

INNOVATIVE DESIGN BRINGS OUT THE BEST

The \$60M Albert Tower Project consists of 157 apartments over 30 levels including a combination of 1, 2 & 3 bedrooms and two retail spaces on the mezzanine and ground floors.

MAIN CONSTRUCTION COMPANY : ICON Construction Australia
DEVELOPER: Joint Venture between Perri Projects and The Carter Group
SUPERINTENDENT: Gallagher Jeffs Consulting
PROJECT END VALUE : \$60 million
COMPLETION : October 2013
STRUCTURAL & CIVIL ENGINEER : Winward Structures
SERVICES ENGINEER : Wood & Grieve Engineers
ARCHITECTS : Rothe Lowman



The spectacular curved precast lattice on the facade of Albert Tower makes it obvious that this was a challenging project, requiring a high level of creative thinking to deliver the design by Architect Rothe Lowman. For Icon Construction Australia (Icon Co), resolving the implicit constructability puzzles of this remarkable 30-level tower resulted in a tremendous demonstration of innovation in action.

Developed as a Joint Venture between Perri Projects and The Carter Group, Albert Tower comprises 157 apartments, two retail spaces on the mezzanine and ground floors, and a rooftop terrace with landscaped garden areas, barbecue area, pool and resident's gymnasium. The project's nine levels of car parking are in the majority above ground, and serviced via custom-built car lifts.

Every apartment has feature walls and feature windows which are curved to match the lattice work, creating a high level of complexity inside, and out. "There were a lot of meetings between us, engineers, architect and client about the best way to erect the facade feature precast panels," said an Icon Co Spokesman.

"In ensuring that the original intended shape and design of the stunning building facade was met, the design required resolution into individual panels which would together form the desired whole once erected, while each being of dimensions which could be transported via A-frame truck and safely craned into position. We paid extremely careful attention to sequencing during the installation to ensure accurate placement and achieve the required tolerances for the final result. Installing curved windows into the curved precast also required a lot of thought and input at the design stage. Once finalised, the precast design was then given to the window contractor to ensure that the curved windows would fit in the openings provided by the curved panels."

"The lobby, which consists of an architectural "Atkar" ceiling and a striking curved corian wall along one side, required intimate detailing and design coordination. As the lobby was also the primary entrance to the building site, a high level of logistical management was implemented when building works were being undertaken and machinery was being used."

All of these complexities meant that an extremely high level of craftsmanship and skill was required on the part of every trade, with Icon Co's team paying scrupulous attention to detailing to achieve the level of quality required. With such irregular non-linear

geometries to resolve, and strict tolerances, the process involved implementing project management skills of the highest order.

Icon Co commenced on site in November 2011, and had the first slab poured by April 2012, with practical completion achieved on October 8, 2013. Eight Icon Co staff worked consistently onsite, including Project manager, Site Manager, Contract Administration, Coordinators and Foremen. In addition, the crane operators, traffic, OHS, Shop Steward, peggy, car lift and alimak drivers and some general labour were direct Icon Co employees. With around 30 subcontractors also on site at various stages, the peak daily workforce was more than 150 people.

Logistics were critical, so as to maintain program and achieve required handover dates for the client.

In terms of methodology, one of the key efficiency measures Icon Co's team implemented was re-positioning the site's tower crane to the southern part of the east facade. While this required a change in the piling design and a re-engineered facade, it enabled the crane to access the whole site the entire time.

Premium quality in finish and fitout is also married with sustainability at Albert Tower, with the project featuring roof-mounted solar panels for hot water and a rainwater storage tank on the roof, which will irrigate the landscaped area and service the cisterns throughout the building.

In completing Albert Tower, Icon Co's team has demonstrated a level of commitment to achieving remarkable results which puts them at the forefront of construction innovation. Icon Co has approximately 200 staff working out of offices in Sydney and Melbourne. These skilled teams are currently constructing a range of projects totalling over 2000 apartments, retail and commercial offices and student accommodation in Melbourne and Sydney. In addition to undertaking projects across multi-unit residential, commercial, education, health and government, Icon Co has a development arm. Recent awards recognising their innovation and expertise in construction include the Melbourne Design Development Award for Harper Lane in St Kilda; and a 2008 Special Commendation for Excellence in Construction of Commercial Buildings.

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EUROPEAN EXPERTISE DELIVERS NEW LEVELS OF SERVICE

What sets Nordic Elevators apart is their ability to design engineer and supply bespoke solutions for projects like Albert Tower. The two MRL Traction Car Lifts they designed and constructed for the project service 16 openings over 9 levels of car parking, and have a range of leading edge features.

The lifts use a frequency drive which shuts down completely, including lights, when the lift is not in use, which will be a long-term energy-saving benefit. Residents are issued with a key fob remote which calls the appropriate lift and opens the doors automatically, so there is no need to exit the vehicle until the final destination.

Manufactured in Italy from powder-coated steel with black landing doors, the lift cars are 2.5m wide, 7m long and 2.1m high. The controls are Swedish, and the motor for the lift drive is from Germany. All these components were manufactured to European Standard EN81, and Nordic made minor adjustments to some aspects to ensure they comply with AS1735 and AS3000 (Wiring Regulations for Lifts).

“This has been a good project for us,” said Nordic Elevators Director, Johan Paschek.

“Albert Tower is our biggest lift carriage to date with the most landings and number of openings. Working with Icon has been fantastic, everything has gone very smoothly.”

