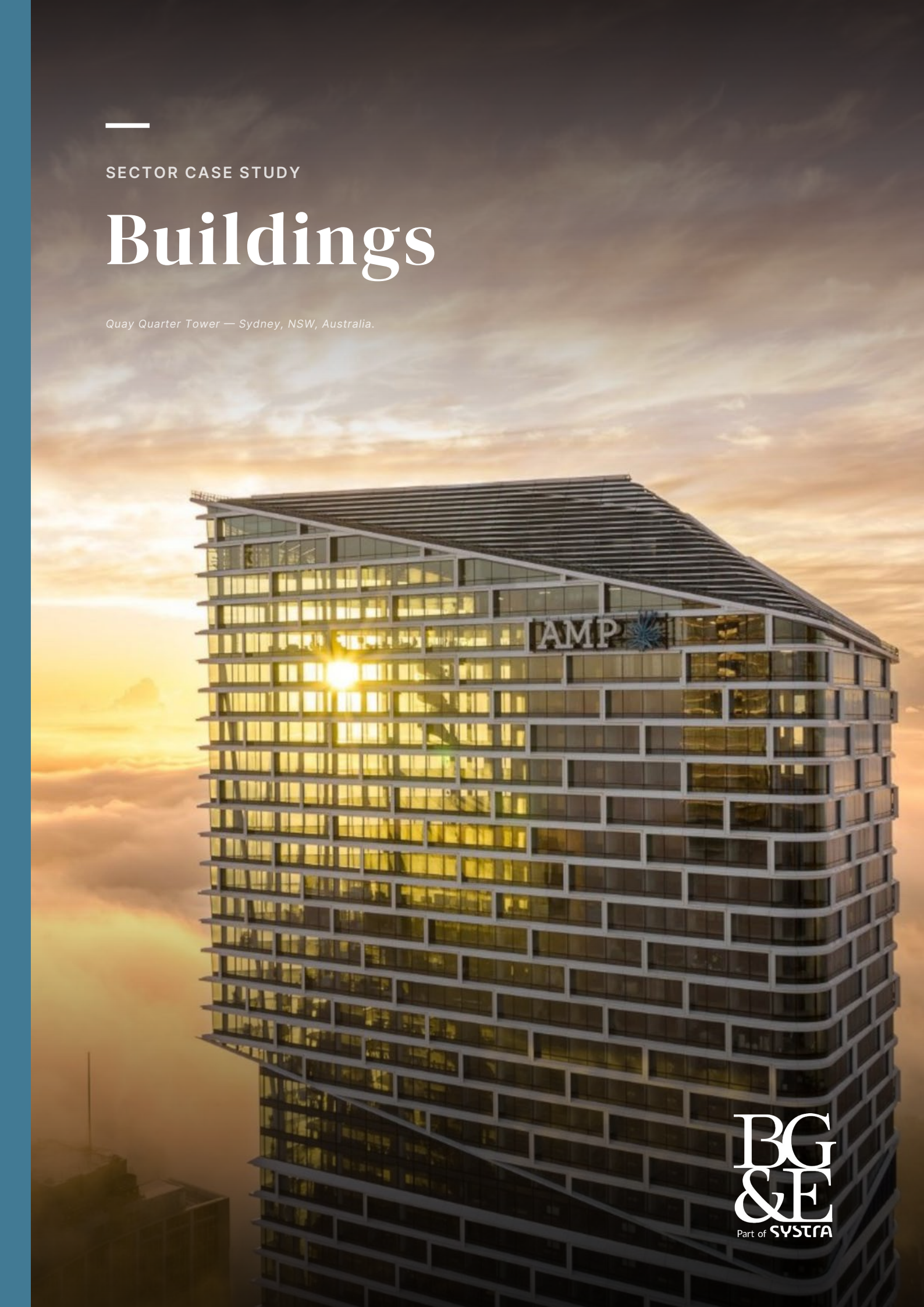
SECTOR CASE STUDY

Buildings

Quay Quarter Tower — Sydney, NSW, Australia.



BG&E
Part of SYSTRA

Content

01 Commercial
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06 Complex Structures
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09 Sports & Entertainment Stadia
10 Hotels
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12 Heritage & Refurbishment
13 Data Centres

50 First Avenue —
Maroochydore, QLD, Australia.

SECTOR CAPABILITY

Commercial

COMMERCIAL

One The Esplanade (Chevron Tower) — EQ Lot 7

STRUCTURAL | CIVIL | CONSTRUCTION ENGINEERING

PERTH, WA, AUSTRALIA
CLIENT: MULTIPLEX

BG&E played a central role in the delivery of Chevron's new headquarters at One The Esplanade — a 130 metre tall commercial tower in the vibrant Elizabeth Quay precinct in Perth.

One The Esplanade by Brookfield Properties is a 29 storey Chevron-anchored development comprising 54,000 square metres of office space, including lobby, conference, and exhibition spaces. Best-in-class amenities include a gymnasium, childcare centre, cafes and restaurants, and retail tenancies throughout the podium.

Engaged under a D&C contract, we delivered full structural, civil, and construction engineering services, including design, documentation, and contract administration.

COMMERCIAL

Sydney Charles Quarter

STRUCTURAL

PERTH, WA, AUSTRALIA
CLIENT: APPL GROUP

BG&E is delivering full structural engineering services for Sydney Charles Quarter (SCQ) — a landmark mixed-use development transforming a prominent 1.95 hectare site in West Perth. Set across four buildings — housing residential, commercial, retail, and hotel uses — the precinct is unified by "The Commons," a 5,600 square metre public open space designed to create a vibrant urban village.

SCQ responds to significant topographic challenges, with a seven metre site fall from Newcastle Street to Old Aberdeen Place, driving complex basement design and retaining solutions. A concrete frame solution underpins the residential towers and hotel, supported by raft and pad footings, while steel framing is used for the distinctive sawtooth roofs and architectural features. The structural systems were developed to minimise transfer structures, accommodate irregular grids, and optimise buildability across podium, tower, and heritage interfaces.

A key feature is the adaptive reuse of the 1960s Pickle Factory. BG&E is undertaking detailed structural analysis and upgrade works to meet seismic standards and extend the building's life. The structural solution integrates heritage preservation with contemporary performance, ensuring the revitalised factory becomes a vibrant hospitality offering within the precinct.

COMMERCIAL

50 First Avenue

STRUCTURAL

MAROOCHYDORE, QLD, AUSTRALIA
CLIENT: WALKER CORPORATION

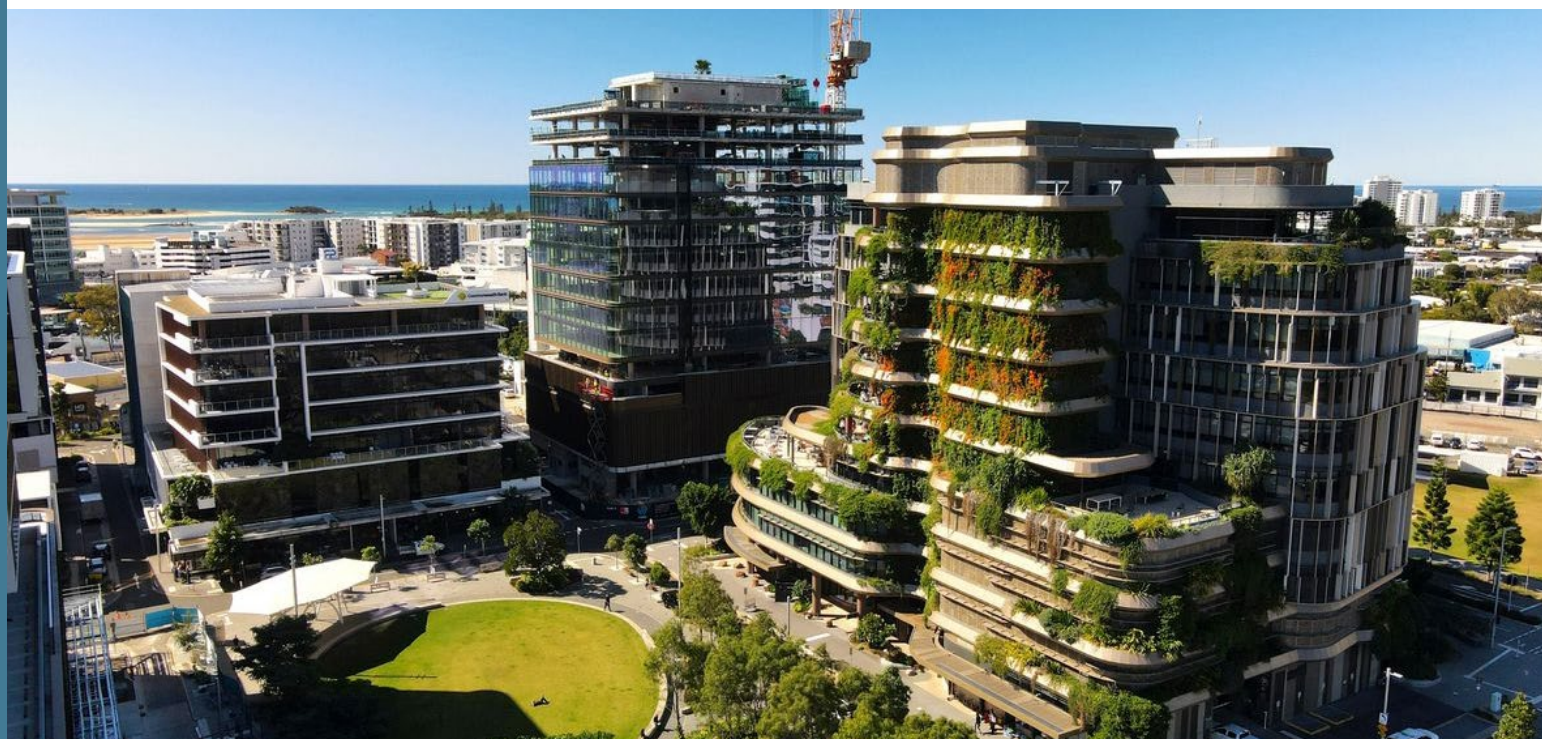
At 15 storeys, 50 First Avenue is set to be the first true high-rise in Maroochydore, located in the Sunshine Coast's city centre.

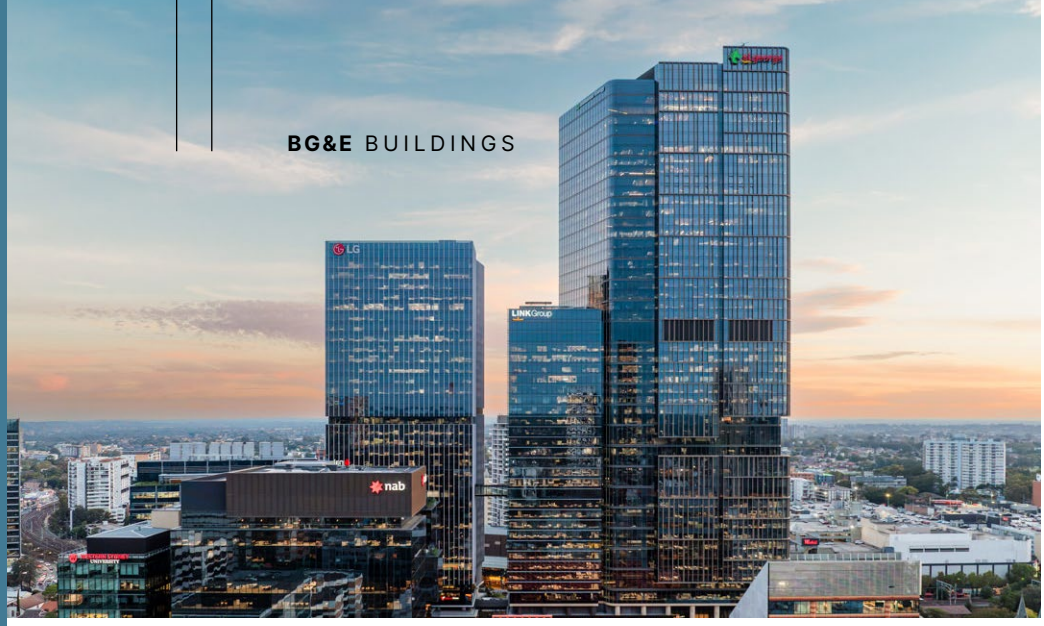
BG&E was initially approached by Walker Corporation to undertake a peer review of the development and confirm any possible structural savings available in the design. Our review highlighted floor plate savings, and we were subsequently engaged to redesign the overall structure.

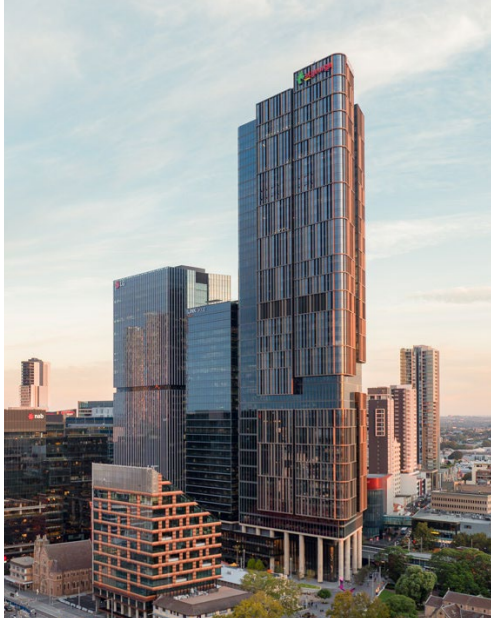
The final design included in excess of $1 million in structural savings and offered the possibility of adding a 15th level to the structure, which was incorporated into the project.

Targeting a 5 Star Green Star Rating and taking aesthetic inspiration from the nearby Glasshouse Mountains, the development will include screened parking, a small retail component, and eight levels of premium commercial space.

As of 2025, the structure is currently under construction, with BG&E providing site supervision works to the contractor after novation.







COMMERCIAL

Parramatta Square

STRUCTURAL | CIVIL | FLOODING & HYDROLOGY

PARRAMATTA, NSW, AUSTRALIA
CLIENT: WALKER CORPORATION

BG&E provided schematic design development in close collaboration with the architect, along with civil, flood, and drainage design services through to construction for Parramatta Square, a project of significant scale and importance to the community.

Parramatta Square is a three hectare mixed-use precinct developed by Walker Corporation, consisting of six stages and accommodating a mix of commercial, education, and retail developments.

3PS, 4PS, and 6PS/8PS are Class A commercial office towers with with a 5 Star rating, directly adjacent to the Parramatta Train Station and the main western train line.

Civil works included road design, pavement grading, stormwater drainage, subsoil drainage design, utility coordination, water sensitive urban design, and erosion and sediment control.

