



WORLD-CLASS SHOPPING

MAIN CONSTRUCTION COMPANY : AMP Capital
CONSTRUCTION VALUE : \$440 Million
COMPLETION DATE : October 2014
CONSULTANTS : DPM



The \$440 Million Macquarie Centre will be the second largest retail shopping centre in Sydney upon completion. This fabulous development will provide one of the finest shopping destinations with approximately 130 extra retail stores and a new fresh food market.

AMP Capital is a leading investment house with over \$142 billion in funds under management. AMP Capital Shopping Centres is a specialised team of experts, combining world-class experience and specialist capabilities in the management of some of Australia's and New Zealand's most successful retail centres. AMP Capital Shopping Centres was established in 1971 and has a portfolio of 26 centres across Australia and New Zealand generating over A\$6 billion in annual sales. Macquarie Centre forms part of the AMP Capital Shopping Centres' \$2.8 billion development pipeline.

AMP Capital Shopping Centres commenced the \$440 million the Macquarie Centre redevelopment in November 2012. Macquarie Centre is situated between Herring, Waterloo and Talevera Roads in the suburb of Macquarie Park in Sydney, New South Wales, opposite Macquarie University's main campus, close to Macquarie Business Park and Macquarie University Station. Macquarie Shopping Centre opened in November 1981 and houses Myer, Target, Big W, Woolworths, Event Cinemas and approximately 250 specialty stores.

"Our plan is to develop Macquarie Centre into one of the finest retail and leisure destinations for the community it serves, said a company spokesperson. "The redevelopment of Macquarie Centre represents the most exciting retail opportunity in Australia—where local and international brands will collide to create a new and revolutionary retail experience." The shopping centre will be around 138,500 square metres when completed. The redevelopment plan includes the introduction of a full line David Jones, a new 2 level mall linking the new David Jones with the existing centre and Myer, a new Fresh Food Market including Coles and

speciality Asian food stores, approximately 130 new specialty stores, two new substations and a further 1,050 car spaces. AMP Capital has built out through Macquarie Centre's car parks for the expansion. Use is made of natural stone, timber, and sky light to create atmosphere in the redevelopment. Columns in the style of a "European colonnade streetscape" punctuate the newer parts of the centre. The skylight is 7m high in order to create a sense of arrival.

The extension will place Macquarie Centre as the largest suburban shopping centre in New South Wales and one of the top ten centres by size in Australia. Macquarie Centre will open in two stages, the first staged opened on 17 July, with a major launch of the entire centre to take place in October, 2014.

AMP Capital Shopping Centres' is also currently working on Ocean Keys, a sub-regional shopping centre located in Clarkson, a northern suburb of Perth, Western Australia. Commenced in January 2013, the \$105 million development of Ocean Keys will "evolve the centre into an exciting retail destination by the end of 2014", with a range of retailers, a new dining precinct, new parking, new transport options and new leisure spaces for the community. Another shopping centre redevelopment for AMP Capital Shopping Centre in the pipeline, is the \$670 million redevelopment at Pacific Fair, a major regional shopping centre located on the Gold Coast, Queensland.

For more information contact AMP Capital Shopping Centres, 50 Bridge Street, Sydney NSW 2000, phone 1800 658 404, email clientservices@amcapital.com, website www.amcapital.com.au



ALLMEN ENGINEERING STEEL STRUCTURES - ON TIME, ON BUDGET, TO SPECIFICATION

Allmen Engineering provided detailed fabrication drawings, manufactured and installed 3000 tonnes in total of structural steel for the Macquarie Centre project. The company, which has been in business since 1997, specialises in custom steel structures and its services include structural design, detailed fabrication drawings, manufacture and installation. Allmen Engineering has worked on shopping centres, warehouses, railway stations, office buildings, staircases, awnings, spires, plantrooms, coal conveyors and shaft lining formwork. Its factory provides 4000 sqm of fabrication area.

The design phase of the project involved detailed coordination with multiple building service contractors to ensure trouble free installation. The work involved underpinning and strengthening of existing structural elements, new mezzanine car park decks (including bondek formwork and shear studs) constructed within the existing concrete framed car park buildings and new multi storey steel framework for the retail upgrade works. As well, Allmen Engineering provided the façade steelwork for cladding support and the architectural steelwork, which included curved skylights, café structures, and entrance lobbies.

