



NDY
A TETRA TECH COMPANY

SUSTAINABILITY

Capability statement

CREATE LOW-CARBON SPACES AND BUILD LONG TERM RESILIENCE

We're pragmatic about sustainability providing advice that enables valuable outcomes. Whether you need support assessing whole-of-life carbon, designing a healthy workplace or planning for net zero, our sustainability specialists recommend solutions that align with your goals. Through technical expertise and a well-resourced global network, we shape local solutions that help balance risk with reward.



Hayley Koerbin

GLOBAL SUSTAINABILITY DIRECTOR
NDY

WHOLE-OF-LIFE SUSTAINABILITY SERVICES

Our team consults on whole-of-life sustainability services – from advising on global strategy and policy, wayfinding through risk and trends, through to practical consultation to achieve your health and wellbeing goals – we deliver data-driven sustainable design solutions for buildings, places and organisations across Australia, New Zealand, Europe and Canada.

Creating future-proof strategies to help you stay informed on your investment position.



We help you get clear on your environmental, social and governance goals and create a viable sustainability strategy that delivers for you long-term.

For investors and developers, this means greater insights into evolving market conditions, emerging trends and legislative change so you can identify opportunities and mitigate risk early.

Together we'll develop robust targets from evidence-based solutions, and create roadmaps that help you add value, communicate, monitor and improve your sustainability performance year-on-year.

Designing resilient solutions to construct people-centric, healthy buildings and places.



We help you embed both health and wellbeing and low-carbon goals into every stage of your project's lifecycle, from concept design through to construction and operation.

For organisations and designers, this means creating people-centric places – realising sustainability design aspirations and implementing proven initiatives to support improved health and wellbeing outcomes.

We'll consult with you and key stakeholders to solve design challenges, embed sustainable concepts, manage construction compliance and help you monitor your operations to maximise long-term efficiency. We achieve world-class ratings for our projects beyond industry standards to showcase excellence in sustainability.

Maximising operational efficiency and delivering spaces of the future.



We help you assess your footprint and create tangible actions to decarbonise your operations and infrastructure.

For organisations, this means greater insights into how efficient your assets are developing and implementing verified strategies that deliver to your sustainability commitments.

Through data-driven analysis, we'll support you to define your emissions baseline, conduct whole-of-life carbon assessments and identify opportunities for upgrades. Advising, verifying, and liaising with sustainability certification bodies on your behalf, we help you to achieve independent certification of your carbon reduction efforts and achievements.

OUR SERVICES

STRATEGIC ADVISORY



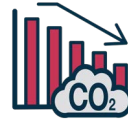
Materiality assessment
and ESG strategy



Company ESG
reporting



Due diligence



Carbon accounting
and offsetting



Decarbonisation
roadmaps



Stakeholder
engagement and
education



Sustainability
visioning

MASTERPLANNING, DESIGN AND CONSTRUCTION



Sustainable design
strategies



Advanced simulation
and analysis



Resiliency risk assessment
and adaptation planning



Whole-of-life carbon
assessments



Zero carbon action
plans



Verified sustainability
certifications



Renewable energy
and storage solutions

OPERATIONS AND ASSET REPOSITIONING



Building monitoring,
auditing and tuning



Operational and
maintenance action plans



Zero carbon action
plans



Verified sustainability
certifications



Workplace policy
development

The background of the image is a photograph of a modern building's interior. It features a large, multi-level atrium with a glass and steel structure. A large, spherical light fixture hangs from the ceiling. The building has a mix of concrete, wood, and glass. The text is overlaid on a dark blue rectangular area with a yellow border on the left side.

DEVELOP SUSTAINABLE SOLUTIONS AND MAXIMISE YOUR ASSET'S POTENTIAL

Build the appeal of your assets with strategic sustainability services that help deliver on your environmental, social and governance targets, including assessing whole-of-life carbon and creating tangible actions for achieving net zero. Our multidisciplinary oversight helps you prioritise operational efficiency and financial return while mitigating risk.