BG&E was commissioned to undertake a flood assessment of the site to consider local overland and mainstream flooding from the Parramatta River. This involved developing a 2D hydraulic model, preparing flood maps and reports as well as scenarios that informed design, and diverting lunch trunk stormwater drainage infrastructure to accommodate site development.

COMMERCIAL

EY Centre

STRUCTURAL | CONSTRUCTION ENGINEERING | MATERIALS & DURABILITY

SYDNEY, NSW, AUSTRALIA
CLIENT: MIRVAC

Designed by leading architects Francis-Jones Morehen Thorp, the EY Centre at 200 George Street is a landmark of Sydney's skyline. BG&E provided structural design services, full temporary works design, and construction methodology advice.

The high-rise comprises 37 floors and five basement levels, delivering 115 metres in height and 38,000 square metres of premium office space.

Key features:

- Post-tensioned composite banded concrete floors and transfer beams.
- A four level lobby supported by 22 metre architecturally inspired slender composite "Y" transfer columns.
- Pure tension transfer columns suspending multiple levels from upper decks.
- Varying floor plate geometry.
- Challenging excavation methodology.
- Efficient design using high-strength, high-performance concrete, made possible by advice from BG&E's Materials team.
- Lateral stability achieved through an eccentric cantilevering concrete core.

COMMERCIAL

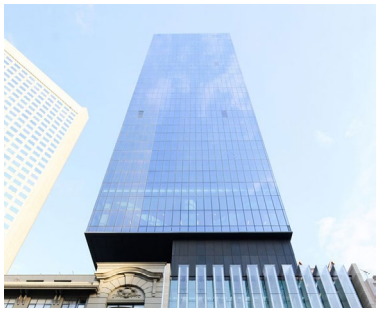
1 William Street
Façade
Brisbane, QLD, Australia.

167 St Georges Terrace
Structural | Civil
Perth, WA, Australia.

211 High Street
Structural | Timber
Christchurch, New Zealand.

260 Queen Street
Structural
Brisbane, QLD, Australia.

333 Kent Street
Structural | Construction Engineering | Materials & Durability
Sydney, NSW, Australia.



405 Bourke Street
Façade
Melbourne, VIC, Australia.

Atlassian
Construction Engineering | Timber
Sydney, NSW, Australia.

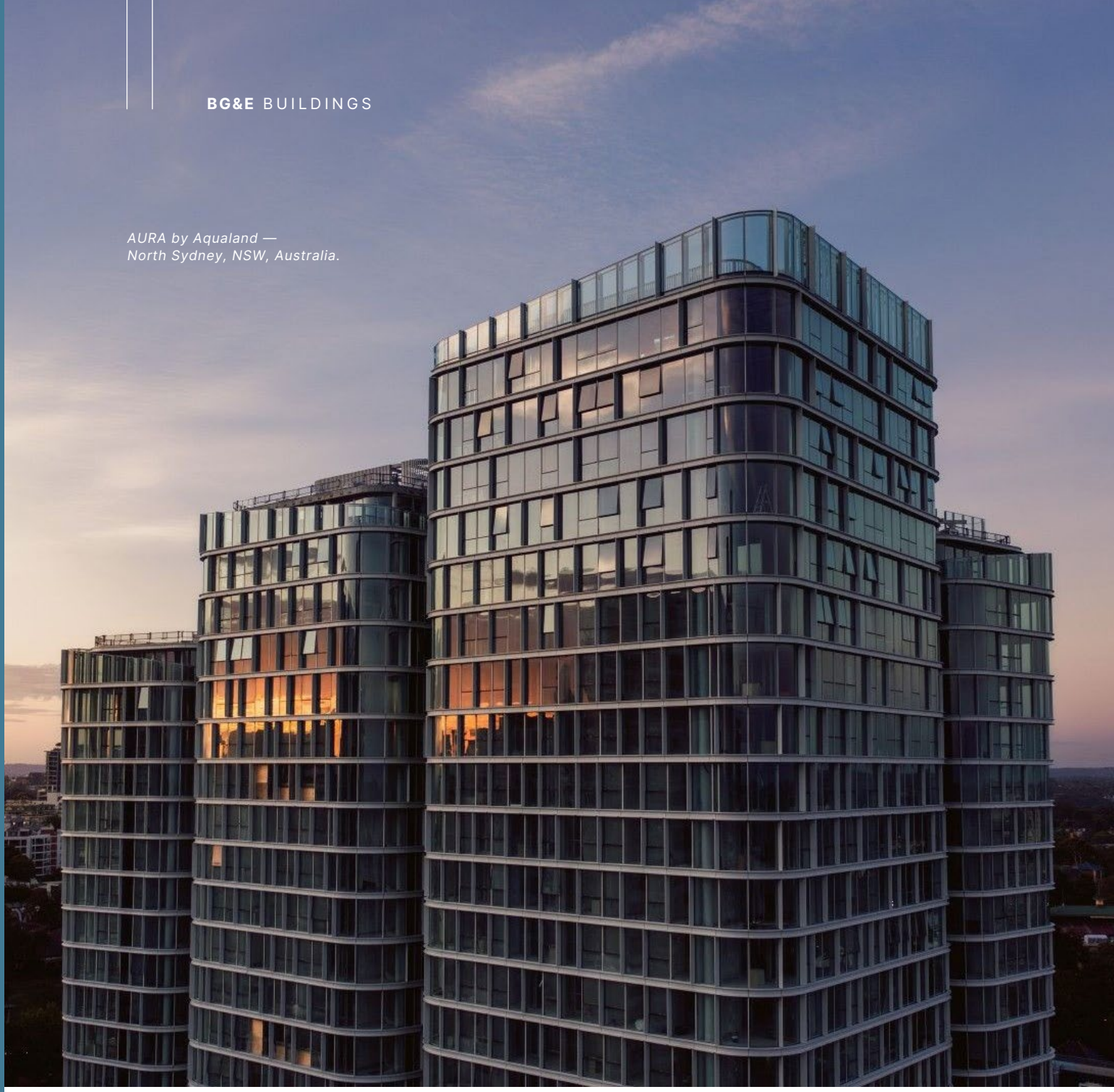
Canva Global Headquarters
Structural | Construction Engineering
Sydney, NSW, Australia.

Central Park Tower
Structural | Construction Engineering
Perth, WA, Australia.

ENEX100 Redevelopment
Structural
Perth, WA, Australia.

Kakano Centre
Structural Peer Review
Auckland, New Zealand.

The Opus
Structural
Dubai, United Arab Emirates.



AURA by Aqualand —
North Sydney, NSW, Australia.

SECTOR CAPABILITY

Residential

RESIDENTIAL

One Oval

STRUCTURAL CIVIL

SUBIACO EAST, WA, AUSTRALIA
CLIENT: UEM SUNSRISE

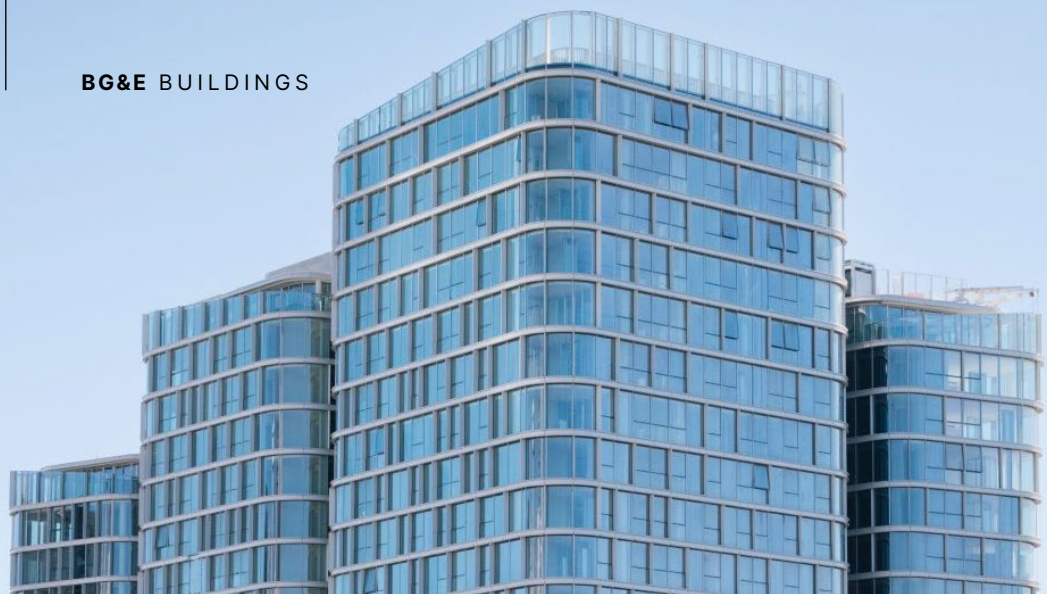
BG&E was appointed as the civil and structural engineering consultant for UEM Sunrise's flagship development within the Subiaco East Redevelopment Area — working closely with the wider design team to support staged delivery and ensure buildability.

Situated adjacent to the iconic Subiaco Oval, the mixed-use project will deliver:

- Two residential buildings — a tiered 36 storey high-rise and an 11 storey mid-rise comprising 340 apartments, townhouses, and essential worker housing.
- Ground-floor retail spaces and landscaped public areas.
- 672 car bays across multiple basement levels, requiring considered structural and civil integration beneath the high-density towers.

BG&E's scope includes:

- Structural design of reinforced concrete towers, including core and podium systems to accommodate stepped heights and architectural features.
- Basement and foundation design, tailored to suit site-specific geotechnical conditions and construction constraints within an urban setting.
- Civil design of on-site infrastructure, including stormwater management, roads, and utility servicing.
- Drainage strategy enabled by our understanding of local site conditions that leverages favorable infiltration characteristics and low groundwater levels.



RESIDENTIAL

AURA by Aqualand

STRUCTURAL | CIVIL

NORTH SYDNEY, NSW, AUSTRALIA
CLIENT: AQUALAND

BG&E provided structural and civil engineering services for AURA by Aqualand — a $1 billion, premium residential development on the site of the former headquarters of SAP at 168 Walker Street in North Sydney.

Civil services included civil design, stormwater design, external footpath and driveway design, coordination with the council and the wider project team, and 3D surface modelling.

Structural services included design of a structural system with reinforced concrete core walls, columns, and post-tensioned slabs.

AURA's undulating façade, multi-towered design, and distinctive hourglass shape mark it as an iconic addition to Sydney's skyline. This project involved coordination with awardwinning architects Woods Bagot, Richards Stanisich, and Webber Architects.

The development includes:

- Four interconnected towers.
- 386 residential apartments.
- An enormous rooftop terrace.
- A community lounge and media rooms.
- A fitness centre.
- Commercial space.
- Prime retail areas.

RESIDENTIAL

Pavilions Residences

STRUCTURAL CIVIL

SYDNEY OLYMPIC PARK, NSW, AUSTRALIA
CLIENT: MIRVAC

The $354.3 million Pavilions precinct by Mirvac comprises two build-to-sell and two build-to-rent residential buildings, located on Figtree Drive in Sydney Olympic Park.

The development includes multiple buildings ranging from 10-13 storey podium and low rise structures to a 36 storey tower in the south east corner and a 24 storey tower in the north west corner — all positioned on a common podium above a four level basement.

BG&E provided structural and civil engineering services from concept design through to construction for the development that includes:

- 705 apartments, sky homes, and terraces across multiple residential buildings.
- A four level basement.
- Resident amenities including a gym, community room, herb garden, pavilions, BBQ facilities, and a 4,500 square metre landscaped podium.
- A 1,500 square metre retail lot (cold shell).
- A new street along the western boundary, dedicated to SOPA.
- Relocation of a mature fig tree from the western boundary to the site's south-west corner.

RESIDENTIAL

Castle Residences

STRUCTURAL CIVIL

SYDNEY, NSW, AUSTRALIA
CLIENT: UNITED DEVELOPMENTS SYDNEY

BG&E provided structural and civil engineering services for Castle Residences and The Porter House Hotel, a mixed-use development in the heart of Sydney with a unique design — a 37 storey tower cantilevering over the heritage-listed Porter House building, originally built in 1876.

The slender composite tower comprises both hotel and residential levels, supported by an eight storey basement. At level 11, the tower cantilevers 10 metres over the historic Porter House, with three concealed four storey steel trusses supporting the 27 storeys above.

Located on the corner of Castlereagh and Bathurst Street, the site required a soldier pile retention wall along its full perimeter, designed to accommodate the adjacent heritage structure and Roads and Maritime Services interface.

The foundation system was developed above the Cross City Tunnel (CCT) that runs approximately 20 metres below the bulk excavation level. During construction, a Sydney Metro tunnel was also excavated parallel to the site, five metres from the eastern rock face.

The project was designed in accordance with RMS Technical Direction for Deep Excavations (GTD2012/001), with excavation depths reaching up to 25 metres.

RESIDENTIAL

Bernborough Ascot

STRUCTURAL CIVIL

BRISBANE, QLD, AUSTRALIA
CLIENT: ST HILLIERS

BG&E delivered a design for the Bernborough Ascot Retirement Village that seamlessly integrated both the existing and future stages of the project — including the majority of the site infrastructure and landscaping requirements.

Bernborough Ascot is set to be the most sustainable retirement community in Australia, after securing the sector's first 6 Star Green Star Communities rating from the Green Building Council of Australia.

The seven storey tower, known as Poinciana House, will include 53 luxury apartments and amenities consisting of an open space reception area, restaurant, residents' lounge, health and wellness centre (with a pool, yoga space, gymnasium and consulting rooms), a private rooftop terrace, and an outdoor bowling green.

BG&E was engaged to provide full structural and civil engineering for this greenfield site.

Civil components included in this scope are:

- Bulk earthworks, including cut and fill for basement construction.
- On-site drainage, including water quality and quantity mitigation measures.
- Internal stormwater drainage requirements, conveying runoff from the internal downpipe.
- Connections, hardstand surfaces and roadways, in accordance with approved SWMP.
- End-of-line stormwater quality treatment devices.
- Internal site access roads and carparks.
- Site access, vehicle turning check and grading works to facilitate internal vehicle movements, and car parking.

RESIDENTIAL

Albert Square Apartments
Structural
Auckland, New Zealand.

Bayz101
Structural
Dubai, United Arab Emirates.

Kula Belgrade
Structural
Belgrade, Serbia.

NC12 Apartments
Structural | Construction Engineering
Auckland, New Zealand.

Oaks Brisbane Casino Tower Suites
Structural
Brisbane, QLD, Australia.

Odyssey Chevron Island
Structural
Gold Coast, QLD, Australia.

One Pearl Sky Bridge
Construction Engineering
Singapore.

Queens Riverside Apartments
Structural | Civil | Flooding & Hydrology
Perth, WA, Australia.

Shell Cove Harbour Hotel
Structural
Shellharbour, NSW, Australia.

