



Case Studies

Bligh Tanner Feature Projects

**BLIGH
TANNER**



Bligh Tanner is a structural, façade, civil, environmental and water engineering consultancy distinguished by its high level of expertise, personalised service and innovative approach.

The following sheets have been compiled to showcase the diverse myriad of projects undertaken by our team of specialists.

Bligh Tanner has been responsible for some of Australia's most innovative and complex engineering projects, from multimillion dollar special structures through to world leading integrated water management systems.

Bligh Tanner is known for solving complex problems and demonstrates a highly specialised approach to environmentally sustainable design.

We deliver engineering and consultancy services on a range of complex, cutting-edge projects across five key disciplines.

- + Building Structures
- + Land and Infrastructure Development
- + Water and Environment
- + Special Structures
- + Façade Engineering

With a commitment to integrating contemporary design with the surrounding built and natural environments, Bligh Tanner has a strong focus on environmentally sustainable design that provides impetus to innovation on all projects.



Waltzing Matilda Centre

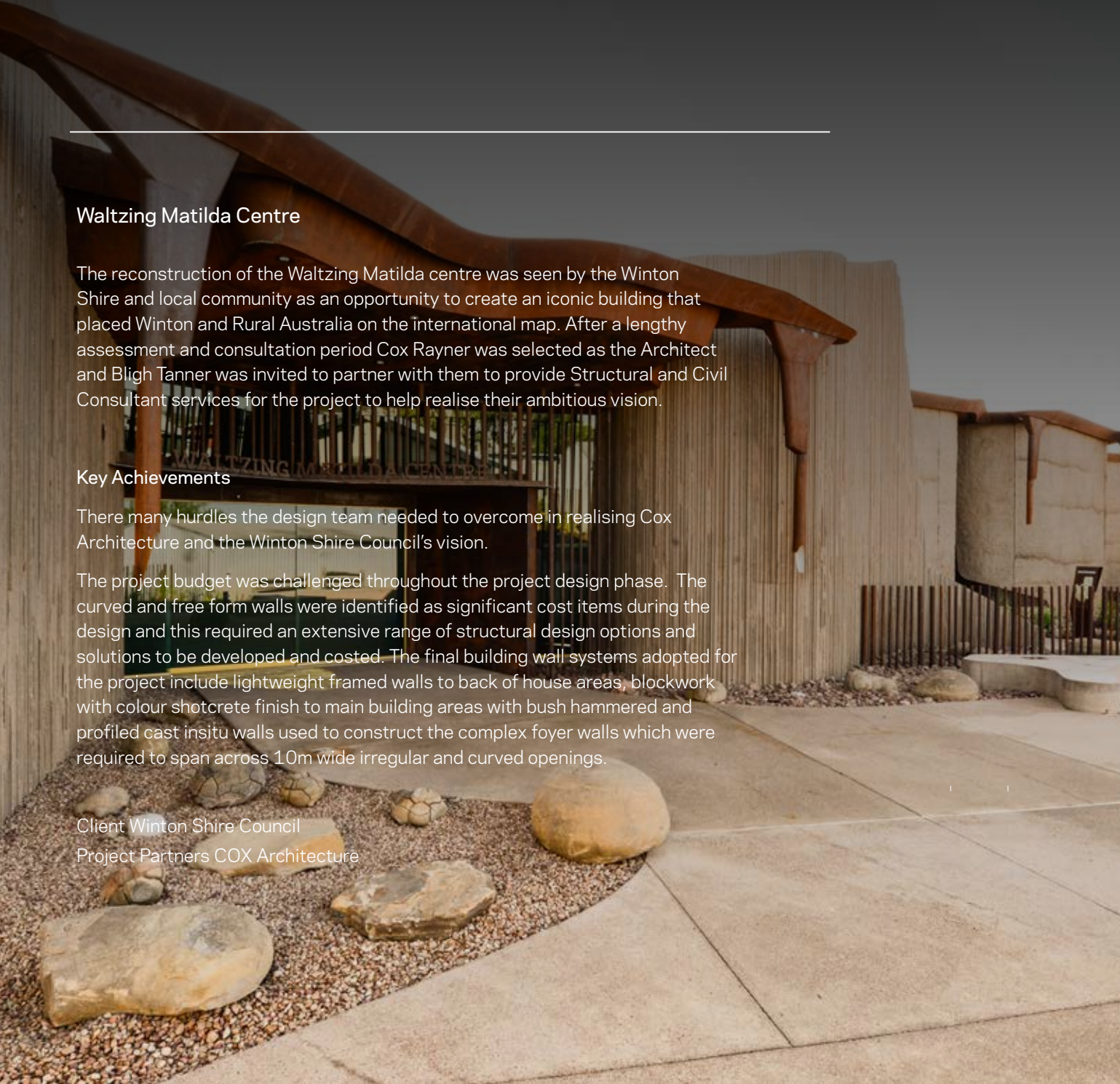
The reconstruction of the Waltzing Matilda centre was seen by the Winton Shire and local community as an opportunity to create an iconic building that placed Winton and Rural Australia on the international map. After a lengthy assessment and consultation period Cox Rayner was selected as the Architect and Bligh Tanner was invited to partner with them to provide Structural and Civil Consultant services for the project to help realise their ambitious vision.

Key Achievements

There many hurdles the design team needed to overcome in realising Cox Architecture and the Winton Shire Council's vision.

