

# INGENUITY DELIVERS COMPLEX VISIONS BEAUTIFULLY

Located in the heart of South Yarra, Hickory has reached new heights of excellence in contemporary living with Ilk Apartments.

MAIN CONSTRUCTION COMPANY : Hickory Group  
DEVELOPER : Little Projects  
PROJECT END VALUE : \$100 Million  
COMPLETION : August 2013  
ARCHITECTS : Cox Architects  
STRUCTURAL / CIVIL ENGINEER : Cardno  
BUILDING SERVICES ENGINEER : Norman Disney Young



It takes thinking outside the square to deliver a project like ILK, with its incredible array of finishes, diverse geometries and inherent construction challenges. Hickory have made a name for themselves as major innovators in construction, and brought to the \$100 million project a style of Design and Construct building which resolves complexities with intelligence and ingenuity.

Located on the former ANZ Building site on Toorak Road, South Yarra, ILK comprises 388 apartments over 24 levels. One of the distinctive features of the design by Cox Architects is a landscaped rooftop garden with communal kitchen, dining space and cinema room on level 9; and on level 3, a health and wellbeing centre with a swimming pool, private gym, sauna and steam room.

ILK also has a unique public face, with floor-to-ceiling glazing for the Penthouse levels from 22-24; fully operable glazed doors on the balconies which allows residents to convert them to large wintergardens; and full-length angled glazing on the facade of the mezzanine level retail area overlooking Toorak Road. There is also a retail area on the ground floor, and three levels of basement carparking.

ILK was initiated by developer Little Projects, who commenced demolition of the existing 11 storey building in late 2010, Hickory then took over the remaining demolition works in March 2011 and then integrated the remaining demolition with the retention works. The build then proceeded swiftly and logically, with Hickory achieving Practical Completion of the South Tower apartments (below Level 9) in July 2013, and the North tower in August 2013. While the progress was efficient, it was certainly not without some complex challenges.

“We had to maintain a live substation during demolition which was feeding both street circuits and adjoining buildings,” explained Hickory Project Manager, Andrew McGowan.

“We then had to build a temporary substation on a cantilevered platform before decommissioning the old substation and continuing demolition and excavation to the Toorak Rd end of the site. Then we had to establish the new permanent substation before removing the temporary substation.

“We commenced retention systems while demolition was still underway. This required us to underpin existing concrete basement walls and extend in a ‘hit and miss’ method to add the additional basement levels. We eliminated perimeter retention piles through the use of steel tubes to vertically retain the existing basement walls. “ILK has a complex and articulated façade consisting of many different finishes, including Brighton Lite precast, bluestone oxide precast, painted precast, Reckli patterned precast, zinc, composite

panelling, curtain wall and standard window systems, zinc and louvre panelling,” said Andrew.

As pioneers in the major project use of Unitised Building methods, Hickory added efficiencies to the structural and facade construction program, through the use of prefabricated external screens and louvre panels, and precast slab edges to the tower levels, which also added to the quality of the external structure. The Reckli patterned precast was cast onto structural steel frame and lifted into place in one piece for the sloping Level 8 soffits.

ILK incorporates a range of sustainability features, including 36,000L rainwater tanks, a solar boosted gas hot water system and compact fluorescent down lights. Hickory had a team of 30 on the project, including project manager, site manager, contract administrators, façade coordinator, six foremen, safety supervisor, shop drawer, two crane crews and general labour peaking at 30 in total. The structure was built by a crew of up to 65 staff from Hickory Structures division. Additionally, there were 50 subcontractors on ILK, bringing the peak daily workforce to 350.

“We have a sense of pride from building a complex project like ILK with so many non-typical elements. There are 39 different apartment types, and 50 different balustrade posts due to the façade articulation,” said Andrew. “All the specialist metalwork and balustrading was shop drawn, procured and installed in-house by Hickory staff and labour.

“We were able to achieve early handover to the client for purchaser inspections and settlements, and received positive feedback from the client on the quality of the finished product.”

Hickory has 420 employees across the group, including in-house specialists across manufacturing, project management, engineering, bathroom pod prefabrication, crane logistics, Enterprise Resource Planning (ERP), site management, plant hire, contracts administration, design and development.

Hickory was named the HIA's largest multi-unit residential builder in their annual Housing 100 poll for the last three consecutive years, and is continuing to add to their track record, with current projects including a 69 level residential tower at 568 Collins Street; Fulton Lane, a twin tower apartment project for Malaysian developers SP Setia; and the Istana, a 25 level apartment building near Queen Victoria Market. Their talents are also at work constructing the new 22 storey headquarters of the Australian Institute of Architects in Melbourne.