Sky Tower
Structural | Construction Engineering
Limassol, Cyprus.

The Bottleyard Apartments
Structural | Civil
Leederville, WA, Australia.

The Hill
Structural
Auckland, New Zealand.

Fiona Stanley Hospital —
Murdoch, WA, Australia.

SECTOR CAPABILITY

Healthcare

HEALTHCARE

SJG Midland Private Hospital

STRUCTURAL | CIVIL | CONSTRUCTION ENGINEERING

MIDLAND, WA, AUSTRALIA
CLIENT: ST JOHN OF GOD

Planning for the new St John of God Midland Private Hospital is well underway, with BG&E providing structural, civil, and construction engineering services for the site development and proposed building from feasibility through construction documentation and administration.

The new 17,000 square metre facility will provide a full-service, standalone private hospital experience, offering comprehensive medical and surgical services.

Future flexibility provisions, including provision for change of use and service reticulation, were incorporated into the building design. The architectural planning for the building and structural grid supported the use of a concrete flat plate, using post-tensioning reinforcement.

Coordination of building services allowed this system to be installed effectively on site, resulting in program savings.

BG&E optimised the hospital's large floor plate design by removing permanent movement joints, reducing structural complexity and maintenance needs.

HEALTHCARE

Queen Elizabeth II Jubilee Hospital

STRUCTURAL | CIVIL | FAÇADE | TRAFFIC ENGINEERING

BRISBANE, QLD, AUSTRALIA
CLIENT: QUEENSLAND HEALTH

BG&E's seamless integration of civil, structural, façade, and traffic engineering delivered an under-budget final cost for Queensland Health in an escalating market.

The Queen Elizabeth II Hospital Expansion project is a significant investment into QLD's healthcare system that will help to meet the growing demand for health services on Brisbane's southside and generate 1,120 construction jobs in the process.

The $465 million expansion includes a new dedicated facility set over five storeys that will deliver 112 additional overnight beds to the precinct and significantly boost capacity for indemand elective surgeries.

HEALTHCARE

New Melton Hospital

STRUCTURAL CIVIL

MELTON, VIC, AUSTRALIA
CLIENT: VHBA & EXEMPLAR HEALTH CONSORTIUM

The new Melton Hospital in Melbourne's outer west is being delivered under a Public Private Partnership between the Victorian Government — VHBA and Exemplar Health Consortium and will support the growing and diverse communities of Caroline Springs, Rockbank, Melton, Bacchus Marsh, and Gisborne.

BG&E is providing structural and civil engineering services for the project, with construction due to be complete by 2029.

To ensure the hospital meets future demand, the design team is involved in a masterplan to ensure future flexibility and future expansion for Western Health.

The new healthcare facility will include:

- 395 Points of Care (274 beds).
- 24-hour emergency department and intensive care unit.
- Maternity and neonatal services.
- Mental health services.
- Radiology services.
- Ambulatory care.
- General administration, breakout spaces.
- 1000 public and staff car parking spots.

HEALTHCARE

The Royal Children's Hospital

FAÇADE

MELBOURNE, VIC, AUSTRALIA
CLIENT: LENDLEASE

BG&E provided façade design services for the Royal Children's Hospital (RCH). Completed in 2011, the $1 billion redevelopment was the largest hospital project in Victoria's history at the time.

The facility comprises in-patient accommodation, operating theatres, pathology laboratories, and a range of specialised clinical spaces supporting state-of-the-art care.

The façade design responded to a complex functional brief while delivering an architectural outcome befitting a world-class healthcare facility.

BG&E was responsible for the design and documentation of the façade across all project stages, including factory inspections and site attendance. Key scope elements included:

- Prescriptive design and documentation for architectural precast concrete for the inpatient unit, laboratories, and clinical care facility.
- Design development and analysis of the external shading system for the main administration building, supported by steel bracketry interfacing with the curtain wall.
- Preliminary schematic design of suspended steel structure to support glass shades external to the main curtain wall.

HEALTHCARE

Fiona Stanley Hospital

STRUCTURAL | CIVIL | FAÇADE

MURDOCH, WA, AUSTRALIA
CLIENT: MULTIPLEX

BG&E was engaged as the structural, civil, and façade design consultant for the landmark Fiona Stanley Hospital, a 232,000 square metre cohesive healthcare precinct.

BG&E worked closely with the Department of Health and key stakeholders to develop the project brief, and subsequently continued on the project under a D&C contract with Brookfield Multiplex.

Structural engineering services were provided for the facility, comprising a 783-bed seven storey hospital, a two storey pathology and education facility over a car park, a 60-bed mental health building, a two storey administration building, a four storey rehabilitation centre, and a three storey central plant that feeds into a buried service tunnel to supply other structures.

BG&E's façade engineering scope covered the design of the hospital's distinctive envelope, incorporating precast concrete panels with multiple finishes, curtain wall systems, aluminum-clad and glazed canopies, composite aluminum cladding, skylights, external shading devices, and glazed entrance walls.

Civil engineering services included site-wide coordination and delivery of bulk earthworks, internal and public road networks, car parking, and full precinct servicing. BG&E also led the development of the overall stormwater drainage strategy and collaborated with hydrogeological subconsultants to deliver a comprehensive precinct water balance study.

HEALTHCARE

Armidale Hospital Redevelopment
Structural
Armidale, NSW, Australia.

Busselton Health Campus
Structural | Civil
Busselton, WA, Australia.

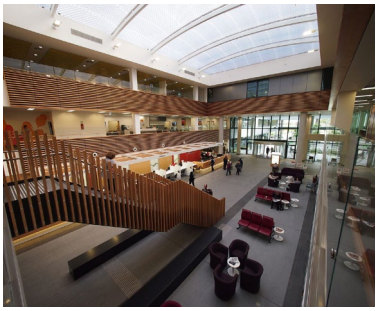
Hollywood Private Hospital Consulting Centre
Structural
Nedlands, WA, Australia.

Hollywood Private Hospital South Block & Emergency Department
Structural | Civil
Nedlands, WA, Australia.

Inverell District Hospital
Structural | Civil
Inverell, NSW, Australia.

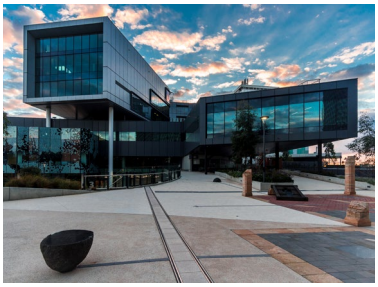
Lake Macquarie Hospital Expansion
Structural
Lake Macquarie, NSW, Australia.

Meadowbrook Private Hospital — Australia Unity Health Precinct
Structural | Civil
Brisbane, QLD, Australia.



Midland Public & Private Hospital
Structural | Civil
Midland, WA, Australia.

QEII Central Energy Plant
Structural
Nedlands, WA, Australia.



Royal Adelaide Hospital
Façade
Adelaide, SA, Australia.

SJG Subiaco East Hospital Redevelopment, Energy Plant & Car Park
Structural | Materials & Durability
Subiaco, WA, Australia.

Surgical, Treatment & Rehabilitation (STARS) Services
Structural Peer Review
Brisbane, QLD, Australia.

Fortitude Valley State Secondary College — Stages 1 & 2 — Brisbane, QLD, Australia.

SECTOR CAPABILITY

Education

EDUCATION

Alkimos College

STRUCTURAL CIVIL

PERTH, WA, AUSTRALIA
CLIENT: WA DEPARTMENT OF FINANCE

BG&E played a crucial role as civil and structural engineers for Stage 2 of Alkimos College's expansion. Our expertise ensured that the new buildings were not only modern and functional but also safe and resilient, meeting the high standards required for educational infrastructure.

The Alkimos College Stage 2 project in the coastal suburb of Alkimos, around 40 kilometres north of Perth, expanded the existing educational facilities to accommodate the increasing student population in the Alkimos and Eglinton areas.

Designed by T&Z Architects, the $52 million project, completed in time for the 2024 school year, added several new facilities to the college, significantly enhancing its capacity and educational offerings.

Stage 2 included:

- A student services area.
- Performing arts centre.
- Dance and visual arts studios.
- Dedicated music and specialist classrooms.
- STEM classrooms.
- Additional general learning classrooms.

These new facilities supported an extra 700 students, bringing the total student capacity to 1,450.

EDUCATION

Fortitude Valley State Secondary College — Stages 1 & 2

STRUCTURAL

CONSTRUCTION ENGINEERING

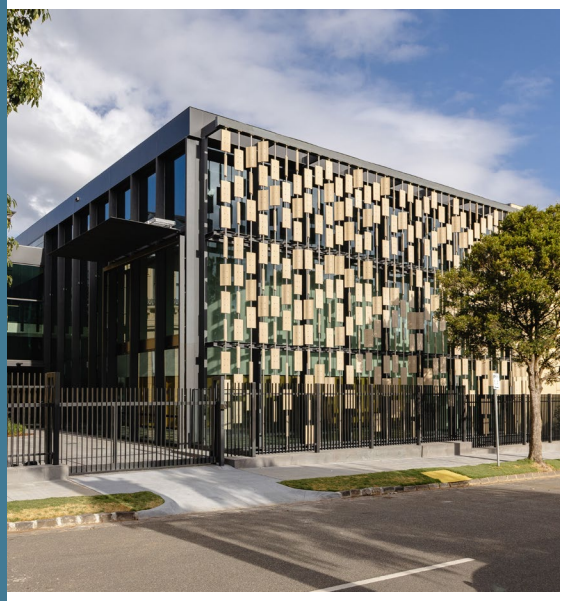
BRISBANE, QLD, AUSTRALIA
CLIENT: QLD DEPARTMENT OF EDUCATION

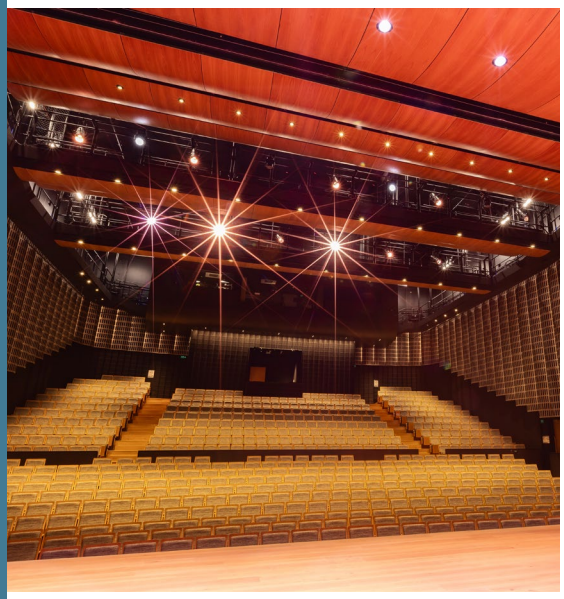
Fortitude Valley State Secondary College is the first school to open in inner-city Brisbane in over 50 years, winning the Australian Institute of Architects Queensland Educational Architecture Award in 2021.

Stage 2 of the project consisted of a sports centre. BG&E provided construction engineering services, including managing the structural design for a 23 metre concrete floor that spans twin basketball courts.

The proximity to a rail line required careful consideration of rail impact loads and partial collapse criteria, with the entire structure built using precast elements.

BG&E's scope also covered the erection sequencing of precast components to assess their strength at various stages and the design of all temporary works to ensure stability. The team produced 4D-rendered animations, aiding communication of the construction sequence to on-site trades.





EDUCATION

Ruyton Girls School Performing Arts Refurbishment

STRUCTURAL | CIVIL | FAÇADE

MELBOURNE, VIC, AUSTRALIA
CLIENT: RUYTON GIRLS SCHOOL

BG&E delivered civil, structural, and façade engineering services for the major refurbishment of the auditorium, performing arts centre, and library facilities at Ruyton Girls School in the heart of Kew — seven kilometres east of Melbourne's CBD.

Designed by Sally Draper Architects, the new performing arts centre features a 650 seat auditorium, a basement drama space, and renovation of the existing library building. The project also tied into a historic late 1800s house that forms the music school, requiring the new basement to extend below the existing building to introduce a new lift shaft.

The completed refurbishment offers an enhanced library building and a high quality performing arts centre that will serve whole school assemblies, performances, and public functions alike.

EDUCATION

NextSense Centre for Innovation

STRUCTURAL | CIVIL | FLOODING & HYDROLOGY

MACQUARIE PARK, NSW, AUSTRALIA
CLIENT: NEXTSENSE

BG&E was engaged by NextSense to deliver a new 5 Star Green Star Centre for Innovation across two interconnected pavilions totalling 14,000 square metres within the Macquarie University campus.

We provided structural and civil engineering services from SSDA through to 90% tender for the design and construct tender, including early contractor input during design development. BG&E was subsequently novated to the successful D&C contractor, completing detailed documentation, construction phase services, and on-site support in close collaboration with the builder.

The $65 million development comprises:

- Zone 1: a three storey administration building, designed as an allied health facility for people with hearing and vision loss.
- Zone 2: a preschool and primary school in a single storey pavilion.

Key design features include:

- Complex post-tensioned and reinforced floors, including curved set-downs and folds.
- Board-formed concrete wall elements wrapping the school boundaries.
- Large structural steel roofs with substantial cantilevers and spans.

EDUCATION

Curtin University B316 Sciences Building

STRUCTURAL CIVIL

BENTLEY, WA, AUSTRALIA
CLIENT: CURTIN UNIVERSITY

The Curtin University B316 Sciences Building will house research and teaching laboratory facilities for science-oriented faculties and the Western Australian School of Mines on the Bentley Campus. The building is designed across five levels: one basement, a suspended ground floor, and three additional suspended levels with a roof above.

As a unique facility, B316 Sciences will include specialist research and teaching laboratories that require stringent structural performance, particularly regarding vibration control, to support the highly sensitive equipment housed within these spaces.

As of 2025, the project has progressed to the Early Contractor Involvement (ECI) phase, with Lendlease engaged as the contractor. BG&E is providing structural and civil engineering services for this development.

Spanning approximately 20,000 square metres, B316 Sciences will be key in supporting Curtin University's goal to expand its STEMM (Science, Technology, Engineering, Mathematics, and Medicine) research and education programs.

EDUCATION (PRIMARY & SECONDARY)

ACG Sunderland
Façade
Auckland, New Zealand.

Arthur Phillip High School
Structural
Sydney, NSW, Australia.

Augustine Heights State School
Structural | Civil
Ipswich, QLD, Australia.

Baringa State Secondary College
Structural
Perth, WA, Australia.

Brabham East Primary School
Structural
Perth, WA, Australia.

Carine Senior High School
Structural
Perth, WA, Australia.

Caufield Grammar School
Façade
Melbourne, VIC, Australia.

Chisholm Catholic College, Northern Development
Structural | Civil
Perth, WA, Australia.

Cleveland State High School
Structural
Brisbane, QLD, Australia.