Nordic Elevators worked closely with Icon, the architect and the consultant team throughout, with four of their staff including

lift mechanics, riggers/electricians and mechanical fitters engaged full-time on the project during the installation phase.

The entire process from early design through to final commissioning took nine months due to the large number of landings making for a substantially complex process for approval of design drawings, and for a lengthy and detailed installation process. For most of their projects, with fewer landings, they average a 20-week timeframe from initial design specification to final commissioning.

Having open global supply networks, rather than being tied to one manufacturer, allows Nordic Elevators to deliver solutions which are precisely tailored for both performance and aesthetic requirements.

“Quality is key, and every lift we design and construct is made specifically for the individual project and application,” said Johan.

“We only use the best quality materials, and we maintain excellent communication with our customers – the customer is everything. It’s an old-fashioned approach to providing a service which is not just about the bottom line.

“We take on anything, from very small lifts for luxury homes through to large capacity lifts for commercial office towers, schools and apartment buildings, and platform lifts for disabled persons. We have the experience and the access to technology to design and construct any sort of lifts.

“I would love to one day put in a 30-40 level car lift which allows people to park right outside their apartments, I am hoping one day to do that.”

Nordic Elevators also have specific strengths in the area of refurbishments and upgrades, as they are able to assess the existing lift and specify, install and commission the precise parts required, including a state-of-the-art control system which can be adapted to any pre-existing system.

A lift renovation can be as simple as new doors, new interiors or new mechanicals and control system, such as the magnificent upgrade Nordic Elevators undertook for a project which had 1940’s era lifts with stunning glass and brass doors. All of the lift systems were carefully removed piece by piece, then all new mechanicals and electronics installed before replacing the original doors, as a result maintaining a vital part of the building’s charm while ensuring a lift solution which was reliable, energy-efficient, safe and meets current BCA and AS/NZ requirements.

The company has a 24/7/365 service centre which provides ongoing backup, including emergencies, routine inspection and maintenance, which is delivered on a schedule responsive to frequency of use.

Recent major projects Nordic Elevators have completed include the design and construction of 2 x 4,500Kg Hydraulic Goods Lifts for K-Mart at Sanctuary Lakes Shopping Centre; 1 X 1000 Kg MRL and 2 x Hydraulic Lifts for Marriot Waters; The lift at the recent Channel 9 The Block series to service 6 levels, including removal of the existing lift and adding 1 extra level, and installation of a new 1000 Kg MRL traction Lift; and 3 Lifts plus 2 Dumb waiters and 1 modernisation for State Coronial Services. They are currently in the early stages of projects for Swanston Square (2 x 4000 Kg 1m/s MRL car Lifts 9 Levels), Frankston Hospital (six lifts) and Eastern Health (two lifts).

For more information contact Nordic Elevators, Unit 17, 125 Highbury Road, Burwood, VIC 3125, phone 03 9889 8112, fax 03 8677 9753, 24h Service 03 9837 5702, website www.nordicelevators.com.au



Albert Tower, VIC



DOTTING THE I'S AND CROSSING THE T'S

As leading edge building surveyors, Reddo ensure the end result of the builders' efforts is fit for purpose and meets the owner's specifications. Being involved in all stages from planning, design, construction and final certification, their involvement is a critical component of a successful build. In over a decade of operation, their expertise has seen them grow into a company with 15 staff, providing services to projects from the top end of town in Melbourne to the Top End in the Northern Territory.

At Albert Tower in Melbourne, Reddo began work over four years ago as the owner's representative, undertaking the initial surveys, including checking ownerships, easements, covenants, town planning approvals and other documentation. Then in late 2010, Reddo began attending the design meetings and provided services checking the architectural and engineering specifications were compliant with the BCA and other relevant codes. Once the tender was granted, Reddo was notated to the builder, and issued the building permit.

Then Reddo began the process of weekly discussions with the builder; undertaking as-built surveys; collating engineers' inspection reports; checking of compliance certificates; and obtaining approval from the fire brigade. The level of detail extends to aspects such as measuring floor areas, counting and measuring windows, and checking emergency lighting systems and general light levels against the BCA requirements. Reddo will also issue the final handover certification.

"Builders rely on us to explain planning and building codes in plain-English, and they appreciate our hands on involvement through each

stage of their project" said Reddo Director, Peter Eyers. "The beauty of the Albert Tower project is the quality of the builder, architect and consultants, who have all worked really smoothly together. Our project manager (on behalf of the owner) liaises regularly with the builder and the consultants.

"There has been an enormous amount of documentation to complete and coordinate, however this has been a very good job to work on, because everyone has been working together to solve problems."

Other projects Reddo is currently working on include the 30-storey mixed-use retail and residential Chinatown project in Darwin; a variety of new buildings for the Victorian State Government; and a commercial offices project in Mulgrave.

Reddo take their role as advocates for the client's interests seriously. Each project is assigned to one of the three Directors who follow it through from design to final handover. Their philosophy is simple. They represent clients' best interests at all times, they make building legislation easier to understand by cutting through the jargon, and they add value through their involvement. The team at Reddo have the qualifications and experience to advise on and apply innovative design solutions, whilst maintaining a responsible approach to building regulation and control.

For more information contact Reddo Building Surveyors, Level 1, 1 Green Street Richmond, VIC 3121, phone 03 9421 3211, fax 03 9421 2955, email info@reddo.com.au, website www.reddo.com.au