STRATEGIC ADVISORY

By engaging NDY, you tap into a global network of sustainability experts who will help your organisation:

- identify and address sustainability related risks and opportunities
- respond to stakeholder and regulatory requirements
- enhance the efficiency, reputation and performance of your assets and overall business.

While each organisation and solution is unique, we work with you to find the best solutions to reach your sustainability goals.

MATERIALITY ASSESSMENT AND ESG STRATEGY

We work with your business and stakeholders to establish a roadmap to improve ESG performance. The ESG strategy we develop together is based on a [materiality approach](#) and will align with your ESG principles and sustainability position. Your unique roadmap will explore opportunities to help you build clear and appropriate commitments to share publicly.

ESG REPORTING

Our team is experienced in putting together voluntary and mandatory ESG disclosures using reporting tools and platforms such as [GRESB](#), [CRREM](#) and the [Science Based Targets initiative \(SBTi\)](#). This includes a range of activities, from end-to-end management of the reporting process through to developing internal procurement processes and data sets. We seek out opportunities for organisations to improve and highlight continuous improvement in reporting.

DUE DILIGENCE

We provide pre-development and leasing advice across a range of market sectors, including government and local council planning policy compliance reporting, development authority consultation and pre-purchase site-selection, auditing and performance modelling. These activities tie back to your organisation's ESG strategy and future reporting to ensure that sustainability targets are achieved and your net zero ambitions are on track.

CARBON ACCOUNTING AND OFFSETTING

Our specialists advise on options for informal validation or formal certification of carbon footprints and carbon management plans and the specific requirements for each. This work gives credibility to carbon neutral and net zero claims and enables a formalised approach to target-setting for carbon reduction initiatives.

Our team has experience working with peak bodies including the [Carbon Trust](#), [Climate Active](#), [Toitū Envirocare](#) and the [World Green Building Council](#) and can manage the process on your behalf.

DECARBONISATION ROADMAPS

Our global team can develop and implement a decarbonisation roadmap for your organisation.

In collaboration with our building services specialists, we help you identify assets in need of improvements across your portfolio, propose solutions for decarbonisation and then categorise and prioritise for investment spend.



STAKEHOLDER ENGAGEMENT AND EDUCATION

We bring a global perspective to environmental and social sustainability issues and understand the profound impact they have on all aspects of your operations, both now and into the future.

We can help you identify, prioritise and communicate the sustainability issues that are most critical to your organisation. This can include stakeholder surveys, workshops and materiality assessments.

SUSTAINABILITY VISIONING

We work closely with you and your design teams to develop an integrated sustainability vision for your project or subsequent masterplan. Incorporating sustainability initiatives from the outset, alongside benchmarking against world-leading projects, is critical to drive innovative, low-carbon and people-centric places.

Our future-focused approach also considers the impacts of climate change and potential mitigation and adaptation techniques for your projects and organisation to minimise risk in this changing climate.

Opportunities may include net zero carbon frameworks, precinct-scale energy, water and waste solutions, low emission transport infrastructure, biodiversity and nature-based solutions, cultural celebration concepts and a focus on healthy, thriving and connected communities.



Offices, Australia

ARCADIA ESG ADVISORY

Sydney, NSW

Services

ESG strategy, decarbonisation roadmap, company ESG reporting, verified sustainability certifications, building auditing

Client: Arcadia

Completion: Ongoing

Arcadia Funds Management is a boutique institutional investment management and advisory business focused exclusively on institutional capital in the real estate sector. Established in 2002, Arcadia has grown into one of Australia's leading boutique institutional real estate investment managers and advisers.

Arcadia manages the Australian Wholesale Property Fund (AWPF) and the PSS/CSS B Property Trust (PCB) Property funds.

Arcadia made a commitment to their stakeholders to improve their Environmental, Social & Governance (ESG) performance. NDY was engaged to assist in developing an appropriate framework, commitments and initiatives to support this.