Hunter School of Performing Arts
Structural | Civil
Newcastle, NSW, Australia.

Lynfield Collge
Façade
Auckland, New Zealand.

Medowie Christian School
Structural | Civil
Hunter Region, NSW, Australia.

EDUCATION (PRIMARY & SECONDARY)

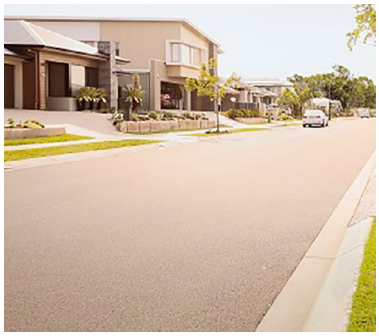
Northland College
Structural
Northland, New Zealand.

Piara Waters Senior High School
Structural | Civil
Perth, WA, Australia.

Pymble Ladies Collge
Structural | Civil | Façade
Upper North Shore, NSW, Australia.

Randwick High School
Structural | Civil
Sydney, NSW, Australia.

Ripley Central State School
Structural
Ipswich, QLD, Australia.



Ripley Valley Secondary College
Structural | Civil
Ipswich, QLD, Australia.

Roleystone Community College
Structural | Civil | Timber
Perth, WA, Australia.

Rossmoyne Senior High School
Structural | Civil
Perth, WA, Australia.

Scarborough Primary School Redevelopment
Structural | Civil
Scarborough, WA, Australia.

SJI International Preschool
Structural | Civil
Singapore.

St Nicholas Early Education Lochinvar
Structural | Civil
Hunter Region, NSW, Australia.

Wilton Junction Public School
Structural | Civil
South West Sydney, NSW, Australia.

EDUCATION (TERTIARY)

All Saints College Performing Arts Centre
Structural
Bulls Creek, WA, Australia.

Australian National Academy of Music, South Melbourne Town Hall
Structural | Civil
Melbourne, VIC, Australia.

Bob Hawke College
Structural | Civil
Perth, WA, Australia.

Curtin University Resources & Chemistry Precinct
Structural | Civil
Bentley, WA, Australia.

ECU Health Science Building
Structural | Civil
Joondalup, WA, Australia.

Griffith University Health Sciences Building
Structural
Gold Coast, QLD, Australia.

Nihon University Campus
Construction Engineering
Newcastle, NSW, Australia.

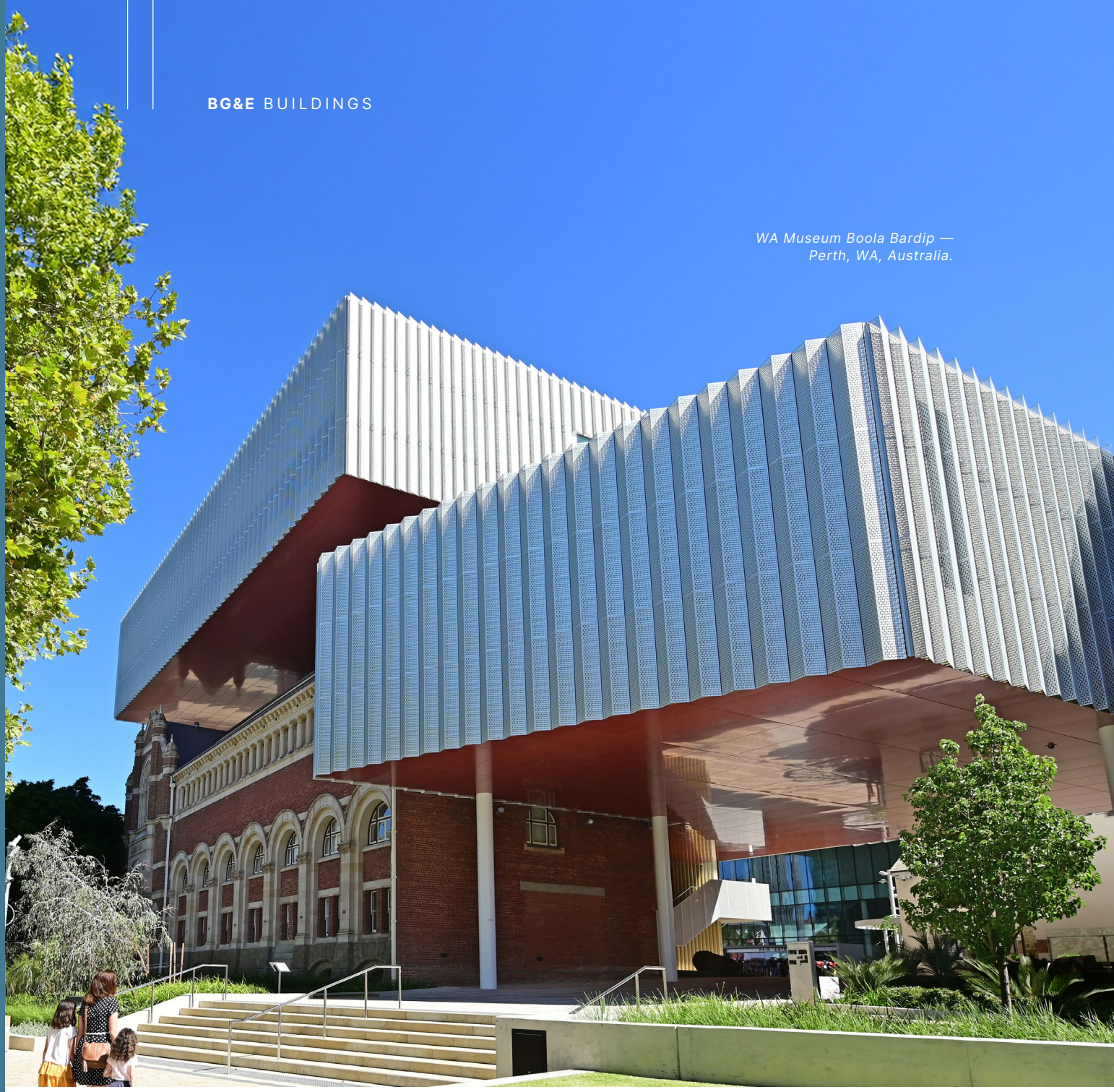
QLD Academy of Science, Mathematics & Technology
Structural | Civil
Brisbane, QLD, Australia.

School of Performing Arts, University of Western Sydney
Structural
Western Sydney, NSW, Australia.

TAFE NSW Kurri Kurri Campus
Structural | Civil
Hunter Region, NSW, Australia.

University of Melbourne, New Student Precinct
Façade
Melbourne, VIC, Australia.

UTS Peter Johnson Building
Structural
Sydney, NSW, Australia.



WA Museum Boola Bardip —
Perth, WA, Australia.

SECTOR CAPABILITY

Civic

(Institutional)

CIVIC

Ruah Community Services

STRUCTURAL

NORTHBRIDGE, WA, AUSTRALIA
CLIENT: RUAH COMMUNITY SERVICES

Designed by Architectus for WA's Ruah Community Services, this $27 million, seven storey multi-functional facility occupies a 694 square metre site in Perth.

BG&E provided structural engineering services for the development that offers comprehensive support for women and children, including those escaping family violence.

The building features a concrete frame with post-tensioned concrete slabs. The internal layout includes:

- Three levels for women's health and family empowerment services.
- Two levels for support services.
- Two levels for short-term accommodation.

CIVIC

Dalby Cultural Centre

STRUCTURAL | CIVIL | FAÇADE | TIMBER

DALBY, QLD, AUSTRALIA
CLIENT: OMA ARCHITECTURE

BG&E is delivering structural, timber, façade, and civil engineering services for the Dalby Cultural Centre (DCC) project in Dalby, a regional town situated 170 kilometres northwest of Brisbane.

The new $40 million DCC will include a multipurpose cinema, library, art gallery, and visitor information centre. The detailed design for the facility is being informed by extensive community feedback, with the aim of creating a state-of-the-art destination that is integrated with the surrounding community and provides a unique cultural experience for both residents and visitors.

Involved from the concept stage of the project, BG&E is partnering with OMA Architecture to deliver this development for the Dalby community and wider regional area.

CIVIC

King Island Community Centre

STRUCTURAL TIMBER

KING ISLAND, TAS, AUSTRALIA
CLIENT: TASMANIAN GOVERNMENT

BG&E provided advanced timber structural engineering services for the King Island Community Hub, a landmark project located on King Island, north west of Tasmania in the Bass Straight.

Designed by Core Collective Architects, the Hub reflects the island's rugged character while supporting a community-focused design vision.

This project demonstrates the strength of collaboration — bringing together Core Collective's architectural vision, Evolve Commercial's construction expertise, and BG&E's timber engineering capability to deliver a durable, sustainable, and meaningful community asset in a remote environment.

BG&E provided detailed mass timber engineering design, including:

- Development of a fully coordinated LOD 400 model to enable precise off-site fabrication and erection of the building's mass timber structure.
- Structural detailing.
- Coordination with two domestic timber suppliers (NEXT and CUSP).
- Constructability reviews to optimise logistics and installation in a remote location.

CIVIC

PCYC Hornsby

STRUCTURAL | CIVIL

HORNSBY, NSW, AUSTRALIA
CLIENT: PCYC NSW

BG&E was engaged by PCYC NSW, following a recommendation from Facility Design Group Architects, to deliver the Hornsby PCYC — a $12 million recreational facility — from concept design through to construction completion.

The new PCYC was integrated into Hornsby Shire Council's existing Waitara Park precinct and includes a two court multi-sport and gymnastics hall, fitness gym, boxing facilities, three multi-purpose rooms, a kiosk and cafe, and administration, staff and public amenities.

The scope of services included:

- Demolition of the existing tennis facilities and clubhouse.
- Construction of a new three level, two court multi-sport facility with basement parking.
- Landscaping upgrades.

The building structures consist of pre-cast concrete walls providing lateral stability and supporting long span trusses for the steel roof.

CIVIC

WA Museum Boola Bardip

STRUCTURAL CIVIL

PERTH, WA, AUSTRALIA
CLIENT: WESTERN AUSTRALIA STATE GOVERNMENT

BG&E provided structural and civil engineering services for the WA Museum Boola Bardip in the Perth Cultural Centre, the State's premier cultural hub that houses scientific and cultural collections.

The name 'Boola Bardip' pays homage to the local First Nations people's history and deep connection to their country. In Whadjuk Nyoongar, it means 'many stories,' reflecting the rich cultural heritage of the land where the museum stands.

The dramatic design links contemporary architecture with the historic and heritage-listed buildings, creating a visual landmark for the State.

Column-free gallery spaces are elevated 15 metres above ground over clear external pedestrian areas of 40 metres by 50 metres, and over the top of an existing heritage building, requiring a long span and cantilevering structure.

The project involved:

- Gallery floors designed for total imposed loads of 14.5 kilopascals and 120 kilonewtons concentrated loads with stringent deflection and vibration acceptance criteria.
- Composite steel gallery floors spanning 20 metres on two, two-storey high fabricated structural steel trusses. These trusses are located within wall lines and vary in depth — between seven metres and 15 metres.
- The trusses span up to 45 metres with a 17 metre cantilever where the new building is located over the existing heritage building.
- To minimise overall steel tonnage, high-strength 450 grade steel plate was used in the trusses.
- Columns are a mix of reinforced concrete and composite steel and concrete.

Perth Film Studio —
Perth, WA, Australia.

SECTOR CAPABILITY

Complex Structures

(inc. Transit Oriented Development)

COMPLEX STRUCTURES

Perth Film Studio

STRUCTURAL | CIVIL

PERTH, WA, AUSTRALIA
CLIENT: HESPERIA PROPERTY

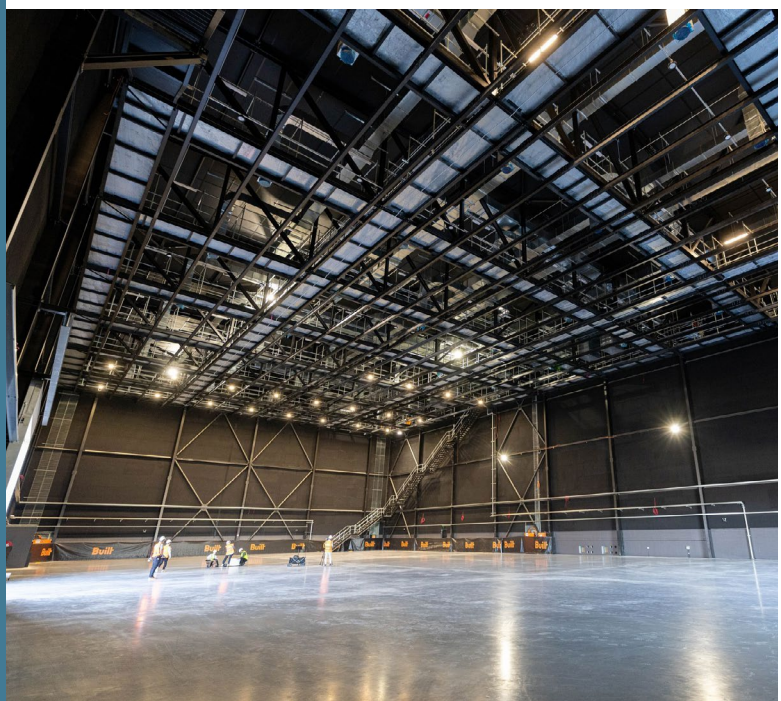
Working alongside Hesperia, TPM, Hassell, Built, and the greater project team, BG&E provided structural and civil engineering services.

The WA State Government has invested $233.5 million to construct a screen production facility in Perth to highlight the creative industry in the West and strengthen the state's capacity to attract larger national and international film, television, and gaming projects.

The facility includes four sound stages, providing 8400 square metres of production space with connecting annex buildings, workshops, a separate office building, other ancillary structures, and a five acre backlot and boneyard.

Civil services provided by BG&E included:

- Site earthworks design and modelling.
- Site drainage, sewer, and water reticulation design.
- Design of the site's internal roads, carparks, and footpaths, and widening of existing roads and intersections.