Working within an operating shopping centre was a challenge which required detailed planning during all phases (delivery to erection), to ensure the wellbeing of the public. The limited storage space on site was overcome by having every manufactured item, packed and delivered in sequence, to ensure that it was erected immediately when it arrived at the job site. All crane setups were methodically thought out. This included the installation of heavy transfer beams up to 30T in weight. Allmen Engineering managed multiple work fronts concurrently at all times, in order to achieve programmed deadlines and did so, without any injuries.

Other projects Allmen Engineering is working on include Barangaroo (Lend Lease), Westfield Miranda, the Australian Defence Force Relocation project at Holesworthy (Laing O'Rourke), and the Royal North Shore Hospital (Brookfield Multiplex).

For more information contact Allmen Engineering Projects Pty Ltd, Managing Director Rupert Henry mobile 0414 391 111, phone 02 9460 2000, website www.allmen.com.au

MMMORE TO OFFER

Triple 'M' Mechanical Services Pty Ltd (NSW) designed, supplied, installed and commissioned the mechanical services installation for the Macquarie Centre project.

Triple 'M' (NSW) is part of the Triple M Group, which specialises in all aspects of HVAC (heating, ventilation, and air conditioning) and fire systems across commercial and industrial sectors and is one of Australia's largest building services providers. This includes design, drafting, manufacturing, construction, commissioning, defects liability management and ongoing maintenance services.

Triple 'M' commenced trading in 1994 in Sydney. The company's first project was the Sydney International Aquatic Centre, part of Sydney's bid programme for the 2000 Olympics. Today Triple 'M' has offices in NSW, Queensland and Western Australia and a staff of more than 400 professionals and tradespeople employed nationally, including duct installers, plumbers, pipe fitters and alarm technicians.

Triple 'M' has some of the largest in-house ductwork manufacturing and pipe work fabrication facilities of any mechanical contractor. These facilities, in NSW and Queensland, have been enhanced by the integration of automated duct fabrication lines that increase the company's ductwork manufacturing capability to over 150 tonnes per month, enabling ductwork to be transported anywhere in Australia.

In excess of 40 employees from the NSW team have directly or indirectly been involved with the Macquarie Shopping Centre project.

Other projects Triple 'M' is currently working on in NSW include the new IKEA Store in Marsden Park in Sydney's west and the Headland Re-development for the Barangaroo precinct.

For more information contact Triple 'M' Mechanical Services Pty Ltd, Level 3 Quad 2, 8 Parkview Drive, Sydney Olympic Park NSW 2127, phone 02 9763 6200, fax 02 9763 6201, email admin@triple-m.com.au, website www.triple-m.com.au





PRACTISED PERFECTION IN PILING

MGI Piling Pty Ltd designed and constructed the bored piled foundations for the Macquarie Centre project. MGI Piling is a family owned company that provides a range of piling services including heavy duty mobile rigs and restricted access piling.

The company employs 50 staff, consisting of qualified engineers, project managers, experienced supervisors and operators. Since 1997 MGI Piling has completed numerous projects on major civil works, including grout injection piling, bored piles, shoring piles, retaining walls, foundations for multi-storey buildings and bridge foundations for various rail and road projects.

The experienced team at MGI Piling overcame many challenges on the project. One of these was the design requirement that the piles withstand the potential impact of a vehicle colliding with the column, supported on the pile, necessitating heavy reinforcing and a substantial socket into hard rock. Restricted spaces and low headroom required the use of small machines which created difficulties drilling through hard rock.

Other difficulties arose because work was carried out within carparks that were in use and some of the work within the existing shopping mall was carried out at night. A further challenge was drilling

alongside an existing culvert, through loose fill, waterlogged material and random rock. MGI Piling purchased new equipment specifically for this project – a Mait Baby Drill and Rippamonti down the hole hammer rig which was used to break up the rock.

“Overall we satisfied Westfield Construction’s requirements, but specifically just managing to construct some of the piles in the difficult locations was an achievement in itself,” said Director, Michael Isaac.

