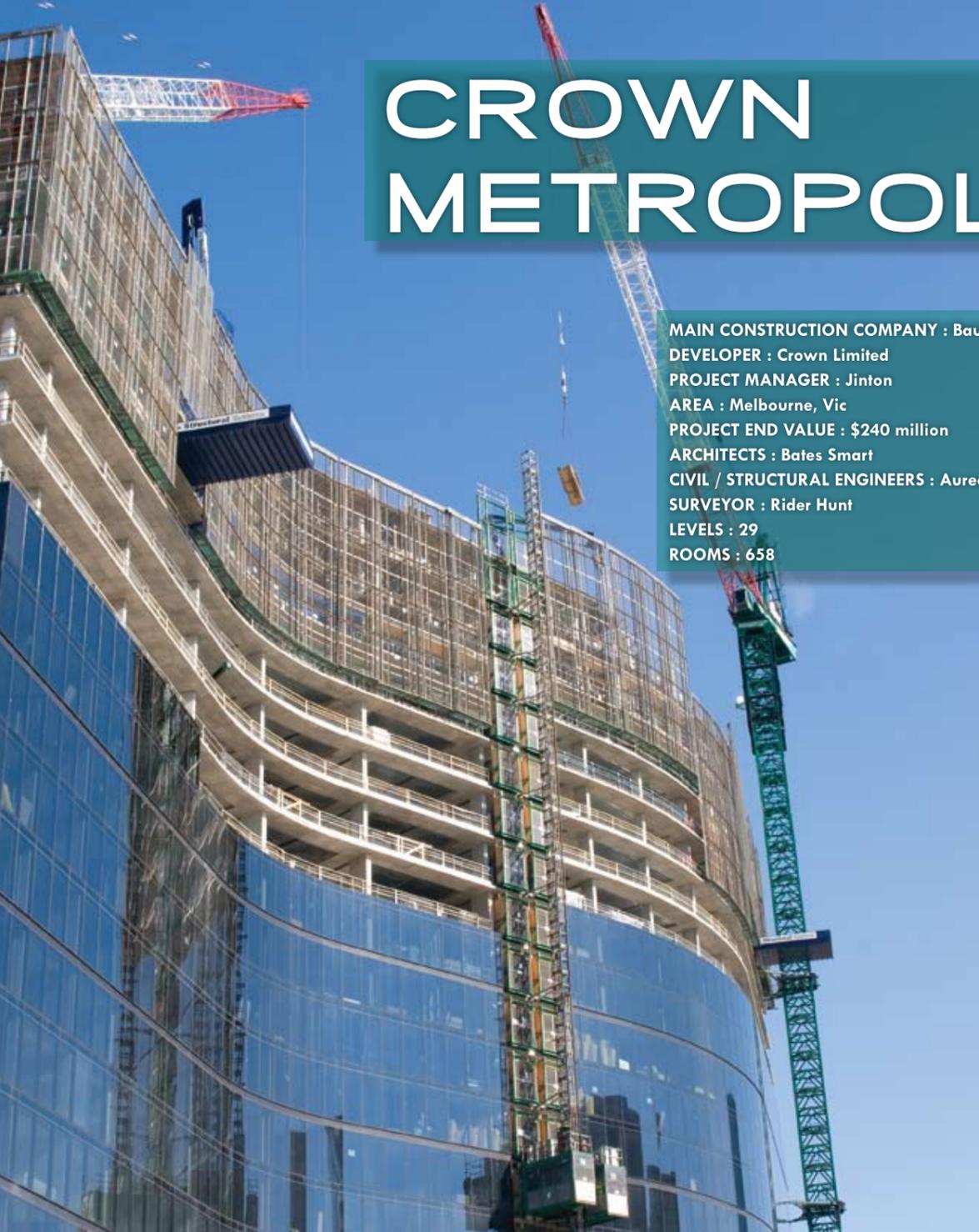


CROWN METROPOL

MAIN CONSTRUCTION COMPANY : **Baulderstone**
DEVELOPER : **Crown Limited**
PROJECT MANAGER : **Jinton**
AREA : **Melbourne, Vic**
PROJECT END VALUE : **\$240 million**
ARCHITECTS : **Bates Smart**
CIVIL / STRUCTURAL ENGINEERS : **Aurecon**
SURVEYOR : **Rider Hunt**
LEVELS : **29**
ROOMS : **658**



Baulderstone identified that a key success factor for the project was the performance of the services and the Site Management Team is working closely with both Crown and the design consultant team to ensure that the detailed engineering and procurement checks performed by the services subcontractors pay particular attention to both energy efficiency and product sustainability issues.

