



# Transforming communities through **sustainability**

ENVIRONMENTAL SERVICES - SUSTAINABLE BUILDINGS - AUSTRALIA





“We pride ourselves on tailoring our ESD advice and solutions to a client’s particular challenge. The most important factor in the success of the project is to recognise that a site has its own set of challenges and opportunities and that these must be considered in detail to maximise outcomes.”

Nicholas Johnson, Sustainability Project Engineer, Principal

## Sustainable solutions

What is sustainability? For us, it’s a commitment to design with the future in mind.

Stantec is redefining tomorrow’s world for today, community by community. For over 66 years, we have distinguished ourselves through our commitment to excellence and our expertise in building thoughtful, long-term solutions.

By partnering with clients, we create a roadmap to sustainable prosperity. We walk the path with you, identifying and capturing opportunities that allow you to realise social, environmental and economic improvements.

We have long championed many of the principals of sustainable design, and our expertise provides a strong foundation for creating the very best solutions. We work on all kinds of built form because we feel the more diverse the projects we work on, the better all our work becomes.

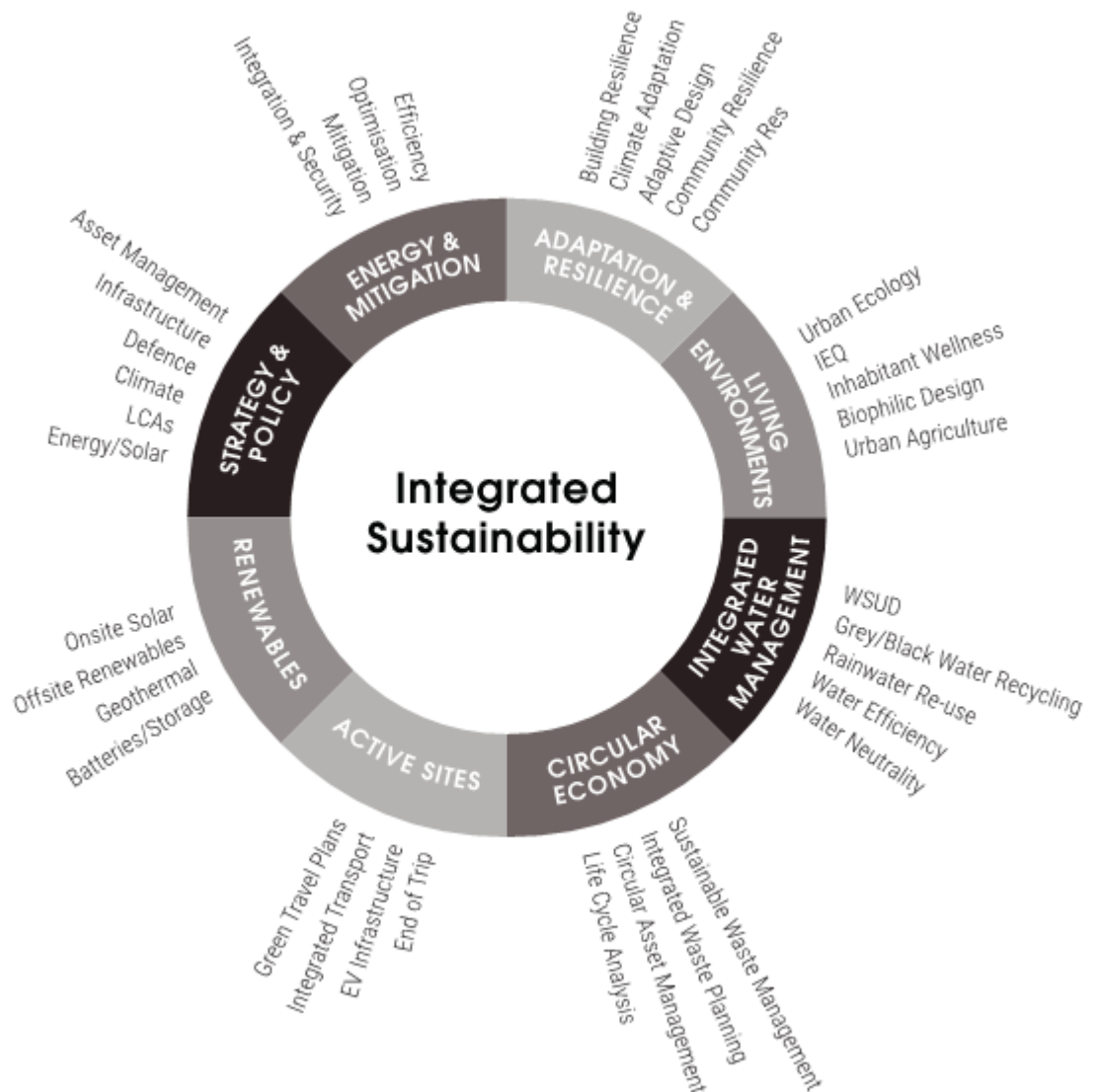
# What we can do for you

We offer expertise in design and engineering services for:

- Building performance modelling (facade design, daylight optimisation, energy analysis)
- Net Positive energy buildings
- Code compliance - NCC Section J
- Project life-cycle assessment
- Feasibility and strategy development
- Whole of life cost analysis
- Holistic renewable energy services
- Climate change resilience & adaption
- Sustainability advice and liaison
- Green finance funding administration
- Town Planning, Sustainability Management Plans (SMPs)
- Water Sensitive Urban Design (WSUD)
- Computational Fluid Dynamic (CFD) Modelling