The project budget was challenged throughout the project design phase. The curved and free form walls were identified as significant cost items during the design and this required an extensive range of structural design options and solutions to be developed and costed. The final building wall systems adopted for the project include lightweight framed walls to back of house areas, blockwork with colour shotcrete finish to main building areas with bush hammered and profiled cast insitu walls used to construct the complex foyer walls which were required to span across 10m wide irregular and curved openings.

Client Winton Shire Council
Project Partners COX Architecture



Australian Age of Dinosaurs Reception Centre

Bligh Tanner contributed as a project partner for the Australian Age of Dinosaurs not-for-profit organisation, which is home to the world's largest collection of Australian dinosaur fossils.

The Australian Age of Dinosaurs Reception Centre is situated on a large mesa formation approximately 20 kilometers outside of Winton in Central Queensland. The award winning building is a complex mix of textured, irregular precast tilt panels which are coloured to blend into the surrounding landscape.

Key Achievements

In addition to the clever use of precast concrete panels, the building's shallow profile steel roof cantilevers over the outdoor terrace to frame the outlook over the surrounding terrain.

Client Winton Shire Council

Project Partners COX Architecture





Heritage: An Installation by New York-based Chinese artist Cai Guo-Qiang

Heritage is a meditative installation which captures its audience through the wondrous congregation of animals from around the world at a watering hole that continuously collects a single droplet of water from the ceiling in its otherwise still waters.

Key Achievements

The engineering behind achieving this balance demanded a consideration of every variable in the room, including the air conditioning plant housed immediately below the Gallery floor! Trial pools were set up to determine the vibration effects on the requisite still waters.

Client GoMA

Eucalyptus, by Cai Guo-Qiang



Eucalyptus 2013, a 31-metre tree suspended along GoMA's central Long Gallery, came from a plantation earmarked for clearing for urban community development. The work was inspired by the ancient trees of Lamington National Park, and creates a meditative, immersive experience for visitors,

Exhibition curator Russell Store

Key Achievements

Certainly getting the 30 metre long 1.5 tonne Spotted Gum from Springfield into the GoMA exhibition space for the 'Cai Guo-Qiang: Falling Back to Earth' installation was interesting. The tree was over a kilometre into a forest and its retrieval and transport was over high level, major in ground infrastructure (water supply pipes), which required steel plate bridging along its length. Then of course manipulating the tree into the gallery required it to be cut into three lengths that then had to be 'hidden' – stitched back together to appear as a single length tree. The QAGoMA staff did an amazing job with the reuse of tree bark patterning over the cuts.

Client GoMA





Darra BMX

Collaborating with Brisbane City Council and architects Conrad Gargett, Bligh Tanner designed a new BMX facility in South Brisbane, Darra. This \$2.3M facility includes a high level, quality track for fitness and skill improvement activities related to BMX riding and lifestyle.

Bligh Tanner was able to add significant value to the project through the development of 3D renders and fly throughs to allow the client and stakeholders to visualise the design as it progressed. This facilitated a collaborative approach to design between project partners, Conrad Gargett, and Brisbane City Council.

Key Achievements

The project included highly complex earthworks and specialist pavement design/line-marking to develop the BMX track. The existing site was located on an old landfill site, requiring specialist engineering input.

Client Brisbane City Council
Project Partners Conrad Gargett





Yalingbila Bibula

Working with the Quandamooka people of Minjerrabah and in collaboration with Cox Architects, Bligh Tanner designed the structural and civil engineering services for this very powerful installation of Yalingbila Bibula.

The project concept and cultural significance was designed with the guidance of the local indigenous council and residents for the suspension of a whale skeleton that had been washed ashore.

Key Achievements

Smart integration of the bracing elements double as viewer information panels for the whale exhibit and research pod.

Engineering challenges associated with near cyclonic winds, a harsh marine environment and land slip susceptibility were addressed throughout the design process.

Working closely with a Canadian based whale articulation specialist to engineer a robust but aesthetical steel armature and cable support structure to hang the whale skeleton from the shelter roof.

Client Cox Architecture

Brisbane City Council's Oxley Creek Transformation

Warril Parkland is the first project to be delivered by the Oxley Creek Transformation, and involves the development of a new parkland along the creek at Larapinta featuring low impact design principles, a major natureplay area and ecological interpretation.

Major sewer and water connections were required for the new park infrastructure, as well as detailed flood modeling and stormwater/flood emergency management plans to ensure the parkland and car parking is safe and resilient during flood events.

Car parking, internal circulation and external roadworks were designed by Bligh Tanner to ensure accessibility of the new parkland.

Key Achievements

Awarded 'The Queensland Government Award for Outdoor Places and Spaces' at the Outdoors Queensland Awards 2020

Client Brisbane City Council
Project Partners Place Design Group



Small Creek Naturalisation

This 1.6 km channel naturalisation was a flagship project for Ipswich City Council's stormwater quality offsets program. It's completion brought clean water and habitat for wildlife, as well as better connections via both path and bikeway for the local Ipswich community to interact with nature in a parkland setting.

Bligh Tanner engaged Landscapology and Streamology as sub-consultants on the project, which included complex flooding and geomorphology considerations, landscaping and vegetation selection to withstand high-velocities.

The design included the re-use of existing site concrete in the streambed to provide scour protection and fish passage.

Key Achievements

The project is recognised as the leading waterway naturalisation project in Australia and has won over 10 major awards, including 2 x National Landscape Excellence Awards. **Small Creek represents absolute best-practice in stream naturalisation and has provided significant ecological and community benefit.**

Client Ipswich City Council

Project Partners Landscapology, Streamology, Nicoleap



Third Avenue Road Upgrade, Marsden

The project extents are located along Third Ave through the suburbs of Marsden and Kingston. The project begins just south of the existing intersection of Third and Fourth Ave where a new reconfigured intersection will be located and continues along Third Ave to tie into the existing 4 lane cross section at Curtisii Court.

