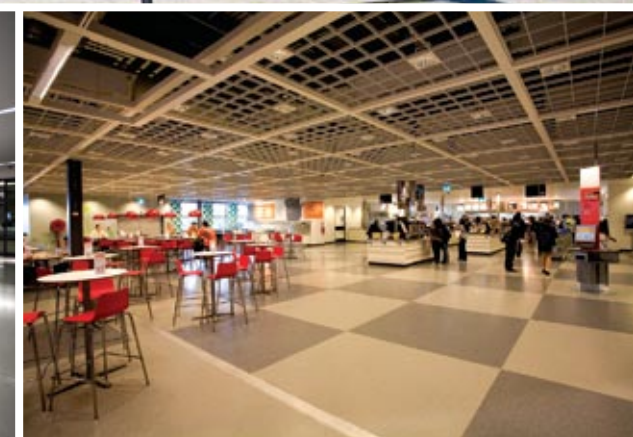
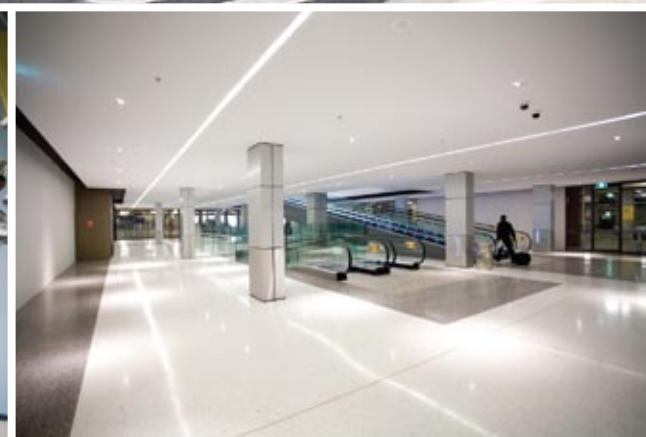
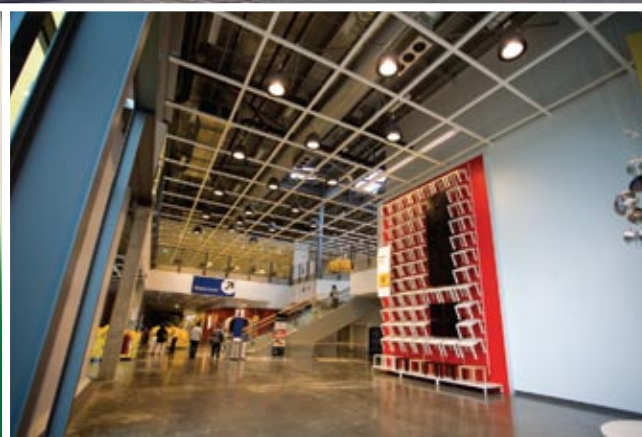


# HARVEY NORMAN & IKEA DEVELOPMENT

**MAIN CONSTRUCTION COMPANY :** Probuild  
**CLIENT :** Harvey Norman and Ikea  
**PROJECT MANAGER :** Lincoln Development Management  
**PROJECT END VALUE :** \$190 Million  
**COMPLETION :** October 2011  
**ARCHITECTS :** Leffler Simes Architects  
**STRUCTURAL ENGINEER :** Cardno Grogan Richards  
**CIVIL ENGINEER :** Paroissien Grant & Associates  
**BUILDING SURVEYOR :** Davis Langdon



## INNOVATIVE SOLUTIONS FOR RETAIL ICONS

As the main contractor for the IKEA/Harvey Norman bulky goods store development, Probuild has successfully incorporated some innovative elements previously unseen in this country into this major addition to Melbourne's bulky goods sector.

Founded in Melbourne in 1987, Probuild now employs in excess of 400 people nationally, has building and civil engineering operations in Victoria, New South Wales, Western Australia and Queensland, and is preparing to start work on its first project in Tasmania.

With Monaco Hickey and Contextx now part of the Group, Probuild has become renowned for its experience in retail projects, and has also successfully delivered award-winning projects in the industrial, scientific, educational, multi-unit residential and commercial sectors. Works on the IKEA/Harvey Norman Bulky Goods development in Springvale commenced in March 2010, when Probuild took responsibility for all civil

works and the construction of the main building. Under a separate contract, Probuild's team also delivered the internal fit-out of IKEA, and the partial fit-out of Harvey Norman and the specialty retail stores in the complex. In addition, Probuild upgraded all surrounding infrastructure to Westall Road and Princes Highway.