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# EXPERTISE IN DESIGN DELIVERS RAPID CONSTRUCTION



Having done the right design and planning behind the scenes, AusPT were able to construct the slabs for ILK Apartments at something close to a rate of knots – on average completing the formwork, concrete, reinforcement and post-tensioning of each floor in just ten days.

Before work commenced, AusPT's qualified engineers and design drafting team spent six months designing the slabs, ensuring they would meet compliance and certification requirements.

Once work commenced, the design showed its worth in the speed with which the work was completed by the four AusPT site staff. The company also supplied all the strand, duct, duct chairs and grout required for installing the post-tensioning.

"The programme was very tight so we needed to install each pour in 1.5 days," said AusPT Commercial Manager, Jason Xerri. "Post-Tensioning was done at speed with programme being the focus. This enabled Hickory to complete floors quickly, which gave them the advantage of introducing following trades much sooner than anticipated.

"Our knowledge in the post-tensioning industry is very comprehensive. We have a good mixture of people that understand certain facets of our trade and when their expertise is combined we can offer excellent advice to potential clients."

AusPT have been in business since 2010, and have a multi-skilled workforce including management, qualified engineers, draftpersons, Safety Rep, Administration and 60 site personnel.

Safety is a priority, with all AusPT safety-trained and weekly toolbox meetings held to ensure risks are managed effectively. It is obvious AusPT's thorough approach to quality design and construction outcomes, and focus on achieving client milestones is a combination valued by Hickory. AusPT's team is currently at work on two more of their projects - The Istana and Fulton Lane.

*For more information contact Australian Post-Tensioning (trading as AusPT), 139 Wedwood Rd, Hallam VIC 3803 PO Box 176 Upper Beaconsfield VIC 3808, phone 03 9702 4557, email mail@auspt.net.au, website www.auspt.net.au*



## EFFECTIVENESS CAN BE A BEAUTIFUL THING

**Drains are not usually one of the most aesthetically brilliant parts of a bathroom.** However, Demtech's innovative AquaFlo channel system is world class, combining function with a stunning architecturally-designed form which brings added finesse to wet areas. Like all of Demtech's products, this Australian-designed and manufactured innovation is a fitting match for the high quality standards and environmental responsibility goals of high end residential projects like Ilk Apartments. The AquaFlo system has been installed outside the shower screens, and extends the full width of the bathrooms, with the reversible top plate allowing a choice of tile finishes to be installed to match the variety of material and colour palettes throughout the project's apartments.

Demtech also supplied and installed 500 of their INSITU shower bases in the Clairmont style. These are a unitised, lightweight alternative to traditional shower bases manufactured from polymer modified cementitious materials with reinforced recycled microfibers. The result is a shower base system which saves on materials, labour and has excellent environmental credentials.

The showers at Ilk have been installed in the centre of the room, which saved on separate plumbing as all shower waste water is diverted into the 50mm-wide Aquaflo channel, and disposed of through the same drainage as the bathroom sink. All the bathrooms' drainage also incorporates Demtech's Nero Universal Leak-Control Flanges. "We modelled the whole installation as a scale model for the client, so we were able to talk it through and discuss all the details," said Demtech Director, Jim Demetriou. "There was a lot involved, and we spent months getting it just right."

AquaFlo has also been used around the pool, with feature tiles affixed to the top plate of the 100mm channel, which provides discreet, reliable and effective water drainage. Demtech's own range of waterproofing products, including 6000 lineal metres of Flexiban Joint Bandage and 5400m<sup>2</sup> of CureFlex SLR2000 waterproofing compound, were supplied to other subcontractors who were undertaking the waterproofing for all the project's internal wet areas. "The tilers were so impressed with the products, they decided to use our adhesives – which amounted to 2000 bags of CureFlex tile adhesive. The CureFlex assisted with resolving the challenge of laying tiles on the project's particular substrates, which included acoustic underlay," commented Jim.

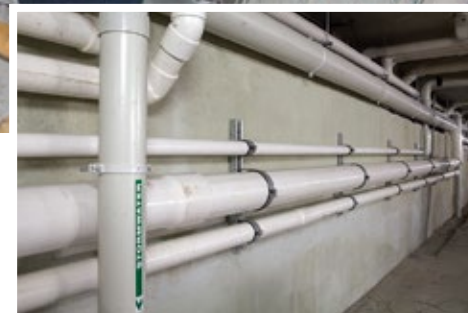
Demtech started work on the Ilk project in June 2012, with the final supply and installation occurring in May 2013. For over 20 years, Demtech has been designing and manufacturing high-quality, cost-effective and rigorously tested products for waterproofing, wet area systems, drainage products and adhesives. All Demtech products are NATA-certified to meet all applicable standards, and are supplied and installed with a no-questions-asked 10 year warranty for quality and workmanship.