MGI Piling’s objective is “to provide excellent service to the construction industry as a specialist in the piling field.” The company is currently working on some other difficult access projects such as the Epping to Thornleigh Third Track rail project, the North Strathfield Rail Underpass project and the M2 Motorway Widening project.

For more information contact MGI Piling Pty Ltd, 9 Enterprise Drive, Glendenning NSW 2761, phone 02 9625 0160, email info@mgipiling.com.au, website www.mgipiling.com.au



INNOVATION AND CAPABILITY WHICH DELIVERS

Two major retailers at the Macquarie Centre Redevelopment project, Coles and David Jones engaged Equilibrium Air Conditioning Pty Ltd to design and install specialised chilled water/hot water systems to suit their respective tenancy briefs. Equilibrium Air Conditioning was established in 1968 and offers industry service solutions and engineering expertise.

The company has over 40 employees, of which 12 are professional engineers. It has sought more effective and sustainable ways to deliver results by providing Design and Construct solutions in major commercial, retail, health and specialist projects.

“By engaging with project teams early in the construction planning stages, Equilibrium offers a degree of innovation and capability which delivers required results” said Commercial Manager, Joe Maric. Equilibrium also has a modern service division that caters for all maintenance and small works project.

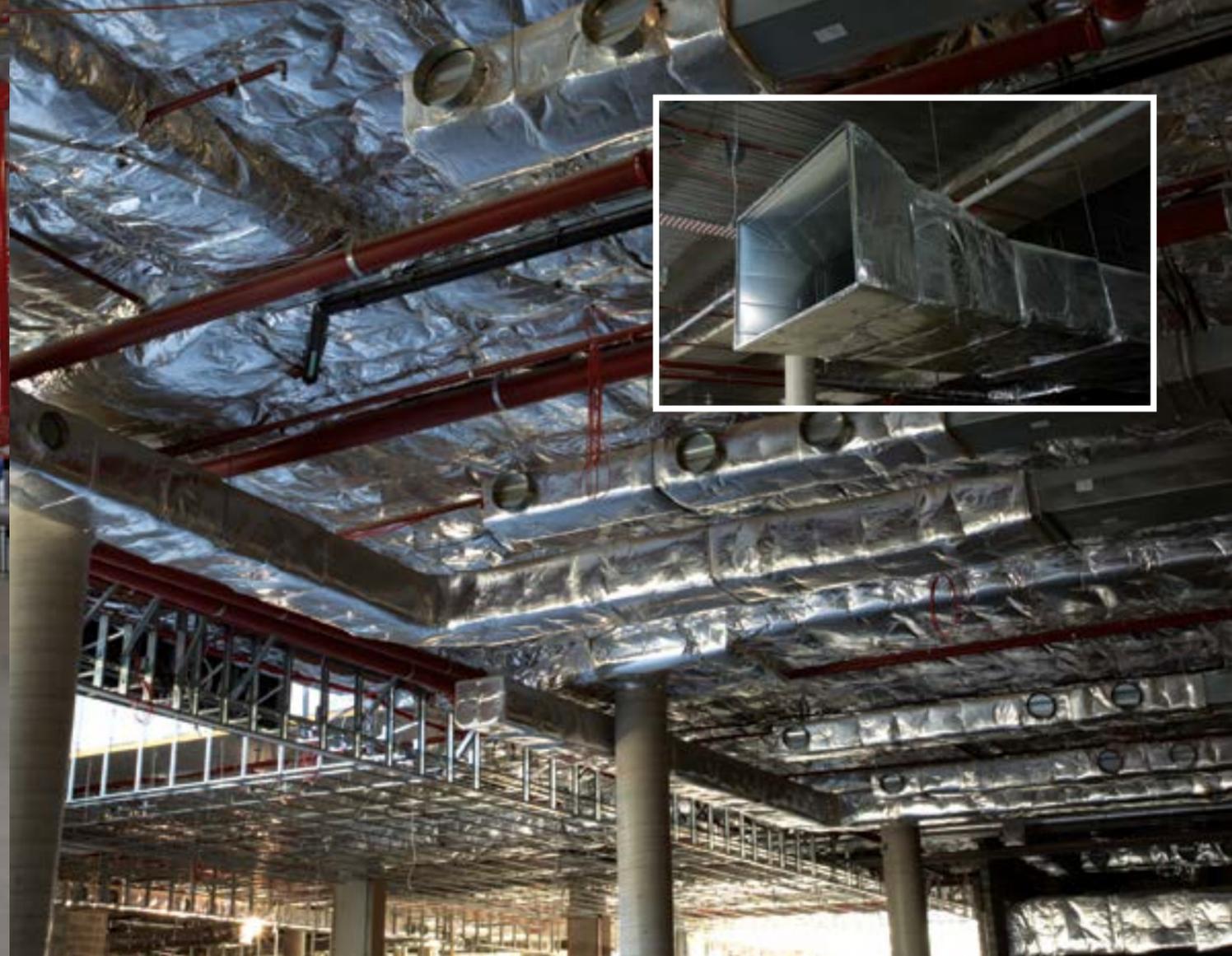
Equilibrium designed and installed a chilled water/hot water system specifically to Coles’ new requirements utilising Desiccant wheel heat recovery to reduce running costs. The layout of exposed ductwork was configured to suit the latest store design from Coles. A Variable Refrigerant Volume system was installed for the back-of-house areas.