Project Manager Ross Saunders says the size of the job presented a huge challenge, but an intensive period of research into and planning of logistics, access, staging, sequencing and programming prior to commencement on site has resulted in significant efficiencies and time savings. "In the end," says Ross, "we went with four tower cranes because we and our structure subcontractor, Form700, agreed that was the optimum number required to feed the project at the rates we needed to achieve the ambitious programme." Ross is proud of some key statistics: "This project's got a gross building area of 205,000m<sup>2</sup>, which is a massive build in one go. We used approximately 120,000m<sup>3</sup>

of concrete; we put in 15,000 tons of reinforcement; we designed, fabricated and installed approximately 32,000m<sup>2</sup> of precast panels; and used about 2000 tons of structural steel."

The IKEA tenancy uses a state-of-the-art mechanical system based on the mass storage of chilled water. The sprinkler tank water is stored in a 1.2 million-litre storage vessel; at night, when the ambient temperature is below twelve degrees, the system goes into pre-cooling mode. During the day, the mass storage of cold water is used to chill the building through chilled beams. "That's a first for us – we don't know any other organisation in Australia where chilled water is stored and reused in this way," says Ross.

Another point of interest is that the IKEA store has a membrane roof rather than the usual Colorbond steel sheet roof. "It's a welded membrane system selected for its durability and insulation properties," explains Ross. "It won't absorb the heat as much as a metal-deck roof – as a result, we've got much better insulating performance than more traditional retail roofs."

Probuild has won several awards in its time, including MBEV Master Builder of the Year three times, numerous MBEV Excellence in Construction Awards, MBA NSW Excellence in Construction Awards in 2009 and 2010 and the 2009 International Council of Shopping Centres Gold Award.

Currently, Probuild is working on the \$200 million Highpoint Shopping Centre project in Melbourne; Roi Apartments in North Fitzroy; Precinct Apartments in Richmond; Riverwood Apartments in Alphington; and Monash University New Horizons, a \$117 million collaborative scientific research facility.

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# READY FOR ANY FORM OF WORK

Form700 was founded in 2002 and employs 670 people. The company builds structures subcontracted to the principal builder in the commercial, industrial and high-rise residential sectors, for both private and public enterprise. Its services include, but are not limited to, formwork reinforcement supply and fix, post-tensioning supply and installation, concrete supply, pumping and placement, concrete lift core construction, structural safety screens and the provision of other self-climbing systems.

Form700 built the concrete structure for the IKEA/Harvey Norman buildings at the Springvale site. This involved building the main three levels of the suspended floors; that is, supplying and erecting the formwork system, supplying and pumping the concrete, supplying and fixing the reinforcements, designing the post-tensioning and supplying and insulating the post-tensioning.

It was also responsible for the craneage, providing four crane towers and manning them, as well as providing and operating four mobile cranes.

The size of the project provided something of a challenge in terms of logistics and timing. “There was a large volume of work that had to be done in a very short space of time,” says a spokesperson for Form700. “Really, it is a conventionally designed shopping centre, but there were 210,000m<sup>2</sup> of formwork and off-floor area that had to be constructed in that short timeframe.

“We ended up with about 330 people on that job alone. Of course, having that many people concentrated on one project meant a lot of coordination. We generally have one project manager and a general foreman and sub-foreman, but on this job we actually had two project managers, being such a large job, and that was the challenge.”

Form700 used all its standard formwork systems on the project – these mainly comprise of table forms and aluminium formwork systems – and the company also supplied a large safety-screen system for the project.

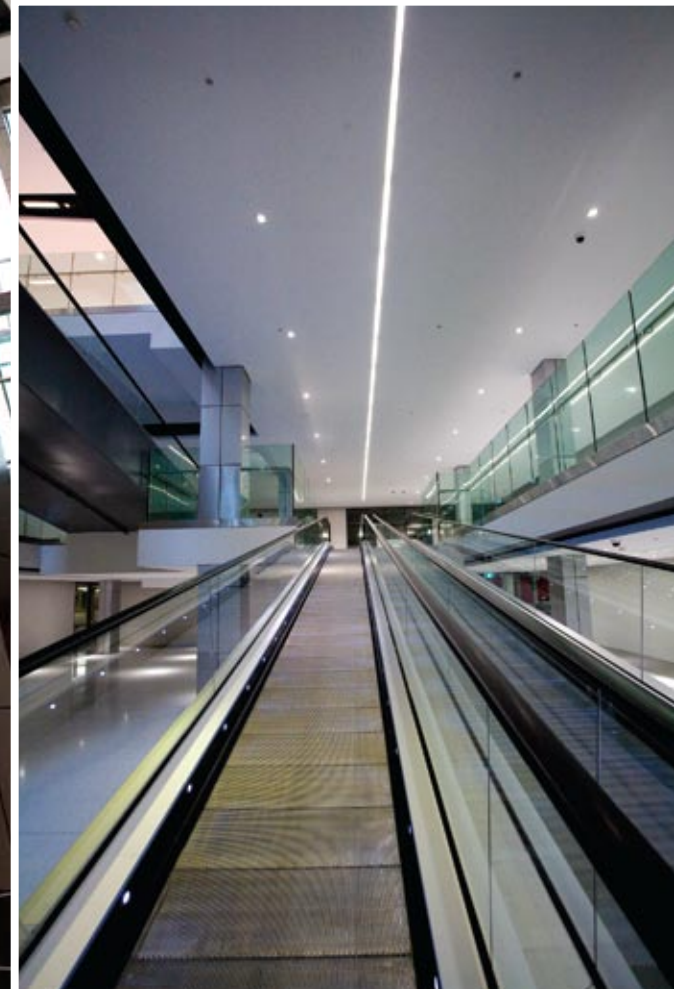
Form700 diverged from some its usual processes on this project in terms of the responsibility for design. “Quite often we build what is on the drawings – what’s been provided by the builder and the client – but included in our brief was actually the requirement to design the suspended slabs,” explains the spokesperson. “That meant there was a lot of interaction between our designers and the architects and engineers for the project. A lot of information had to pass between us as we were doing the design and the working drawings for the project.”

