrete repair, cladding, high-pressure cleaning, glazing, plastering and welding.

Allsafe Platforms and Scaffolding's products are all expertly supplied, constructed, maintained and dismantled by their highly trained team.

Recent projects Allsafe Platforms and Scaffolding have worked on include The Grand Chancellor Hotel in Spring Hill, Toowong Village Shopping Centre in Toowong and The St. Laurence School located in South Brisbane.

For more information contact Allsafe Platforms and Scaffolding, 24 Andrew Campbell Drive, Narangba QLD 4504, phone 07 5432 3711, email admin@allsafeplatforms.com.au

North Coast Tanks based on the Sunshine Coast, are the industry leaders in onsite concrete water tanks in Queensland. High-strength, reinforced, sprayed-concrete water tanks for commercial and residential applications are expertly constructed by Craig Schneider and his team with over 37 years of local experience behind them.

The company was founded in 1978 by Don Schneider who developed his own method of constructing on-site, insitu, reinforced concrete tanks and built many using his own design. After taking over this business Craig has modernised the original system and directed the business forward embracing technological advancements and products, supported by documentation, and standardisation that still utilise the original process and skills developed by his father. Thus over time North Coast Tanks has developed a most durable and versatile solution for water storage. Their method involves concrete being sprayed into form-work and finished off smoothly, producing a seamless construction without joints. Every tank is engineer-designed and steel re-enforced throughout ensuring the structural integrity of the investment.

Constructed onsite with a wide range of sizes, engineered loads and variable capacities, the BSA licensed and insured tanks conform fully to industry safety and compliance standards.

North Coast Tanks specialise in concrete tank repairs and an interesting domestic application of converting swimming pools into water tanks, allowing houses being renovated to increase their water storage capacities and utilise their space more effectively. They also have begun manufacturing plunge pools of different sizes, finishes and customisation.

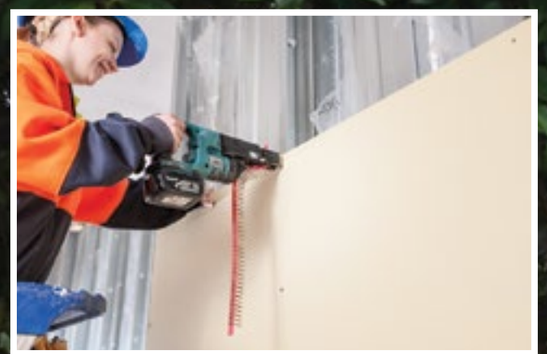
On the GE Headquarter Development in Springfield the North Coast Tanks team constructed a 112,000 litre tank that was engineered to go underneath the carpark. As the project is greenstar-rated, the concrete mix had to be re-designed and the steel re-enforcment needed an industry certificate before being built into the basement as part of the foundation.

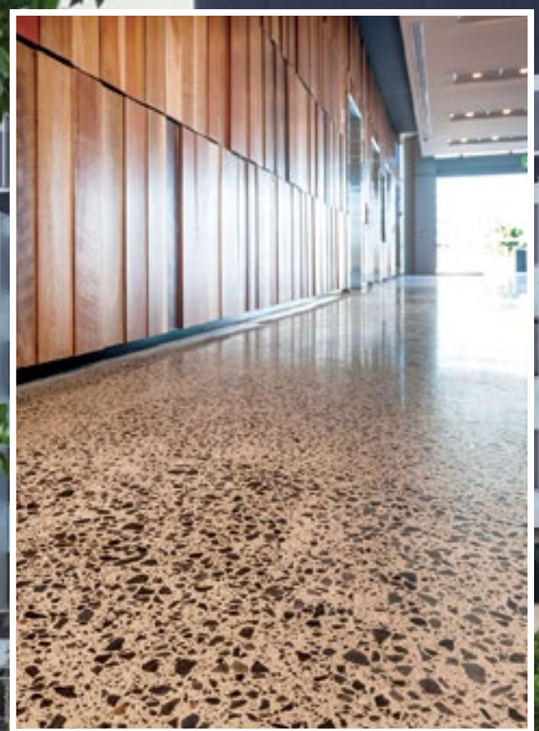
Recently Craig and the team at North Coast Tanks constructed three 160,000 litre in-ground water tanks on the Emerald Lakes development at Carrara.

For more information contact North Coast Tanks Pty Ltd, PO Box 571, Palmwoods QLD 4555, phone 07 5445 9514, fax 07 5478 9589, website www.northcoasttanks.com.au

Below Blue Star Plastering constructed the internal wall framing, ceilings and plasterboard linings for the GE HQ.

Below McGinn Concrete supplied, placed and polished concrete on the GE Headquarters Building.





Blue Star Plastering worked closely with Kane Constructions on the GE Headquarters in Springfield, specialising in the areas of plastering, drywall lining and external cladding. Founded in 2010, the family company had around 15 employees engaged to complete the base works to 6 levels and the GE Money fit-out to 3 levels.

On the GE HQ, Blue Star Plastering are responsible for the base works of the internal wall framing, insulation for both acoustic and thermal (using Fletcher Insulations products) and plasterboard linings. The exposed suspended grid ceilings used Armstrong World Industries mineral fibre ceiling tiles, with the suspended ceiling frame constructed with Boral Green-Star plasterboard linings supplied by Betaboard Pty Ltd. Blue Star Plastering also installed aluminium skirting and timber capping to the perimeter spandrel walls. These products were selected by liaising closely with Kane Constructions and their suppliers in order to achieve a Green Star rating of 6 for the project. Wherever possible all products used were Green Star rated and approved.