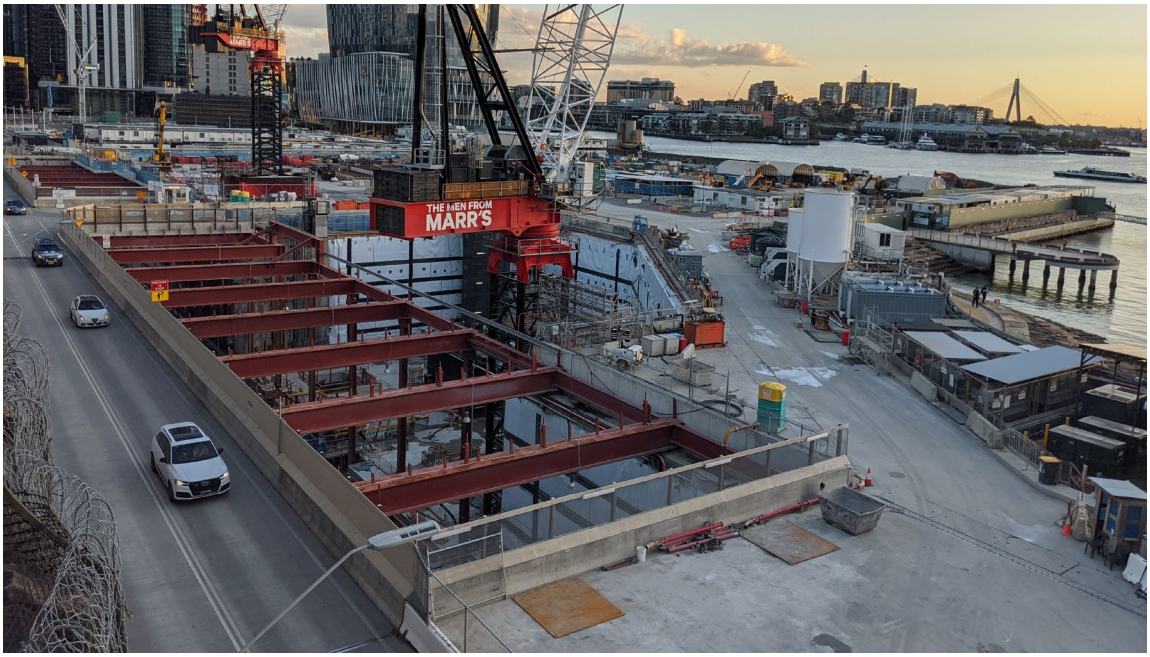


COMPLEX STRUCTURES

Barangaroo Station

STRUCTURAL | CIVIL | CONSTRUCTION ENGINEERING

SYDNEY, NSW, AUSTRALIA
CLIENT: JOHN HOLLAND, CPB CONTRACTORS, GHELLA JV



The technically challenging Sydney City and Southwest Tunnel and Station Excavation (TSE) package involved the construction of twin 15.5 kilometre metro tunnels beneath Sydney Harbour and the excavation of six new underground stations.

Arcadis and BG&E JV (ABJV) provided structural, civil, and temporary works engineering services for:

- Tunnelling from Chatswood Dive to Marrickville Dive.
- Excavation, design, and construction of the new underground Barangaroo Metro Station.
- Stage 2 and 3 permanent works design.

The site served as the TBM launch point under Sydney Harbour, the retrieval point for cutter heads and shields from the Marrickville Dive, and the excavation and construction site for a major crossover cavern.

Barangaroo Station is a fully underground station located 25 metres below street level. The 240 metre long, 21 metre wide station box was constructed using bottom-up techniques, with extensive temporary works — including a wide steel bridge beside the heritage wall and the temporary relocation of Hickson Road.

Key challenges included:

- Water tightness requirements and hydrostatic pressures.
- Station is a fully tanked, waterproof structure for 300kPa water pressure.
- Out of balance water forces between the high street and the harbour.
- Proximity to the harbour marine environment.
- Resolving uplift forces using permanent ground anchors in a highly saline environment.

Value engineering during the Stage 1 reference design improved the interface with excavation and temporary works and minimised in-situ construction — reducing the construction program.

Key innovations include:

- Permanent design and temporary works design were undertaken simultaneously by the same design team, delivering a timely, more efficient, and lower cost outcome.
- Concrete strength gain was measured in situ to enable stripping of forms to be undertaken as early as possible, substantially reducing the construction program.
- BG&E embedded a design engineer within the construction team to assist with queries, changes, and rectifications.

Barangaroo Station — Sydney, NSW, Australia.

COMPLEX STRUCTURES

Air New Zealand Hangar 4

CONSTRUCTION ENGINEERING

TĀMAKI MAKAURAU, AUCKLAND, NEW ZEALAND
CLIENT: AIR NEW ZEALAND

BG&E provided construction engineering and temporary works for Air New Zealand's Hangar 4, the largest single-span timber arch aircraft hangar in the Southern Hemisphere.

At 1.5 times the size of Air NZ's previous largest hangar, Hangar 4 has capacity to accommodate one wide-bodied and two narrow-bodied aircraft simultaneously.

Key design features:

- Arch: spanning 95 metres with a height of 35 metres to the apex, the arch was fabricated in 20 metre segments and spliced on site.
- End wall: uses timber box beams and was lifted in two stages using hinged baseplates. The curved nature complicates the lift and a custom support frame was required to support the mullions.
- Nose cone: a standalone steel structure designed to carry only its own loads, with lifting capacity limited by its concrete plinth supports.
- Pavement verification: various pavement designs were assessed with outrigger loads compared to a Boeing 777 and deflection monitored during lifting.
- Bracket design: designed to act as a torsionally rigid point, the brackets provide direct bearing to support the arch, are removable at height, and are adjustable to allow for timber tolerances.

COMPLEX STRUCTURES

Resorts World Oceanarium

STRUCTURAL

SENTOSA, SINGAPORE
CLIENT: FABRITECTURE

BG&E was engaged by Resorts World Sentosa (RWS) to provide structural engineering services for the redevelopment of the Singapore Oceanarium (SGO) — formerly the S.E.A Aquarium.

The upgraded facility features a larger footprint and enriched exhibits to deliver an immersive and educational experience about marine life and the oceans.

The scope involved designing new structures and the modification of existing ones to accommodate new aquarium tanks, visitor areas, and back-of-house facilities.

This posed significant structural challenges, particularly in retrofitting existing structures to support large aquarium tanks while minimising disruption to the surrounding developments and existing infrastructure that required close coordination with specialist aquarium consultants.

The new Singapore Oceanarium now stands as a major attraction within RWS, seamlessly blending architectural ambition with structural ingenuity.

Key structural features included:

- New large-volume aquarium tanks that are supported by deep foundations.
- New reinforced concrete and structural steelwork elements to cater to increased loads.
- Integration of new and existing building systems.
- Complex construction staging and sequencing in a live environment.
- Extensive modifications to the existing basement and superstructure.

COMPLEX STRUCTURES

Rosebery Engine Yards

STRUCTURAL | CIVIL

ROSEBERY, NSW, AUSTRALIA
CLIENT: GOODMAN

The Rosebery Engine Yard is an award-winning adaptive reuse project that has transformed 100-year-old industrial buildings in the heart of Sydney into a modern, sustainable hub with boutique workspaces, a showroom, and food and beverage tenancies.

BG&E provided structural engineering services, delivering a full building upgrade with new roof lateral bracings to achieve code compliance. Extensive planning and materials testing allowed 90% of the existing structure to be retained, delivering significant cost and carbon efficiencies.

A key focus was the design and strengthening of heritage elements, including long-span sawtooth trusses, masonry walls, steel framing, timber frameworks, windows, and exposed brickwork, to preserve the sites industrial character while enabling large open spaces.

Outcomes:

- Retained 90% of the original structure, achieving financial and environmental efficiencies.
- Maintained existing roof structure capacity through extensive building services coordination.
- Revitalised a 1920s heritage-listed site in central Sydney.

SECTOR CAPABILITY

Retail

RETAIL

Castle Towers

STRUCTURAL | CIVIL | CONSTRUCTION ENGINEERING | FLOODING & HYDROLOGY | MATERIALS & DURABILITY

SYDNEY, NSW, AUSTRALIA
CLIENT: QIC

The $1 billion expansion of Castle Towers and its surrounding precinct was a highly complex project, requiring significant technical capability along with an evolving scope.

BG&E was engaged in multiple packages of work for the Castle Towers project:

- Castle Towers Site A Redevelopment.
- Castle Towers Site B Subdivision.
- Castle Towers Zone 3 Redevelopment.
- Pennant Street Roadwork Widening.
- Woodward Building Development.

The Site B Subdivision subdivided the old Castle Hill Public School site into eight lots, utilised for high-density mixed-use residential and commercial buildings, plus one park. A key challenge was the need to modify the original road designs to accommodate the proposed building that was relocated to within the subdivision site, before the roads in Site B were designed.

The Zone 3 Redevelopment involved partially demolishing the original 1979 structure while retaining key elements, upgrading retail areas, and constructing both a new mixed-use building and a new hotel — all integrated within the existing structure and built above the retail precinct and car park. We also ensured key tenant areas remained operational throughout construction.

Significant challenges of the redevelopment included:

- Coordination with three different architects, each responsible for various aspects of the development.
- Management of services and civil items traversing the site, which was still operational and accessible to the public.
- The placement of onsite detention tanks was complicated by the existing Sydney Metro tunnels beneath the site.

Castle Towers — Sydney, NSW, Australia.

RETAIL

Dubai Mall Zabeel Expansion

STRUCTURAL | CONSTRUCTION ENGINEERING

DUBAI, UNITED ARAB EMIRATES
CLIENT: MULTIPLEX

The Dubai Mall Zabeel Expansion is a major extension of the existing Dubai Mall, delivering an additional 200,000 square metres of retail space, a 250,000 square metre carpark, and an 80 storey, 150,000 square metre mixed-use residential and hotel tower.

BG&E provided the following services:

- Permanent works design of the mall extension, carpark, and mixed-use tower.
- Construction engineering and temporary works advice.
- Review of the launched bridge connecting the existing Dubai Mall.

RETAIL

Moore Park Supa Centa Redevelopment

STRUCTURAL | MATERIALS & DURABILITY

SYDNEY, NSW, AUSTRALIA
CLIENT: LIPMAN

BG&E provided structural engineering and materials and durability services for the major refurbishment and extension of the Supa Centa homemaker centre in Moore Park, Sydney.

The project included:

- Construction of a new Level 2 extension over the existing gallery level.
- Reconstruction of part of the atrium space and refurbishment of the Ground Level mall.
- Redevelopment of the gallery level to form an extension of the ground and Level 1 malls.
- Upgrades to the lower car park and associated entries.

BG&E was engaged to re-engineer the existing DA design to deliver a more cost-effective solution. Our scope encompassed the full structural design of Zones 1 and 2 from Design Development and Tender Documentation through to Construction Documentation and Construction-Phase Support.

BG&E's Materials team carried out destructive and non-destructive diagnostic work on-site, along with a fire investigation review, to inform and support the structural refurbishment design works for the gallery level.

RETAIL

Piccadilly Theatre & Arcade

STRUCTURAL

PERTH, WA, AUSTRALIA
CLIENT: PALASSIS ARCHITECTS

BG&E was engaged by Palassis Architects to deliver structural engineering design works for the redevelopment of the heritage-listed Piccadilly Theatre and Arcade in Perth's CBD.

Originally constructed in 1938, the arcade connects the Hay and Murray Street malls and is renowned for its striking Art Deco architecture.

The redevelopment restored the building to its original state as a grand theatre with a repositioned proscenium and upgraded retail tenancies.

The development incorporated part of the existing buildings on the site, featuring a central retail arcade, additional retail and workshop tenancies above, and a cinema complex.

Key aspects of the redevelopment included:

- Installation of a new floor infill and lightweight roof at the Hay Street end.
- Construction of three new lifts (Hay Street lift, theatre goods lift, and Murray Street lift) and making necessary modifications to the existing building structure.
- A new steelwork "Fly Tower" structure to accommodate the repositioned theatre stage and proscenium.
- Structural upgrades to existing tenancies.
- A new rooftop plant platform above the Murray Street building.
- Installation of a new shop front structure throughout the ground floor arcade.

RETAIL

Plaza Arcade

STRUCTURAL

PERTH, WA, AUSTRALIA
CLIENT: YTL STARHILL GLOBAL REIT MANAGEMENT

The $8 million Plaza Arcade redevelopment included detailed design and construction support for the refurbishment of the arcade building and fit-out for the new Uniqlo tenancy.

BG&E was engaged directly by the client to form a design team with project managers AECOM and the architecture firm Buchan Group overseeing the project design.

The original structure was constructed in 1913. Since then, Plaza Arcade has undergone major refurbishments in the 1960s and early 2000s. As part of the new redevelopment, an additional storey was constructed over the existing structure, adding to the complexity of the job.

Key features of the project included:

- Column strengthening works to accommodate a new storey addition.
- Demolishing and reconstructing newly combined foundations under the existing structure.
- Design of a new lightweight steel and concrete structure for a storey addition utilising Bondek, Hollowcore planks.
- Construction of a storey height truss to eliminate entry columns.
- Design of interfaces between the new and existing structure.
- Upgrades to the existing structure.

RETAIL

Birkenhead Point Shopping Centre
Structural
Drummoyne, NSW Australia.

Darby Plaza
Structural
Newcastle, NSW, Australia.

Direct Factory Outlet
Structural | Civil
Perth, WA, Australia.

Macquarie Shopping Centre
Structural | Materials & Durability
Sydney, NSW, Australia.

Marketfair Campbelltown
Structural
Sydney, NSW, Australia.

Paddy's Markets
Structural | Construction Engineering
Sydney, NSW, Australia.

PAK'nSAVE
Structural | Materials & Durability
North Island, New Zealand.

Pittwater Place Shopping Centre
Structural
Central Coast, NSW, Australia.

Stockland Baldivis
Structural
Baldivis, WA, Australia.

The Pad
Structural | Materials & Durability
Dubai, United Arab Emirates.

The Shops at Ellenbrook
Structural
Perth, WA, Australia.

The Village Balgowlah
Structural | Civil
North Sydney, NSW, Australia.

Vision Tower —
Dubai, United Arab Emirates.

SECTOR CAPABILITY

High-Rise

HIGH-RISE

The Index (85 Storeys)

STRUCTURAL

DUBAI, UNITED ARAB EMIRATES
CLIENT: UNION PROPERTIES

The Index is a 328 metre tall skyscraper in the heart of Dubai's International Financial Centre, featuring 50 residential storeys and 30 commercial storeys on top of a four storey lobby and a five storey underground basement.

The tower is oriented on an east-west axis, enabling the structures concrete core to protect internal spaces from the low-angle desert sun while the south façade incorporates extensive sunshades to reduce solar gain.

BG&E's innovative design incorporated massive concrete portal frames and attenuated buttress walls to optimise stability.

BG&E provided structural engineering services, including:

- A 300 metre high double portal concrete frame providing stability.
- Large transfer structures at mid-height.
- Prestressed concrete floors.
- Reinforced bored piled raft foundations.
- A seven level basement excavation designed for variable sand conditions and a high-water table, resisted by tension piles.
- A predominantly glazed curtain wall façade with highly detailed precast cladding.

HIGH-RISE

Vision Tower (71 Storeys)

STRUCTURAL

DUBAI, UNITED ARAB EMIRATES
CLIENT: DUBAI PROPERTIES

Vision tower is a slender 260 metre tall tower with sloping façade located in the prestigious Business Bay district of Dubai.

