
Deep thinking

Underground Power Capability Statement

Buildings | Australia & New Zealand





A community of experts

Stantec's global network of designers, engineers, scientists and project managers work together at the intersection of community, creativity and client relationships. Careful balancing of these priorities results in projects that advance the quality of life in communities across the globe.

But wherever Stantec is located it is our local teams who have the skills, experience and knowledge to drive the projects in their own back yards. In Australia and New Zealand (ANZ), our local offices of award-winning multi-disciplinary engineers have been helping both private and government clients build communities for over 60 years.

Our people have long-standing client relationships and are inspired to advance the communities in which they live, delivering cost-effective, quality consultancy services.

Whether we're partnering with clients to design a hospital or mixed-use development, a research facility or industrial park, an education campus or airport, we design with community in mind because we believe in the **power of places to transform lives, to meet the needs of a community today, to help fulfil its potential tomorrow.**

Our global business

25K

Employees

400+

Locations

6

Continents

#01

From start to finish. Our team leaders continue to manage the projects for which they tender, right through to completion. Change in team management causes delays and undermines a project's stability and design direction. Continuity is more conducive to achieving your goals within programme and budget.

#02

Value-adding innovation. Stantec's Creativity & Innovation program encourages our global network of engineers to develop tools, processes and technology. These creative ideas might save time at the design stages of a project, reducing client costs. Others offer powerful marketing potential for stakeholder engagement. Celebrating our best ideas with investment means they are fully developed to benefit all our clients and communities, wherever they may be.

#03

The right experience. From research stations in Antarctica to solar projects in rural Australia. From bespoke luxury residences to affordable high-rise apartments. From stadiums to play parks... and everything imaginable in between. We have the right skillsets to help you achieve your construction goals.

#04

Focus on buildability. Engaging with engineers in the early stages can save time and money in the long-term. Pragmatic spatial considerations, site-appropriate construction methods, informed materials selection, compliance with legislation and consideration of the operational environment. Our advice gives reassurance to stakeholders, boards and financiers that all factors have been fully considered.

#05

We're at the right tables. Our people are active proponents within Australia's property industry, seeking positive change on behalf of their communities. The influential tables at which we sit include the Urban Development Institute of Australia, the Property Council of Australia, Consult Australia and Green Building Council of Australia.



We don't just say we deliver outstanding solutions and client service. We prove it.

Stantec has been recognised numerous times at the independently assessed Beaton Client Choice Awards in Australia and New Zealand.