Current projects that Form700 is working on include the new ATO headquarters in Collins St, Docklands; Bank Apartments in South Melbourne, for Probuild; the Upper Westside apartment buildings on the corner of Lonsdale and Spencer streets; and Main Point Apartments in South Melbourne, as well as a number of other multi-storey apartment projects. The company is also working on projects in Adelaide and Perth.

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# LIGHTING THE WAY AT HARVEY NORMAN IKEA DEVELOPMENT

Lighting Partners Australia (LPA) specialises in the development, production and distribution of commercial and industrial lighting products throughout Australia, Asia, Europe and the United States.

The company's primary sales activity is in the commercial, retail and project-based, high-end residential sectors of the market. LPA provides lighting solutions to a range of clients, including architects, designers, electrical engineers, builders, developers, electrical contractors, end users and government authorities. The company has local and overseas manufacturing operations enabling prompt distribution of lighting systems.

LPA is the exclusive Australian distributor of several international brands such as Forma Lighting, Metalarte, LAMP, Lucitalia and Pallucco and is focused on continually developing new energy efficient luminaires with its partners and manufactures.

Product development includes the latest LED technology and T5 fluorescent fixtures for internal and external applications.

LPA also researches, develops and designs new products in-house and outsources the manufacturing to third parties with products manufactured and sold under the LPA brand representing an increasing share of the company's overall product range.

LPA is increasingly involved in the implementation of major projects within South East Asia, the Middle East, Europe and parts of the United States.

This requires a close working relationship with developers at an early stage of the design process and a focused understanding of the project and client brief. This is brought together, through a collaborative process between the client and LPA and a careful understanding of the requirements and limitations of each project, energy needs, budgets and delivery requirements.

LPA has completed a range of projects, including the new Harvey Norman IKEA store at the Springvale Homemaker Centre.

The company was responsible for the overall lighting design and supply, including the custom lighting implementation for the mall area.

These luminaires include the latest energy efficient and long life Metal Halide CDM-R fittings, new LED technology inside and out and T5 high output fluorescents throughout the space. Careful attention was given to pedestrian access areas, using lighting to highlight different zones, by means of recess linear extrusions and concealed Led strip lighting therefore providing a clever and aesthetically pleasing solution.

In addition, LPA provided a great deal of technical expertise throughout the project working closely with consulting engineers and electrical contractors on all aspects of the design process, installation requirements and final commissioning of the lights.

The company is also the preferred lighting supplier to major national high end retail clothing brands, in addition to banking, pharmaceutical and jewellery stores.

LPA also undertakes rollout programs for commercial apartment developments throughout Melbourne, Sydney and Queensland, as well as retail mall developments within shopping centres, and hotel chains throughout Australia and Europe. It recently completed the renovations of the Park Hyatt Hotel in Sydney, where it worked closely with the hotel owners, the design team and builders to ensure a trouble free lighting supply.

The company is well positioned to grow strongly in the future within each of its market segments and become an intrinsic part of the Australian lighting landscape for many years to come.

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## TRUSTED ARCHITECTURE

Leffler Simes Architects are retail and commercial architects working in Australia, New Zealand and more recently Europe.

Founded in 1968 and with offices in Sydney, Melbourne and Brisbane, Leffler Simes employs a permanent staff of 70 employees.

