

RISING ABOVE

699 Bourke Street rises from the iconic curves of the Southern Cross Station rooftop, utilising the valuable airspace rights above platforms 13-16 of Melbourne's largest transit terminal.

DEVELOPER : Mirvac Group
MAIN CONSTRUCTION COMPANY : Mirvac Group
ARCHITECT : Grimshaw Architects
STRUCTURAL ENGINEER : WSP Structures
CONSTRUCTION VALUE : \$125 million



699 Bourke Street provides 7 floors of A-grade office space with premium services, a double-height 'lantern space' boardroom, open air terrace and a frontage onto the Bourke Street Bridge. The new home of AGL Energy, it is certified as a 6-Star Green Star rating and committed to a 5-Star NABERS rating.

"Initially [the brief] was to provide AGL Energy with 13,000m². Mirvac and AGL saw this as a joint opportunity for growth. With AGL moving into a new and sophisticated headquarters and Mirvac seeing this as a unique and striking opportunity to deliver a world class workplace we both had a priority to work together and deliver a successful outcome," explains Mirvac's Development Manager Tom Faulkner.

Mirvac and AGL's collaborative approach facilitated the ability for AGL to expand its spatial requirement. This resulted in the consolidation of AGL's Victorian operations to 699 Bourke Street, with them taking on the full 20,000m² area.

"Stakeholder management is key and one of the more challenging elements of the project," Faulkner explains "The foundation of the building is a deck that was constructed in 2003 and Mirvac started the development of the tower above that foundation in late 2013 early 2014."

"What that meant was the delivery structures that had been devised for the development to

take place were designed in a very different environment to when construction started."

"We were building 24m above four of the busiest train lines in Southern Cross Station – it being the biggest train station in the country," says Faulkner, "what that distils down to: is 12,000 commuters, running underneath our building every 8 minutes during peak hour for example and throughout the development program for that building we occupied the rail environment in excess of 200 times."

In order to get a rail occupation or approval to build and occupy that rail environment Mirvac needed to submit for a permit from the state and rail occupation authorities. Those permits

require flagging what will be done by some trades up to three months in advance. They also had limited flexibility to change those plans beyond ten days before actually going to work, requiring an exceptional level of planning.

After over 200 occupations and in spite of these constraints the Mirvac team completed each of these successfully and the rail services have remained largely unaffected throughout. Sustainability was a big part of the project: The project achieved a certified 6 star Green Star rating in Design through very efficient services planning. While the project required a VAV system Mirvac utilised a very efficient one and they used the highest performing commercially available glass in the building.

699 Bourke also boasts a 80,000 litre rainwater catchment tank and extensive end of trip facilities. AGL has also collaborated with Mirvac in the development stage to provide a 90 kilowatt solar array on the roof and chargers for electric vehicles in the car park.

There is also interactive digital signage throughout the development that communicates not only the sustainability initiatives of the building but is quite user friendly in that it suggests the benefits to users of the building within the broader precinct. One of these is on the internal street that connects Collins Street to Bourke Street. It shows occupants of the building the time that the next train is leaving on the platforms below for example, or what

events are on at Etihad stadium that weekend or what the weather that afternoon might be.

