

IKEA SUPERSTORE SUCCESS

MAIN CONSTRUCTION COMPANY : FDC Construction & Fitout Pty Ltd
PROJECT END VALUE : \$40 million
ARCHITECT : Leffler Simes
CIVIL ENGINEER : ACOR



The \$40M IKEA Building is situated within the new Sydney Business Park precinct. Features include the retail store, showroom, child's play area, warehouse, unloading areas, food market and restaurant.

Located within the new Sydney Business Park commercial precinct, IKEA Marsden Park is the latest construction management success story from FDC Construction & Fitout Pty Ltd. With a total site area of 76,000m², the building's footprint is 28,000m². Incorporated into the site are the retail store, showroom and market hall areas, children's play area, Swedish food market, customer and co-worker's restaurants and warehouse and goods unloading areas. Additionally, there is 650m² of lettable office space, substation and back-up generators and 33,000m² of car parking, internal roads, pavements and landscaping.

The IKEA superstore was the first building to commence on the Marsden Park site and will be joined by other major retailers including Bunnings, Masters and Costco. The area includes industrial, bulky goods and residential. The construction also features 25,000m² of air conditioned space, two 1,000,000-litre fire sprinkler tanks and 820,000 litres of underground rainwater storage. It is the first Australian IKEA store to be a single-level construction and will now be used as a model store for similar future IKEA stores in the country.

Construction on the store began in February 2014 with completion of the base building on December 23. Retail fitout of the store started in February this year in readiness for the store's opening in June. "The design for the project commenced early 2013 and that ran for the 12 months before commencing on site," FDC Construction & Fitout's Daniel Faulkner said.

"We used 3D modelling during design development for services design and general coordination for the store. There was a decent lead in (on the project) as we basically started from scratch given the store's single level design unlike previous stores. The construction involved 40-plus trade contractors to complete the project. During peak times there was up to 300 workers on site at any one time." Daniels explains that the project's main point of difference to your normal retail store was the roofing system. "We used a Kingspan wall cladding and roofing system. This was advantageous for the speed of installation and also advantageous for the composite nature of the sandstone sandwich panel," he said.

"The Kingspan roofing system was K-Dek, providing a TPO membrane roof finish. It's

basically a metal sheet with an insulation layer and TPO waterproof membrane adhered into one panel. It is more a European approach to roofing and it had its challenges. There was no contact in Australia who had used that type of roof before. (IKEA Marsden Park) was the first project to use the Kingspan K-Dek system on such a large scale."

Despite the use of a new roofing system, as a construction company with plenty of experience in retail projects, the IKEA Marsden Park development progressed smoothly for FDC with no significant issues.

Along with retail projects, Daniel adds that FDC Construction & Fitout does "all sorts of work, in a number of different sectors of the industry. A bulk of our work consists of retail, data centres and warehousing and industrial projects."

This is evident from the company's track record of working on significant projects across construction, interior fitout, refurbishment, technologies and mechanical – making FDC an efficient one stop shop.

In addition to retail, FDC works on projects in government, commercial, education and learning, health and science, industrial, manufacturing, residential, hospitality and more. Established 25 years ago, FDC offers a complete service from concept to completion. Its founding principle was that the process of building is as significant as the construction's outcome. The construction process provides an opportunity to share knowledge, value add and establish collaborative relationships and in turn, deliver an outstanding project to the client. The company believes that the more it contributes to a client's success, the more it contributes to its own success.

FDC's work on IKEA Marsden Park is no exception with the company delivering the project ahead of all contract dates for early access and practical completion, while meeting the development's high standards.

For more information contact FDC Construction & Fitout Pty Ltd, 22-24 Junction Street, Forest Lodge NSW 2037, phone 02 8117 5000, fax 02 9566 2900, email tenders@fdcbuilding.com.au website www.fdcbuilding.com.au.

Below Leffler Simes Architects provided architectural services for the IKEA Marsden Park.

Recognised as one of Australia's leading architectural practices, Leffler Simes Architects' rich history spans more than 45 years. Employing over 70 staff across Australia with offices in Sydney, Melbourne and Brisbane, the practice has always been at the forefront of design. Beginning with Australia's retail sector expansion in the late 1960's, the practice has continued to expand into all aspects of architectural design, including commercial, industrial, hospitality, education, medical, leisure and residential sectors.

The ability of Leffler Simes to produce quality design solutions in conjunction with a highly professional service, has seen the expertise of the practice continue to be highly sought after.