Leffler Simes Architects have been servicing Harvey Norman for 17 years, and have been involved in more than 160 of their projects in six countries. The practice works closely with the directors and property team of Harvey Norman to develop both Harvey Norman stores and bulky goods developments such as the Springvale Homemaker Centre.

It also has a long association with IKEA, having worked closely with the IKEA property team both in Australia and in Sweden to develop and integrate their requirements into the Springvale Homemaker Centre development.

Leffler Simes Architects were also appointed architects for the new IKEA store in Tempe, Sydney, which opened in December 2011. This store is the largest IKEA store in the Southern Hemisphere. Leffler Simes Architects have been involved with Springvale Homemaker Centre project for over five years, from initial design, through town planning, documentation and the construction stage.

The building itself is innovative in its design, and incorporates sustainable building concepts, energy-efficient air conditioning and lighting systems, rainwater harvesting, solar shading and numerous other energy-efficient initiatives.

Leffler Simes Director Stephen Evans has designed this building from the very first concept sketches, with the close assistance of Associate Director Alexis Fischler and a team of architects and interior designers.

“At the moment Leffler Simes is involved in numerous projects throughout the country, worth in excess of \$400M,” says Evans. When looking at the large number of current projects, he likes to emphasize the importance of looking ahead to create opportunity and growth. “Following the success of our current practice and increasing demand from our clients we are looking at opening an office in Adelaide in the very near future.”

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## CARDNO KNOWS HOW

Cardno is a multi-national engineering company with a specialist Buildings group located in Melbourne that focuses on the structural design of large commercial building structures.

In conjunction with Leffler Simes Architects, Cardno’s structural team was commissioned as the principal structural engineering consultant for the new 82,000m<sup>2</sup> Harvey Norman/IKEA Homemaker Centre on the corner of Princes Highway and Westall Road, Springvale. Some of the structural design challenges encountered during the project included poor soil conditions, 10,000m<sup>2</sup> of elevated roadway and loading docks, elevated kiosk arcades and warehousing, long span post-tensioned floors, and feature steel and precast concrete façade awning on all street frontages of the building.

Cardno investigated different piling options for the site and elected for concrete-driven piles due to the high allowable skin friction. “Due to the unfavourable soil conditions near surface level, driven piles were a more efficient solution over conventional pad footings and bored piers as the preferred foundation system,” explains Cardno’s Ashley Pollard. The foundation system comprised over 3500 precast driven piles. A major design component of the building was the floor systems. At each level the floor plate area was in the order of 400m x 200m, totalling 230,000m<sup>2</sup>; this area coupled with columns at a grid spacing of 8.8m

x 10.8m presented a number of different design options for the slabs. The final solution comprised Fielders KF40 metal deck formwork and post tensioning which saved around 15mm of slab depth. Given the sheer size of the steel roof structure Cardno worked closely with purlin manufacturer Stramit to provide an economical solution to the design of the purlins. Using Stramit’s proprietary EXACTA Purlins, their design software, Cardno was able to factor in substantial improvements in sections capacity which resulted in excess of fifty tonnes of steel savings when compared to more traditional design methodologies.

Construction of the Harvey Norman/IKEA homemaker centre was completed in 2011 by Probuild with the project being completed months ahead of schedule.

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# PUTTING IN THE GROUND WORK

Geotechnical consultants Civiltest Pty Ltd have been in business for approximately 24 years, and employ 45 staff across their Mornington Peninsula, Mitcham and Mildura NATA-accredited laboratories. The company provides civil engineering testing services for both small and large civil engineering projects.



Civiltest has kept a dedicated focus on its core businesses of geotechnical and civil engineering materials testing, recognising that when a business spreads itself too thin it cannot always provide optimal service.

On the IKEA/Harvey Norman project, Civiltest was responsible for the earth remediation works on the site prior to construction beginning. "We were involved in supervising the earthworks, removing unsuitable fill that had originally been placed on the site, and then we supervised the controlled reinstatement of those fills to reach a suitable standard for construction to begin. The works Civiltest carried out followed the guide lines given in AS3798," says Civiltest's Grant Gibbs.

Civiltest was responsible for the development of the specification for the placement of the fill with Level 1 control for the remediation works that took place on the site.

Through its accredited laboratories, Civiltest provides a wide range of soil and concrete tests following AS1289, Soil Testing For Engineering Purposes, AS1012 Making And Curing Concrete Specimens, AS3798 Guide Lines On Earthworks For Residential And Commercial Developments, AS2870 Residential Slabs and Footings, AS1726 Site Investigation Code, VicRoads Test Methods and Codes of Practice and MainRoads (NSW) Test Methods and Codes of Practice.

Civiltest is currently working on Stage 7 of the Bass Highway upgrade near Phillip Island, and is also involved in the testing works at the Iluka mine site at Ouyen in northern Victoria.

