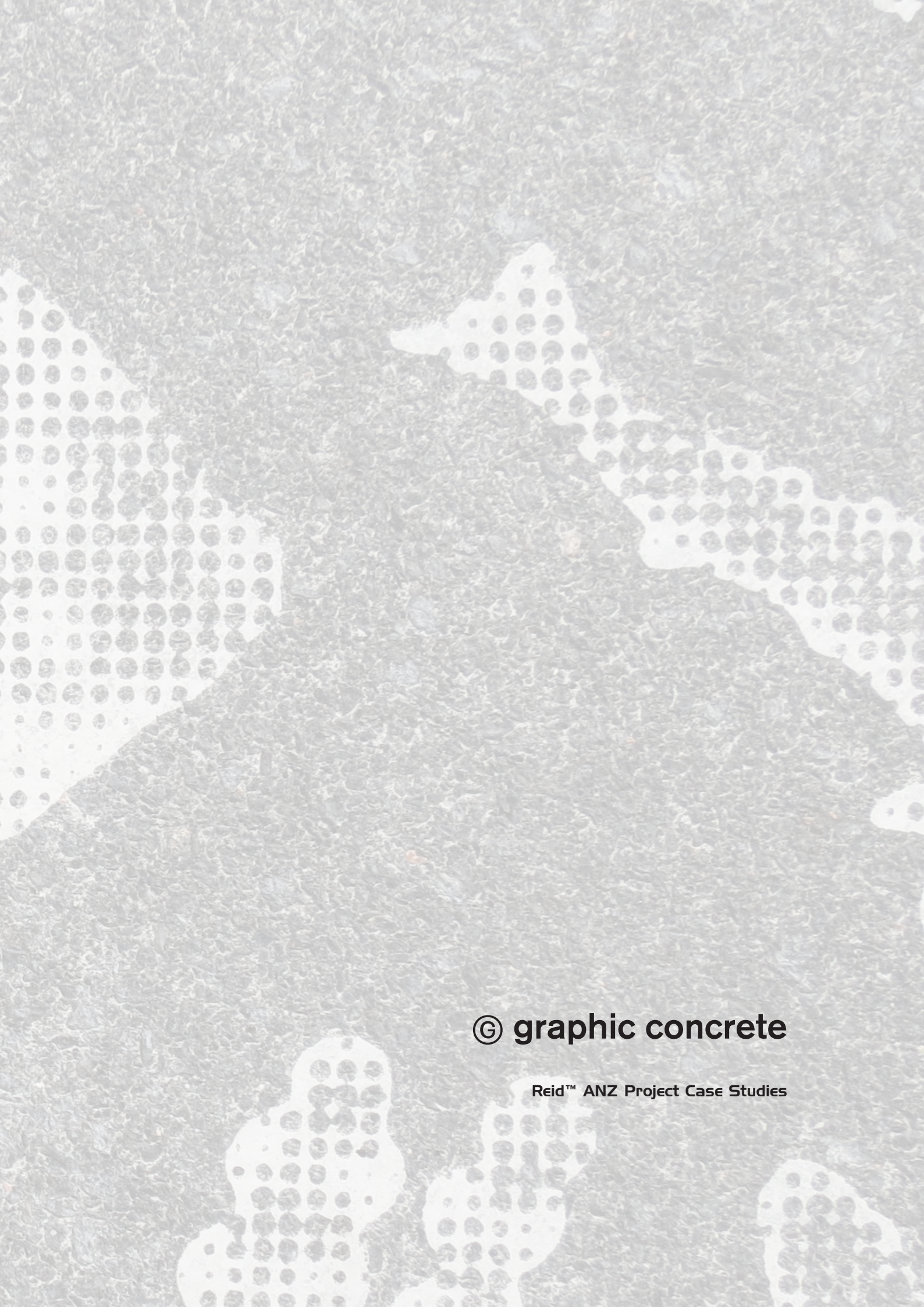

graphic concrete
Reid™ ANZ Project Case Studies

Project Details

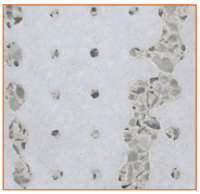
Location: Frederick Irwin Anglican School Chapel, WA