One of Arcadia's ESG targets, set through NDY's engagement, is their carbon neutral target. Our team investigated the Funds' commercial, industrial and retail assets to develop a zero carbon transition plan. Certain assets are also jointly owned with other partners, making reviews at an asset level complex.

NDY has worked with Arcadia over the last three years to develop a baselines for each fund to then benchmark their ESG targets against and create continued improvement and value. Our team has become more involved at an asset level to drive

sustainable performance across all sectors of Arcadia (office, retail and industrial) including:

- Undertaking a detailed audit of the World Square Shopping centre
- Partnering with NDY's services team, undertaking the major refurbishment works at 52 Goulburn St and 1 Chifley Square
- Completing Green Star Performance certifications for two industrial assets.

Additionally, NDY continues to work with Arcadia to ensure year-on-year improvement of their GRESB rating.



Health & Sciences, Australia

BARWON SUSTAINABILITY ADVISORY

Sydney

Services

ESG strategy, company ESG reporting,
verified sustainability certifications,
building auditing

Client: Barwon Investment Partners

Completion: Ongoing

Barwon Investment Partners (Barwon) is committed to enhancing the sustainability of its assets, funds and business. NDY's sustainability team was engaged in 2022 to undertake a GRESB gap assessment of the Barwon Institutional Healthcare Property Fund (BIHPF) as well as a Green Star Performance gap assessment of 12 key assets.

The fund comprises a portfolio of Australian healthcare assets including hospitals, private specialist facilities, day surgeries and medical centres and ancillary healthcare assets and is the first healthcare fund to be awarded a Green Star rating.

The aim was to assist Barwon to improve the GRESB performance of its BIHPF and the Green Star performance of its assets. This work involved:

- Reviewing 2022 performance
- Identifying key priority areas to enhance performance
- Providing recommendations on how to implement the identified opportunities.

Following the successful completion of these projects, NDY was engaged to deliver other sustainability services at an organisational, fund or asset level. This includes:

- Green Star support – completing the Year 1 Green Star audit of the rated portfolio, ensuring the current green building rating was maintained and achieving an increased score from 31 to 35 points, as well as supporting the implementation of the Green Star Performance rating tool across further assets and conducting a Green Star Performance v2 gap analysis.
- Technical audit – conducting a detailed review of building asset metering systems and data as well as recommendations for improvement.
- GRESB support – completing the 2023 GRESB submission for the BIHPF which led to a significant improvement of 19 points, well beyond the year two GRESB improvement average of 10 points, and the subsequent 2023 GRESB gap assessment to provide recommendations to continue enhancing performance.
- ESG strategy support – assessing Barwon's environmental, social and governance (ESG) performance versus that of its peers, conducting a materiality assessment which included stakeholder engagement, providing recommendations, and developing an ESG strategy to prioritise ESG efforts going forward.



CREATE SUSTAINABLE DESIGNS THAT POSITION YOUR PROJECT FOR SUCCESS

Our knowledgeable consultants help you embed sustainability into your vision by providing evidence-based and cost-effective solutions. Through early engagement and active collaboration, we support and strengthen your vision with proven sustainability initiatives that help position you for success.

MASTERPLANNING, DESIGN & CONSTRUCTION

We carefully and skillfully consider ways in which our communities and cities can become more sustainable through the appropriate management of the built environment.

Our sustainable design expertise values all aspects of sustainability to ensure the projects we design are high performing and resilient across their life cycle, minimise natural resources and provide a healthy and safe space for people where they feel a sense of belonging and purpose.

SUSTAINABLE DESIGN STRATEGIES

We nurture the relationship between people and planetary health, striking not only a balance but improved outcomes in social and environmental sustainability. Buildings and places must be more than just resource efficient.

We place emphasis on human-centric design, delivering integrated and complimentary solutions which are environmentally responsive, people-focused and resilient. We deliver consultancy services that focus on whole-of-life impact to create efficient, affordable and healthy buildings.