Vision tower comprises a 71 storey tower with 51 levels of office, 14 carpark, and 6 general usage. The development includes the adjacent 14 level carpark.

The façade includes predominately glazed curtain walls with a sloping illuminated light box feature above the entrance lobby.

Features:

- Extensive wind engineering to achieve acceptable building movements.
- Eccentric core box, sway-frame, and outriggers utilized to stabilise building.
- Banded prestressed concrete floors.
- Reinforced bored piled raft foundations.
- 17 metre clear span carpark.

HIGH-RISE

Addax Tower (65 Storeys)

STRUCTURAL

ABU DHABI, UNITED ARAB EMIRATES
CLIENT: MULTIPLEX

The Addax Tower is a $320 million iconic high-rise commercial tower that forms part of a grand waterfront mixed-use development on Al Reem Island, approximately one kilometre from Abu Dhabi's CBD.

BG&E provided structural engineering services for Addax Tower, a 266 metre tall skyscraper that is one of Abu Dhabi's tallest buildings. The tower was constructed using reinforced and post-tensioned concrete and is enclosed in a striking aluminum and glass façade.

The development comprises 65 storeys of office space, a 26 storey hotel, a six level car park, and three basement levels. Together with its adjoining podium, Addax Tower has a total floor area of approximately 240,000 square metres.

HIGH-RISE

Jumeirah Beach Residences
(46 Storeys)

STRUCTURAL

DUBAI, UNITED ARAB EMIRATES
CLIENT: DUBAI TECHNOLOGY, ELECTRONIC COMMERCE & MEDIA FREE ZONE AUTHORITY

BG&E provided structural engineering services for Jumeirah Beach Residences — the foundation of a thriving waterfront community on Dubai's coastline that comprises 35 residential towers and four hotels on shared podium sprawled across a 230,000 square metre site.

The tower buildings and hotels range from 10 to 46 levels, above a four to five level podium that covers most of the site.

BG&E provided the Theme Architect with master planning and schematic design, while detailed designs for four of the tallest buildings were delivered for the Dubai Technology, Electronic Commerce and Media Free Zone Authority.

The elongated site, about 1.7 kilometres long and width varying between 70 metres and 200 metres, lies between the Dubai Marina and the coast adjacent to the Hilton Dubai Jumeirah, Sheraton Jumeirah Beach, Ritz Carlton, Oasis Beach, Metropolitan Resort, and Le Royal Meridian hotels — all meccas for the thousands of visitors to one of the most popular Middle Eastern destinations.

HIGH-RISE

JW Marriott Marquis Hotel
(80 Storeys)

STRUCTURAL

DUBAI, UNITED ARAB EMIRATES
CLIENT: EMIRATES GROUP

Upon completion in 2012, this awe-inspiring development was the world's second tallest hotel, with twin-tower skyscrapers standing 355 metres up into Dubai's skyline.

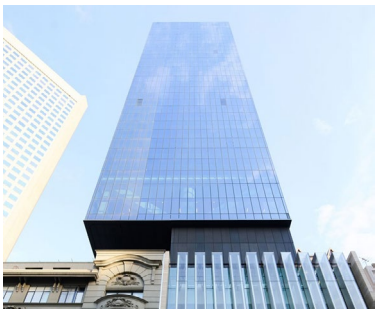
BG&E provided structural engineering services, which comprised the following key features:

- Twin concrete-frame towers on piled raft foundations.
- Glazed guest lifts in the 80 storey towers.
- Expansive podium areas with tall, unrestrained tower columns.
- Stability via the use of a concrete core and outrigger walls.
- Transfer structures at first hotel floors above the podium.
- Post-tensioned flat plate slabs.

This timeless luxury hotel features 1,364 guest rooms, 240 suites, four Presidential Suites, a banquet hall, an auditorium, 18 specialty retail stores, 19 restaurants, and a day spa, all surrounded by perfectly manicured landscaping.

HIGH-RISE

22 Bishopgate (278m)
Construction Engineering
London, United Kingdom.



405 Bourke Street (194m)
Façade
Melbourne, VIC, Australia.

Vida Dubai Marina & Yacht Club (230m)
Structural
Dubai, United Arab Emirates.

Central Park Tower (249m)
Structural
Perth, WA, Australia.

Chifley Tower (244m)
Structural
Sydney, NSW, Australia.

Emirates Office Towers (354m & 309m)
Structural
Dubai, United Arab Emirates.

EQ Tower (202m)
Façade
Melbourne, VIC, Australia.

One Za'abeel (238m & 301m)
Structural | Construction Engineering
Dubai, United Arab Emirates.

Prima Pearl Apartments (254m)
Façade
Melbourne, VIC, Australia.

The Residences Dorchester Collection (150m)
Structural
Dubai, United Arab Emirates.

UP Tower (243m)
Structural
Dubai, United Arab Emirates.

World Trade Centre (241m)
Structural
Doha, Qatar.

Optus Stadium —
Perth, WA, Australia.

SECTOR CAPABILITY

Sports & Entertainment Stadia

SPORTS & ENTERTAINMENT STADIA

Te Kaha

CONSTRUCTION ENGINEERING

CHRISTCHURCH, NEW ZEALAND
CLIENT: JINGGONG STEEL INTERNATIONAL

The Te Kaha — Christchurch Stadium is a state-of-the-art addition to Christchurch, set to accommodate 30,000 for sporting and 36,000 for music events.

BG&E is providing construction engineering and temporary works services to the $683 million project — including design review of temporary propping, lifting lug assessment, trusses construction jigs, temporary stability of roof trusses, and access platforms.

The design review presented challenges involving coordination with overseas designers and a Mandarin-speaking team, as well as addressing the designer's unfamiliarity with local codes.

Effective management of critical factors such as logistics, crane availability, and tight project timeframes and time constraints were essential.

Our technical team applied their robust earthquake engineering knowledge, 3D FEM modelling skillset, expertise in legislative requirements and local design codes, and multilingual capacity to ensure the project's success.

The stadium promises to invigorate the city centre, spur development, and reestablish Christchurch as a sports and cultural hub — drawing visitors from around New Zealand and the world.

SPORTS & ENTERTAINMENT STADIA

Sydney Football Stadium

CONSTRUCTION ENGINEERING

SYDNEY, NSW, AUSTRALIA
CLIENT: JOHN HOLLAND

The Sydney Football Stadium, now known as Allianz Stadium, is a $828 million, state-of-the-art stadium near Sydney's CBD that was funded by the NSW Government and reopened to the public in 2022.

BG&E was engaged to undertake temporary works for the fabrication, transportation, and erection of the steel roof for SFS. These works included:

- Erection staging of the major roof elements, including a staged FEA model for each roof element with temporary supports on the pitch to control the local soil bearing and overturning.
- Review of lift studies and design of temporary supports for out-of-plane lifting induced loading.
- Design of the temporary support jigs and mechanisms to allow movement in the stressing stages and lifting of the radial arches.

The new stadium was built to meet the future safety and access requirements and boost growth in the Sydney visitor economy.

SPORTS & ENTERTAINMENT STADIA

Optus Stadium

STRUCTURAL | CIVIL

PERTH, WA, AUSTRALIA
CLIENT: BROOKFIELD MULTIPLEX

Formerly known as New Perth Stadium, Optus Stadium was completed in 2018 and accommodates permanent seating for up to 60,000 patrons, with the potential for expansion to accommodate up to 70,000 seats.

Provided under a D&C Contract, BG&E was engaged as a subconsultant to Arup to provide civil and structural engineering services for the stadium and wider precinct development.

Civil engineering services addressed the existing land conditions of the 42 hectare precinct, adopting a sustainable stormwater strategy integrated with State Transport infrastructure and the precinct's landscaping vision. To mitigate settlement risks, designs worked to existing ground levels, ensuring durability of pavements, roads, in-ground services, and landscaped areas, including the community oval.

Structural engineering services included:

- Detailed design, modelling, and documentation of the stadium substructure components.
- Supporting the contractor with temporary works designs for components of the superstructure.
- The adoption of a piled foundation system to support the steel-framed stadium structure and event level concourse ground slab, due to underlying soft alluvial soil materials with high consolidation settlement characteristics.
- Design and documentation of the external ticketing gates structures and landscaping structures.

SPORTS & ENTERTAINMENT STADIA

YAS Waterworld

STRUCTURAL | CIVIL

ABU DHABI, UNITED ARAB EMIRATES
CLIENT: ALEC

Located on Yas Island, Yas Waterworld spans 15 hectares and features 43 rides, ticketing, food and beverage outlets, and a traditional souq.

BG&E provided structural and civil engineering solutions, maintaining a focus on aesthetics, safety, and durability throughout the design process.

The park's main attractions are supported by multiple structural steel crag frames clad in Glass Reinforced Concrete (GRC).

Key design features include:

- The world's largest standing wave, comprising a three metre double flow barrel projecting 7,000 litres of water onto a rubber-clad steel frame fixed to a reinforced concrete bunker.
- A central water recreation zone, centred around a funnel structure capturing water jets fired over the rollercoaster.
- A 35 metre structural steel crag with base connections resisting up to 20,000 kN in shear.
- Ride platforms, stairs, and integrated theming structures.
- A reinforced concrete pearl diving tank area and 230 millimetre acrylic panels.
- Jetties, bridges, shade structures, balustrading, and suspended walkways linking all visitor zones.
- Secondary framing for rock-work theming and articulated conveyor platforms for ride tubes.
- Themed entrance structures including dolphins, serpents, masts, nests, and feature elements.

SPORTS & ENTERTAINMENT STADIA

Sam Kerr Football Stadium

STRUCTURAL

QUEENS PARK, WA, AUSTRALIA
CLIENT: DEPARTMENT OF LOCAL GOVERNMENT, SPORT & CULTURAL INDUSTRIES

The Sam Kerr Football Centre is a $50.8 million state football centre that was built to serve as a training facility for the FIFA Women's World Cup in 2023.

BG&E provided structural engineering services to the project, which included the following building components:

- Main building — two-storey building housing administration facilities, change rooms, function area, and tiered seating overlooking the main playing fields.
- Maintenance Building — a single-storey working building, store, and compound for site maintenance equipment and materials.

The stadium features match day and training facilities to support the development of junior and high-performance players, as well as grassroots and community football programs.

SPORTS & ENTERTAINMENT STADIA

AK Reserve Stadium
Structural
Mount Claremont, WA, Australia.

Al Bayt Stadium
Façade
Al Khor, Qatar.

Al Rayyan Sports Club Stadium
Structural
Doha, Qatar.

Hunter Stadium
Structural | Materials & Durability
Newcastle, NSW, Australia.

Maitland Regional Athletics Centre
Structural | Civil
Maitland, NSW, Australia.

Moore Park Stadium
Construction Engineering
Sydney, NSW, Australia.

Optus Stadium Transport Projects
Structural | Civil
Burswood, WA, Australia.

Peninsula Kingswood Country Gold Club
Structural | Civil
Frankston, VIC, Australia.

Perth Arena
Façade
Burswood, WA, Australia.

Subiaco Oval
Structural
Subiaco, WA, Australia.

Sydney Cricket Ground
Structural
Sydney, NSW, Australia.

Western Australian Cricket Association (WACA) Ground
Structural
Perth, WA, Australia.

25hours Hotel The Olympia —
Sydney, NSW, Australia.

SECTOR CAPABILITY

Hotels

HOTELS

Grosvenor House

STRUCTURAL

DUBAI, UNITED ARAB EMIRATES
CLIENT: SHEIKH AHMED BIN SAEED AL MAKTOUM

BG&E provided structural design engineering services for Grosvenor House — Tower 1, the first hotel to open in the iconic Dubai Marina.

Standing at 210 metres or 48 storeys, the high-rise structure comprises a five star hotel and serviced apartments, as well as luxurious conference, banquet, and food and beverage facilities.

Occupying an 8,000 square metre plot at the northern mouth of the Dubai Marina, the three storey basement construction made use of proprietary precast planks alongside precast band beams and a composite structural concrete topping. This process enabled the efficient construction of the three below ground floor levels and early commencement of the superstructure.

The vertical elements — columns, cores, and shear walls — were constructed using high-strength concrete, drawing on experience gained by BG&E's Buildings team from the construction of the Emirates Tower project. This approach reduced reinforcement requirements and bar diameters, facilitating off-site prefabrication of column wall and reinforcement cages.

HOTELS

9-25 Commonwealth Street, Edition Residences

STRUCTURAL

SYDNEY, NSW, AUSTRALIA
CLIENT: WR SYDNEY

Located in Sydney's vibrant Surry Hills, 9-25 Commonwealth Street is a 35 storey tower comprising four underground car-park floors, ground floor retail, a boutique 13 floor hotel, and luxury residential apartments.

BG&E provided structural engineering services for the $55 million high-rise development. Key features include:

- A slender mixed-use tower design.
- Transferring core walls.
- Car lifts in lieu of conventional ramps in the basements.
- A truck turntable in the loading dock.
- Post-tensioned concrete floors.
- A 15 metre high façade truss on the roof.

HOTELS

Laheq Island

STRUCTURAL | TIMBER

KINGDOM OF SAUDI ARABIA
CLIENT: CHAPMAN BDSP & RED SEA GLOBAL

Designed by Foster and Partners, this SAR 12 billion luxury resort island aims to establish the region as a premier international tourist destination, featuring an 800 metre diametre ring hotel with a central lagoon, over 550 luxury villas, beach clubs, restaurants, entertainment venues, and an 18 hole golf course.

BG&E's role included:

- Structural design of 43 luxury villas, ranging from three to eight bedrooms, each with a unique architectural character.
- Design of nine common amenity buildings, including two constructed over shallow coastal waters.
- Collaboration with Timber Design Studios to incorporate extensive use of structural timber throughout, including pergolas, canopies, and roof structures.

Key challenges included ensuring structural durability — including marine structures and timber elements — in an extremely aggressive environment, and managing construction in a remote location through maximising off-site manufacturing.

HOTELS

EQ West — EQ Lots 2 & 3

STRUCTURAL CIVIL

PERTH, WA, AUSTRALIA
CLIENT: CA CORPORATION

The $300 million development of Lots 2 and 3 Elizabeth Quay (EQ West) represents a key component in realising the vision for one of Perth's premier inner-city precincts.

BG&E provided the structural and civil engineering services for this contemporary mixed-use development.

EQ West comprises:

- 182 metre, 54 storey residential tower.
- 100 metre, 27 storey mixed-use tower.
- Four basement car parking levels.

Together, they comprise 493 residential apartments, a 190 room hotel, contemporary commercial space, end-of-trip facilities, an art gallery and viewing deck, back-of-house facilities, and car parking.

The tower floors have been designed with post-tensioned concrete slabs, and the buildings' lateral stability is provided by the lift and stairwell cores with supplementary shear walls. A mass damper is provided at the upper level of the residential tower to control building horizontal accelerations under service winds.