- Ecological Footprint Analysis

We offer full service end-to-end consultancy in the following rating and certifications systems such as:

Green Star, NABERS, WELL, ISCA, LEED, BREAM, Passive House, Carbon Neutral, LBC and Fitwel





## Optus Stadium

The multi-purpose 60,000 seat Optus Stadium is rated as a world-class venue with its commitment to putting its 'fans first'.

We provided the following services:

- Design and documentation for the electrical
- Fire engineering and fire protection
- Mechanical
- Sustainability
- Technical and vertical transportation

The design supports Western Australia's unique sporting, cultural and Aboriginal heritage along with the Sports Precinct landscape providing spectacular views across the Swan River to the City.

In every project, we endeavour to reduce our impact on the environment by running programs to minimise our carbon footprint, ensure recycling and green procurement is achieved.

Since opening in 2018, Optus Stadium has received the 2019 Prix Versailles Sports Award and been named 'Project of the Year' at 2018's The Stadium Business Awards in London.

**Project value:** \$700 million  
**Completion:** 2018



## Taronga Institute of Science & Learning

Taronga has the largest zoo-based conservation science team in Australia that operates jointly with Government agencies and the international zoo and conservation community to protect our natural environment and secure a shared future for wildlife and people.

Our team engaged in providing Green Star and sustainability services to the project.

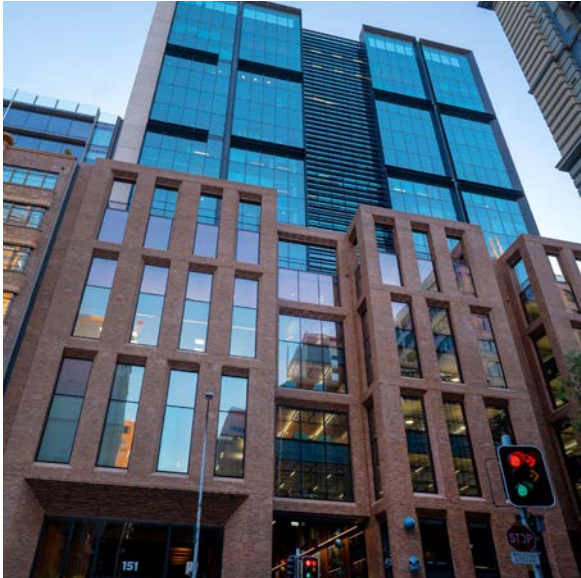
On completion of the building delivered the following features:

- Green Star Accredited Professional
- 6 Star Green Star Design & As-built – v1.1 – World Leadership
- Life Cycle Assessment
- Climate Change Adaptation Plan
- Detailed energy modelling for mixed-mode building services design

In 2019 the project received the NSW Australian Institute of Architects Award and the Educational Architecture Award.