As specialists in traditional retail and large format retail developments and commercial builds and fit outs, Leffler Simes' quality services were contracted for the IKEA Marsden Park project. The practice completed the design and construction for the development's architectural and interior package.

Leffler Simes Architects' Managing Director Chris Goodman said the IKEA Marsden Park project was considered as a 'prototype' single-level store format. "The layout of this project is different to previous IKEA stores in that it is more compact and refined, but still maintains the iconic IKEA concept and values of a balanced commercial and customer friendly environment," he said.

"The idea is to make the building convenient and easy for shoppers to navigate and experience the store in all aspects from shopping to dining."

"The store's layout is also future proof for any expansions or alterations, through a clever planning and construction approach." The project is fully clad with sandwich panels including within the entry area, giving the development a simple appearance and clean lines throughout within a large format look store.

With the warehouse standing at 13.5m, the development's high building volume ensures maximum visibility from the area's busy Richmond Road intersection, as well as the overall Marsden Park precinct.

"Large glazing panes in the warehouse area maximise natural lighting into the building and create a huge open and inviting area for customers to look into the building 24/7," Chris added.

"The large structural spans were achieved through the use of a sandwich wall panel system, making the building as cost efficient and open as possible. The large span also addresses the efficient operation required by IKEA store planning."

"In addition, the building wall and roof panels' performance and double glazing throughout, as per the IKEA global standard, are well and above local climatic requirements and conditions."

The project also incorporated innovative materials, resulting in efficiencies on site, including installation times and man power. "The roof is made out of a prefabricated membrane lined roof panel system. This resulted in a fast installation on site as well as a reduction in man hours compared to conventional membrane roofing," Chris said.

"Adopted coolroom panels in the kitchen areas also minimised construction time on site, while addressing the requirements for IKEA operations by achieving a robust material."

Among its many projects, Leffler Simes is also working on IKEA in Canberra. The practice has also recently branched out to China and is undertaking significant projects in Northern China.

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Below Triple M designed, constructed and installed the mechanical services throughout the Ikea Marsden Park.

As mechanical services enter the energy efficient era, the comprehensive skills and engineering knowledge of Triple M Mechanical Services can provide energy-efficient solutions for major projects such as the Ikea Marsden Park store. Triple M's team delivered a design, construct and install package for all the mechanical services throughout the newly constructed store. Triple M and their key supplier ActronAir applied their engineering skills, and brought together the best technology available to provide indoor climactic environment and high air quality, without high energy use.

ActronAir's Hercules™ unit technology provided a practical, long term, and meaningful emissions reduction solution to this large store. These Hercules™ roof top package units combine strong performance with one of the lowest operating and product life cycle costs in its class. When you factor in ActronAir's legendary longevity and reliability, you'll understand why key retailers like Ikea are specifying these units. ActronAir has been designing and building air conditioning systems, for Australia, since 1984. The company's technological advancements have led to the development of some of the most energy efficient systems in the world.

Triple M are committed to sustainable solutions. The company's Project Managers, Engineers, Draftsman and Technicians have designed and delivered mechanical services for a range of major projects, including hospitals, residential apartment complexes, laboratories, Government buildings, retail outlets, industrial facilities, manufacturing operations, data centres, commercial offices and close tolerance environmental systems. The head of company operations is located in Sydney Olympic Park, where a team of professionally-qualified, experienced and client-focused building engineers apply their skills to providing best-practice solutions for project needs.

With an extensive internal and external network, and their ductwork manufacturing facilities in Sydney, Melbourne, Brisbane and Albury/Wodonga, customised solutions can be provided on time and in a cost-effective manner. Triple M's fabrication process uses the latest CNC plasma cutting and fully automated modular duct manufacturing system, ensuring a fast and efficient delivery for their projects. Systems such as that installed for Ikea are designed by Triple M's highly experienced team of draftspersons, who use the latest digital technology to resolve complex and challenging briefs. 3D BIM design