As the Principal Consultant for delivering this road upgrade project for Logan City Council, Bligh Tanner is responsible for the design and documentation of roadworks, pavements, stormwater drainage, coordination of public utility plant relocations and allocation of service corridors.

Key Achievements

Upgrading roads from 'single carriageway rural form' to multilane urban roads that cater for pedestrians and cyclists.

Widening Scrubby Creek bridge.

Relocation of significant trunk sewer and water mains and minimizing flood impacts on all the properties.

Client Logan City Council

Construction Value \$40M (Estimated)





Hanlon Park Redevelopment

Bligh Tanner was the principal design consultant for the Hanlon Park Redevelopment project, led by EPOCA Constructions.

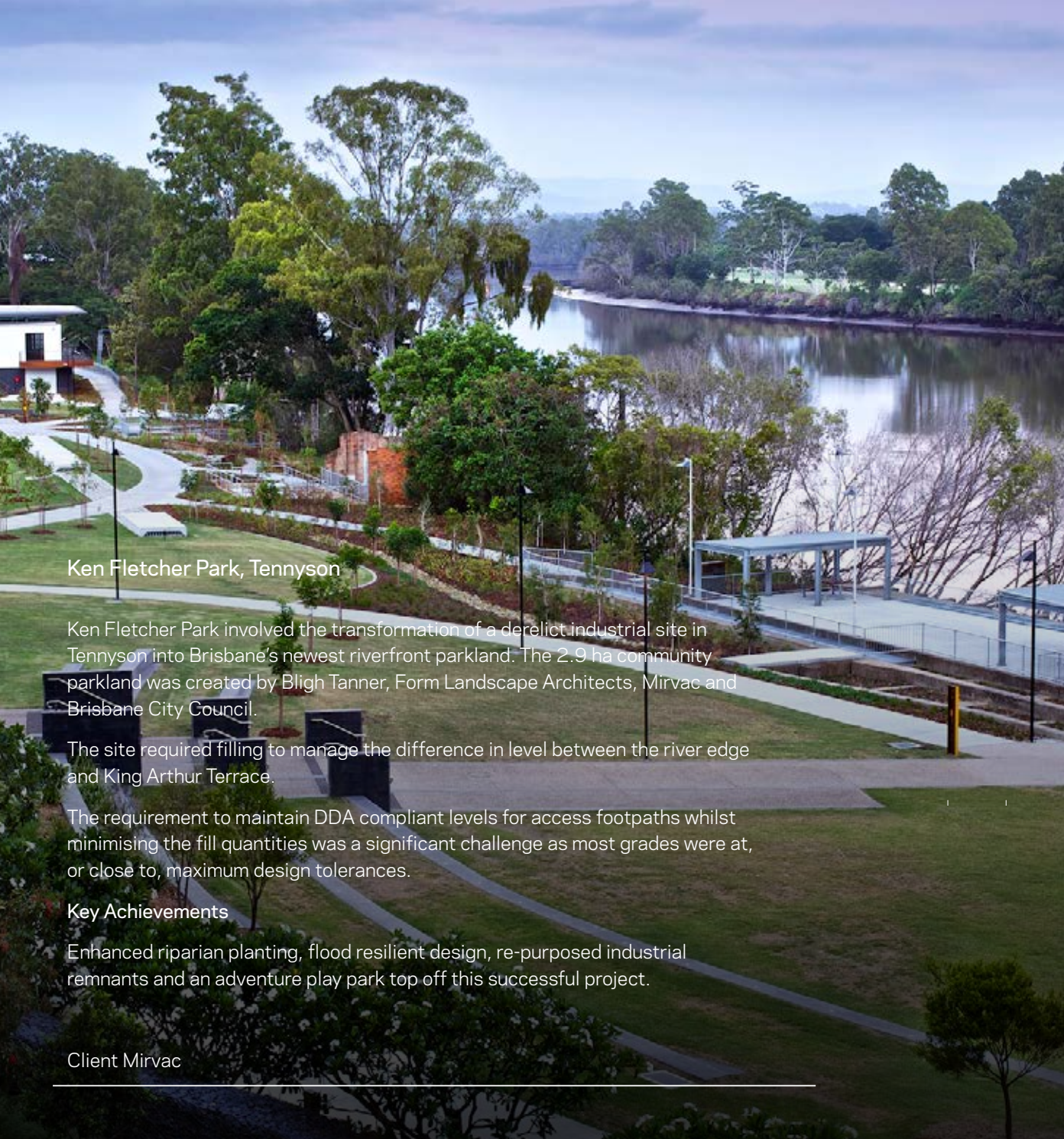
The Hanlon Park Redevelopment includes the renaturalisation of Norman Creek back into a thriving and interactive waterway for the community to enjoy. The park will be activated with foot paths shaded by native vegetation, playgrounds and seating areas.

Key Achievements

Hanlon Park is one of Brisbane City Council's flagship park projects. The Bligh Tanner led design has obtained widespread stakeholder support including from Urban Utilities and multiple internal stakeholders. The project opened formally in May 2021.

Client Brisbane City Council

Project Partners Epoca Construction, Tract Consultants



Ken Fletcher Park, Tennyson

Ken Fletcher Park involved the transformation of a derelict industrial site in Tennyson into Brisbane's newest riverfront parkland. The 2.9 ha community parkland was created by Bligh Tanner, Form Landscape Architects, Mirvac and Brisbane City Council.