RESILIENCY RISK ASSESSMENT AND ADAPTATION PLANNING

As our climate changes so too must the way we consider the risks buildings and organisations face. We assess the probability and impact of climate risks to facilitate considered responses, striving for environmental, operational and community resilience.

Our results help clients and policymakers make informed decisions to address regulatory requirements, human health and environmental concerns and future planning scenarios.

ADVANCED SIMULATION AND ANALYSIS

Our advanced simulation provides real-world data to inform design. We use data to visualise and communicate trends and patterns, challenging the rules of thumb that our industry has become comfortable with and reliant on. Using multi-objective analysis and parametric modelling to influence the built form and drive decision making provides our projects with bespoke and verified solutions.

Our advanced simulation services include:

- precinct-scale simulation of environmental factors such as wind microclimate, air quality and outdoor thermal comfort
- solar exposure and overshadowing impacts of new and existing buildings
- facade studies for optimising solar loads, and decreasing mechanical cooling and heating demand
- balancing natural daylight penetration and internal thermal comfort for enhanced indoor environment quality
- future asset performance under the latest climate change projections
- proof of concept analysis for new and innovative approaches to mechanical air distribution
- optimised control strategies and operating conditions.



WHOLE-OF-LIFE CARBON ASSESSMENTS

Our team is equipped to drive projects towards lower carbon emissions from the earliest stages, all the way through to completion, with expertise on low and zero carbon design, sustainable procurement and construction strategies. We use data-driven design assessments for decision making, drawing from our database of projects and applying lessons-learned to every scenario.

We balance the carbon impact of materials, construction activities, refurbishment and end-of-life phases with a project's key aims, for example enhancing wellbeing, minimising costs or reducing operational energy. This allows you to make informed low-carbon decisions throughout all project stages and work towards your sustainability targets and certifications.

ZERO CARBON ACTION PLANS

We provide zero carbon action plans for precincts and buildings with clear actions to achieve zero carbon. This starts with design and follows into procurement, construction and operations.

Our plans future-proof buildings to accommodate any future additional loads, energy storage or demand response solutions which may occur or be implemented

during a building's lifetime. We also consider end-of-life scenarios and provide insight into future solutions for carbon risks such as back-up generation and refrigerants.

VERIFIED SUSTAINABILITY CERTIFICATIONS

We believe that a robust design framework or certification can help ensure a project's environmental and social sustainability aspirations are realised in design, construction and operation.

We offer formal management and administration against all industry recognised sustainability certification schemes including [Green Star](#), [BREEAM](#), [LEED](#), [NABERS](#), [WELL](#), [Passive House](#) and [Living Building Challenge](#).

RENEWABLE ENERGY AND STORAGE SOLUTIONS

Increasingly, organisations are recognising that establishing their own supply of renewable energy makes good sense for the bottom line as well as the planet. This applies to landlords and tenants who are looking at ways to deliver on their sustainability objectives.

Our team can work through renewable energy feasibility studies such as solar photovoltaics or geothermal heating that include a strong return on investment and optimise design to provide a low-carbon, resilient solution.



Offices, United Kingdom

ARDING & HOBBS

London

Historically used as a department store, the restoration of the majestic Grade II listed Arding & Hobbs delivers sought after premium office, retail and leisure space in the heart of Clapham Junction. A modern rooftop extension is an exciting new feature of this grand dame.

With circa 90,000 ft² of office space and 20,000 ft² of retail and leisure areas across lower levels, Arding & Hobbs features a prominent 'crown' rooftop extension that creates new fourth and fifth floors that are surrounded by a roof garden terrace with provision for an outdoor cinema.

The project achieved a BREEAM Excellent rating with new high-performance facade elements and retention of the key building structure to maximise the reduction of embodied carbon. The heritage listed building fabric has been retained, with the existing glazing replaced to reduce energy consumption for heating and cooling as part of a lean, clean and green energy reduction hierarchy.