Project Partners

Client: Frederick Irwin Anglican School
Architect: Oakley Architecture
Artist/Designer: Llian Ciemitis
Precaster: Delta Corporation, WA

Product

Reid™
Graphic Concrete®
GCArt&Design™



Frederick Irwin Anglican School Chapel, WA

Designed by Chris Oakley (Oakley Architecture), the Frederick Irwin Anglican School is in the process of planning the construction of a new Chapel, called "The Rush Chapel".

Comprising a 350 person Chapel including mezzanine, Chaplain's office, meeting room, teaching space, storage, toilet facilities and a quiet garden, the new "Rush Chapel" will soon represent the soul of the Frederick Irwin Anglican School. Drawing inspiration from Frederick Irwin's significant contribution to the historic "Rush Church" – the Swan River Colony's first church built in December 1829, Chris Oakley enlisted the services of renowned Perth-based artists Jillian Ciemitis and Debbie Oakley to bring his vision to life.

Working within the historical and thematic context of the Rush Church, the artists developed a number of public art conceptual designs with botanic references. These included rushes, plants and trees as the basis for both the textile and structural components. From here, Jillian's concept of "Rising Rushes" was born - a large scale work of art on the main walls of the Chapel which are to pay homage to the rushes that were laid to fabricate the walls of the original Rush Church back in 1829. The design of the skyward reaching "Rising Rushes" was also symbolic for spiritual ascension.

With the "Rising Rushes" conceptual art designs well underway, Jillian set about finding the best method to transpose her photographic works-of-art on to the precast walls of the Chapel. The textured decorative finish needed to be visible, yet subtle, so the art would not be a visual distraction for the congregation, but serve as a "watermark" effect on the precast walls. This design consideration was also intended to give the Chapel a timeless quality. Having recently met with Wayne McCormick

(BDM – Architectural Products) at Delta Corporation's precast yard to discuss the latest in decorative concrete technologies, Chris Oakley suggested Jillian take a closer look at Delta's graphic concrete™ cast samples.

Available through Reid across Australia and New Zealand, graphic concrete™ is an innovative decorative concrete technology which produces patterns, images, photos and works of art on concrete. The decorative finish is achieved by utilising the contrast between the exposed aggregate and smooth textures using a special membrane printed with a surface retarder "ink". Whilst graphic concrete™ is suitable for use on conventional "grey" concrete mixes, utilising custom concrete mix designs or recipes can achieve either vivid or subtle contrasts by specifying cement oxides (or pigments), as well as changing up the colour and size of the aggregates in the mix. When Jillian Ciemitis dropped into Delta's precast yard in September 2014, it was quickly evident that graphic concrete™ technology ticked all the boxes.

Immediately following the Delta visit, Jillian contacted the Reid office in Melbourne to learn more about using graphic concrete™ technology. What emerged from here, was a collaborative team effort between architect, artist, precaster and supplier resulting in the delivery of graphic concrete™ membranes to the team at Delta Corp in July, 2015.

As Wayne McCormick (Business Development Manager) at Delta Corp explains, **"we are always looking for new challenges and ways to take our Architectural precast to a new level. After discovering the graphic concrete™ technology we were very excited at the possibilities it presented. Full credit to the design team at Fredrick Irwin for taking inspiration from the viewing of a sample and converting it into a vision for the Chapel. Being the first project of it's kind in Perth, we relied heavily on the assistance and experience of Reid in Melbourne, and the Graphic Concrete team located in Finland who have been very supportive throughout the project. The outcome was fantastic."**

NATIONAL PRECAST member

Project Details

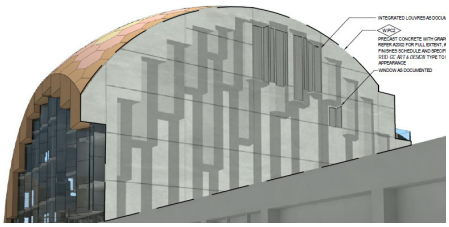
Location: Geelong, Victoria
Project Value: AUD$45m