The site required filling to manage the difference in level between the river edge and King Arthur Terrace.

The requirement to maintain DDA compliant levels for access footpaths whilst minimising the fill quantities was a significant challenge as most grades were at, or close to, maximum design tolerances.

Key Achievements

Enhanced riparian planting, flood resilient design, re-purposed industrial remnants and an adventure play park top off this successful project.

Client Mirvac





Darlington Point Solar Farm

Bligh Tanner have lead the civil and structural design of what was at the time of design Australia's largest solar power station, Darlington Point Solar Farm. This solar farm is now the 10th largest Solar Farm in the world.

Darlington Point is a 330 MW (DC) solar farm that will generate roughly 685,000 MWh per annum – enough to power around 115,000 homes.

Key Achievements

A logistical challenge for the project was the sheer size of the site which measured almost 6 km from one end to the other. As an indication of scale, Bligh Tanner designed over 20 km of roads within the site.

Given its proximity to the Murrumbidgee River, floods have always been part of the landscape at Darlington Point. The vast majority of the large site is flood prone, and some areas can be flooded for many days at a time, requiring careful design of photovoltaic modules and electrical infrastructure.

Project Partners Encome Energy Performance

Story Bridge Under Bridge Platforms

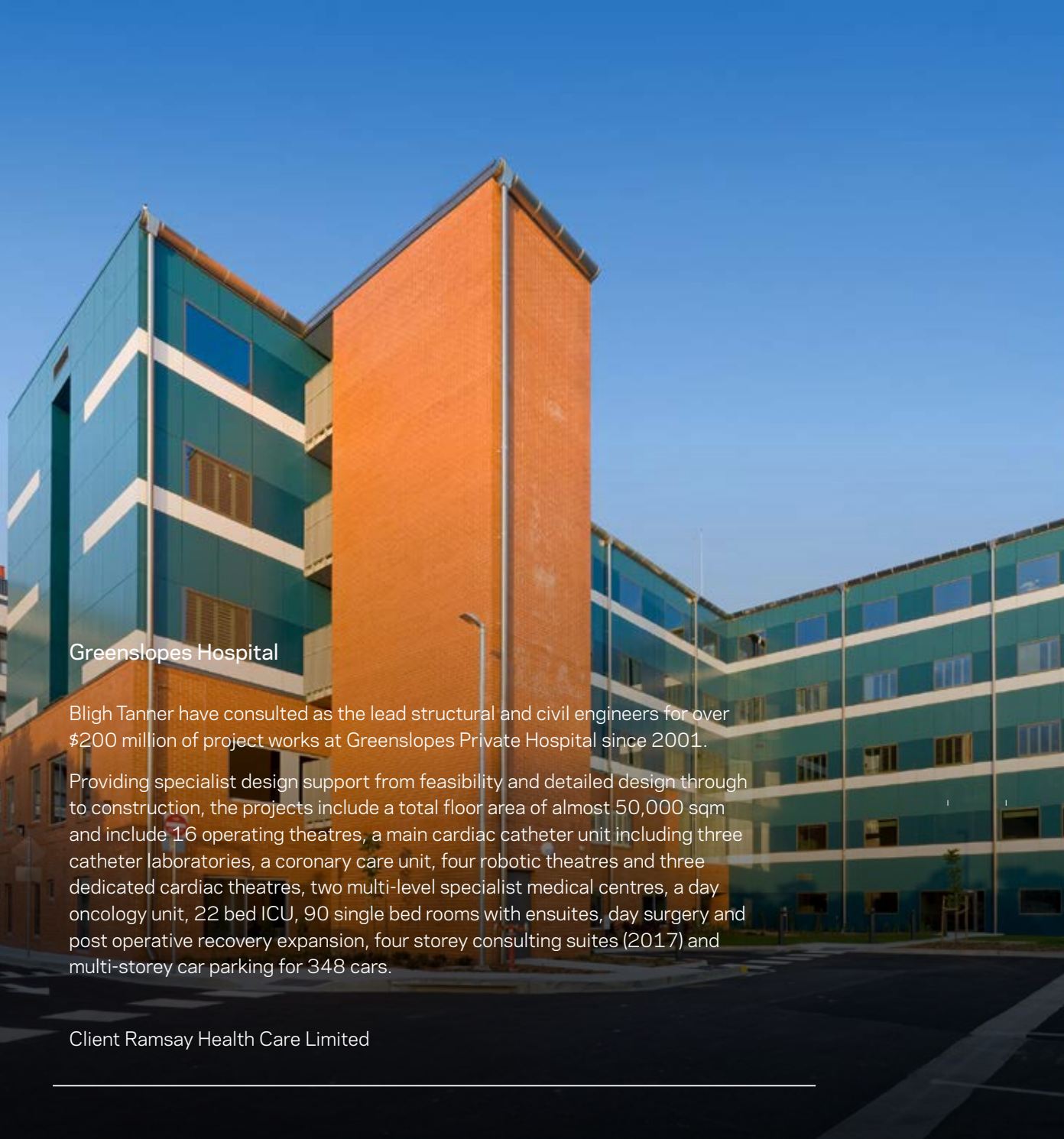
Bligh Tanner performed detailed design and tender documentation of movable under-bridge platform for the iconic, heritage listed Story Bridge. The proposed under-bridge platform is approximately 25m wide x 22m along the length of the bridge. Bligh Tanner designed three platforms, one each for southern anchor span, northern anchor span and river span.