2022 Beaton Client Choice Awards Winner:

- Best Provider to Property

2019 Beaton Client Choice Awards Winner:

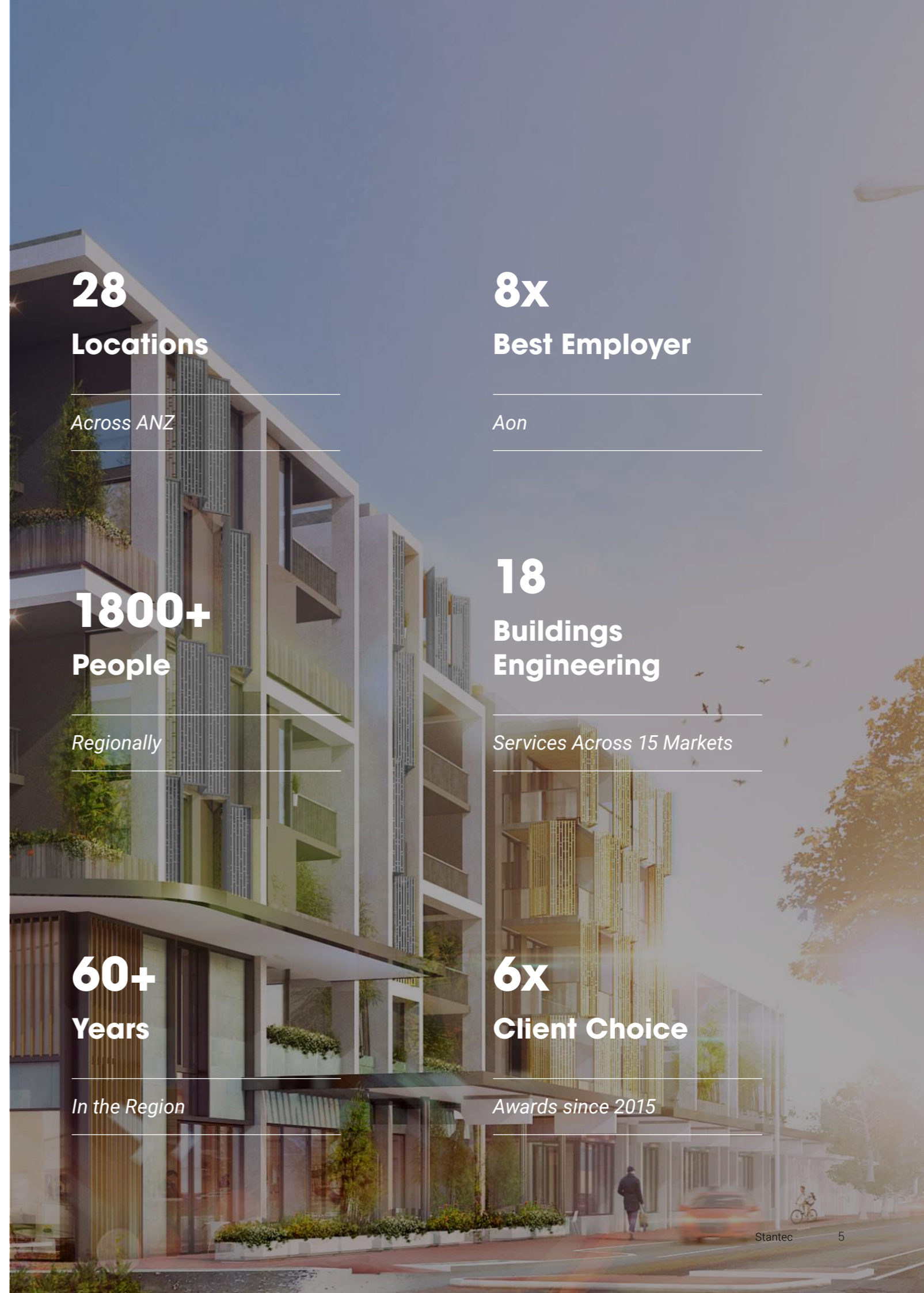
- Most Client Focused Consulting Engineer

2017 Beaton Client Choice Awards Winner:

- Best Consulting Engineering Firm (revenue \$50m-\$200m)

2016 Beaton Client Choice Awards Winner:

- Best Provider to Property Sector



28
Locations

Across ANZ

8x
Best Employer

Aon

1800+
People

Regionally

18
Buildings Engineering

Services Across 15 Markets

60+
Years

In the Region

6x
Client Choice

Awards since 2015

We know Underground Power

At Stantec, it's more than just Underground

Our Underground Power Design (UPD) team covers a range of services, above and below the ground, to help our clients.

- Power Distribution for Land Developments (Green titles and Infill sites)
- Power distribution for Survey Strata Developments
- High Voltage Substations
- Protection Studies
- Street and POS Lighting
- Solar Lighting
- Feasibility Studies
- Master Planning
- Project Management
- PUPPS Projects
- National Broadband Network and Telstra Services
- Infrastructure Services
- Power Generation and Back-up Services
- ESD Initiatives
- Industry Advocacy Assistance – such as Gifted Assets, Transformer Noise Compliance and HV Pool Assessments

Great reputation Australia-wide

Our UPD team has over 50 collective years of distribution power experience and has been behind many large projects across Australia. Due to the quality of our work, we've become the trusted consultant by local authorities and many of our clients.

Our specialist skillset

Our engineering knowledge and experience ensures a one-stop shop for clients to achieve a coordinated design. We can assist by providing:

- Distribution design and documentation services

- Feasibility services
- Roadway Lighting Design and documentation (including Main Road Works)
- PUPPS design and documentation
- Civil engineering services relative to development works
- Construction phase support
- Expertise in preparing design and construction manuals

Why clients choose Stantec

We know and understand the network – With decades of experience working on projects across the country, we know and understand the Australian network intimately and have developed excellent working relationships.