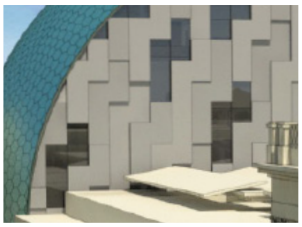
Project Partners

Client: Geelong City & The State Govt
Architect: ARM Architecture, Melbourne
Builder: Kane Constructions
Precaster: Otway Precast, Victoria

Product

Reid™
Graphic Concrete®
GCArt&Design™





The Geelong Library & Heritage Centre, VIC

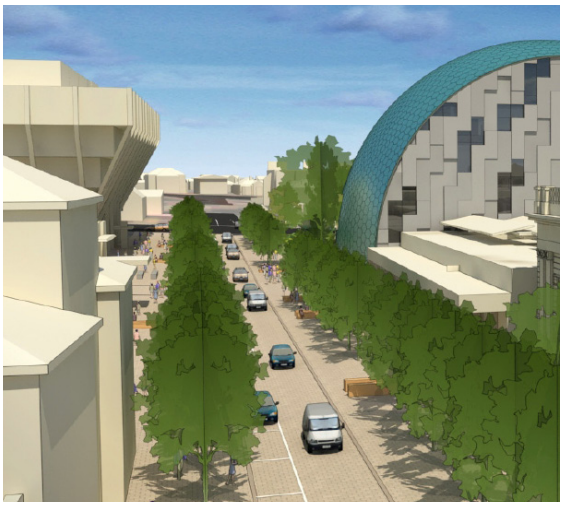
Unveiled by the Greater City of Geelong in September 2012, the new Geelong Library & Heritage Centre promises to be a spectacular addition to Geelong's architectural and cultural landscape.

The nine storey, state-of-the-art facility features a unique Dome design developed by renowned Melbourne firm, ARM Architecture.

With an aim to complement, rather than to compete with the existing heritage buildings in the precinct, ARM Architecture opted for an ultra modern design. The unique "eroded" Dome design pursues the idea of blending the building and Johnstone Park. Central to this vision was the specification of Graphic Concrete Ltd's GCArt&Design™ on a grand scale. Having first considered graphic concrete on The Shrine of Remembrance in Melbourne, ARM Architecture earmarked the technology early in the conceptual design stage to create a series of "3D hexagon plinths".

Kane Constructions were awarded the project and in turn allocated the manufacture of the precast façade panels to Otway Precast in Colac. Not without its fair share of design hurdles and challenges, Reid worked closely with both Kane and Graphic Concrete Ltd in Finland, delivering the last of the membranes to Otway Precast in August 2014.

Now installed, the graphic concrete panels on the east elevation form the backbone of the entire structure, enabling the unique dome-shaped design of the Geelong Library & Heritage Centre to take shape.



Project Details

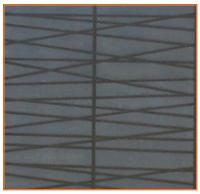
Location: St Paul's High School, Booragul, NSW

Project Partners

Builder: Ware Building Pty Ltd
Architect: QOH Architects
Precasters: Simply Precast, NSW

Product

Reid™
Graphic Concrete®
GCCollection™
Vertices™



St Paul's High School, Booragul, NSW

Located in the peaceful lakeside setting of Booragul just 20 km from Newcastle, St Paul's is a co-educational Catholic High school of approximately 950 students. Established by the Diocese in 1984, St Paul's enjoys a young, energetic and engaging tradition.

A feature of this tradition is the high importance placed on the pastoral care of students, the desire to provide many opportunities for students to shine and the culture of expectation that ensures high academic results.

As an ongoing commitment to upholding the values and tradition at St Paul's, the school has undertaken a number facility upgrades in recent years including the Trade Training Centre in 2012. Just two years later, St Paul's were awarded a grant for the construction of their new Library & Information Technology Centre.