Key Achievements

The key aspects of the platform design are to eliminate the need of imposition of exclusion zones for public safety during the story bridge maintenance works and to collect the wastewater from bridge wash downs and to minimise interference with Howard Smith Development. Bligh Tanner provided full tender documentation along with mechanical and electrical engineering drawings with the support of the specialised sub-consultants.

Client Brisbane City Council





Greenslopes Hospital

Bligh Tanner have consulted as the lead structural and civil engineers for over \$200 million of project works at Greenslopes Private Hospital since 2001.

Providing specialist design support from feasibility and detailed design through to construction, the projects include a total floor area of almost 50,000 sqm and include 16 operating theatres, a main cardiac catheter unit including three catheter laboratories, a coronary care unit, four robotic theatres and three dedicated cardiac theatres, two multi-level specialist medical centres, a day oncology unit, 22 bed ICU, 90 single bed rooms with ensuites, day surgery and post operative recovery expansion, four storey consulting suites (2017) and multi-storey car parking for 348 cars.

Client Ramsay Health Care Limited





West Village, Peter's Ice Cream Factory

West Village is set to house eight modern apartment buildings, a Woolworths supermarket, and a diverse mix of galleries, boutiques, traders and merchants interlinked by vibrant laneways.

A feature of this project is the Peter's Ice Cream Factory. This historic factory building is one of two buildings that will be retained as part of the masterplan for the West Village development.

This urban renewal project will create a vibrant ground plane at West Village and add to the Boundary Street precinct, which is set to be the central retail hub of West End.

Client Sekisui

'The Sound that Light Makes', 300 George Street, Brisbane

Bligh Tanner undertook the detail engineering design for a 12m high continuous façade screen wrap to the 4 storey podium level of 4 high rise towers situated at the junctions of George Street, Ann Street, Adelaide St and North Quay in Brisbane. The façade artistry was designed by Alexander Knox.

The undulating punched and pressed aluminium screen articulates around the mixed use podium level, with tight radius curves and interfaces with various soffit, façade and glazing elements.

Client UAP
Project Team Brookfield Multiplex, DBI





ACU Mercy Building

The \$32m building Australian Catholic University Mercy Building project was commissioned following an extensive growth period that made the ACU Banyo Campus at the time the fastest growing university campus in Queensland. At 5 stories high and 5000 sqm, the Mercy building delivers outstanding indoor and outdoor learning areas while preserving a strong awareness of the culture of the McCauley at Banyo Campus.



Bligh Tanner have provided an excellent and collaborative structural engineering service for the ACU Mercy Building project.

They considered different structural approaches during the concept stage and played a major role in resolving complex early works challenges.

I have enjoyed their hands-on approach during workshops and resultant sketch options greatly assisted realisation of best value.”

- Graham Legerton | Group Director

Client Australian Catholic University
Project Partners Thomson Adsett





Western Sydney Watercycle Management

Bligh Tanner led the development of new urban typologies for this major new growth area (equivalent to a new city the size of Adelaide). The typologies demonstrate that the parkland city objectives are able to be realistically implemented at a development scale, and are able to be facilitated through planning controls.

Key Achievements

The typologies resolve the combined challenges of urban density, housing affordability, and urban greening. The typologies are for low, medium and high density residential as well as commercial and industrial development, as well as typologies for the floodplain fringe.

Client Sydney Water



Thomas Dixon Centre

This significant redevelopment will elevate Queensland Ballet's global platform, providing our creative community with access to world class facilities. The project involves the refurbishment of six studios; a new 350 seat performance theatre; a Performance Studio Wellness Centre for the dancers and a new café with space for functions.

Maintaining the historic integrity and character of this heritage listed building, the new additions have been designed around the existing centre and tied together by a new central promenade which has been shaped to realise a space for creative togetherness and welcoming.



Client Queensland Ballet
Project Team Conrad Gargett, QBuild and Hansen Yuncken



Forgan Smith Centre, UQ

Bligh Tanner were responsible for all upfront investigations of the existing building. The building's upper level roof was demolished to allow an increase in the roof height of 500mm, creating a more functional floor space. The new structure features a series of ceiling vaults, reflecting the University's Great Court.

Internally, demolition works were conducted to allow for a new void area creating a full height atrium in the main entrance.

Key Achievements

Transforming the existing 1948 building into a modern learning space.

Client University of Queensland



Brisbane Girls Grammar School

Bligh Tanner has been working with Brisbane Girls Grammar School for some years and has seen it grow into a well- planned and exciting campus.

The most recent project was delivered by Lendlease and m3architecture. Bligh Tanner had the pleasure of designing the structural engineering and managing the construction phase for The New Science Learning Centre. This seven-storey building is the school's most substantial project to date, featuring sophisticated design elements that link the new building to the existing site.

Two outstanding design features are the large striking void through the centre of the building with steel stairs connecting to all levels and a steel bridge linking Level 2 of the old science block with Level 4 of the new centre. These two elements allow cross ventilation and natural light to flood the area and allows ease of movement for the staff and students.

The Science Learning Centre significantly increases the number of laboratories at the school while also offering recreational and multi-functional spaces to benefit all of the students and the broader school community.

Key Achievements

AIA Award Educational Architecture 2021

Client M3 Architecture



St Rita's College Trinity Centre

St Rita's College Trinity Centre was named the winner of the John Dalton Award for Building of the Year. "Attention to ideas and detail is reflected in the quality of the spaces and façade that speaks to both the school and neighbourhood," said the jury.