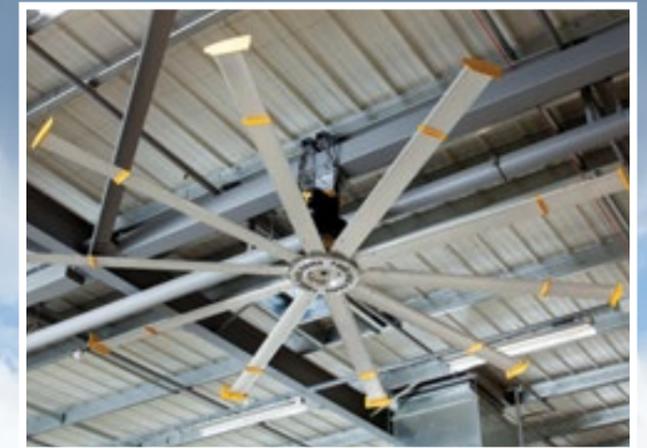
or 3D detailed pipework and ductwork workshop drawings are developed at state of the art cad work stations utilising the latest in Autodesk Revit suite and TSI CadDUCT software.

Triple M design and install mechanical ventilation, air conditioning, mechanical services, computer based control systems, industrial dust control systems, industrial ventilation, ferrous and non-ferrous piping, Co-generation and thermal storage, cleanrooms and medical gases systems. They can also provide services in balancing and commissioning, indoor air quality studies, essential services reviews, mechanical smoke hazard management systems testing and reporting, existing system assessments and performance evaluations and sheetmetal and steel fabrication. Triple M has been in business for over 20 years, and has developed a set of capabilities including total project management; a special projects division which specialises in retrofits and refurbishments; estimating and tendering services; 24 hour maintenance and repair; and energy-efficiency analysis.

With qualified NEBB (National Environmental Balancing Bureau) Supervisors and a team of highly trained technicians trained in accordance with NEBB Procedural Standards for Testing and Balancing of Environmental Systems, Triple M ensure buildings are functioning at their best by providing services including air and hydronic balancing; existing system surveys; duct air leakage testing; essential services testing; room pressure testing; laboratory testing; capture hoods and make-up air system commissioning; and Building Automation System (BAS) commissioning. Triple M has active involvement in relevant industry bodies, including Engineers Australia, AIRAH (Australian Institute of Refrigeration, Air Conditioning and Heating), ASHRAE (American Society of Heating, Refrigeration and Air-conditioning Engineers), CIBSE (Chartered Institute of Building Services Engineers), NEBB (National Environmental Balancing Bureau) and the GBCA (Green Building Council of Australia).

Other current projects include the Westfields Macquarie and Hurstville Redevelopments, where Triple M are providing design and construct packages for all Mechanical services.

For more information contact Triple 'M' Group of Companies Pty Ltd, Level 3, Quad 2, 8 Park View Drive, Homebush Bay NSW 2127, phone 02 9763 6200, fax 02 9763 6201, email TMG@triple-m.com.au, website www.triple-m.com.au



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GROUP OF COMPANIES
'the team you can trust'



IKEA Marsden Park, NSW

Below Axis Building Group installed panel wall cladding, flashing and the IKEA signage.



As a market leader in the construction, metal roofing and cladding industries, Axis Building Group's extensive track record reinforces its reputation for quality, innovative and creative construction services which it has been delivering for more than 50 years.

The Group's Axis Metal Roofing business provides an all in one solution for metal roofing, cladding and façade requirements. The company is one of Australia's leading metal roofing and specialist cladding contractors, as well as being Safety and Quality accredited to ISO 9001 (Quality) AS/NZS 4801 (Safety).

As specialists in large commercial roofing projects, Axis Metal Roofing has completed works on a number of notable projects across Sydney including large-scale commercial projects like IKEA Marsden Park and Amcor's new \$1 billion production facility at Botany.

Up to 15 full time Axis Metal Roofing employees worked on IKEA Marsden Park at any one time. The company installed vertical and horizontal 80mm Micro-Rib Kingspan insulated panel wall cladding, flashing and the development's IKEA signage.

"Installation was via the use of a crane and vacuum lifting machine to position the panels in place. The panels were then fixed in place from elevating work platforms," Axis Building Group's Cameron Tabone said.

The project was the second IKEA store for Axis Building Group, after it successfully completed the IKEA Tempe project. In addition to IKEA Marsden Park, Axis Building Group is being kept busy with a number of projects.

"We are currently working on several defence, infrastructure and rail projects such as the Moorebank Unit Relocation for Laing O'Rourke, the new Royal Adelaide Hospital for the Hansen Yuncken/ Leighton Contractors Joint Venture, new Bega Hospital for Brookfield Multiplex and the North West Rail Link Project for the ETTT (Epping to Thornleigh Third Track) Alliance Consortium," Cameron added.

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