Key project initiatives included:

- Ventilation is provided through high efficiency systems with heat recovery and CO₂ control.
- Underfloor HVAC systems on the new floors minimise ceiling services and highlight exposed CLT beams.

Services

Sustainable design strategies, advanced simulation and analysis, verified sustainability certifications

Client: W.RE

Architect: Architect: Stiff & Trevillion

Completion: 2023

- Efficient LED lighting provides flexibility with infill track sections to easily facilitate additional lighting for tenant fitout.
- No gas is used for office heating, instead it's provided by efficient all-electric VRF heating/cooling system.
- An onsite photovoltaic array generates some of the electricity required to run Arding & Hobbs, surrounded by green roofs to enrich local ecology.
- With the achievement of WiredScore Platinum and an ICN, the building is well placed for modern connectivity as a smart building.

Internally, an eye-catching stained-glass dome on the third floor references the building's heritage. A new atrium with escalators connecting the floors pays homage to the original department store.

While respecting the past, the building's construction is sensitive to its position near residential areas, demonstrated through consideration of plant acoustics and in maintaining trading continuity of an adjacent large retail store.

A much loved building that has stood the test of time, the Arding & Hobbs restoration ensures its place for generations to come.



Offices, United Kingdom

ST. PANCRAS CAMPUS

London

Services

Sustainable design strategies, advanced simulation and analysis, verified sustainability certifications

Client: W.RE

Architect: Caruso St John

Completion: 2024

W.RE's new St. Pancras Commercial Centre is a dynamic mixed use development that includes light industrial, residential, office and retail space on Pratt Street in Camden Town. Constructed as 3 buildings linked by shared outdoor space, the precinct aims to reflect the energy and diversity of the surrounding area.

NDY is delivering services engineering, fire and sustainability on this ambitious new project. Key challenges included developing a design that successfully navigated stringent planning requirements and community needs.

As a core project focus, our sustainability design incorporates significant targets that include a very high-performance building envelope, optimised glazing properties, electric heating and cooling systems using on-site heat-pumps (avoiding use of gas across the site), as we work towards an increasingly decarbonised grid. Solar thermal and photovoltaic collectors further offset carbon emissions across the site. The project is targeting net zero carbon, with NDY's sustainability team undertaking whole life cycle analysis of embedded and operational energy.

The wellbeing of tenants and residents will be further enhanced through careful design that both enhances access to high quality indoor environments and features such as large residential balconies, a public courtyard and shared roof terrace for office events; with the development presenting benefits to the wider Camden community that include new landscaped connections through the site from adjacent streets.



Offices, Australia

435 BOURKE STREET

Melbourne, VIC

Leading national integrated property investor and developer, Cbus Property, is aiming to create a world-class commercial office tower that sets a new benchmark for sustainable office buildings with its new 435 Bourke Street development in Melbourne.

Cbus Property has a vision which goes beyond just carbon by looking at all aspects of sustainability. Its focus for 435 Bourke Street includes environmental impact, wellness, connection to the community, nature and productivity.

The 52-storey commercial tower is proposed to comprise:

- 48 storeys of premium office space (approximate 62,000 m² – 63,000 m² NLA)
- Expansive commercial office lobby with working lounge, retail and wellness spaces
- Open-air roof terrace spaces on levels 3, 9 and 20
- A “Sky Garden” area at levels 20 to 22
- 4 levels of plant rooms at roof level
- 5 levels of basement including car parking, end-of-trip-facilities, services and back-of-house building management facilities.

As the building services consultant, NDY has been helping Cbus Property to develop a range of

Services

Sustainable design strategies, advanced simulation and analysis, zero carbon action plans, verified sustainability certifications, whole-of-life carbon assessments, resiliency risk assessment and adaptation planning, renewable energy solutions

Client: Cbus Property

Architect: Bates Smart

Completion: Ongoing

innovative solutions that will help 435 Bourke to stand apart in Melbourne's CBD and achieve its vision.