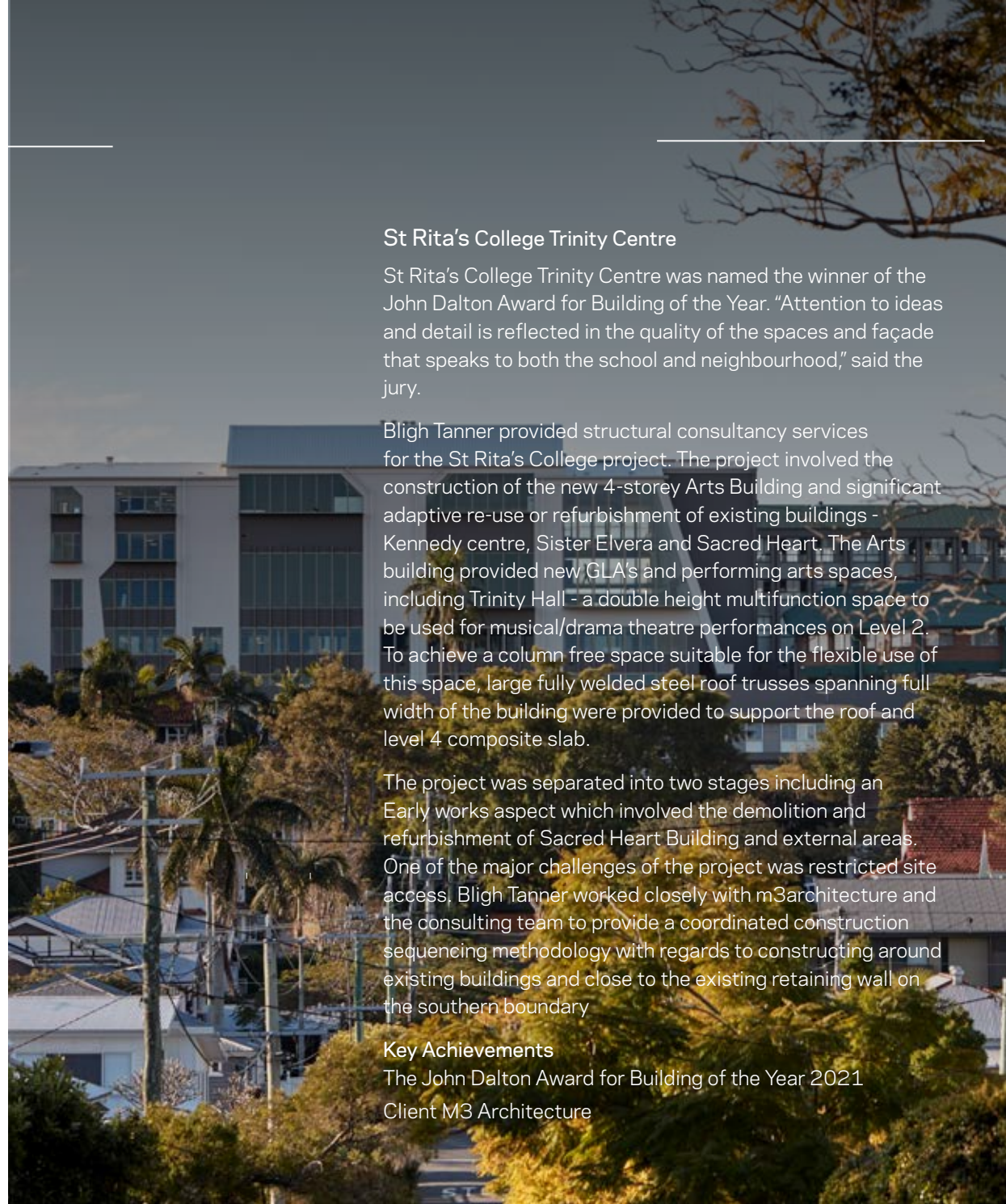
Bligh Tanner provided structural consultancy services for the St Rita's College project. The project involved the construction of the new 4-storey Arts Building and significant adaptive re-use or refurbishment of existing buildings - Kennedy centre, Sister Elvera and Sacred Heart. The Arts building provided new GLA's and performing arts spaces, including Trinity Hall - a double height multifunction space to be used for musical/drama theatre performances on Level 2. To achieve a column free space suitable for the flexible use of this space, large fully welded steel roof trusses spanning full width of the building were provided to support the roof and level 4 composite slab.

The project was separated into two stages including an Early works aspect which involved the demolition and refurbishment of Sacred Heart Building and external areas. One of the major challenges of the project was restricted site access. Bligh Tanner worked closely with m3architecture and the consulting team to provide a coordinated construction sequencing methodology with regards to constructing around existing buildings and close to the existing retaining wall on the southern boundary

Key Achievements

The John Dalton Award for Building of the Year 2021

Client M3 Architecture





Anglican Church Grammar School, Centenary Library

Working in tandem with award winning architects BSPN, Bligh Tanner have worked to create a tertiary inspired library environment.

This \$30M building features bespoke and responsive spaces to encourage freedom in learning. This innovative concept utilised design and intent space to successfully create an environment that improves human interaction and pedagogical methods.

Key Achievements

Successful in winning the Queensland Educational Architecture Award.

Client Anglican Church Grammar School



HEY House

The project is the architects own house. "Passionate quality detailing is paramount and exudes from every space and juncture in this delightful well-built and engineered family home," said the jury.