From the top end of town to down-to-earth industrial projects, Demtech's range has been developed to ensure that builders and trade professionals can access products which give a watertight guarantee of excellent results.

*For more information contact Demtech Australia Pty Ltd, 8 Nicholas Drive Dandenong South Victoria 3175, phone 03 9706 5564, fax 03 9706 5565, email info@demtech.com.au, website www.demtech.com.au*







## WALKING THE WATER-SAVING TALK

Saving water is more than a matter of people timing their showers at ILK, because thanks to Liquid Vision Plumbing Group (LVPG), the project's entire hydraulics system has been designed to save water and energy. LVPG's design and construct package incorporated numerous sustainability features, including 36,000L rainwater storage on the level Basement 2 collected from level roof 25 which is being reused for irrigation and water features; an automatic backwash domestic filtration system; and six star fixtures throughout all 485 bathrooms, and the kitchens and laundries of the 388 apartments, plus common areas including the swimming pool, roof top restaurant with teppanyaki, gym and cinema.

ILK also has a solar preheat gas boosted hot water system, comprising 32 solar panels with 3000 litres of solar preheat, 20 Rinnai natural-gas boosters and a ring main for hot water reticulation. The apartment kitchens also feature gas cooktops for energy-efficient cooking.

LVPG's in-house design and estimating teams began work on the project in mid 2010, and completed the installation and commissioning in July 2013. At the peak of the installation period, up to 25 of the company's licensed plumbers were onsite completing the hydraulics works.

"We completed the project to the highest quality, on time and within budget. LVPG also maintained a healthy and harmonious relationship with

Hickory, as well as the project's other service trades," said Liquid Vision Plumbing Group Project Administrator, Joseph Princi.

For more than 13 years, LVPG has been bringing together the best of leading-edge hydraulics technology and highly experienced trade skills to develop and deliver excellent results for projects. The company's track record includes some of the leading examples of sustainable construction such as Ark in Richmond, The Nicholson in Coburg, and Nonda Katsilidis' Unitised Building project Little Hero.

Other major projects LVPG has completed include Baju Apartments at Henley Beach in South Australia; Henley Square IGA Supermarket; Timbaktu at Mount Buller; and Society in South Yarra. By working closely with clients, LVPG can deliver cost-effective and holistic solutions for hydraulics services design, construction and certification across retail, residential, commercial and general construction sectors. The company capabilities also include gas pipes and fitting, civil contracting, drainage contracting and project management across all their areas of expertise.

**For more information contact Liquid Vision Plumbing Group**, phone 03 9827 5032, fax 03 8611 7994, email: support@liquidvision.net.au, facebook: Liquid Vision Plumbing

## VISIONARY FAÇADES IMPECCABLY DELIVERED

With its dynamic design and diverse geometries, Ilk Apartments presented Jangho Curtain Wall with an opportunity to demonstrate their highly-sought expertise skills across a range of materials and methods.

Jangho are a complete facade solution provider, from design and fabrication through to installation, with the combined talents of Jangho's Australian staff and China-based staff ensuring the architect's vision is beautifully constructed. The company has integrated R&D, engineering and design expertise, which in combination produced the copyright-protected detail design for the Ilk facade package.

The facade included the expansive glazing of the Toorak Road podium levels, aluminium panels, aluminium composite panels, united curtain wall panel, typical window and sliding door panels, glass panels, three-level full height glazing on the penthouse levels, and operable louvers for the apartments terrace wintergardens. In addition, parts of the facade included aluminium extrusions, gaskets, sealant and fixings, and low e Unitised Double Glazing was applied to the relevant parts of the facade glazing, in the interests of thermal and energy efficiency.

"We have our own site manager to supervise the on-site installation," said Jangho Curtain Wall Spokesman, Charles Cheng.

"The on-site installation was all carried by a local labour force, creating more jobs for the local market. Our project manager manages the whole facade package process, from procurement, fabrication, on-site issues and commercial issues, to any rectification of defects at the end of Practical Completion.

"Our facade systems comply with BCA 2009 Section J (BCA Class 2 residential units), and BCA 2009 Section J (BCA Class 1,5,6,7a and 9b non-residential areas) according to the ESD report by Norman Disney & Young. All our facade systems are also produced under a Certified Quality Management system to ISO 9001." The greater than usual complexity of the facade system made for a challenging design and fabrication process, especially the unique window designs, however, Jangho's engineering expertise ensured an excellent result.