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## A GLOBAL STANDARD IN ENERGY SERVICES

Dalkia is the world's leading energy services company. In existence for over 70 years, today Dalkia has offices in over 40 countries worldwide and employs 53,457 staff. In Australia and New Zealand, the company employs 350 people, 150 of whom are service technicians, along with a further 40 apprentices.

Dalkia provides heating, ventilation and air conditioning (HVAC) solutions to over 2830 customers in the retail, commercial, tertiary and industrial sectors. Its specialty is providing energy-efficient HVAC solutions for the mechanical services marketplace; it also distributes and services the Trane brand of water chillers, air-handling units and building management control systems, as well as the Trend brand of building management control systems.

Dalkia, in conjunction with Allstaff Airconditioning, played an important role in the design of the HVAC systems for both the Harvey Norman complex and the IKEA store. For Harvey Norman, Dalkia supplied two high-efficiency centrifugal water chillers and 58 Off air-handling units and fan coil units, and installed a complete building management system incorporating central chiller and boiler plants. It was also responsible for air-handling and energy usage monitoring from CHW and HHW.

For IKEA, Dalkia supplied two high-efficiency water chillers and 20 Off air-handling units and fan coil units, and installed a complete Trend building management system, which manages all the complex HVAC systems to provide IKEA with an energy-efficient system as well as monitoring of all water, electricity and gas usage. The IKEA centrifugal chiller utilises a free-cooling mode, allowing the chiller to produce cold water during low ambient conditions without the need to run the compressor, which means a substantial reduction in energy and running costs.

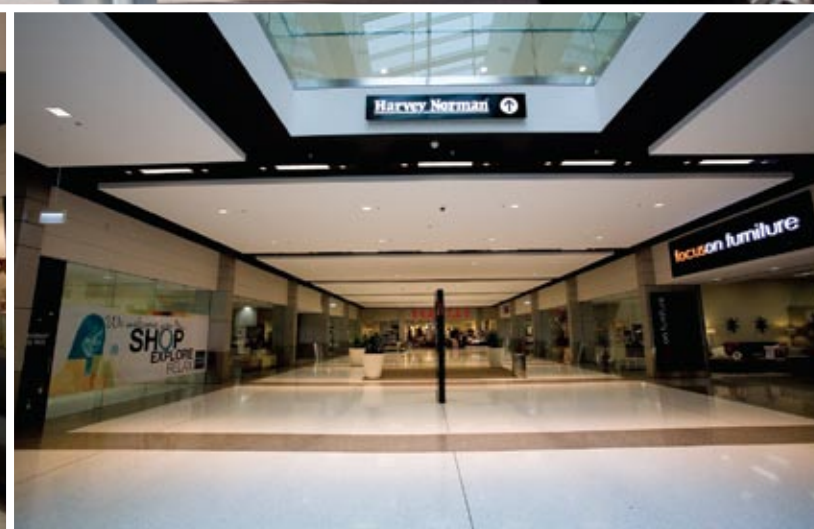
Other projects Dalkia is currently working on include the RACV Club in Torquay, Northpark Private Hospital in Bundoora and the Glen Eira Sports and Aquatic Centre.

Dalkia would like to thank Allstaff Airconditioning for their partnership in this demanding project.

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# KEEPING IKEA / HARVEY NORMAN FIRE SAFE



Lake Young & Associates (LYA), a fire-safety engineering and consultancy firm, provides planners, architects, engineers, designers, builders and regulators with solutions to the challenges posed by public safety and fire issues in commercial and public buildings.

The company was formed in 2002 by a team of fire-safety engineering professionals and currently employs five people at its Melbourne base. LYA offers a variety of fire-protection and building-code consulting services, from the development of master plans and code consultation to on-site evaluation and design of fire-safety systems.

On the Ikea/Harvey Norman project, LYA was responsible for the fire-safety engineering and consultancy, "which justified the building being designed as meeting the performance requirements of the building," says Scott Young, a co-director of the company.

"Considerations included the typical problems we had to justify under the requirements of the building code – i.e. large population, long distance of travel and everything associated with that. You want the functionality

of the shopping centre while also providing an acceptably safe building from a regulatory viewpoint."

LYA has worked on a number of large projects, including the Melbourne Convention Exhibition Centre and other public buildings, high-rise structures, offices, health care facilities, telecommunications facilities, residential apartments, mixed-use complexes, factories and warehouses, hotels and transportation.

LYA is backed by a proven track record of success in satisfying complex issues created by a range of building codes, standards and regulations at all stages of projects.