With over 25 years' experience in master planning, architectural services, interior and landscape design, Quinn O'Hanlon (QOH) Architects were engaged to provide the design for St Paul's new technology centre.

To create a striking façade with a point of difference for the state-of-the-art "iCentre", the team at QOH specified the use of the graphic concrete GCCollection™ Vertices™ repeating pattern.

Although the graphic concrete™ technology was to be used on just 4 panels, the elements were intricate in design and required the expertise of a quality architectural precaster. Ideally, this precaster would also be located in the Newcastle region, so the choice was "simple", or rather Simply Precast in Kurri Kurri.

New to graphic concrete technology, Simply Precast were provided with extensive training and guidance through the entire process by the Reid Precast Team. As part of the onsite training programme, a number of trial membranes were provided to the production team to cast sample panels, experimenting with concrete mixes in a variety of casting conditions. With training completed and the cast samples a success, the production membranes for St Paul's iCentre were confirmed, and delivered to Simply Precast by Reid in August, 2014. With the façade panels expertly cast by the team at Simply Precast, they were in turn delivered to St Paul's High School for erection in late October 2014.

Project Details

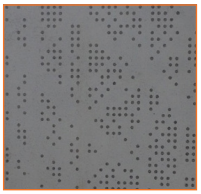
Location: Te Pai Park, West Auckland, NZ
Client: Auckland Council

Project Partners

Builder: Astley Construction
Architect: ArchOffice
Precasters: Concretec NZ Ltd

Product

Reid™
Graphic Concrete®
GCCollection™
Atom Cross™

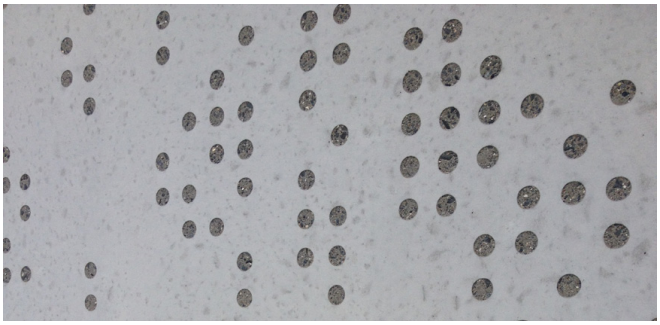


Graphic Concrete "flushed with success" at Te Pai Park!

In September 2014, the Auckland Council issued a tender for the upgrade of the toilet block at Te Pai Park in West Auckland. As part of a larger initiative to upgrade the Park facilities, the Auckland Council commissioned the replacement of the public toilet block at Te Pai Park with a new two-pan facility. Whilst definitely not the largest project in terms of scale, its arguably one of the more important ones!

Having experience in using conventional formliner technology in the past, the Auckland Council worked with architecture firm ArchOffice to deliver a truly unique design. In April 2014, Ronald Lumantarna at Reid introduced graphic concrete to the ArchOffice team and was the perfect choice of decorative concrete technology to compliment the Te Pai Park upgrades.

With the GCCollection™ Atom Cross™ pattern selected, building contractors Astley Construction engaged Concretec NZ Ltd to cast the panels required for the Te Pai Park toilet block. The challenge for Concretec NZ however, was using the innovative technology for the very first time. By utilising the graphic concrete™ technical data and support materials provided by the Reid team in Auckland, the crew at Concretec NZ produced the panels for the Te Pai Park toilets with impressive results!



Project Details

Location	Christchurch, New Zealand
Project Value:	NZD$40m
Client:	Ngāi Tahu Property

Project Partners

Builder:	Armitage Williams Construction
Architect:	The Buchan Group
Precasters:	Bradfords Precast

Product

Reid™
Graphic Concrete®
GCArt&Design™

Graphic Concrete reaches new heights at Wigram Skies!

The Wigram Skies Town Centre is a NZD$40 million retail, office and supermarket hub at the Ngai Tahu Property-owned Wigram Skies residential development in south-west Christchurch. The Wigram Skies Town Centre project is testament to the collaboration between the project architects at The Buchan Group, the Reid teams in Christchurch, Auckland and Melbourne, Graphic Concrete Ltd in Finland and of course, Bradfords Precast.