The Australia-based Jangho team on the project included four designers, two engineers, a project manager, project coordinator, site manager, and an average of 15 people on site undertaking the installation. Fabrication was undertaken at Jangho's facility in China, which has also produced facade systems for some of the world's most outstanding buildings including Infinity Tower in Dubai, Marina Bay Sands in Singapore, Saudi Arabia's CMA Tower, China World Trade Centre and City of Dreams Macau.

In Australia, Jangho has also recently completed spectacular facade packages for 720 Bourke Street and the new Burwood Highway Frontage for Deakin University. The company has 83 staff in Australia working across offices in Melbourne, Sydney, Brisbane and Perth. When added to the resources of the 6,000+ highly skilled, focused and innovative design, engineering, fabrication and project management staff working around the globe, this gives the company the ability to manifest complete facade packages for designs of any level of complexity.

**For more information contact Jangho Australia Melbourne office**, Level 5, 499 St. Kilda Road, Melbourne, VIC 3004, phone 03 9867 1668, fax 03 9866 6969, email jangho@jangho.com.au website www.janghogroup.com





## A STAR FIRE-SAFETY PERFORMER - SPEEDPANEL®

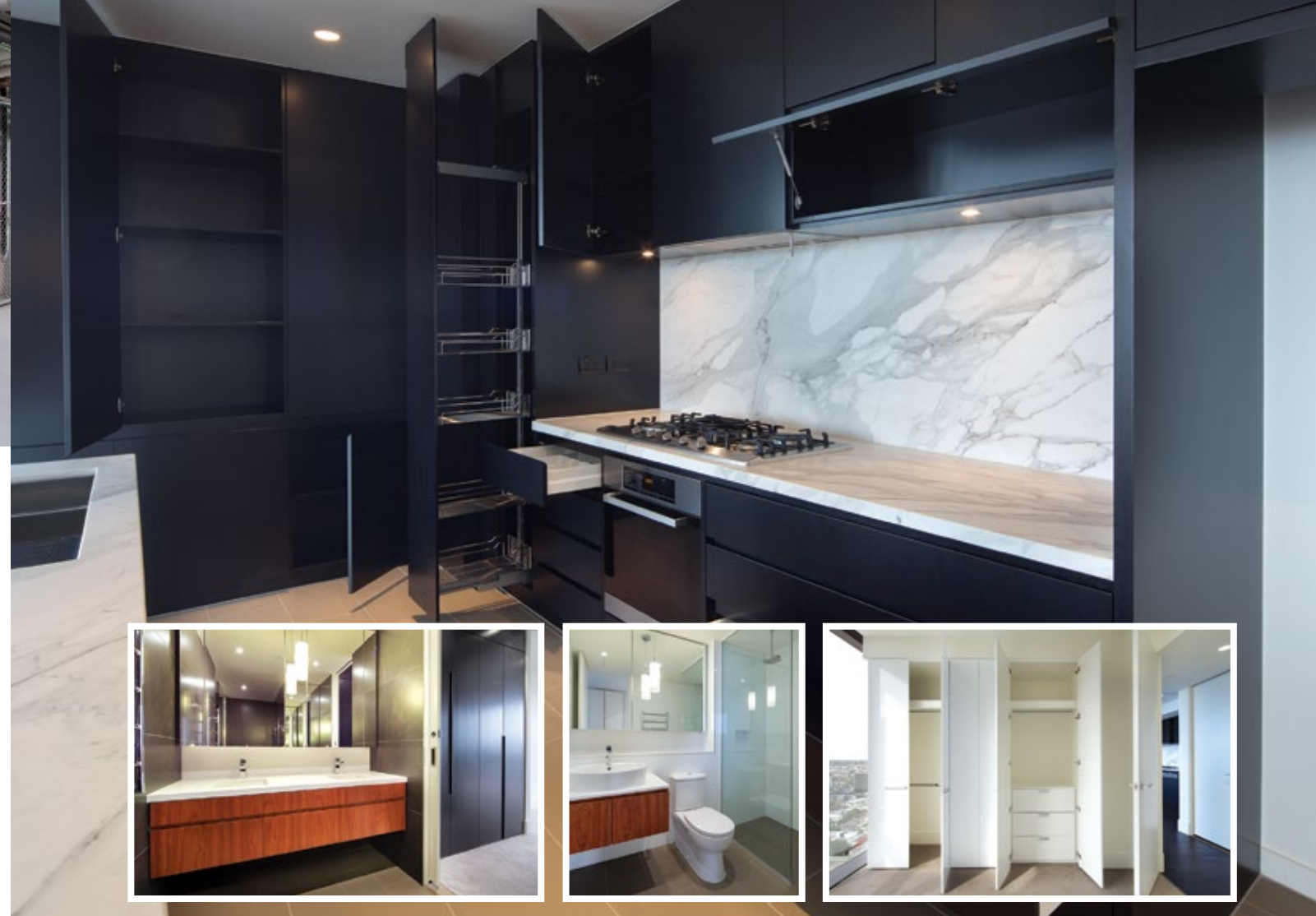
**SPEEDPANEL offers a fast, green and cost effective means of replacing mechanical ductwork in fire stair and shaft applications.** At ILK, this Australian-designed and manufactured innovation was installed in the basement storage areas, stair pressurisation, car park plenum walls and fire rated scissor walls, with SPEEDPANEL working closely with the architect and Hickory to ensure it was used to its full capabilities.