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## LEADERS IN GLASS

Viridian Glass, part of CSR Building Products, came into being in 2007 when CSR acquired Pilkington Australia and DMS Glass. The company is Australia's largest provider of glass and the only Australian manufacturer of float glass and hard coat performance products.

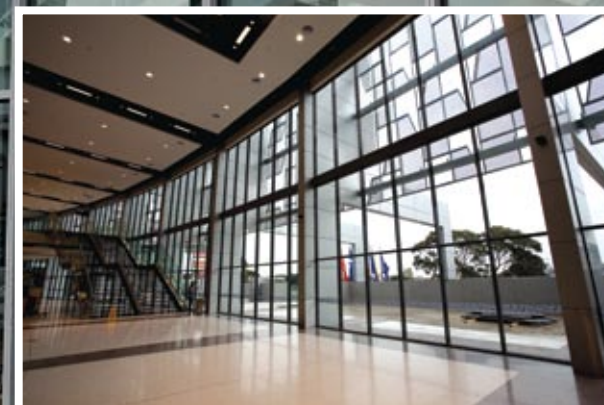
Viridian's range of residential and commercial glass includes double glazed windows, and laminated, energy-efficient, safety, security and self-cleaning glass. Viridian recently developed a new range of products that comes under the heading New World Glass. The range includes a float glass range, as well as low-E, energy-efficient glass, double-glazed windows, solar-control glass, bushfire-resistant glass, safety glass, security glass, storm-resistant glass, low-reflectivity glass and self-cleaning glass.

Viridian has a strong commitment to sustainability, and in 2007 it became the first manufacturer to sign a sustainability covenant with EPA Victoria, Sustainability Victoria and The Australian Industry Group to work together to protect the environment and contribute to a more sustainable Victoria.

Viridian continues to focus on technology and innovations that reduce the environmental impact of its manufacturing, and has a strong focus on developing products that lower energy consumption and provide additional comfort in the world's buildings and cars.

Viridian has also embraced a 'Target of Zero Waste', where initiatives already in place have virtually eliminated packaging and inter-packing materials in the delivery of Viridian glass. Products such as DécorMirror eliminate copper coatings and treat and recycle chemicals and glass, unlike traditional silvered mirrors. Viridian Float glass has a recycled content of 29%.

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## FUTURE FOOD SOLUTIONS

The Future Products Group Ltd (FPG) has been in business for almost thirty years, and in this time has become a leader in developing food display solutions. The privately owned company has manufacturing facilities in New Zealand and Asia, and sales offices in Australia, New Zealand, Europe (including London) and Egypt. Currently, it employs close to 200 people.

FPG's main business is the provision of retail food solutions, encompassing a combination of temperature-controlled display units and shop fittings. Many of its innovations and technological breakthroughs are now standard features across the FPG range. Products range from counter-mounted units to free-standing display units to heavier-duty units that can be integrated into joinery. FPG also offers customisable modular counter systems.

FPG provides a full in-house manufacturing and design service as well as project management if required, and is able to customise units or fittings for clients. To date, its major clients have been some of the world's largest supermarkets, bakeries, fast food chains, convenience stores and specialty food stores.

On the IKEA/Harvey Norman project, FPG provided all the temperature controlled food display solutions, including open front and glass door merchandisers along with heated Bain Marie and refrigerated cold well displays for the main restaurant, similar equipment was supplied for the downstairs bistro. All the equipment was customised to IKEA's specifications.

FPG has a historical relationship with IKEA, having worked on a number of projects for them across the world, most recently in Asia.

FPG is continually striving to offer premium solutions to its range of clients and sees client relationships as partnerships, with both parties working towards common goals together.

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## CLAD WITH EXPERIENCE

Established over 25 years ago and employing over 40 staff, GJN has developed a solid reputation for delivering high-quality projects. The company designs, fabricates and installs architectural cladding systems using a range of products, including aluminium composite material (Alucobond, Alpolic etc.), solid aluminium, stainless steel and glass. GJN specialises in rolled and curved panel works.

GJN provides all elements of a façade: cladding, windows, curtain walls, shopfronts and sunscreens. In addition, the company offers design advice to clients, covering issues ranging from panel layout and optimising sheet usage, to bracket and framing systems, through to access requirements.

On the IKEA/Harvey Norman project, GJN was responsible for all the architectural façade work, all the feature blades, the shopfront and main entrance work. A lightweight framing system was used for the feature columns and blades, creating significant cost savings for the building.

The four key products used on this job were solid aluminium, Alucobond, stainless steel panel and glass, with everything

manufactured in house at GJN's factory. In-house manufacturing requires the use of a range of specialised equipment, including a CNC overhead router for composite panel work, a CNC press brake and guillotine, five-metre-long rollers for diameters greater than 300 mm, various press brake tooling for diameters under 300mm, and heavy duty precision mitre saws.