The building will be one of the first office towers in the world to feature a façade integrated photovoltaic (PV) system. The integration of solar panels within the facade's shading elements generates a portion of the base building's electricity as well as reducing the air-conditioning loads. This unique feature incorporates an innovative approach to the electrical design to help it work.

The remainder of the all-electric building will be powered by purchased renewable electricity and will be net zero carbon in operation from day one.

The project is targeting the following ratings and certifications:

- Green Star Buildings – 6 Star
- WELL Certified Core – Platinum
- NABERS Energy Base Building – 5.5 star with 6 star stretch target in operation
- NABERS Water Base Building – 4.5 star

435 Bourke will be a pioneer project for Australia, if not the world, and one that responds to the future of the workplace.



Education, Australia

PICAC NARRE WARREN

Melbourne, VIC

Services

Advanced simulation and analysis, zero carbon action plan, renewable energy and storage solutions

Client: The Plumbing Industry Climate Action Centre (PICAC)

Architect: FMSA Architecture

Completion: 2019

Watch the project timelapse video:

[Watch now](#) 

PICAC Narre Warren is Victoria's first all-electric Net Zero Energy (NZE) education and research facility, providing vocational training to support Victoria's construction industry. The innovative facility focuses on new technology, risks and approaches and teaches everything from mechanical and gas installation to health and safety programs.

With climate change rapidly impacting our planet, NDY's expertise in engineering and sustainable buildings led to our engagement and the delivery of a leading sustainability approach. Following extensive research in sustainable building trends, our team proposed an ambitious NZE strategy to demonstrate real leadership and be consistent with our client's educational goals – and then helped to secure grant funding for the project from ARENA (the Australian Renewable Energy Agency).

The renewable energy supplied on the site is a unique combination of geothermal energy wells and solar panels. According to NDY's sophisticated energy modelling, on an annual basis this will provide enough energy to match the usage demand of the entire building.

The energy wells are a combination of very deep (110m) and moderate depth (13m) screw bore piles which maximise the geothermal supply on the site.

With strong passive design as its foundation (which NDY's sustainability team helped FMSA Architecture to develop), the building utilises indirect evaporative cooling units, relaxed temperature conditions, in-slab heating, and ground-source heat exchange loops integrated into the structural piles. 770 rooftop solar PV panels then generate the same amount of energy each year as the building consumes, completing the energy supply strategy.

Extensive advanced simulation modelling predicted the energy demand of the building utilising different servicing approaches, and assessed the energy generation potential of the rooftop solar PV array. The complexity of the modelling varied as the design evolved, with hourly data throughout the year interrogated so that a deep understanding of the main contributors to the heating and cooling requirements could be sensitivity tested. Design adjustments were made progressively to arrive at an overall design that achieved equality of building energy demand and renewable energy supply, and at acceptable cost. Minimising the building energy demand through critical examination of the building's requirements and matching the most suitable low-energy systems to these requirements was an important part of the modelling process.



Education, Australia

BOOLA KATITJIN

Perth, WA

Services

Sustainable design strategies, advanced simulation and analysis, verified sustainability certifications, whole-of-life carbon assessments, resiliency risk assessment and adaptation planning, renewable energy solutions

Client: Murdoch University

Architect: Lyons

Completion: 2023

Boola Katitjin provides Murdoch University with approximately 16,000 m² of contemporary collaborative learning space, informal peer-to-peer learning, academic workplace and campus landscape. The building also contains a new campus wide Student Services Hub and a series of innovative 'future focused' research and industry engagement spaces. The project is a demonstration of the University's commitment to sustainable practices and design innovation.

The primary purpose of the project was to provide the University with state-of-the-art contemporary learning spaces, to meet the needs of contemporary higher education.

Designed to achieve a 6 star Green Star Design and As-Built v1.3 rating, the project demonstrates leadership in sustainability on a national scale.

