MORE THAN A PLACE TO SHOP

The \$300 million redevelopment of Highpoint Shopping Centre has seen the Centre grow an extra 30,000m² and introduce a new David Jones, Woolworths, Fresh Food Market and approximately 100 new specialty stores.

HIGHPOINT SHOPPING CENTRE / THE GPT GROUP & PROBUILD









The redevelopment included the design and delivery of a new 30,000m² (approx.) extension; additional multi deck car parks; a new Woolworth's supermarket and fresh food market; a new David Jones; a number of leading international mini majors and approximately 100 new specialty retailers. The scope also included new and upgraded central mechanical plant, security system, EWIS and fire systems. Work commenced in March 2011, and was completed over three stages, with the final stage opening to the public in March 2013.

"We undertook considerable research to look at what people wanted and why, and we worked closely with Probuild to get that balance between the functional and the experiential, so people linger and feel invited and welcomed, it's not just about shopping," said GPT Development Manager, Mark Pheely. "The design blurs the line between inside and outside. In the malls it feels more open and natural; you get the breeze that blows gently through the space."

Working under a design and construct contract, Probuild collaborated closely with the architects, Grimshaw Architects, and The GPT Group to resolve some highly challenging constructability issues. The biggest of which was the unique Eco Spine roof, which forms a connecting link between the existing mall, the new fashion mall and the new fresh food market.

This non-linear timber, steel and ETFE structure mimics the sinuous curves of the Maribyrnong

River, with the translucent ETFE "pillows" allowing light to stream through the roof to the levels below, while minimising thermal transference. The roof features aluminium louvers controlled by a BMS system linked to an automated weather station on the roof.

Up to 40 workers ranging from boilermakers, to carpenters and electricians were working on the roof every day for 10 months. "It was high risk and was given a lot of attention by the safety committee. We got through without any LTI's, and we continually adjusted the SWMs," said Drew Miller from Probuild.

The theme of 'eco' effectively permeates the project, with a range of outstanding ESD features. All the air in the developed part of the centre is 100% fresh, entering and venting through the louvers installed in the malls roofing Natural light floods the malls, and there is abundant living greenery throughout, including a 6.8m ficus tree. The interior temperature is also reflective of the seasons, which has enormous energy-efficiency benefits.

"A shopping centre's indoor temperature is usually set to 22.5 degrees. Highpoint can vary from 18 degrees to up to 24 degrees, which gives people a sense of connection to the outside world. These tolerance levels also makes the centre more energy efficient – the eco-roof is 53% more energy efficient than the existing centre," explained Mark Pheely.

There are also substantial green aspects to the exterior works. The new open-deck eastern car park, which offers 1,600 spaces over four suspended decks features timber cladding and living green screens. These comprise native climbers in planter boxes, irrigated by rainwater captured in tanks. The two suspended decks of the northern car park also feature timber and green screens.

"The whole sense of green is very important. 70,000 plants went in around the perimeter of Highpoint, to create a buffer between ourselves and the neighbours," said Mark Pheely.

Other ESD aspects include the use of FSCcertified timber throughout, and a rainwater harvesting system with a 480,000 litre storage capacity.

The Highpoint project also embraced the transport aspect of ESD, with an emphasis on public transport connectivity, and a green travel plan including a car-pooling system developed



for the centre. Showers and bike facilities have also been installed for retailers. For Mark Pheely, this is an aspect of GPT's ongoing commitment to reducing the project's ecological footprint.

"It's about looking after the environment. From our point of view it's the right thing to do," said Mark Pheely. "GPT's commitment to sustainable development is non-negotiable. Highpoint is a real statement, and a landmark in how retail can be developed. There's a lot of value-engineering in the project."

Probuild's own ESD commitment resulted in a range of refinements, including smaller details such as the cladding for the hand basins in the amenities.

"The architect proposed a Corian (synthetic) product. The hand basins are curved, and we ended up with a thin natural stone laminated onto MDF. This was prototyped first, as it took a bit of experimenting," said Drew Miller.

The site was previously a bluestone quarry, and boulders uncovered during bulk excavations have been creatively redeployed. They were removed to one of Probuild's yards, worked on, and returned to site to form part of a landscaped water feature.

"This project is very holistic and synergistic. We try to consider how we interact in the community," said Mark Pheely. "We employed local artists to create works for the entry, for example the art at the eastern car park entry, which is the story of the geology of the site." Wherever we can we tie back in to the local area and community. There's a tension point – how do you drive genuine creativity, and make the project functional and buildable?

"To convince international retailers such as Top Shop, Zara and Apple that Highpoint is right for them, design is the overriding factor. We are proud of the fact that this combination of all three international retailers does not exist in any other Australian shopping centre today.

"This is the first time The GPT Group, Grimshaw and Probuild have all worked together, and we feel very proud of what this new relationship created. When you make a brave move – you get a brave outcome."

The long-term ownership and management of the Highpoint Shopping Centre is held jointly between the Highpoint Property Group, GPT Wholesale Fund and The GPT Group Images Signal & Hobbs were responsible with supply and installation of the roofing and cladding to the Highpoint Shopping Centre.

Given their substantial experience, highlytrained trade workforce, sound supplier relationships and certified dedication to Quality results, Signal & Hobbs are an invaluable asset to any major project. For the Highpoint Shopping Centre Redevelopment, Probuild relied on their specialist roofing skills for the supply and installation of metal roofing, metal cladding and insulated panel, and also the roof mounted access walkway and safety system solutions.