BSP have worked closely with Kane Constructions to ensure the client gets the desired finish using the best possible products whilst keeping with the design brief, increasing long-term resilience while lowering maintenance procedures. An example is a shadow line-edge bulkhead trim applied to the exposed grid ceilings with the junction of the set plasterboard ceiling. Using this product eliminated a possible maintenance issue by removing a set P50 trim for a rigid aluminium product.

Another example was the powder coated aluminium door frames which Kane Constructions needed to be installed near the end of the project to stop any damage occurring. BSP suggested and used a full wall system width setting capped bead, allowing for both sides on the opening to be set and the aluminium door frame to be installed prior to the doors being hung.

Blue Star Plastering are also working with the Queensland Government to develop a number of Year 7 High Schools in areas including Victoria Point, Narangba Valley, Cavendish Road, Ipswich and Merrimac. As well as collaborating with Kane Constructions on the Redcliffe State High School and Archerfield Energex. Blue Star Plastering were also winners of the Master Builders QLD State Award 2015 for cladding works at Springfield railway stations.

For more information contact Blue Star Plastering, PO Box 1160, Mt Ommaney QLD 4074, phone 0401 540 108, email bluestarplastering@hotmail.com

Keith McGinn started his concreting company in 1988 with a view to focussing on the residential and commercial markets, whilst specialising in polished concrete works. In 2013 McGinn Concrete were awarded tender for the GE Headquarters Springfield Development to supply, pump, place and finish nearly 7000m^3 of concrete over the 9 levels. They did this using Holcim Enviro Green Star Mix Concrete. This concrete mix uses 56.6% manufactured sand and 100% recycled water, allowing for a reduction in cement by 56.9%, achieving a 3 point Green Star Rating for concrete supply.

After addressing early problems involving 'slump', the mix proportions were increased for better workability and finishing. The building was also finished in sections by pouring 1000m^2 slabs, one at a time.

According to the Project Baseline Cement Usage figures, McGinn Concrete used a total of around 3,094 tonnes of cement on the GE HQ with a weighted average of 439 kg/m^3 of cement, earning 2 Green Star points.

Another point was added for the amounts of recycled sand and water used, totalling 3 Green Star points as awarded to Holcim Australia for the mix.
The GE Headquarters utilises a low maintenance concrete façade framed with Aluminium Spandrel panels and sun shading. This combined with dark coloured concrete façade panels and topped by a large over sailing roof structure produces a strong visual signature and sight lines.

With 2 levels of basement parking the McGinn crew were kept busy ensuring the concrete was poured and levelled successfully, while allowing sufficient drying time in between sections and maintaining the time-frame schedules. As a result, the design for the GE Headquarters maximises net lettable area and allows for future flexibility through its building systems and construction methods.

The expertise of McGinn Concrete doesn't stop with concrete placement on the GE HQ, they also polished internal slabs to a Hiperfloor finish. McGinn Concrete has spent years developing their own method of polishing slabs to achieve this Hiperfloor finish that not only looks like glass but stands the test of time. Other projects that McGinn Concrete has worked on include The All Hallows Year 7 School, Airport Link, 7 stations on the Moreton Bay Rail Link, Nissan Building in Springwood, Everton Park Retail Centre, Stage 4 of Yeronga Aged Care Facility and many more.

For more information contact McGinn Concrete, 54 Bega Road, Kingston QLD 4114, phone 07 3451 7900, fax 07 3804 3722, email info@mcginnconcrete.com.au, website www.mcginnconcrete.com.au

Below Townes Waterproofing conducted waterproofing of retaining walls, lift pits, joints, tilt slabs and on the substation.

Townes Waterproofing has grown from a sole trader status into a family owned and operated company based in Regents Park, Queensland. They were responsible for the waterproofing of retaining walls, lift pits, joints, tilt slabs and the substation on the GE Headquarters Development site in Springfield.

Specialising in Polymer Bitumen Flame Applied Waterproofing Membrane (Torch-On) techniques, the company is qualified to install other waterproofing systems, including self-adhesive sheet membranes, seamless acrylic, cementitious and polyurethane membranes, epoxy and flake flooring with non-slip applications. Also attending to crack injection and leak repairs, to wet areas, retaining walls, lift pits, balconies and plant rooms.

Owner Richard Townes has driven the company to expand to include contracts from commercial builders such as Kane Constructions, Hutchinson, Multi-Span, Rohrig, Box & Co. and McNab. The company has assisted over 109 builders and home owners with their waterproofing needs.

Some of the challenges that Townes Waterproofing experienced on the GE project included mud, rain and flooded wet footings. Despite the conditions, all work was carried out to Australian and manufacturer's standards with some waterproofing systems carrying up to a 20 year warranty.

Townes Waterproofing provides a superior service to their builders and have been highly recommended for their quality service at competitive rates. They provide rooftop waterproofing for water-holding structures, planter boxes, balconies and general traffic areas. This allows external areas to flourish with vegetation and cuts down the carbon footprint, increasing the E.S.D. Initiative Rating. Crack injection and leak repairs are also skillfully dealt with.

The company provides innovative and tailored solutions to waterproofing needs, discussing with clients the best options for problem areas which are cost effective. The team continually strives to keep up with current waterproofing trends through research and development, networking, and material suppliers knowledge.

Other projects Townes Waterproofing has worked on include the Princess Alexander Hospital, Roma Street Parklands, Ergon Energy Substation in Ipswich UQ and QUT and Anzac Square in Brisbane.

For more information contact Townes Waterproofing Pty Ltd, 5 Acorus Court, Regents Park QLD 4118, phone 07 3800 0505, email admin@towneswaterproofing.com.au, website www.towneswaterproofing.com.au