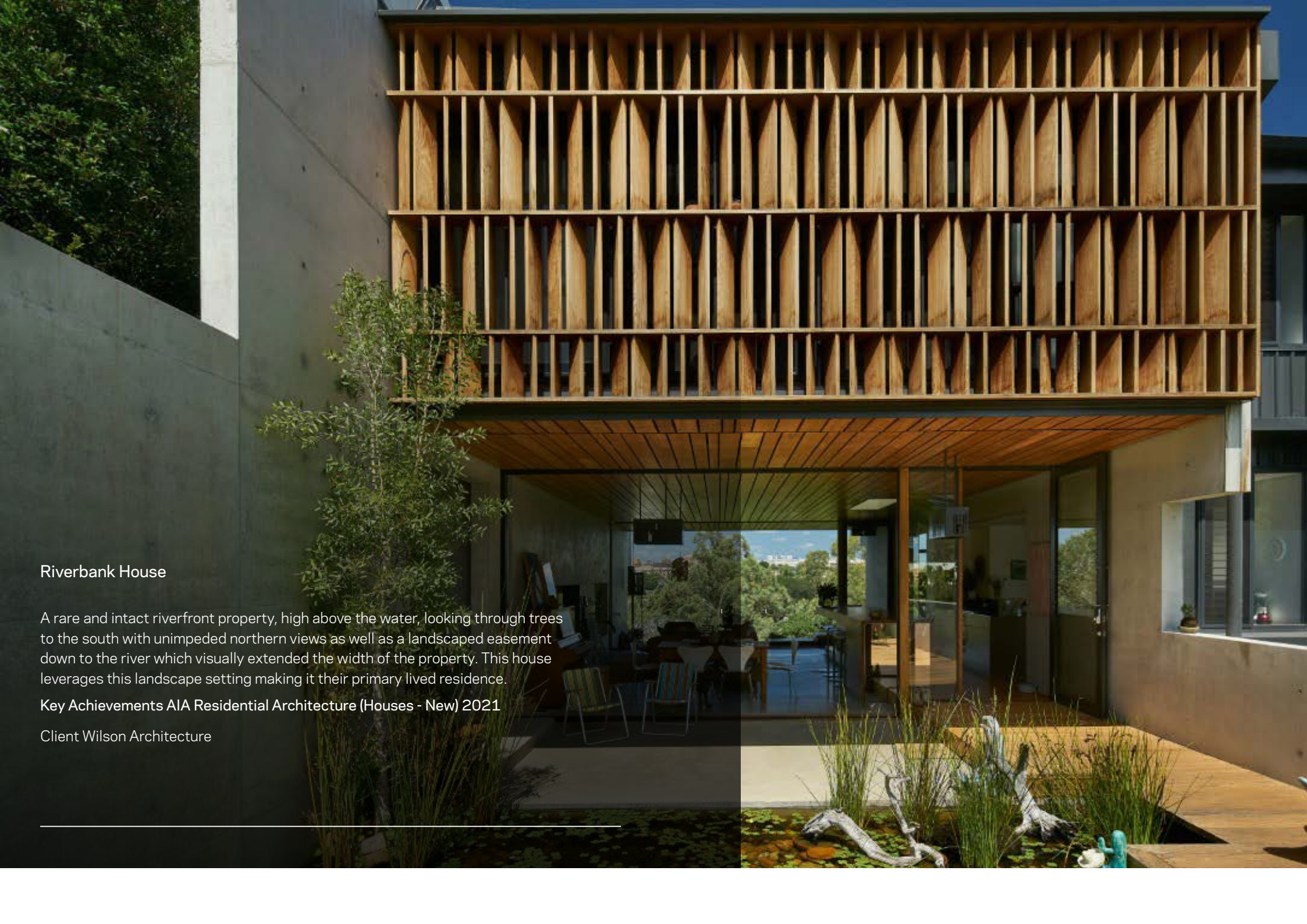
"This is a resilient place in both a hard and soft sense and a timeless home with a modern aesthetic cloak. It offers a sense of enlightenment, flexibility, and function to its users and educates and informs those that may visit or pass it by."

Key Achievements The inaugural Philip Follent Award for Building of the Year 2021

Client Willemsen Architecture

Photographer Scott Burrows





Riverbank House

A rare and intact riverfront property, high above the water, looking through trees to the south with unimpeded northern views as well as a landscaped easement down to the river which visually extended the width of the property. This house leverages this landscape setting making it their primary lived residence.

Key Achievements AIA Residential Architecture (Houses - New) 2021

Client Wilson Architecture

Door 42

The success of Door 42 is in the planning regime and carefully managed sequencing of spaces throughout the facility.

The suburban context is purposefully understated to shape a welcoming entrance sequence for at-risk youth seeking refuge. Upon entering, the residential quality thrives, forming the communal heart of the complex. There is mindfulness of the need to respect the residents' individuality and wellbeing, which is managed through the layering of incremental levels of independence.