NDY worked closely with the architect and facade consultant, through an iterative modelling process, to ensure the building's architecture will passively control solar gains to minimise cooling energy and enhance thermal comfort, incorporating deep eaves to the north, vertical fins to the southern facade, and horizontal fins to the eastern and western facades. The combination of smart and informed passive design

and high performance building fabric results in Boola Katitjin exceeding NCC Section J 2019 performance requirements by 10% and resulting in a 90% reduction in greenhouse gas emissions when modeled under Green Star protocol.

Wind microclimate and thermal comfort studies informed the architectural and mechanical design and enabled the use of mixed mode ventilation to select areas for 40% of the year, further reducing energy consumption.

The project team prioritised reduction of embodied carbon in construction materials resulting in a hybrid, mass timber construction for the majority of the structure, the largest in Western Australia so far. Mass timber construction not only reduces new carbon emissions entering the atmosphere but sequesters carbon from the atmosphere as it grows.

NDY has developed a strong understanding of Murdoch's appetite to push boundaries in sustainability in the built environment and has delivered the expertise required to design a world leading sustainable building.



Offices, Australia

12 CREEK STREET ANNEX

Brisbane, QLD

The Annex at 12 Creek Street is a 12-floor commercial building that is home to office spaces, retail tenancies and an exclusive landscaped terrace overlooking the Brisbane River developed by Dexus.

The building's office levels were designed to accommodate both single and multi-lease occupancy, with the ability to subdivide individual floors to a maximum of six suites. This provides flexibility for both the building owner and tenants.

The building's facade, which was designed to align with Brisbane City Council's masterplan: Buildings That Breathe Design Guide, also reflects a stand of fig trees which neighbour the building. The facade of the building's first six levels incorporates outdoor spaces which take in the fig trees at base, canopy and tree top. These spaces are breathable, linking the indoor area to the outdoor environment, providing tangible wellbeing benefits for occupants. The upper three levels include a sky terrace that was designed to mimic a cascading garden. NDY designed the mechanical systems to accommodate the breathable facade and the sky terrace.

The building was originally targeted to meet PCA Grade-A, 4.5 Star NABERS Energy, 4 Star NABERS water and 4 Star Green Star building standards, however NDY's sustainability team worked with the client and the builder to achieve a 5 star Green

Services

Sustainable design strategies, advanced simulation and analysis, verified sustainability certifications

Client: Dexus Property Group

Architect: BVN Architecture

Completion: 2020

Star rating. This was achieved through the early identification in the design process that the building could be awarded 5 star status through the strategic targeting of additional Green Star points in the design.

The team focused on reduction of water consumption in the building's design through a performance pathway to obtain valuable points. Additionally the architectural vision of reflecting the neighbouring fig trees was used to incorporate aspects of other sustainability ratings tool, namely the beauty element of the Living Buildings Challenge, into the Green Star assessment.

NDY also developed tenant fitout guidelines, which not only helped achieve the final points required to achieve a 5 star rating, but ensured that the vision DEXUS had to deliver a sustainable asset would be realised through the reduced impact of tenant operations in the building.

[Read more](#)





Offices, New Zealand

2DEGREES HEAD OFFICE

Auckland

Services

Verified sustainability certifications,
workplace policy development

Client: 2degrees

Architect: Warren and Mahoney

Completion: 2022

2degrees is one of New Zealand's (NZ) leading telecommunication companies. They are driven by their purpose of 'Fighting for Fair to make NZ a better place to live', which stems back to their inception in the early 2000s where they became the country's third mobile provider and halved costs for Kiwis overnight.

People and wellbeing are integral to the 2degrees culture, and when moving into their new Auckland headquarters the organisation took the opportunity to demonstrate this commitment to providing a happier and healthier workplace through certification under The WELL Building Standard (WELL).