Equilibrium designed and installed an independent water cooled chilled water system to serve David Jones’ two level retail tenancy. Air Handling units were located in various plantrooms around the tenancy. The design of the smoke exhaust system was integrated with the Macquarie Centre’s main system

The main challenge of the project was the installation of major equipment into a completed structure. This involved extensive horizontal movement of chillers and air handling units. Equilibrium completed the works within the tight building programme ready for fitout by the major tenants.

Equilibrium is currently involved in a number of prominent projects including Four Points Hotel at 161 Sussex Street, Sydney, the Sydney Adventist Hospital’s new Clinical Services Building, Wollongong Private Hospital, Mater Hospital in North Sydney, The Hospital for Specialist Services Norwest and Stockland Wetherill Park.

If for your project you are looking for service solutions & engineering experts contact Equilibrium Air Conditioning Pty Ltd today, Unit 7, 38 Brookhollow Avenue, Norwest Business Park, Baulkham Hills NSW 2153, phone 02 9439 4822, fax 02 9439 4699, email jmaric@eqac.com.au, website www.equilibriumac.com.au



pr FIRE SERVICES
DESIGN & CONSTRUCT 02 9622 0266
www.prfire.com.au

P & R Fire Services Pty Ltd has design and construct expertise in all areas of fire systems design for residential and commercial projects. At the Macquarie Centre Extension project, P & R Fire Services job included the detailed design, installation and certification of the fire systems.

This work included the fire sprinkler system throughout the extension, fire extinguishers, fire sprinkler pumps and tanks, a smoke detection system and sound system for emergency purposes.

In addition P & R Fire Services did a major BCA fire system upgrade to the existing shopping centre. P & R Fire Services also inspected and tested the fire system installation to AS1851 (Maintenance of Fire Protection Systems and Equipment).

P & R Fire Services is an independent, owner operated business with 48 staff. The Managing Director takes a personal interest in all projects and is readily available for consultation with all clients.

The members of the professional team that worked on the Macquarie Centre Extension project were Peter Woodworth (Manager), Lawrence Thorpe (Senior Project Manager), Steven Parrington (Site Manager

Wet Fire Services), Wes Brown (Site Manager Dry Fire Services), Scott Manning, Daniel Olford and Phil Davis (Fire System Designers). They met the challenge of completing the works within the time restraint limits of the project, in the difficult environment of a trading shopping centre, during the extension and upgrade.

“Our design staff have extensive experience and produce economical and compliant fire systems to suit the individual client requirements,” said Peter Woodworth. “We are able to produce compliant designs in both AutoCAD and REVIT format.”

P & R Fire Services Pty Ltd is available to perform consultation, design, installation and certification of fire services within New South Wales, Queensland and the ACT. Some of the company’s other projects include Westfield Miranda and Westfield Parramatta in NSW, Westfield Carindale in Queensland and Westfield Belconnon in the ACT.