**Project value:** \$25 million  
**Completion:** 2018





## Barrack Place, Sydney

151 Clarence Street is a 20,000m<sup>2</sup> NLA 20-storey A-Grade office building in the City of Sydney. We provided sustainability, modelling and Green Star services for the contractor in a D&C capacity. Our scope was to deliver the following:

- WELL Certified™ Platinum Rating
- 6 Star Green Star Office v3
- 5 Star NABERS Energy
- 4 Star NABERS Water
- Over 130% cumulative reduction in embodied energy
- Climate Change Adaption Plan

These elements have combined to achieve a simplified, workable solution that delivers a higher environmental outcome.

**Project value:** \$80 million

**Completion:** 2018



## Monash Building 17

The biology department built-in 1968 at Monash University in Melbourne was suffering cracked facades, roof damage and was an overall structure no longer meeting safety conditions.

Our sustainability and structural team conducted a thermal performance analysis which led to the installation of an insulated panel (SIPS) curtain wall system that supports non-flammable glass-reinforced concrete (GRC). The GRC is cast into a triangular 3D form offers a striking aesthetic feature and shade.

By working closely with stakeholders, we were able to facilitate the design process, resulting in:

- 39% reduction in solar gain
- 24% reduction in heating and cooling loads
- 17% increase in natural daylight penetration

The update sees continual longevity of the building's life while supporting a sustainable solution for the community.

Our construction methodology enabled the contractor to complete their task while remaining fully operational.

**Project value:** \$32 million

**Completion:** 2019



## Sydney Fish Markets

The new Sydney Fish Market will establish a world-class tourist destination, featuring 65,000m<sup>2</sup> purpose-built mixed use with a strong focus on sustainability. The development will provide cutting-edge sustainability and responsible design, creating a public space of beauty and environmental responsibility.

Our team worked closely with stakeholders to ensure sustainable outcomes throughout the project, including:

- Pursuing a 5 Star Green Star Design and As Built v1.3 outcome – Australian Leadership
- Development of a Climate Change Adaptation Plan to ensure the development is responsible.
- Significant reuse of elements, including greywater reuse, rainwater reuse and Solar power
- Optionally complying the building under NCC 2019 – to ensure the building was meeting a design equivalent of the future
- Use of Timber and low-impact materials to reduce the impact
- Developing a robust natural ventilation strategy to minimise the building's total energy use by 17%

**Project value:** \$350 million

**Completion:** 2023



## Westpac Bank Now Green Star Portfolio

Our team has worked with Westpac Banking Corporation over the past several years to achieve new benchmarks in environmental design.

Westpac conducted a fit-out called Bank Now across their locations to support environmental performance standards under the Green Star framework and minimum 5 Star Green Star Interiors.

Under the GBCA Volume Certification network Westpac Bank Now sites are achieving:

- Average 40% improvement in energy efficiency and reduced greenhouse emissions
- Dedicated energy metering systems connected to a national data platform monitoring energy and water consumption.
- High levels of internal air quality were achieved via the installation of indoor plants, the use of low-VOC and formaldehyde emission materials.
- Improved social engagement and social sustainability benchmarks
- Acoustically improved internal environments; and
- Reduced waste to landfill, including commitments to reduce waste from end-of-life interiors and reduced construction and demolition waste

**Project value:** \$30 million

**Completion:** 2015 - ongoing



## 4 Parramatta Square

The 4PS site forms part of the \$2 billion Parramatta Square development, which is currently one of Australia's largest urban renewal projects.

The 71,000m<sup>2</sup> office tower sits 35 stories high, above a 3 level retail/childcare podium, offering A grade services and a fully integrated design.

The Stantec team are working closely with the contractor to deliver ESD, Green Star, NABERS, Section J and Life Cycle Analysis services for the development.

Our collaboration with the design team ensures the project will be sustainably viable and achieves the aim of the project to meet timeframes and budgets.