With art designed by a local artist and commissioned by the client, Eric Buhrs at The Buchan Group was convinced that graphic concrete was the best solution to bring the artist's vision to reality. The free flowing exchange of ideas and suggestions between The Buchan Group, Reid NZ, Reid Australia and Graphic Concrete Ltd delivered a set of membranes that were quickly met with approvals from the artist, the client and The Buchan Group.

Last, but by no means least, was the need to enlist the services of a quality architectural precaster to cast the GCArt&Design™ façade panels for Wigram Skies. On the back of the success with their graphic concrete panels for Stage 2 at Rangi Ruru Private School, Bradfords Precast in Ashburton proved to be the obvious choice.

With collaborative projects like The Wigram Skies Town Centre, graphic concrete is reaching new heights in New Zealand.

Project Details

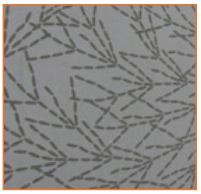
Location: Merivale, Christchurch, NZ
Project Value: NZD$100m

Project Partners

Builder: Leighs Constructions Mcildowie
Architect: Partner Architects (Melb) Leighs
Precasters: Constructions & Bradfords Precast

Product

Reid™
Graphic Concrete®
GCCollection™ Grass™, Vertex™ & Swarm™



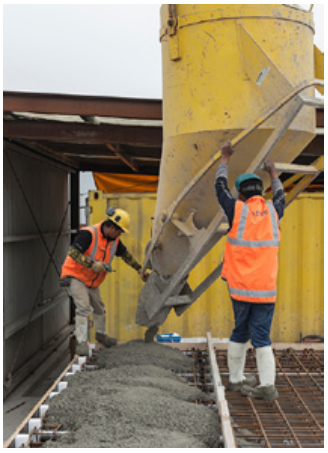
Rangi Ruru Girl's School, Christchurch NZ

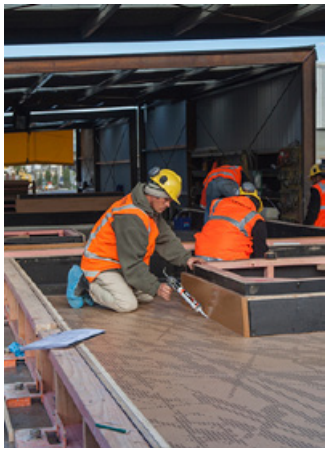
"Project Blue Sky". As a result of the 2010 and 2011 Canterbury earthquakes, Rangi Ruru Girl's School in Merivale lost 60% of the entire campus' buildings, though thankfully, none of its staff or students. Staying true to its entrepreneurial spirit, Rangi Ruru made the brave and bold decision to use this opportunity to redesign and rebuild the school and continue to educate New Zealand's young women.

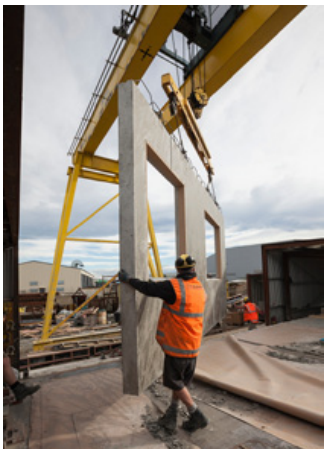
Prior to September 2010 the school had begun to investigate how it could plan for the future so that it would continue to be at the forefront of girls' education. After the earthquakes the Board of Governors decided not to replace buildings in an ad hoc manner, but to take the opportunity to redesign the whole school campus and to build a school designed around the needs of tomorrow's women leaders. 'Project Blue Sky' was the name given to this vision, reflecting the school's name, Rangi Ruru which translates to 'wide sky shelter'.