We offer a full service – Stantec is one of few companies who can offer a multi-discipline approach. Working across civil and building services, we have the capability to deliver on all underground power projects for both land and building developments.

We have earned the industry's trust – We keep abreast of best practice by being committed to professional development and ongoing education. We're well represented on Australia's leading industry bodies, such as the Infrastructure Committee for Urban Development Institute of Australia.

We're connected – Our contacts and long-term relationships with people in local authorities, government departments and industry bodies means that we're up-to-date with what's happening and understand their requirements. This means that your project will go smoothly and be delivered on time and on budget

It's more than just power – We're experts at telecommunications and NBN services, lighting, solar power lighting, power generation, infrastructure master planning, and so much more.

↓
Elizabeth Quay
Perth WA





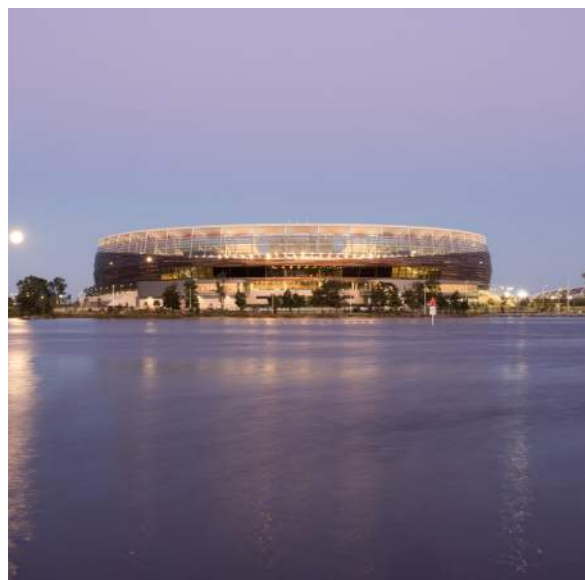
Fiona Stanley Hospital

Fiona Stanley Hospital is the largest building project ever undertaken by the WA State Government. The new healthcare facility is the major tertiary hospital in the south metropolitan area of Perth, providing 783 beds including a \$225 million State rehabilitation service.

The hospital includes 150,000sqm of floor space over five main buildings, with state-of-the-art technology built into every level of the hospital.

Many initiatives implemented within the scope of Stantec provided services that contributed to this development being one of Australia's most technologically advanced hospitals.

Project value: \$2 billion
Completion: 2013



Optus Stadium

The multi-purpose 60,000 seat Optus Stadium is a world-class venue, with Stantec providing design and documentation for the electrical, fire engineering, fire protection, mechanical, sustainability, technology and vertical transportation components of the project.

The commitment to a 'fans first' stadium resulted in an innovative design ensuring an exceptional event atmosphere and home

ground advantage that can only be experienced by being there.

The design acknowledges Western Australia's unique sporting, cultural and Aboriginal heritage and the Sports Precinct landscape provides a spectacular vista across the Swan River to the CBD.

Project value: \$700 million
Completion: 2018



Karratha City Centre Infrastructure Works

This project involves implementation of the City Centre Master Plan through design of a planned city that responds to the environmental conditions of the Pilbara and provides infrastructure for future growth.

This project involves significant modifications and upgrades to the road and infrastructure networks, including road realignments through existing buildings, undergrounding of

existing overhead distribution services along with accommodating the planned voltage upgrade in Karratha from 11 to 22kV.

The works include master planning, design, documentation, tendering and superintendence.

Project value: \$90 million
Completion: 2015



Project value:
\$2.6 billion

Completion:
2015

Elizabeth Quay

Stantec is the Metropolitan Redevelopment Authority's principal consultant for the Elizabeth Quay project on the Mounts Bay area of the Swan River Foreshore. Since 2007 Stantec has provided civil, electrical, hydraulic, mechanical, structural and underground power engineering services, involving over 45 staff (throughout four offices), for the feasibility, design and construction phases.