All installations are also done by GJN's own team, eliminating the need for work to be subcontracted out.

GJN's clients include premium developers such as Probuild, Baulderstone, Lend Lease, Equiset and Westfield.

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## PANEL OF KINGS

**K**ingspan Insulated Panels Pty Ltd, an international building and construction solutions provider, is a division of the Kingspan Group. The company has been operating in Australia since 2004 and employs over 60 people. Kingspan's state-of-the-art Australian manufacturing facility services the Australasian and South East Asian markets.

Kingspan specialises in the design and manufacture of sustainable, high-quality, fire-safe insulated roof, architectural wall and façade panel systems. Its products are suitable for a range of different sectors including commercial, retail, education and industrial. Kingspan offers designers and architects the means to create energy-efficient buildings that deliver a strong architectural and aesthetic impact.

For the Harvey Norman/IKEA project, Kingspan supplied 8000m<sup>2</sup> of insulated architectural wall cladding in high performance Ikea corporate colours blue and yellow. Mechanical handling was used to install the product. Kingspan Insulated Panels' Area Sales Manager, Vicky Keep, and the full technical team, worked with clients to resolve the technical aspects of the project.

Kingspan is keenly aware of the demands on architects and builders to design and construct energy-efficient buildings – the tightening compliance

regime in Section J of the Building Code of Australia being the most obvious of those demands. "The market is also more conscious of the need for energy-efficient buildings, with clients often demanding that new buildings are future-proofed, especially as energy costs continue to spiral and a price on carbon looms," says the company's Helen Flood. With robust, strong design as a cornerstone, Kingspan is committed to delivering high-performance products whose hallmarks are energy- and cost-efficiency and construction simplicity.

Currently, Kingspan is expanding its product range with the launch of Evolution, an insulated, flat architectural wall and façade system. The system is available in cover widths of 600mm, 900mm and 1000mm, and comes with a range of ancillaries to enhance the look of walls and façades.

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## THE SPACE SAVERS

**K**ardex VCA has installed 4 large Shuttle® Vertical Lift Modules into the new IKEA Centre in Springvale. The Shuttle® XP unit is an automated tray delivery system and provides high density storage for IKEA inventory items such as flatpack components including kitchen doors, panels and fasteners, plus items such as cushions, quilt covers and other manchester.

The footprint of the Shuttle® system is less than 0.5% of the total warehouse floor space, uses all of the free height to the ceiling and provides storage for more than 1000 SKUs. IKEA includes high density small footprint automated storage in new stores as a standard feature. Kardex has had a frame agreement with IKEA since mid 2007 and has now provided IKEA with 101 Shuttle® units installed across 29 stores and 11 countries.

Kardex has supplied four Shuttle® units at height 9.5metres for the IKEA Centre installation. The machine size is specific to IKEA's special application and the tray is 4 metres wide. These are the largest Shuttle® units installed in Australia. Each machine provides the equivalent of 15 metres of vertical storage and close to 48m<sup>3</sup> of storage volume. The total system storage capacity is 192m<sup>3</sup> in a footprint of 17mL x 3mW. The machines use the principle of 'goods to user', and deliver trays to the



machine access at an ergonomic height. Each unit has 58 trays fitted with side walls and dividers to provide secure storage for all inventory.

Inventory in the 4 units is managed by Kardex's Power Pick 5000 (PP5000) application. PP5000 runs on one PC console and delivers tray requests to the required machine based on the inventory item required. All four machines are managed from the one console. IKEA and Kardex have developed a specific solution for the interfacing of PP5000 to IKEA's internal MHS-SGF Inventory system.

Kardex VCA specialises in providing small footprint automated vertical storage solutions to a wide range of industries and applications. Our systems include Shuttles®, locally manufactured Carousels, sortation benches, inventory software and associated site and support services. Kardex VCA can make storage and distribution a front line contributor to any business.

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## SUPERIOR STEEL SOLUTIONS

Founded in 1987, Williams Steel provides construction and design solutions for stainless steel and nonferrous metalwork projects. Its work is featured in many of Melbourne's best-known landmarks, including the world-renowned fashion hub Chadstone Shopping Centre. Currently Williams Steel employs thirty-eight staff at its Somerville, Victoria base.

The company specialises in feature metalwork, stainless steel rails and balustrades, glass balustrades, perforated façades, general metalwork and sheet metal.

On the Harvey Norman/IKEA project in Springvale, Williams Steel was responsible for all external and internal stairs, special perforated balustrades, the IKEA balustrades, glass void balustrades, the perforated façade to the carpark and crash rails.