The four basement levels are fully submerged below the water table. Diaphragm walls and hydrostatic slabs designed to resist up to 120 kPa of water pressure form the basement walls and lower slabs.

HOTELS

Renaissance Hotel

STRUCTURAL | MATERIALS & DURABILITY

MANCHESTER, UNITED KINGDOM
CLIENT: PROPERTY ALLIANCE GROUP

The four-star Renaissance Hotel in Manchester has been closed since July 2020, in anticipation of an ambitious redevelopment by Property Alliance Group. Instead of taking the traditional demolish and rebuild route, the original hotel tower will be retained, undergoing restoration and upcycling.

BG&E is providing structural engineering and materials technology services for the refurbishment project. Our innovative technical solutions will significantly cut the development's embodied carbon emissions, facilitating owners and operators in achieving BREEAM Certification. The forecasted environmental benefits are substantial, projecting a remarkable 40% reduction in CO2 compared to constructing a new hotel of the same size.

The revamped 216 bedroom hotel, part of SH Hotels & Resorts, will operate under the "Treehouse" brand. This project is a key component of the £181.6 million redevelopment plan for the Deansgate site, marking the second Treehouse Hotel in the United Kingdom, after the first in London.

HOTELS

600 Londsdale Street
Façade
Melbourne, VIC, Australia.

Holiday Inn Darling Harbour
Structural
Sydney, NSW, Australia.

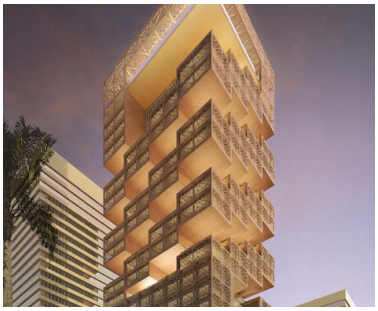
Hotel Grand Chancellor
Construction Engineering
Nedlands, WA, Australia.

Hotel Indigo
Construction Engineering
Auckland, New Zealand.

Hyde Park Hotel
Structural | Façade
Perth, WA, Australia.

Jumeirah Beach Residences
Structural
Dubai, United Arab Emirates.

Melbourne Hotel
Structural
Perth, WA, Australia.



Nozul Lusail Marina
Structural | Materials & Durability
Lusail, Qatar.

Oxford Street Hotel
Structural | Construction Engineering | Façade
Sydney, NSW, Australia.

Ramada by Wyndham VetroBlue Apartment Hotel
Structural
Scarborough, WA, Australia.

Shell Cove Harbour Hotel
Structural
Shell Harbour, NSW, Australia.

Sydney Charles Quarter
Structural
Leederville, WA, Australia.

West Side Place —
Melbourne, VIC, Australia.

SECTOR CAPABILITY

Façade

FAÇADE

The Ritz-Carlton, Perth — EQ Lots 9 & 10

FAÇADE

PERTH, WA, AUSTRALIA
CLIENT: FAR EAST CONSORTIUM

Elizabeth Quay's waterfront precinct has seen the transformation of Lots 9 and 10 into two striking towers, housing the prestigious 6-star Ritz-Carlton Hotel and luxury residential apartments.

The façade for the towers is a high-performing unitised curtain wall system with high-performance glass and an integrated operable window system connected to the build monitoring system. These Lift Tilt Operable Windows (LTOWs) are the largest of their type in the world.

We were initially engaged during schematic design, and during the design development phase for the LTOWs, following which we provided extensive services during the construction phase to completion.

The development was completed and handed over in 2021.

FAÇADE

West Side Place

FAÇADE

MELBOURNE, VIC, AUSTRALIA
CLIENT: FAR EAST CONSORTIUM

BG&E Façade Consultants led the visionary design for West Side Place, a $2.5 billion landmark mixed-use development at 250 Spencer Street, Melbourne, featuring Australia's largest bluestone façade installation to date.

This development comprises four luxury towers (ranging from 63 to 85 storeys) housing 2,853 luxe apartments, connected by a 10 storey podium with a ground floor lobby, 3,000 square metres of retail space, and basement parking.

Tower 1 is the pinnacle — rising 270 metres as Melbourne's second tallest building, with the upper 15 levels hosting the flagship Ritz-Carlton Hotel and the remainder high-end residential apartments.

BG&E delivered complex and innovative façade typology services, including tensile cable structures façades, different façades materiality, and modular façade systems.

The façade is characterised by its tessellated articulation and consists of a complex unitised curtain wall with sloped and folded panel types. The podium façades feature bluestone panels meticulously installed as a curtain wall system — the result of rigorous testing and innovative methodology to ensure the installation meets stringent structural and safety design requirements.

FAÇADE

435 Bourke Street

FAÇADE

MELBOURNE, VIC, AUSTRALIA
CLIENT: CBUS PROPERTY

Architecturally designed by the multi-award-winning Bates Smart, 435 Bourke Street will set a new benchmark for sustainable office development and design, being one of the first office towers in the world to feature a “solar skin” façade.

BG&E Façade Consultants were engaged from the early concept to completion of the project. We were closely involved with design specification, due diligence, proof of concept, and pretender prototyping of the solar skin to facilitate procurement of what is one of the largest BIFV installations in the world.

435 Bourke Street is one of the first all-electric A-grade commercial towers in Melbourne. The project had some very challenging sustainability targets with 6 Star Green Star and NABERS, as well as a Platinum WELL certified rating.

Part of the certification process required a 30 percent reduction of body embodied carbon emissions.

In line with Cbus Property’s commitment to Net Zero Carbon, 435 Bourke Street is designed to achieve Net Zero Carbon in operation, with up to 20 percent of its fully electric base building electricity requirements generated on-site by its solar skin design. The balance of the building will be powered by offsite renewable electricity.

FAÇADE

Royal Adelaide Hospital

FAÇADE

ADELAIDE, SA, AUSTRALIA
CLIENT: SOUTH AUSTRALIA HEALTH DEPARTMENT

BG&E was engaged as the façade consultant for the New Royal Adelaide Hospital — the largest building project in South Australia — located on the edge of Adelaide's CBD. Our role was to review the brief and tender documentation and to ensure the appointed façade contractor met the project requirements.

Delivered by the HYLC JV, the development consolidates healthcare facilities from across a number of sites in Adelaide, creating a single major hub for the city's healthcare needs into the 21st century.

The façade is characterised by a demanding technical performance brief that includes detailed requirements for extremely high levels of acoustic performance, structural requirements exceeding the current Australian Standards and a seismic performance brief for a post-disaster functionality.

Following a detailed review of the project documentation, the façade was rigorously tested for acoustic, weathering, structural, and seismic performance to ensure compliance with all specifications.

FAÇADE

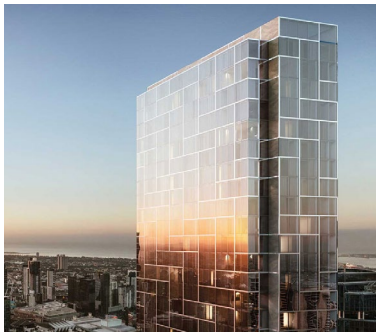
1 William Street
Façade
Brisbane, QLD, Australia.

17 Spring Street
Façade
Melbourne, VIC, Australia.

205 North Quay
Façade
Brisbane, QLD, Australia.

35 Spring Street
Façade
Melbourne, VIC, Australia.

Caufield Grammar School
Façade
Melbourne, VIC, Australia.



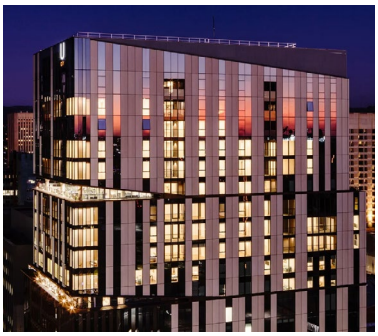
Collins House
Façade
Melbourne, VIC, Australia.

Crown Casino Mahogany Room
Façade
Melbourne, VIC, Australia.

King Abdullah Sport City Stadium
Façade
Jeddah, Saudi Arabia.

Midwater Apartments
Façade
Gold Coast QLD, Australia.

Snow Dunes, Doha Festival City
Façade
Doha, Qatar.



U-City, Franklin Street
Façade
Adelaide, SA, Australia.

University of South Australia
Façade
Adelaide, SA, Australia.

Quay Quarter Tower —
Sydney, NSW, Australia.

SECTOR CAPABILITY

Heritage & Refurbishment

HERITAGE & REFURBISHMENT

Quay Quarter Tower

STRUCTURAL | CONSTRUCTION ENGINEERING | MATERIALS & DURABILITY | SUSTAINABILITY

SYDNEY, NSW, AUSTRALIA
CLIENT: DEXUS

The Quay Quarter Tower (QQT) project comprised conversion of a 50-year-old, 45 storey asset into a highly sustainable commercial vertical village, wildly recognised as the largest adaptive reuse project in the world.

BG&E played the key role in transforming the architect's ambitious vision into a constructible solution through structural, construction, materials, and sustainability services from concept to completion.

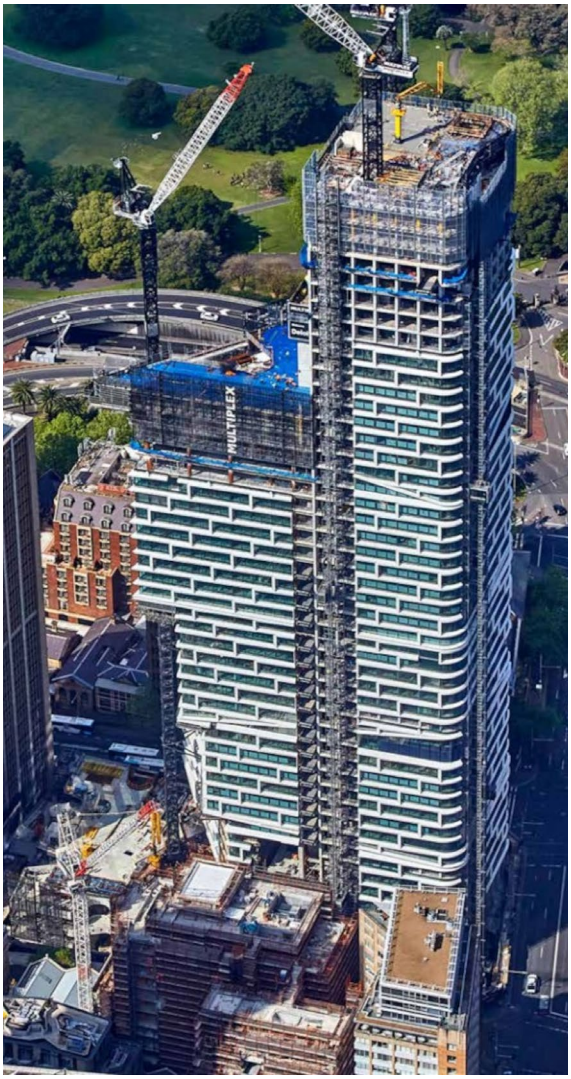
In a construction world-first, one side of the tower was demolished and reconstructed while the other side of the tower was retained and refurbished simultaneously — enabling significant environmental and operational efficiencies.

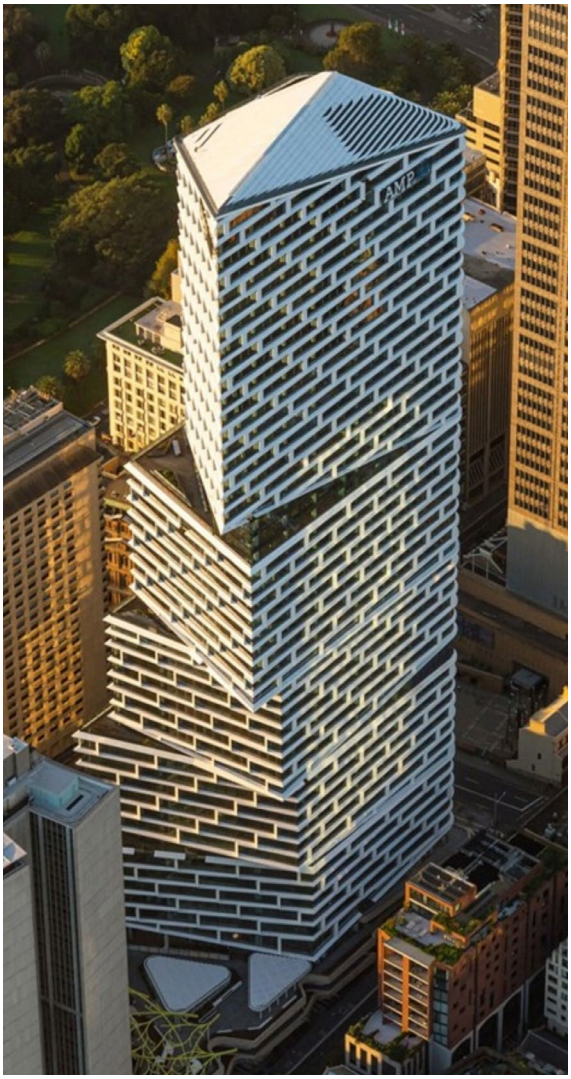
During the upcycle of the existing building, around two-thirds of the towers original core were retained — conserving approximately 12,000 tonnes of embodied carbon.