Stantec assembled a quality team of consultants for this project including marine consultants, hydrologists and licensed surveyors. The works involved coordination of a number of engineering disciplines, in conjunction with the project architect and consultant team.

The Elizabeth Quay project includes detailed design, documentation, feasibilities, costs estimates and business case reports to assist with project mandates. Detailed design includes remediation, earthworks, servicing relocations, sewer reticulation, water supply, drainage, roadworks and underground power. Stantec have also played a key role in the interface between civil subdivisional and public realm landscaping works.

Stantec continue to provide construction assistance to the managing contractor throughout the multi-staged construction process, and is also involved with the current construction of the Ritz Carlton towers within the precinct.



Project value:
Undisclosed

Completion:
2017

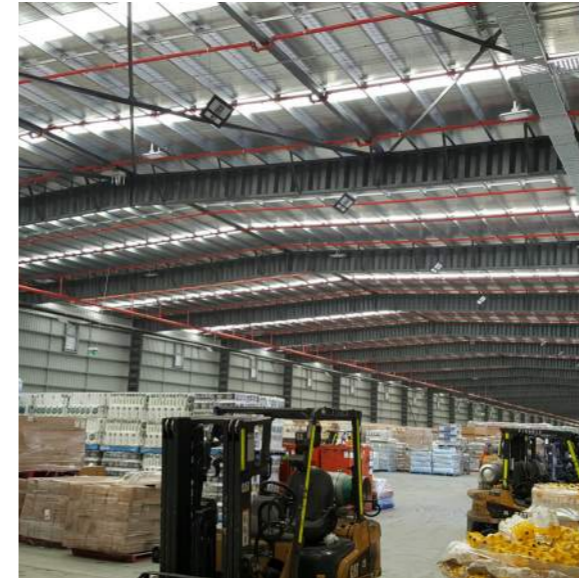
The Village, Taigum

This project involved Precinct 1 of The Village Taigum – a single level retirement village comprising of 121 units located in North Brisbane.

Stantec were involved in several aspects of this project including:

- Masterplanning for the site development involved design documentation to ensure supply was available for the current stage of works and all future stages
- Internal site reticulation for electrical and communication services included design documentation for electrical, NBN and telecommunications services to all units within Precinct 1 and also internal street lighting to all roads and pathways
- External street lighting infrastructure was documented in accordance with all council and supply authorities

Project challenges including working on a large subdivision, as well as coordination between design consultants – the most important aspect of this project. This allowed the construction/installation on site to run smoother compared to if coordination hadn't occurred to the level of detail that took place for this project.



SCT Logistics

Stantec were commissioned by SCT Logistics and DZine Construction Group for the design of the new SCT Logistics intermodal rail freight logistics centre.

The new facility sits within the Bromelton State Development Area south west of Brisbane. The site has direct access to the Brisbane-Sydney-Melbourne mainline controlled by the Australian Rail Track Corporation (ARTC).

Stantec's involvement included:

- Civil earthworks design
- Road and intersection design including pavements
- Stormwater drainage, culverts and flood analysis
- Retaining wall design within the ARTC mainline corridor
- Car parks and hardstands
- Intersection street lighting

Project value: \$30 million
Completion: 2017



Ripley Road

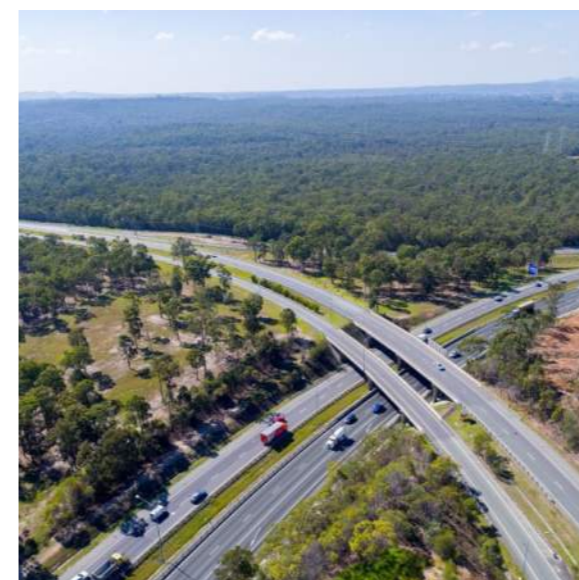
The project at 352 Ripley Road in South East Queensland involves a subdivision electrification including HV, LV, street lighting and NBN pit and pipe communication.