Manufactured from 29.5% recycled materials and is 100% recyclable, with a possible 100 year durability for internal environments SPEEDPANEL's green credentials are many. SPEEDPANEL also has high wind resistance and can be installed as soon as concrete formwork is removed therefore allowing sub trades access to the work face a lot sooner than comparative

products. SPEEDPANEL walls can be used as plenums and quite often replaces ductwork. SPEEDPANEL's service includes site inspections and site workshops to ensure correct installation of the fire rated walls.

Manufactured in Melbourne since 1997, SPEEDPANEL is supplied around the country and is also gaining exposure in Asia, Europe, the USA and the Middle East. Recent major Australian projects include Gold Coast University Hospital, Eureka Tower, Melbourne Convention Centre and the MCG redevelopment. Current projects include the New Royal Adelaide Hospital, Cairns Base Hospital and the Architects Institute of Australia.

*For more information contact Speedpanel*, phone 03 9724 6888, website [www.speedpanel.com.au](http://www.speedpanel.com.au)



## IJF QUALITY + PERFORMANCE = CLIENT SATISFACTION + SUCCESS

**The true test of a company's craftsmanship and professionalism is whether it can meet a large complex scope and schedule, while still ensuring every detail is flawless.** At Ilk Apartments, IJF Australia has succeeded on all counts, delivering impeccable results on a major project scale with its manufacture, supply and installation of all the apartment joinery.

IJF's scope included 271 kitchens, 134 laundries and 449 vanities and shaving cabinets. Each design type consisted of multiple sub-types which required IJF to pay particular attention to the nuances which might affect the flow of the project. In addition, IJF crafted 146 linen presses, 293 study desks and 593 robes and sliding doors. Manufacturing commenced in October 2012, and the final installation was completed in mid-2013.

The design of the Ilk project joinery was highly creative and detailed. Many kitchens had a unique integrated laundry and a Vide Poche joinery unit, and an extra degree of diligence was applied to ensure unusual constraints such as detailed bulkheads and service risers would not affect joinery production methods and on-site installation. This meticulous approach also enabled integrated laundry appliances and service requirements such as DB boxes and cables to be successfully incorporated into the corresponding joinery.

Due to the complex nature of the Ilk floor plan, IJF was conscious of the need for thorough supervision procedures to ensure successful

installation throughout each phase. IJF's Ilk Project team facilitated a smooth, skilled transition between the manufacturing and installation elements of the project.

Established in 1964 as a family-operated domestic joinery business servicing Adelaide and surrounds, IJF has grown into a national operation with over 100 staff nation-wide, including highly skilled tradespeople, production staff, project coordination professionals, and dedicated site crews in each state.

Stellar projects include Emirates Wolgan Valley Resort, Eureka Tower, 1 Bligh Street (Clayton Utz fitout), Crowne Plaza Darwin, Convesso, The Royal Children's Hospital Melbourne and the Fiona Stanley Hospital in WA.

Recognised as a Tier One joinery firm, IJF provides the nation's leading builders and developers with complete design and construct packages for refurbishments, new builds, renovations and redevelopments; complete interior fitout; and supply of customised, high quality joinery FFE remits ranging from fully-installed cabinets, cupboards, and benches through to loose furniture items.

*For more information contact IJF Australia Pty Ltd*, 41-43 Cormack Road, Wingfield SA 5013, phone 08 8349 7400, Tender Enquiries: [davidm@ijf.com.au](mailto:davidm@ijf.com.au), website [www.ijf.com.au](http://www.ijf.com.au)