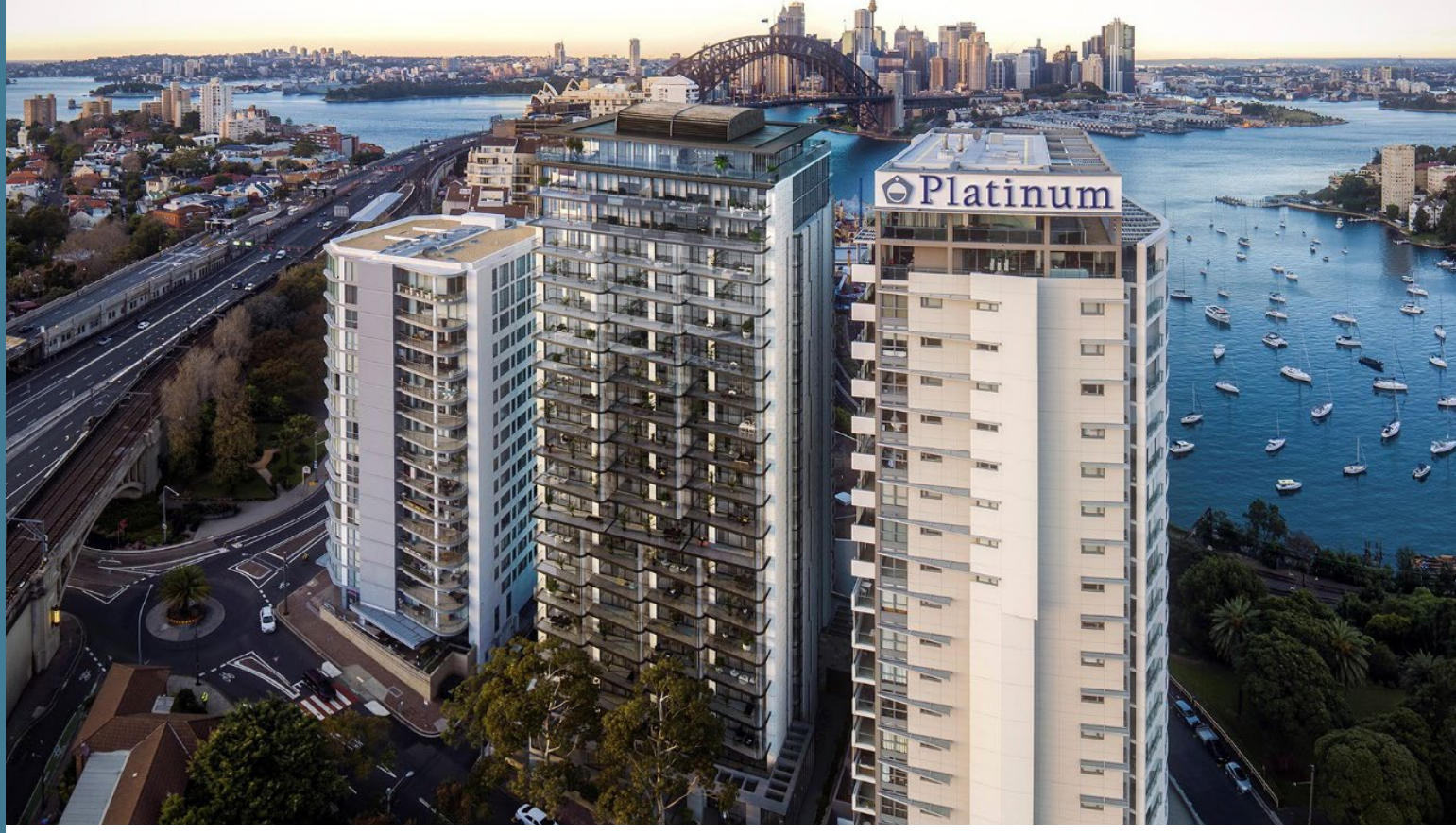
The upcycled QQT now boasts doubled usable area and user accommodations, compared to the original tower — from 45,000 to 102,000 square metres of usable area, and from 2,500 to 9,000 user accommodations, respectively.

Awarded the 'World Building of the Year' at the 2022 World Architecture Festival (WAF) in Lisbon and the prestigious 2022/23 International High-Rise Award — these accolades highlight the extraordinary transformation and sustainability of the project, setting a new global standard in adaptive reuse.

Quay Quarter Tower — Sydney, NSW, Australia.







HERITAGE & REFURBISHMENT

BLUE at Lavender Bay

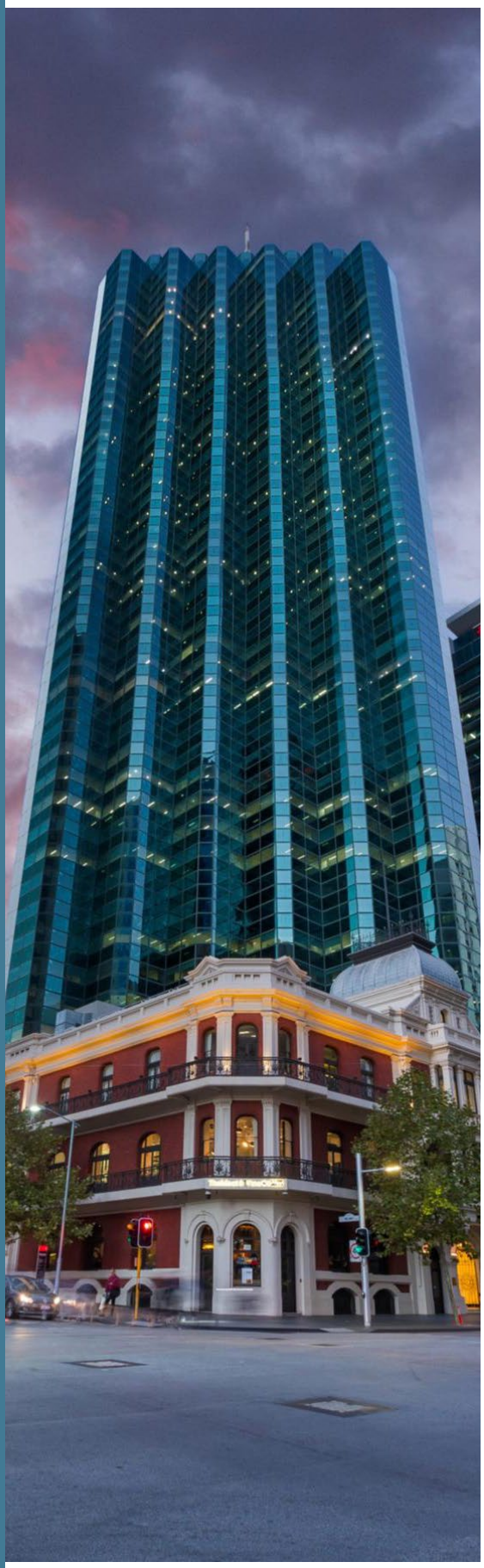
STRUCTURAL

SYDNEY, NSW, AUSTRALIA
CLIENT: AQUALAND

BLUE at Lavender Bay is a luxury residential tower at 61 Lavender Street in Milsons Point, just minutes from Sydney's CBD. The development saw the adaptive reuse of the existing commercial building into residential apartments that boast uninterrupted Sydney Harbour and northern skyline views.

BG&E provided Aqualand with structural design and engineering services for the redevelopment of the commercial tower which involved partial demolition, strengthening, and extension of the existing structure.

The demolition works involved the demolition of the existing lift and stair walls, internal slab panels on all levels, and the entire slab on levels 18 to 20. The new building works involved the construction of new lift and stair walls, new internal slab panels, new slabs on levels 18 to 21, and composite steel balconies on the north and south building edges.



HERITAGE & REFURBISHMENT

St George's Terrace

STRUCTURAL

PERTH, WA, AUSTRALIA
CLIENT: GOLDEN GROUP

32 Street Georges Terrace involved the redevelopment of the existing May Holman Building to increase floor area and convert the building into a contemporary office facility.

BG&E, engaged from concept, assessed multiple expansion options and initially considered full demolition, but determined that reusing the existing building — despite extensive core re-planning and partial demolition — was the most cost-effective solution.

A staged core demolition and strengthening sequence ensured stability without the need for temporary perimeter bracing. The existing raft was strengthened by dowelling and thickening to accommodate increased wind and seismic loads. A structural steel frame with composite slabs enabled efficient construction of new floor areas within the constrained CBD site.

HERITAGE & REFURBISHMENT

Westminster Tower

STRUCTURAL | CIVIL | FAÇADE | MATERIALS & DURABILITY

LONDON, UK
CLIENT: LONDON SQUARE

The historic 1980s Royal Doulton manufacturing site will be taking its next form as the new Westminster Tower — a premium mixed-use building that boasts a health and wellness facility, private offices, three new storeys and luxury apartments with floor-to-ceiling, double-height glass windows with views of the iconic London skyline.

BG&E provided materials, structural, civil, and façade engineering services to the adaptive reuse project — ensuring structural safety and performance enhancements while preserving 90% of the original building, resulting in a significantly reduced carbon footprint, compared to new build construction.

Different options for the new façade design have been studied based on the client's requirements, strict load allowances and cost. Great focus has been given to constructability with the proposed cladding solution articulated to suit the existing structure as well as achieving stringent environmental and sustainability envelope performance.

Due to limited information on the existing building, a key challenge of the project was understanding the structure's present behaviour and performance, in relation to the proposed design.

To combat this, BG&E's Materials team combined destructive and non-destructive materials tests to ensure a comprehensive dataset for structural analysis. Using this data, our Buildings team developed a Finite Element Model that accurately replicated the behaviour of the existing building.

HERITAGE & REFURBISHMENT

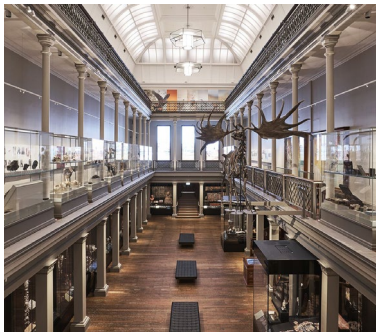
32 St Georges Terrace
Structural | Materials & Durability
Perth, WA, Australia.

333 Kent Street
Structural | Construction Engineering | Materials & Durability
Sydney, NSW, Australia.

Chancery Chambers
Structural | Materials & Durability
Auckland, New Zealand.

General Post Office
Structural | Materials & Durability
Perth, WA, Australia.

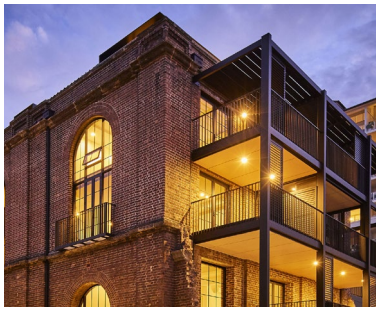
His Majesty's Theatre
Structural | Materials & Durability
Perth, WA, Australia.



Long Gallery — Australian Museum
Structural
Sydney, NSW, Australia.

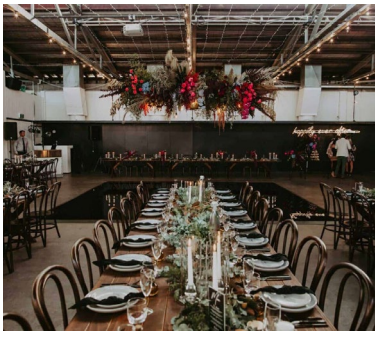
Mudgee Art Gallery
Structural | Civil | Construction Engineering | Flooding & Hydrology
Mudgee, NSW, Australia.

Olderfleet
Façade | Materials & Durability
Melbourne, VIC, Australia.



Plumbers Workshop
Structural | Materials & Durability
Sydney, NSW, Australia.

St Marys Cathedral
Structural | Materials & Durability
Perth, WA, Australia.



The Old Pickle Factory
Structural | Materials & Durability
Leederville, WA, Australia.

Tramsheds Harold Park
Structural | Materials & Durability
Sydney, WA, Australia.

SECTOR CAPABILITY

Data Centres

DATA CENTRES

IMDC ntelliCentre 3 (IC3) Super West Data Centre

STRUCTURAL | MATERIALS & DURABILITY

NORTHERN SYDNEY, NSW, AUSTRALIA
CLIENT: MACQUARIE DATA CENTRES

The IC3 Super West Data Centre, part of Macquarie Data Centres' Intellicentre Campus in Macquarie Park, Sydney, is a next-generation facility designed to support the rapidly growing demand for AI and cloud services.

Once complete, the campus will deliver an IT load of up to 63 MW, making it one of the most significant data centre hubs in Australia.

The development includes more than 11,700 square metres of technical space across a five storey building, incorporating 14 data halls, office and amenity areas, extensive backup power generation, and robust cooling systems to support high-density workloads.

DATA CENTRES

Project Experience

	LOCATION	MW	STORIES	ENGINEERING SERVICES	TYPE
AUSTRALASIA	ACT, Australia	20	1	Structural, Civil & Traffic Engineering	Colocation
	ACT, Australia	60	1	Structural, Civil & Traffic Engineering	Colocation
	Auckland, New Zealand	12	2	Const. Support Temporary Works	Colocation
	Auckland, New Zealand	12	2	Const. Support Temporary Works	Colocation
	Auckland, New Zealand	12	5	Structural Engineering	Hyperscale
	NSW, Australia	35	6	Structural Engineering	Colocation
	NSW, Australia	48	3	Structural Engineering	Hyperscale
	NSW, Australia	35	6	Structural Engineering	Colocation
	NSW, Australia	60	3	Structural & Construction Engineering	Hyperscale
	NSW, Australia	40	2	Structural & Civil Engineering	Colocation
	VIC, Australia	58	1	Structural & Civil Engineering	Hyperscale
ASIA	Cavite, Philippines	24	3	Structural & Civil Engineering	Colocation
	Fairview, Philippines	124	5	Structural & Civil Engineering	Hyperscale
	Hyderabad, India	48	5	Structural & Civil Engineering	Hyperscale
	Johor, Malaysia	54	2	Structural Engineering	Hyperscale
	Kuala Lumpur, Malaysia	54	2	Structural Engineering	Hyperscale
	Kyoto, Japan	100	4	Site Due Diligence	Hyperscale
	Manila, Philippines	36	3	Structural & Civil Engineering	Hyperscale
	Manila, Philippines	22	4	Structural & Civil Engineering	Colocation
	Manila, Philippines	16	3	Structural & Civil Engineering	Colocation
	Osaka, Japan	32	4	Structural Peer Review	Hyperscale
	Pune, India	96	2	Structural & Civil Engineering	Hyperscale
	Saitama, Japan	48	5	Structural Peer Review	Hyperscale
	Singapore	16	6	Structural & Civil Engineering	Colocation

MIDDLE EAST	Abu Dhabi, UAE	60	3	Structural & Civil Engineering	Hyperscale
	Bahrain	48	2	Structural & Civil Engineering	Hyperscale
	Dubai, UAE	20	3	Structural & Civil Engineering	Colocation
	Dubai, UAE	20	3	Subject Matter Expert | Technical Advisor	Colocation
	Dubai, UAE	7.2	3	Structural & Civil Engineering	Colocation
	Israel	60	2	Structural & Civil Engineering	Hyperscale
	Israel	51	2	Structural & Civil Engineering	Hyperscale
	Israel	51	2	Structural & Civil Engineering	Hyperscale
	Israel	51	2	Structural & Civil Engineering	Hyperscale
EUROPE	Berlin, Germany	16	2	Const. Support | Temporary Works	Colocation
	Dublin, Ireland	4	2	Structural & Civil Engineering	Owner Occupier
	London, UK	96	5	Const. Engineering | Sequencing	Hyperscale
	Madrid, Spain	4.8	1	Structural & Civil Engineering | Const. Support	Colocation
	Vienna, Austria	4.8	1	Structural & Civil Engineering | Const. Support	Colocation

At BG&E, we are united by a common purpose — we believe that truly great engineering takes curiosity, bravery and trust, and is the key to creating extraordinary built environments.

Our team of more than 800 highly skilled people, in offices across Australia, New Zealand, Singapore, the United Kingdom and Middle East, design and deliver engineering solutions for clients in the Property, Transport, Ports and Marine, Water, Defence, Energy and Resources sectors.

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BG&E
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