The Project is on track to achieve:

- 5 Star NABERS Energy Base Build
- 4 Star NABERS Water Whole Building
- 5 Star Green Star Design & As Built v1.1
- PCA A-Grade services throughout
- Fully integrated fit-out for PNSW, aiming to develop a 5 Star Green Star and NABERS Interiors

**Project value:** \$350 million

**Completion:** 2020



## Penguin Parade, Phillip Island

We were engaged to help deliver a new visitor centre for Phillip Island's Penguin Parade that would replace the ageing existing facilities and provide a world-class asset in a remote location.

The project integrated a holistic sustainability approach through design and construction and will work towards achieving carbon, water, and waste neutrality through operation.

Key project details include:

- Low carbon building materials
- Timber structure, using sustainably sourced Victorian timber
- Solar PV array of 666 panels
- Working in and protecting a sensitive ecological environment
- Rainwater capture and reuse to assist with future water neutrality

**Project value:** \$58 million

**Completion:** 2019





# Setting the new standard

## A SIMPLE APPROACH

Sustainability can become a complex exercise, but often the most effective solutions are the simplest. Our philosophy incorporates lessons learned from the past with well thought out designs for the future. We couple our knowledge & expertise with modern technology to ensure cost-effective sustainability outcomes are achieved without over-complicating things. Sustainable planning adds longevity to a building's life, allowing for easy maintenance & upkeep as well as adaptability for future years.

## PLANNING & RESILIENCY

We acknowledge that we are facing a climate crisis and that communities all over the world will be meeting new challenges as populations grow and weather patterns shift. Our approach is not to stick our heads in the sand. We believe in finding simple design solutions that give a building the adaptability needed to maintain functionality and safety even in extreme weather conditions. The structures we create should provide a safe and comfortable shelter to the communities they serve for years to come, while contributing to a safe and healthy planet.

## SUSTAINABLE WELLNESS

A good building isn't just about how it's built, it's about who it's built for. We focus on people. When we say design with community in mind, we mean it. Our contributions to a building's design involves thoughtful consideration of who's going to be using the building and how. Whether that means greater access to daylight and clean air, smart building technology to allow for greater user control, or communal spaces that bring people together, people are at the centre of our work.