Working on an average floor cycle of 6.5 days, Baulderstone streamlined the construction process by working closely with the subcontractors to maximise the off-site manufacture of rough-in phase materials and therefore minimise their time on the working decks.

The Metropol's curved glass façade is not only the key design feature of the structure but its installation was crucial to the construction plan as it governed the progress of the following finishing trades.

The design of the curtain wall facade system is based on the concept of a panellised system where the units are prefabricated and glazed off site and delivered to site on pallets ready for installation. The majority of the panels in the tower structure are designed based on a vertical strip system enabling the installation to occur from within the building using a proprietary system of hoisting panels from the floor to the outside of the building using a floor crane. The curtain wall was made (manufactured) in Australia with glass imported from China. The curved shape of the core best suited the use of slip forms for the two service cores in the building.

On completion, the Crown Metropol will bring the combined hotel accommodation in the Crown Complex to excess of 1600 rooms, which will be the largest of any hotel site in Australia.

Crown Metropol is the largest stand alone hotel in Australia.

It will also bring yet another iconic structure into the impressive Baulderstone portfolio which features buildings of both local and worldwide significance including the Sydney Opera House, Sydney's Anzac Bridge, Brisbane's Storey Bridge, Melbourne's Etihad Stadium and Adelaide's Convention Centre.

With over 1200 employees, Baulderstone is one of the largest Building and Engineering companies in Australia, with turnover in excess of \$1.5 billion.

The company offers a full range of construction services and is currently working on the Kurilpa Bridge in Brisbane and was recently awarded the contract for the upgrade of the Mardi Dam Transfer and High Lift Systems at Mardi on the NSW Central Coast.

BAULDERSTONE RECEIVE THE CROWN

Crown Metropol, the third hotel in Melbourne's Crown Entertainment Complex, is currently under construction with main builder Baulderstone and project manager Jinton, set to deliver the project in early 2010.

The 29 level Metropol features a distinctive curved glass façade and will include a total of 658 rooms made up of 625 King rooms and 33 suites based on a module and standard room size of 38 square metres, meeting rooms, business centre, restaurant and bar, club lounge, a day spa and fitness centre.

Correct selection of the materials handling plant was acknowledged as critical to achieving the 24 month construction programme with a Favco

310D tower crane with a 55m boom length capable of lifting 8T at 35m to 3.7T at 52m, selected to serve the northern section of the tower and a Favco 310 tower crane with a 51.6m boom length capable of lifting 16T at 17.5m to 4.5T at 51.6m to serve the southern portion.

The construction methodology incorporated a hydraulic perimeter protection screen system being erected in conjunction with the concrete structure sequence to enable the construction of the perimeter columns and beams and once erected, form part of the slab edge of the suspended slab. Precast was used for the two non typical walls in the lower section of the south core and the carpark lifts with blade precast columns used for the typical floors above level 8 units to be cast into the suspended slabs and installed while the perimeter screens are in place.



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HONEYWELL'S HOTEL SECURITY

Honeywell Building Solutions designs, installs and maintains the systems which keep workplaces safe, secure and energy efficient. Complex security environments, like the Crown Metropol development demand technology savvy solutions to ensure a safe and secure environment for staff and guests alike. Honeywell excels at providing building automation systems including security, life safety, heating, ventilation and air conditioning for projects of any scope or size.

Honeywell's involvement with Crown Casino operations span 12 years, and previously include installations for Crown Plaza and Crown Promenade as well as the main casino complex. For the Crown Metropol Hotel development, Honeywell undertook the supply, installation and commissioning of all required security services. This complex infrastructure includes CCTV (both live and recorded video), Access Control and a Hotel Locking System.

"The most successful outcome for the project was for Crown staff to have a seamless control system that was user friendly and would save valuable operation time," said John Dempsey, Honeywell's Victorian Operations Manager.

The Crown project includes Honeywell's flagship award winning product, Honeywell Enterprise Buildings Integrator™ (EBI), a state of the art integrated building management system designed to integrate all aspects of building automation and control into a single entity.