It also comprises of the proposed construction of an overall maximum of 1,000 dwellings and approximately six retail tenancies, as well as the underground relocation of 2km of existing 33/11kV overhead lines.

Stantec are proud to be part of the solution to South East Queensland's fast growing population, working in conjunction with developers, city councils, supply authorities and land development engineers.

The project – to be done over 17 stages – is due for completion in 2023.

Project value: Undisclosed
Completion: 2023



Logan Motorway Enhancement Project

This project involved major upgrades of the Logan and Gateway motorways in order to improve congestion in the area.

Stantec were involved in the removal of existing street lighting within affected areas of work to ensure future works can be undertaken without disrupting existing services. Being part of the team for this project highlighted how Stantec design documentation directly impacted other design teams who had not considered the existing services.

Design coordination between council and supply authorities was a key challenge. With the design area covering such a large site, our documented design required coordination with Department of Transport and Main Roads, Logan City Council and Brisbane City Council to ensure each asset was correctly identified and documented.

Project value: \$512 million
Completion: 2019



Concord Hospital

As part of the Concord Hospital upgrade works, it has been necessary to upgrade the existing aged 11kV infrastructure to support the development.

Concord is a HV customer and the works entailed a new 11kV intake switching station, four new off 11/0.4kV substations and approximately 2.5km of new HV cable.

Careful masterplanning of HV cable routes was required so as not to impact on future stages at the precinct.

Owing to the supply arrangement, it was necessary to provide two HV network rings to service the site. Differential protection was employed on all substation feeders.

Project value: \$350 million
Completion: 2020



Defence Logistics Transformation Project

The project included the redevelopment of a series of buildings, comprising of warehouses ranging from 5,000m² to 40,000m² in size, workshop buildings, EIR buildings, firing range, ADE facility, 4,000m² headquarters facility and 33 KV and 22 KV networks in the Moorebank and Bandiana Victoria JLUV(V) bases.

The HV networks consisted of intake switching stations,

overhead and underground HV cables and substations.

The new 33 KV high voltage network connection to the supply authority for Moorebank and Holsworthy was difficult and onerous as it involved many parties over the two bases with different timelines for power requirements.

Project value: \$300 million
Completion: 2015



NSW Parliament House

Stantec provided the documentation and construction supervision for two new 1,650kVA standby generators and for new mechanical services switchboards for Parliament House in Sydney.

The new generators provide full site power backup and replaced the existing partial only site backup.

The existing building and site having heritage restrictions limited options as to where the

generators could be located.

The end solution to satisfy heritage, council and client requirements was to locate the new diesel generators in the basement, which required engineering solutions for cooling, ventilation and combustion exhaust routing to the room 4 levels below external ground level, while conforming to a tight budget.

Project value: \$5 million
Completion: 2018



Project value: \$200 million

Completion: 2018

Omnia, Potts Point

The 18-storey luxury apartment tower, on the site of the former Crest Hotel, includes 135 high-end apartments plus retail offerings. The project is set to offer some of the most incredible views of Sydney's CBD and harbour, with design features including luxury 1,2 and 3-bed residences and penthouses.

Stantec provided a variety of services to the project, including acoustics, electrical, hydraulics, mechanical and sustainability.

As well as the above services, Stantec was enlisted to undertake documentation of all the required street lighting for the project. The street lighting design was undertaken using AGI32 and needed to comply with the City of Sydney Streets Technical Specification and Public Domain Design Codes.

The street lighting design to Victoria Street needed to comply with AS1158.3.1 Category P6 and consist of 7.2m Smartpoles with 2m outreach arms. It was necessary to include the horizontal and vertical illuminance plots covering the roadway and footpaths to City of Sydney for approval.