**1st**

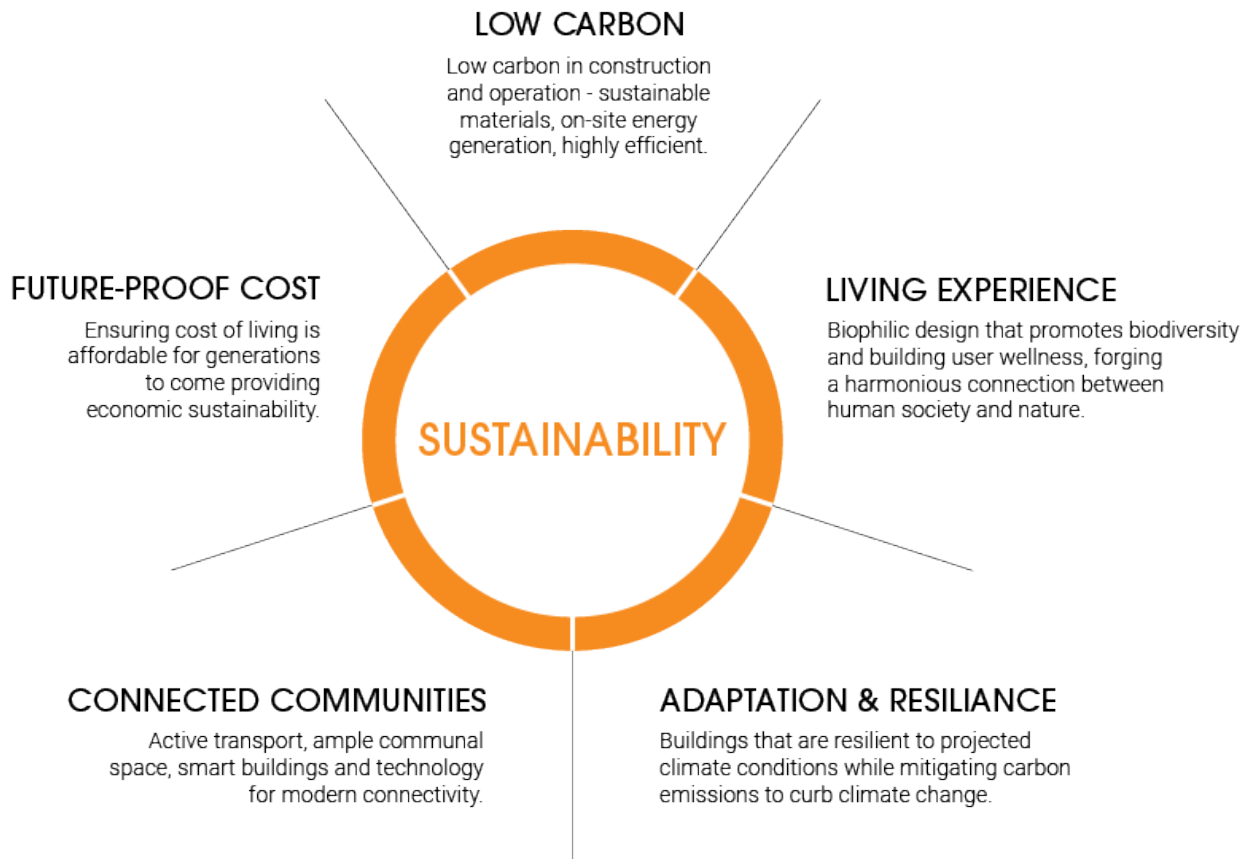
6 Star  
Green Star  
Interiors V1.1  
Rating in  
Australia

**1st**

WELL Core  
& Shell Precertified  
Gold building in  
Australia



# Our collaborative approach



## Meet the Sustainability team



**Nicholas Johnson**  
Sustainability Project Engineer,  
Principal  
Melbourne, VIC  
E [nicholas.johnson@stantec.com](mailto:nicholas.johnson@stantec.com)  
T +61 3 8554 7000



**Cormac Kelly**  
Sustainability Section Manager,  
Principal  
Melbourne, VIC  
E [cormac.kelly@stantec.com](mailto:cormac.kelly@stantec.com)  
T +61 3 8554 7014



**Prasanna Suraweera**  
Sustainability Section Manager,  
Australian Discipline Leader, Principal  
Perth, WA  
E [prasanna.suraweera@stantec.com](mailto:prasanna.suraweera@stantec.com)  
T +61 8 6222 7074

TEAM



**Alexander Kobler**  
Sustainability Section Manager,  
Principal

Sydney, NSW  
E alexander.kobler@wge.com.au  
T +61 2 8484 7050



**Kenneth Yuen**  
Sustainability Project Engineer

Melbourne, VIC  
E kenneth.yuen@stantec.com  
T +61 3 8554 7046



**Joseph Caparrotta**  
Sustainability Project Engineer

Sydney, NSW  
E joseph.caparrotta@stantec.com  
T +61 2 8484 7042



**Le Han Tan**  
Sustainability Project Engineer

Sydney, NSW  
E le.tan@stantec.com  
T +61 2 8484 7033



**Tim Sadlier**  
Electrical & Energy Project Engineer,  
Associate

Melbourne, VIC  
E tim.sadleir@stantec.com  
T +61 3 8554 7119



**Nathan Lawry**  
Senior Sustainability Engineer

Adelaide, SA  
E nathan.lawry@stantec.com  
T +61 8 8201 9400



**Guljit Bates**  
Sustainability Project Engineer

Sydney, NSW  
E guljit.bates@stantec.com  
T +61 2 8484 7103



**Mark Price**  
Energy & Electrical Project Engineer,  
Principal

Perth, WA  
E mark.price@stantec.com  
T +61 8 6222 7093



For more information please visit  
[stantec.com](http://stantec.com)



Design with **community** in mind