Key Achievements

Commendation for Residential Architecture - Multiple Housing - Sunshine Coast Regional Architecture Award 2021

Client Push Architecture





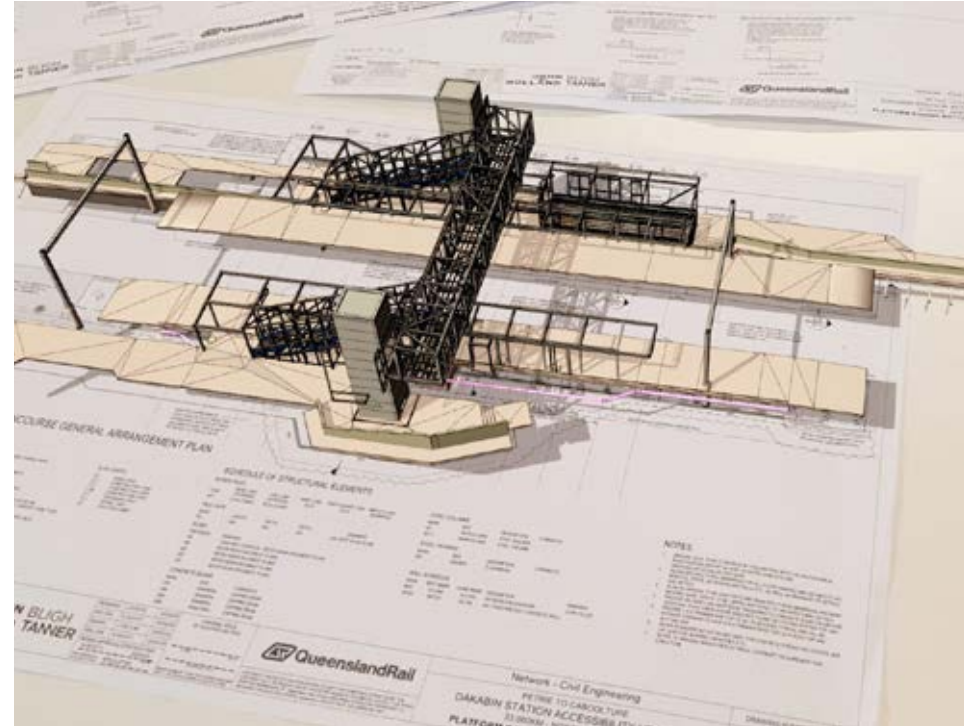
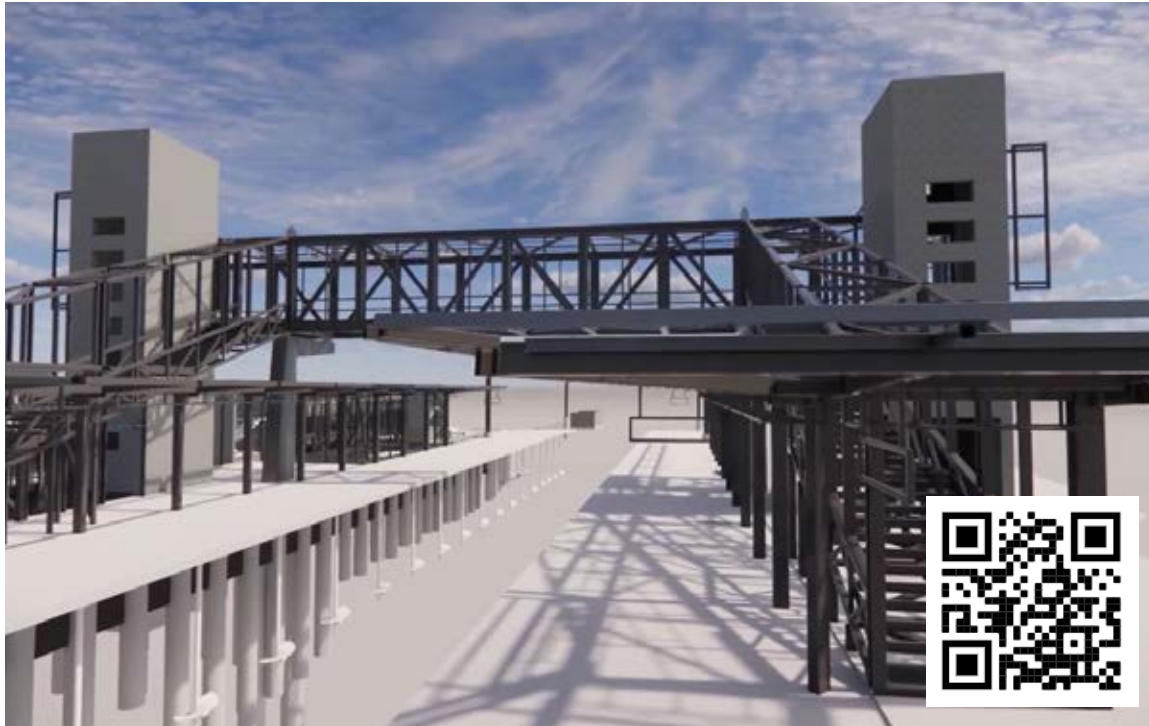
Maritimo House

Built in 1925, Maritimo is arguably one of Brisbane’s finest waterfront properties.

Bligh Tanner were responsible for the structural engineering of a major refurbishment of this Brisbane Heritage property. The refurbishment encompassed a majority of the 2300m2 sloping riverfront site and included new tennis courts and terraced gardens, new pool terrace, additional off-street parking and substantial alterations to the existing building.

Building alterations included new bedrooms and enlarged master bedroom in the previous “attic” including with roof alterations, new internal passenger lift and spiral staircase.

Architect Conrad Gargett



Technology + Visualisation

Bligh Tanner provides an extensive range of virtual design and digital modelling services. The firm's visualisation models and fly throughs allow a structural design to be simulated and assessed before it is built. Clients can see how structural, architectural, civil and MEP services combine to deliver a finished asset.



BLIGH TANNER

- + Building Structures
- + Land and Infrastructure Development
- + Water and Environment
- + Special Structures
- + Façade Engineering

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