Williams Steel does its own perforating; approximately six months ago it purchased a new perforating machine, which was used on this project and which will allow the company to better service clients in the future.

Bill Williams, managing director of Williams Steel, is pleased with the results of his new management team and crew's work on the Harvey Norman/IKEA project. "Every part of the job had challenges that had to be accommodated, but that's part of construction. The clients were very happy with the result."

Other current projects for Williams Steel include the RMIT Design Hub, Sunshine Hospital, Highpoint Shopping Centre and the new National Broadband Network Operations facility.

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## COMMERCIAL KITCHEN SPECIALISTS

KBR Commercial Pty Ltd was established in August 2005 by directors who between them have over 50 years' experience in the food service/hospitality industry. Over the years, KBR Commercial has grown into one of the largest commercial kitchen contractors in Australia, and is also recognised internationally, having serviced clients in the Maldives and the Pacific region. It currently employs 30 people at its Melbourne office.

KBR specialises in commercial kitchens and bars, and operates in a range of industry sectors, including hospitality, retail, resorts, health and aged care, education, sporting venues, correction and defence facilities. The size and scope of KBR's projects vary from the supply of one piece of equipment through to full fit-outs of refrigeration/food service/beverage packages. The company also specialises in creating custom applications for clients.

Refrigeration is an integral part of KBR Commercial's business. The company custom fabricates under-counter refrigeration cabinets, cake displays, upright cabinets, wine displays, and butcher cold plates; all types of custom cabinets can be built upon request and all cabinets can be manufactured in self-contained or remote-operation varieties. KBR's

qualified refrigeration mechanics are heavily involved in all aspects of fridge and freezer design, manufacture, installation, maintenance and repair.

KBR is also a major supplier of cooking equipment and warewashing equipment for companies such as Moffat, Comcater, Hobart, Meiko, Winterhalter, Stoddart and J.L. Lennard.

On the Harvey Norman/IKEA project, KBR was responsible for the supply and installation of kitchens, and refrigeration.

Currently, KBR Commercial is working on a range of projects including the following: MCG Southern Stand Redevelopment – Victoria, Raine Square – Perth, Catholic Leadership Centre – Victoria, Assumption College, Trinity College, Mamababa Restaurant, Benalla Hospital to name a few.

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## DISPENSING A WIDE RANGE OF PRODUCTS

IMI Cornelius is the world's leading supplier of beverage dispensing and cooling equipment, and has nearly 70 years of experience in the industry. The company employs 21 staff in Australia.

IMI Cornelius manufactures and markets a broad line of post-mix beverage dispensing systems, beer dispensers, ice-makers, juice and tea dispensers, frozen beverage dispensers and a complete line of accessories.

In Australia, the company has a long-standing partnership with IKEA, and on the Springvale IKEA project IMI Cornelius provided a total beverage solution to cover the bistro, Swedish food market and the co-workers' dining area. The company used the latest technology in chiller design; these designs feature highly efficient electronic temperature control and variable-speed ice bath agitation.

The IKEA project was managed internally by Paul Ryan (National Technical Manager) and Craig Macdonald (Key Account Manager).

IMI Cornelius has a strong commitment to sustainability, recognizing that such an attitude can impact positively on productivity, returns to shareholders, reputation and growth. The company believes it can continually improve management of social, environmental and economic issues to achieve a high standard of responsible care for people and the environment, without compromising growth or business efficiency.

Currently, IMI Cornelius is working with IKEA on all its store openings and upgrades. Globally, IMI Cornelius is always working on various large-scale beverage-dispensing projects, including projects for stadiums and high-volume QSR accounts.

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## TOP CLASS ROOFING

Since its founding in Melbourne in 1995, Academy Roofing has grown to become one of the largest roofing contractors in Victoria, and over the years it has completed a range of successful projects.

The company currently employs around 70 staff over a wide range of roofing jobs, 35 of whom worked on the IKEA project. "Before the project started we had to understand the practical theory and technical aspects of how IKEA wanted the TPO FLAG membrane roof system completed. We gained specialised training overseas to install this product to the standard that Flag (as it's their product) commit to on their jobs for IKEA. This helped us greatly as it is a very new and unique type of roofing system to Australia," explains the company's construction manager, Craig Brinsdon.

Academy Roofing staff are now very specialised in the installation of Flag TPO membrane in Victoria and will always be able to complete such projects in the future anywhere in Australasia.

Other current projects that Academy Roofing are doing at the moment are the Melbourne Market Relocation Project at Epping for Bovis Lend Lease, Crown's East End extension for Baulderstone, the Puckapunyal Army Base (SIAD) for Kane Construction and the Queenscliff Army Base (SIAD) for Hansen Yuncken.

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