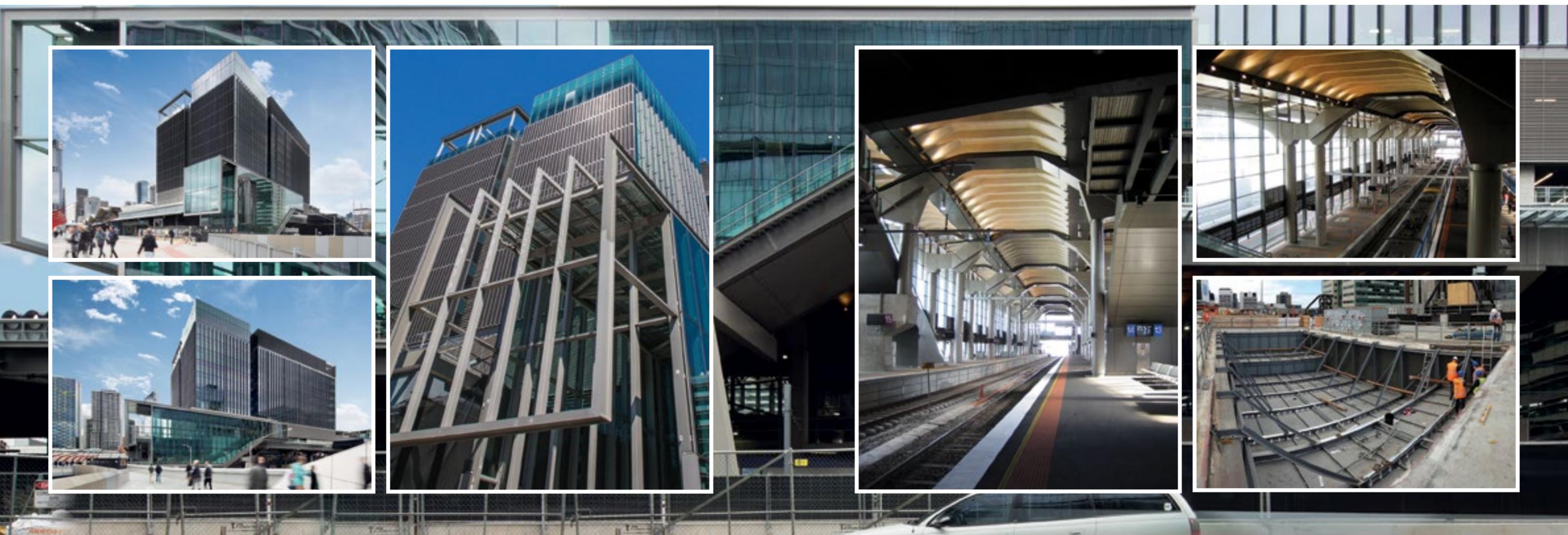
"We're really proud of the building. It has been a unique and challenging project, yielding an architectural landmark and for Mirvac the pinnacle of the whole project has been the relationship with AGL. I don't know any other developer in the industry that has formed a stronger ongoing relationship with a tenant and that has resulted in several offshoot joint ventures."

For more information contact Mirvac Group, Level 5, Building Q3, 6 Riverside Quay, Southbank VIC 3006, phone 03 9645 9400, fax 03 9695 9444, website www.mirvac.com

Below du Chateau Chunn were responsible for ensuring that the construction process was safe, accessible and energy efficient.

du CHATEAU CHUN

Below WSP Structures were responsible for the Structural Design of 699 Bourke Street.



du Chateau Chun have been the leaders in building legislation, technical codes and construction standards for the private sector market for more than 28 years.

Operating out of Melbourne, Sydney and Canberra they provide the property development and construction industry with professional advice on property and construction for residential, commercial and industrial projects.

With a team of highly skilled and experienced professionals coupled with years of building regulation and code advisory experience they were the preferred building surveyors of 699 Bourke Street. du Chateau Chun were responsible for ensuring compliance with the Building Code of Australia (BCA).

The entire construction was to take place on a concrete deck above Southern Cross Station. Having no immediate street frontage to access the build “above a major transport interchange facility” proved to be the most challenging aspect of this project, says Greg du Chateau. The project involved collaboration with rail authorities to avoid any disruption to rail services and an exact work schedule.

du Chateau Chun were required to assess plans for compliance with the BCA and then issue building permits for commencement of building work. Mandatory inspections of the building commence once building works start and this process continues for the duration of the construction, in this instance over a two and a half year period. An occupancy permit is then issued at the completion of the project prior to the occupation of the building.

du Chateau Chun describe their work ethic as one where they strive for quality to be met. Employing 14 people, loyalty is at the core of their team. They pride themselves on having consistent and successful project completion, knowing that this positivity engenders a motivated work environment. 699 Bourke Street further establishes them at the forefront of building regulation and code compliance practice.

For more information contact du Chateau Chun, Suite 218/838 Collins Street, Docklands VIC 3008, phone 03 9081 1688, website www.duchateauchun.com

WSP Structures were responsible for the structural design of the new 12 level office building at 699 Bourke Street including the transfer deck (built over the existing station) for the 699 Bourke Street building and a future building at 664 Collins Street.

The deck was designed as a series of stylised portal frames, transfer beams and stylised precast floor planks. The 699 Bourke Street building was constructed using composite slabs and beams. The lift and stair shafts which resist lateral forces was constructed using precast panels. Composite floors were adopted to maximise the yield for the existing transfer deck. The lighter weight of steel construction allows for an additional two levels compared to the original concept of a banded slab.