Notably, the Honeywell EBI™ is the base platform that is currently in operation at Crown's existing hotels, Crown Plaza and Crown Promenade as well as the main casino complex and this project will further the overall integration of the casino's various operation systems.

"The Honeywell team is thrilled to be again working with Crown on another milestone development" said David Sheward, Honeywell's Victorian Sales Engineer "Honeywell prides itself on developing long term relationships with our customers; building strong collaborative partnerships, and delivering the solutions that best fit their need".

The Crown Casino development is a showcase of the quality and technical excellence delivered by the experienced team at Honeywell.



Honeywell

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AE SMITH CROWN ANOTHER PARTNERSHIP

For over 111 years AE Smith, Australia's largest privately owned mechanical services contractor, has played an integral role in the 'construction of Australia' and most importantly has developed strong and enduring partnerships throughout the industry.

The company's vision to be 'partner of first choice' was clearly evident as mechanical services sub contractor on the Crown Metropol Hotel project. A role, which continues its long association with both Baulderstone and Crown in Melbourne.

AE Smith provided the air conditioning, chilled and hot water plant to the hotel rooms and podium floors, with each hotel room having its own fan coil units. The project team of 63 plumbers, headed up by General Manager Peter Staedler and Project Manager Angelo Pascuzzi, showed exceptional teamwork in working on all floors simultaneously to meet the timeframe and utilised their extensive experience to deal with the challenges presented by the unique 'S' shaped building design.

The company's superior teamwork is a reflection of the importance the company places on partnerships, both internal and external, and with tough economic and environmental conditions prevailing, choosing the right partner can be critical to a project's success.

The AE Smith team of 650+ professionals is organised into four separate but complimentary business units, which together, deliver a single source solution around Australia.

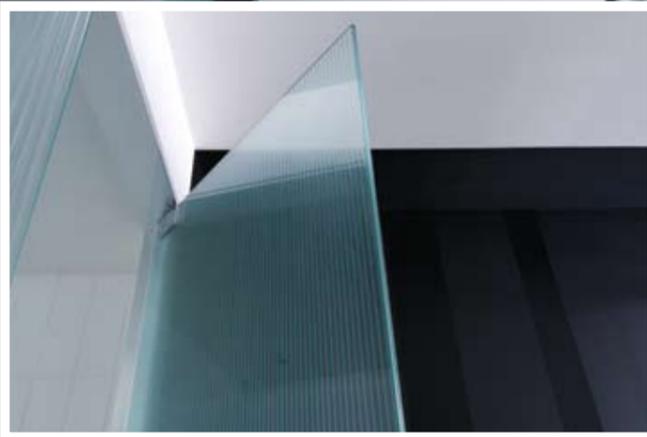
To further support their partners, AE Smith recently launched a new business unit called Emerald Sustainable Performance to help improve the environmental performance and energy efficiency of commercial buildings.

The company also recently reaffirmed its status as the exclusive 'Master Dealer' in Australia for the American Auto-Matrix range of Building Control Systems, further strengthening their depth in air conditioning and mechanical services, environmental controls and energy services.

AE Smith continues its enviable role as 'partner of first choice' with current projects including the \$330 million Ecosciences Precinct in Brisbane for Watpac and Melbourne's \$1 billion New Royal Children's Hospital (as part of a Joint Venture) for Bovis Lend Lease.

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HEART OF GLASS

In taking on the bathroom fit out at the C3 Hotel, Heritage Glass were faced with some demanding design and finish challenges.

The designers selected a glass with narrow ribs for shower and toilet cubicle doors and dividers, with an expressed requirement that the glass lines produced by the ribs be clean, clear and sharp, yet still allow a fair degree of privacy. The products on offer from around the world all fell short on one or another criteria. The solution was to use high quality float glass as a base, and use a multi headed CNC controlled glass milling machine to sculpture the required pattern and finish to the glass panels. All panel sizes were predetermined and ordered from shop drawings.

To compliment the selected glass we consulted on the design of appropriate door handles, and manufactured project specific handles which double as a towel rail in a highly polished stainless steel finish.

The next challenge was to incorporate a door stop, which stopped the door opening out and allowing water to drip onto the floor, but was removable by hand in the event of an emergency, thus allowing the door to be opened outwards.