For more information contact P & R Fire Services Pty Ltd, 44/24 Garling Road, Kings Park NSW 2148, phone 02 9622 0266, fax 02 9622 0366, email peter@prfire.com.au, website www.prfire.com.au

ENERGY EFFICIENT SOLUTIONS



“One of Australia’s largest thermal and acoustic insulation supply and fit specialists”, ee-FiT Pty Ltd, was chosen to assist in both thermal and acoustic insulation in the Macquarie Centre project. Specialising in energy efficient solutions, ee-FiT has been in business for 3 years and engages over 100 employees and contractors in NSW, ACT, Queensland and Victoria.

Each state has an experienced team that includes sales staff, technical savvy commercial managers, residential managers and a dedicated contractor work force. Insulation correctly specified and installed, is one of the most critical products in improving energy efficiency. It can save up to 40% in heating and cooling bills. It is also commonly used to reduce noise transfer between commercial floors, rooms and dwellings.

The range of services ee-FiT provides includes the full cycle of an insulation project. The company will undertake pre-project planning and specification, including technical support to architects and tender support through project design, pricing and undertaking energy assessments.

When a contract is awarded ee-FiT works closely with its client to reach agreement on final specifications, safety requirements and a

project timetable. On project completion, ee-FiT will issue all project and warranty certificates. The company is committed to providing environmentally sustainable products.

A team of twelve worked on the Macquarie Centre project including a consultant with over 15 years’ experience within the commercial under slab sector, and a sub-contractor with over 10 years’ experience. “We were able to support the builder with the numerous changes that occurred in the specifications,” said team leader, Matt Peisley (Manager NSW/ACT). “Due to our ability to use a variety of products we were able to ensure that all acoustic and thermal ratings were achieved”.

Other projects ee-FiT is currently working on include Westfield’s Miranda and Woolworths, Double Bay in NSW and Hindmarsh Construction’s Canberra Ave and the Commonwealth Building in the ACT. The vision for the business is to “safely deliver extraordinary value to our customers,” said a company spokesperson.

For more information contact ee-FiT (ACT) Pty Ltd, 3/218 Gladstone Ave, Fyshwick 2609, phone 1800 433 348 (FREE Measure & Quote), email info@cefit.com.au, website www.cefit.com.au

Macquarie Centre, NSW



SUCCESS STORY



“At Carona Group Pty Ltd we can justifiably claim to be the industry leaders in barrier and door systems for energy and hygiene control,” says a company spokesperson.

Carona, based in Lawson, NSW, designed and installed 4500 Series Thermal Traffic doors and Focus Glass Door Inserts for both the Coles and Woolworth’s supermarkets in the Macquarie Centre Redevelopment project.

The 4500 Series Thermal Traffic doors allow access from the shop floor to back areas and Focus Glass Door Inserts display refrigerated merchandise. “With a project of this size, managing complex delivery is always a challenge,” said Theresa Lee. However, this is nothing new to Carona, who has delivered hundreds of projects across the country for major clients.

“Our client appreciated the responsiveness and fast lead-times we were able to deliver,” said Drew Taylor. “Carona has a lean, efficient manufacturing facility with large stocks of product, so we were able to dispatch the doors and products made to the customer’s requirements in a very tight time frame”. Carona’s project team worked closely with the building team to ensure “on time delivery”.

“The 4500 Series High Impact traffic doors represent the latest design in thermal efficiencies combined with extreme durability,” said Theresa Lee. “The urethane foam core combined with a polyethylene shell ensures this door is the leader in its field”. The Focus range of Glass Door products brings a high level of distinction to many major retailers so that their merchandise is presented in the most attractive way whilst maintaining temperatures and clarity of vision. Double or triple glazed heated glass ensures the effectiveness of this popular range.

Carona’s doors strike a balance between presentation, energy efficiency and cost-effectiveness. The door types in the Macquarie project were customer-facing, so presentation was a major design consideration as were high insulation values for greater energy efficiency.

Customisation is a key feature to Carona’s success story. Every project is carefully designed and managed to suit the requirements that are unique to each site.

For more information contact Carona Group Pty Ltd, Blue Mountains Business Park, 40 Livingstone Street, Lawson NSW 2783, phone 02 4702 66 55, fax 02 4702 6650, email sales@carona.com.au, website www.carona.com.au