The biggest challenge to overcome was constructing the new station and the 699 Bourke Street building under occupation. Typically a two or three hour window at night was available for construction. The deck and building was constructed using prefabricated large self contained steel shells complete with reinforcement cages.

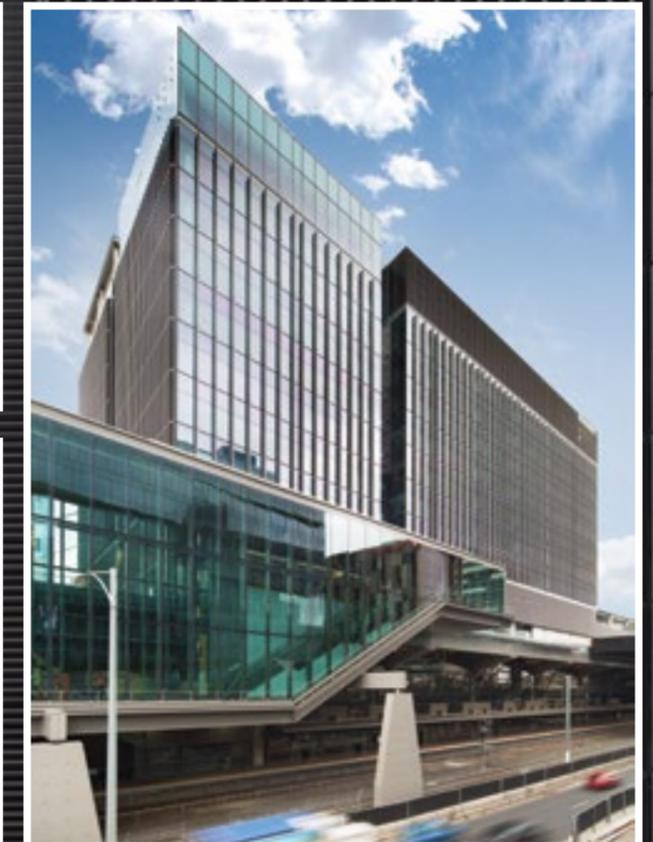
Winward Structures merged with WSP Global in June 2014 to form WSP Structures in 2014.

In 2003 Winward structures were employed for the structural design services of the entire redevelopment of what was originally Spencer St Station and is now Southern Cross Station. Formerly quite an old 1960s station, it was demolished to make way for the city's largest transport hub and air rights development. It runs suburban rail, interstate rail, a bus terminal, and airport services.

For more information contact WSP Structures, 488 LaTrobe Street, Melbourne VIC 3000, phone 03 8327 8600, fax 03 8327 8699, website www.wspstructures.com.au



699 Bourke Street, VIC



Working anywhere near rail corridors involves added layers of complexity in regards to the logistics of the build. Safeworking Solutions has a dedicated team that is committed to safe and efficient work practices when dealing with railway-affected sites.

The new office building from Mirvac, 699 Bourke Street, is sited directly above the Southern Cross Rail Station in Melbourne's CBD. Being built on an existing concrete deck, the development reaches 24 metres above platforms 13–16 of the station, and spans 180 metres in length 40 metres in width.

The team of 20 from Safeworking Solutions specifically provided rail safety to on-site staff that then allowed works to occur while live trains were operating through the station. Key to the success of this work-sites intensity was the communication between Ground Level to works occurring on the levels above. As a transport hub for both interstate and suburban trains, Safeworking Solutions competently handled the site complexity whilst ensuring a safety –above-all approach.

Since its inception over 16 years ago, the company has gone from strength to strength, with the excellence of their safety

record preceding them. With a clear intention to be the 1st choice safeworking and service provide in the rail industry, their commitment to ensuring all staff maintain full competency and commit to being a responsive, action oriented organization on site, continues them on their path to growth.

Further services offered by the company range from L1 TISA Training, ABS/LS competent Employees, gangers, hand signalers, Trackforce Protection Coordinators, Operational Safeworking Supervisors, TVO Operators, and on track approvals.

Working across South Australia, Victoria and New South Wales, other current projects include the Geelong and Grovedale Station upgrades, Regional Rail link, and Warragul Rail Precinct Upgrade.

For more information contact Safeworking Solutions Pty Ltd, 3 Ryland Avenue, Croydon VIC 3136, phone 1300 720 934, website www.railsws.com.au