We were then asked to install glass panels hanging from the ceiling in the pool area on level 27/28.

These panels were over 5 meters high and 2 meters wide, all 25mm thick, and with an individual weight of 700kg. We designed project specific hanging brackets. The logistics of installing these large panels in such a location proved very challenging, the stunning appearance of this glass curtain justifies the challenges which had to be overcome.

We are proud to have been part of the team which has put together a project which was uncompromising in the demand for excellence.

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COOKE & DOWSETT CROWNED

With over 19 years experience in the commercial plumbing industry, Cooke & Dowsett have worked with many of Australia's leading commercial builders and architects to achieve and deliver excellent project results and now they have been 'crowned' as the hydraulics contractor for Crown Metropol at Melbourne's Crown Casino complex.

Cooke & Dowsett were commissioned by project builder, Baulderstone to supply and deliver the complete hydraulic services package to the project, with the scope of works including sewer drainage, stormwater drainage, sewer waste and vents, hot and cold water, warm water, fit out of the commercial kitchens, sanitary fixtures, compressed air lines, ultra violet disinfection, rainwater harvesting, stormwater downpipes, greasy drainage, tradewaste, methane vents and the in-ground fire services.

The company utilised a number of new procedures on the sleek, contemporary building including the use of the Environmentally friendly material Polypropylene (PPR) for the delivery of the hot and cold reticulation system throughout the building, GPS surveying equipment for locating the hydraulic services penetrations, installation of a rain water harvesting system for irrigation and pool make up water and due to the poor ground conditions HDPE with stainless steel clipping was installed.

The GPS equipment was required to deal with the challenges presented by the complexity of the unique curve of the building. Cooke & Dowsett

also implemented a specific and dedicated design team to extensively coordinate the pipework due to the uncharacteristic challenges on the upper levels of the building. Cooke & Dowsett also faced the challenge of complying with the higher level of OH&S standards implemented by Baulderstone. Cooke & Dowsett appointed a dedicated specialised OH&S officer to supervise the required training and consultation to meet these standards.

Founded in 1992 and formally known as Scott Dowsett Plumbing Services, Cooke & Dowsett have been associated with numerous high profile projects with their expertise and experience not limited to Water Systems, Drainage Systems, Gas services, Fire Services and Civil Drainage but extending to Design and Construct with their designs implemented throughout Australia and on a number of international projects.



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GOS AUSTRALIA JOIN CROWN METROPOL



On completion, the Crown Metropol will bring the combined hotel accommodation in the Crown Complex to 1600 rooms, which will be the largest of any hotel site in Australia and fittingly the largest project to be undertaken by custom joiner, GOS Australia (gosa).

The 29 level Metropol includes 685 hotel rooms with an average size of 38 square metres and GOSA fitted out all the guest rooms with wardrobes, mini bars, vanities, screens, bedheads, amenity boxes, bed shelves as well as the lift lobbies and foyers including feature wall panelling and the back of house joinery work.

GOS Australia have over 20 years experience and provide a comprehensive range of specialised joinery services from design advise, through manufacturing and site installation. With state-of-the-art technology and techniques, GOSA utilised their expertise to achieve the Clients unique and highly stylised design elements of this landmark project.

The company's extensive supplier network was invaluable in sourcing the required materials – fabrics, carpets, timber veneers etc – both locally and internationally, to meet the design specifications. GOSA demonstrated their vast expertise using a range of materials and finishes: timber, MDF, glass, stainless steel, stone, polyurethane, staining and clear finishes on this large, prestige property.

With dedicated project personnel and dedicated site installation teams, GOSA met the challenge of Baulderstone's tight project schedule of an average floor cycle of 6.5 days and delivered up to 38 rooms a week during to complete the project.

Based in Heidelberg Heights, Victoria, GOS Australia have proven their capability to complete even the largest projects, with the Crown Metropol adding to their portfolio which also includes The Melbourne Convention Centre, Melbourne University Faculties & Commas Building, Hilton FF&E and Podium, Royal Women's Hospital, Yarra Street Apartments, Southern Cross First Development and Holden Headquarters to name a few.

The company is also now working on The New Royal Children's Hospital Development, 717 Bourke Street Travelodge, The Bank Apartments, LEA – Monageetta Test Services and Thomastown Recreation & Aquatic Centre.

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