Yarrabend, Alphington Townhouses

Yarrabend is widely regarded as the best mixed-use development site in Melbourne. Glenvill are redeveloping and masterplanning the 16.5ha site into a new community to house in the order of 2,500 new dwellings, comprising traditional housing, townhouses and apartments. The development will also include mixed use development of commercial and retail.

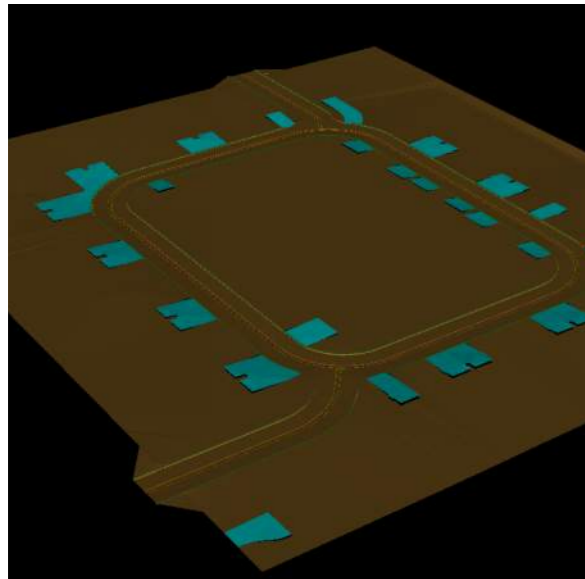
townhouses across the site for both civil and electrical disciplines.

Stantec are responsible for:

- Authority management
- Schematic design
- Detailed design
- Contract administration

Project value: \$1 billion
Completion: 2019 (Stage 1)

Stantec have been engaged by Glenvill for the development, design and contract administration of their



Callander Road, Noble Park

The project involved construction of 37 townhouses at Noble Park in Melbourne.

Project value: \$3 million
Completion: 2018

Stantec provided civil and infrastructure design services, which included civil earthwork modelling and flood modelling.

Project challenges included the interactive process surrounding the flood model to satisfy authority requirements and services infrastructure coordination.



Queenscliff Sport And Recreation Precinct Upgrade

The project is part of the Queenscliff Sport and Recreation Precinct Upgrade which provides a clear separation of camping and sporting activities as well as improved facilities including new oval lights, new netball courts and game day facilities.

The team were involved in design and documentation for powerheads across the camps site. The powerhead pedestal has been uniquely designed to stand up to the harsh climate conditions at the site. Both mountable and permanent powerheads were specified to cater for high and low season at the park.

Stantec were engaged for the construction of 137 caravan sites and upgrades to the sports club, netball courts and cricket area, providing civil and infrastructure design services, power reticulation and lighting design.

Project value: \$4 million
Completion: 2018

Project value: \$40 million

Completion: 2019

CIRQ, Point Cook

Stantec is engaged to deliver full civil engineering design and management and construction management phase services for 100 townhouses at Lot C, Point Cook, located 21km from Melbourne's CBD.

The development is an infill site located next to an existing town centre and aims to deliver a high quality development incorporating the surrounding amenity of established wetlands with a strong focus on socially conscious design and a sustainable community.

Design features include:

- Low rise, high density and high amenity development
- Socially conscious design and delivery
- Design to maximise sustainability
- Strong landscape setting

Minimal impact on the existing site due to cultural and heritage artifacts across the site



Project delivery and offering

Buildings ANZ project coordination

No matter what the project, no matter what your needs are, we have the team to help make it happen.

A Stantec Project Engineer will be:

- Responsible for ensuring cohesive team delivery
- The first point of contact for the client

What does this mean for our clients?

Not only will you receive the very best from all Stantec consultants, you will receive seamless design integration across all Stantec disciplines. This will result in identifying and minimising scope-gap, cost or programme risks.



PROJECT DISCIPLINES



Working together

Communities are fundamental. Whether around the corner or across the globe, they provide a foundation, a sense of place and of belonging. That's why at Stantec, we always design with community in mind.

We care about the communities we serve—because they're our communities too. We're designers, engineers, scientists, and project managers, innovating together at the intersection of community, creativity, and client relationships. Balancing these priorities results in projects that advance the quality of life in communities across the globe.



Connect with us



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