"The majority of the roofing installed on the Highpoint North East Precinct project was Stramit Speed Deck Ultra® Concealed Fixed Decking. One of the logistical issues was the delivery and placement of 32m long lengths of roofing to the David Jones precinct, as the site conditions and locations of the tower cranes would have made the lifting and placement of long length sheeting very difficult," said Signal & Hobbs Managing Director, Sam Curnow.

"Our solution was to utilise the Stramit FarLap® roof lap joint system. This allowed us to site join the roofing sheets and lay the roof in two lengths from gutter to ridge line without the need to adjust the structural steel. "The Highpoint project also features a polycarbonate roofing system to the fashion mall for which we used the Sunpal Multi cell translucent glazing system supplied by Palram. This proved a challenge to install, as it was designed to be installed without safety mesh below. "The risk issues were overcome by a combination of elevated working platforms and a custom made gantry which was specifically designed and tested to span beyond the 6m between supports, and provide access for the installation."

This is a good example of how Signal & Hobbs engage with an architect's vision, and then look for a workable solution to construct it. Because the company has such long-standing and solid relationships with its key suppliers, adding a bespoke element to the solution when required is possible. The cladding the company supplied and installed to the interface between the new construction and the existing Highpoint Shopping Centre was Bondor Metecnospan insulated panels. These ensure the external walls achieve the required BCA compliance, and also remove the requirement for a built up system.

Signal & Hobbs were also involved with the installation of roof mounted roof safety



systems. "Having completed training for the installation of Fixed Platforms, walkways, stairways and ladders, Signal & Hobbs have built a relationship with Sayfa, our supplier of roof mounted roof access safety Systems, which enables us to provide a quality supply and installation service," said Sam.

"We have full time experienced installers able to complete all our roof safety system installations, and multiple employees trained to the supplier's standard, with excellent understanding of the AS1657-1992. With design of the systems supported by Sayfa, the end result is a safe and useable system for the client.

"Signal & Hobbs has been providing roofing solutions to the construction industry for nearly 40years, and currently employs nearly 80 full time people including, site crew, administration, estimating, management and Manufacturing. Many of the Signal & Hobbs team were deployed on the Highpoint project, led by two of our most valued employees, Wayne Mclean and Brian Purvis. As Wayne has over 30 years' experience and Brian over 40 years' experience, they were able to work through any site difficulties we encountered.

"All of the Signal & Hobbs site team are inducted into our company OH&S management system before they commence onsite. We have a commitment to a minimum level of training for all our employees - all our tradesmen MUST have Plumbing Industry Registration, training in working at heights, plant and equipment high risk licenses, plus First Aid for senior site foremen and task specific training as required.

"We believe the outcome of this is a safe and high quality roofing installation."

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Signal & Hobbs' commitment to achieving high standards begins with the initial tender. During the tender process, they identify valueadding options for their clients while also ensuring their submission will deliver on the architectural intent and give an on-budget result for the builder. Their approach is to manage themselves in a manner which enables clients like Probuild to achieve their goals.

"We aim to be leaders in our industry for training, innovation and improved work practises, and this includes early identification of project risk, and providing feedback for eliminating or reducing that risk," explained Sam.

"We have recently achieved ISO 9001:2008 certification for Quality Management systems (QMS) through SAI Global. The process of developing our QMS has also strengthened our Risk Management Strategy. As part of this, we regularly review our suppliers' performances, and this supplier risk analysis process results in reducing risk for our clients and builders through possible supply chain issues.

"We believe the achievement of ISO 9001:2008 certification, coupled with National Code of Practice compliant employee agreements, a sound and compliant OH&S management system, and a welldeveloped Quality Assurance Plan with Inspection and test procedures completed on all major projects, gives Signal & Hobbs an undeniable advantage."

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Highpoint Shopping Centre, VIC



AUSTRALIAN NATIONAL CONST



Baigents Pty Ltd, Consulting Engineers & Shop Detailers is a Victorian company with an international reach. Established in 1988 and comprising 45 professionals, technicians and support staff, Baigents has completed projects in all Australian states, New Zealand and southeast Asia and has built a reputation for providing quality design services to the retail, commercial and industrial sectors.

Baigents was responsible for all structural and civil engineering design, together with the precast concrete panel and the structural steel shop detailing for the \$300 million development of Highpoint Shopping Centre. This 30,000m² expansion was designed to provide an enhanced retail offering for the west of Melbourne.

Matthew Webb, a director of Baigents and the project's Senior Structural Engineer, explained how Baigents' unique set of skills advances the project. "This was a design and construct project and our role was to provide both the engineering and the shop detailing services simultaneously to help speed up the construction works. This is a service that is not generally offered by consulting engineering firms." Matthew said.

Mr Webb also said that Baigents had collaborated with the principal builder, Probuild Constructions, on many retail projects in the past and

Below Baigents Consulting Engineers & Shop Detailers were contracted as the civil & structural engineers and shop detailers for the Highpoint Shopping Centre development.

that the two companies bring complementary services to each project. Baigents' careful staging allowed the design and shop detailing phases to overlap, leading to a shorter overall programme with the minimum disruption to the operation of the Centre and reduced inconvenience to its tenants.

Baigents also utilized carbon fibre strengthening to the project to increase the capacity of existing concrete floors at the Centre. This innovative approach to rehabilitating the existing structure, provided increased utility while still following the client's brief of using ecologically sustainable development principles.

Baigents, with its unique set of skills, has been able to build an enviable list of completed works that spans the retail, commercial, residential and industrial sectors.

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