The forward thinking vision for the re-development of Rangi Ruru was conceived in the year the school celebrated its 125 year history. The aim is to build a school that will provide the very best in modern academic, cultural, sporting and social learning environments and to see the school through the next 125 years. With Te Koraha, one of Christchurch's grandest old buildings at the heart of the campus, Project Blue Sky will create four distinct zones, which will be separated into two redevelopment stages: This first stage, the Academic and Cultural Zone, incorporates buildings that have a significant character and place in the Rangi Ruru story, and new spaces that allow girls to learn in a fresh, modern environment. Stage 2 of Project Blue Sky upholds Rangi Ruru's long history of leading the Christchurch community in the arts and sport.

A state-of-the-art music, dance and drama facility will include a 120 seat theatre, Dance studio, teaching spaces for music, drama and dance practice rooms, as well as a recording studio. Designs for the Sports Centre include a full sized gym, fitness centre and teaching spaces all of which aim to complement the school's existing swimming pool.







How it all began – The story of Graphic Concrete

The idea of Graphic Concrete was born in 1996 whilSamuli Naamanka was studying at theHelsinki University of Art and Design . He enrolled in a course on concrete applications to learn more about concrete as a building material. The aim of the course was to examine the new look of concrete, resulting in a design for thePikku Huopalahti Concrete Park in Helsinki, Finland. Naamanka studied the aesthetic values of concrete as a façade material and how to treat the concrete surface in an industrially viable way. This resulted in a new method for creating patterned concrete surfaces, Graphic Concrete, which was patented in February 1999.

The real challenge was to apply the invented technology to precast concrete production. In 2000 a product development project was launched together with leading Finnish concrete factories, paper manufacturers and printing laboratories. The project was financed by companies affiliated with the Finnish concrete industry and theFinnish Funding Agency for Technology and Innovation (Tekes).

The R&D project was a success, and in 2002 the companyGraphic Concrete Ltd was founded. Right from the outset Graphic Concrete was developed as a tool for architects and designers. With this tool they could integrate their visual creativity into construction projects and design large-scale concrete surfaces.

Today Graphic Concrete has been used in over 700 projects in 25 countries around the world by numerous architectural offices and concrete element factories. Our extensive list of references demonstrates the vast range of designs in which graphic concrete can be used: public, residential, industrial and infrastructure.

Learn more about Graphic Concretewww.graphicconcrete.com

Photography

Cover photo
Graphic Concrete Sample Slab
Pattern: Textilia & Mosaic Ellipse
Photography: Kuvatoimisto Kuvio Oy

Page 1
Perilänkuja Residential Building, Finland, 2018
Architecture: HPK-Arkkitehdit
Photography: Kuvatoimisto Kuvio Oy

Vantaa Astrum Residential Building, Finland, 2018
Architecture: Arkkitehtoimisto Forma-Futura Oy
Photography: Graphic Concrete

Hämeenlinna Provincial Archive, Finland, 2009
Architecture: Heikkinen-Komonen Architects
Photography: Jussi Tiainen

Page 2
Viborg Provincial Archive, Viborg, Denmark, 2015
Architecture: Schmidt Hammer Lassen Architects
Photography: Helene Høyer Mikkelsen

Page 3
Graphic Concrete Production Process
Photography: Pekka Agarth, Veli-Pekka Rydenfelt

Page 4
Skanska Headquarters Sweden, Lustgården, Sweden, 2013
Architecture: Strategisk Arkitektur
Photography: Graphic Concrete

Waurn Police Station, Australia, 2014
Architecture: Strata PNA Architects
Photography: Graphic Concrete

The Brunswick Hotel, Australia, 2014
Architecture: CAYAS Architects
Photography: REID Construction Systems

Ulappatori Residential Building, Finland, 2013
Architecture: Arkkitehtitoimisto Petri Rouhiainen
Photography: Graphic Concrete

Ospedale Giovanni XXIII Chapel, Finland, 2014
Architecture: Traversi + Traversi Architetti
Photography: Graphic Concrete

Westfield Gargen City, Australia, 2014
Architecture: Westfield Design & Construct
Photography: Graphic Concrete

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