2degrees approached NDY to help guide their organisation through the WELL journey. Their new headquarters is the first project in NZ to achieve WELL certification, becoming WELL Certified™ Platinum in May 2022.

Design interventions that support employee health, safety and wellbeing include:

- Kaiterra Sensedge air quality monitors located throughout the fitout, taking live measurements of indoor air quality and thermal comfort levels, with results displayed in the office lobby and on an employee accessible website

- Personal workspace comfort adaptation with access on request to task lighting, blankets for warmth, desk fans for cooling and noise cancelling headphones
- Influencing staff use of internal stairs for inter-tenancy movement with aesthetic stair networks and encouraging signage
- Restorative areas for Hauora (wellness) including the Harikoa room for meditation, prayer and yoga.

2degrees' internal operations and staff policies, whilst already outstanding, were also elevated with initiatives such as:

- Commitment to responsible sourcing of food available to staff with at least 50% of all fruit and vegetables and 25% of all animal products being certified organic
- Driving education on smoking prevention and smoking cessation support for staff and their families
- Revamped parental leave policy offering some of the strongest opportunities for new parents in the NZ workforce
- extensive wellness programme provides people with the ability to claim a gym visit back when travelling and access to programmes to support their mental health.



Hotels, New Zealand

THE HOTEL BRITOMART

Auckland

Services

Sustainable design strategies, advanced simulation and analysis, verified sustainability certifications

Client: Cooper and Company

Architect: Cheshire Architects

Completion: 2020

For more than 15 years, Cooper and Company has been patiently regenerating the 9-block Britomart neighbourhood in the heart of Auckland's downtown waterfront. It's a place where a blend of heritage and contemporary buildings now houses a working community of over 5,000 people and offers some of Auckland's best eating, drinking and shopping.

The Hotel Britomart was designed as a place from which to enjoy all the amenities of the Britomart neighbourhood and the city beyond. NDY delivered full building services on the development, including an industry-leading sustainability offering. Our team provided design solutions for the new build, 10 storey hotel and the accompanying transformation of the adjacent historic Buckland Masonic building, an existing site first built in the 1800s, into an office building.

New Zealand's first 5 Star Green Star certified hotel has been designed to the highest standards of sustainability for building and construction. Working closely with Cheshire Architects and Cooper and Company, an organisation with a passion for sustainability that is in line with our own, NDY delivered the sustainability solutions that were a driving force behind the development's realisation.

After research was obtained for the certification process, findings showed more than 2/3rds of travellers would prefer to stay in eco-friendly accommodation. To keep the project in line with these findings, initiatives included nearly 80% of the construction and demolition waste being re-used or recycled during the 2-year build, and 70% of the water used for concrete coming from recycled sources. Material selection was imperative to the success of the sustainability goals, with locally sourced sustainable timber and recycled bricks used in the build.

There were 2 key services considerations for NDY during the design phase: limited plant space and the placement of building services in hotel rooms. To overcome spatial problems relating to the mechanical plant, NDY sourced chillers from numerous manufacturers and found only one that would meet the building's demand and load whilst fitting into the tight plant area.

Ultimately The Hotel Britomart is a smart, contemporary location that offers a respite to its guests through luxurious and sustainable rooms while reducing the impact of climate change and enhancing health and wellbeing for guests and hotel staff alike.



DELIVER PEOPLE- CENTRIC SPACES AND ATTRACT TOP TALENT

Heighten productivity, uncover operational efficiencies and create a better place to work. We apply global know-how to local situations so you can access sustainability solutions designed to help your workplace perform the way you need it to. Our evidence-based recommendations start early and continued consultation enables the design to support your organisational health and wellbeing goals.

OPERATIONS AND ASSET REPOSITIONING

We value existing buildings. In a world of finite resources, the imperative to build less is becoming more and more prevalent. The increase in tenant organisations pursuing net zero targets means there is more scrutiny on the buildings they occupy. The most sustainable building is one that nurtures the relationship between people and planetary health, striking not only a balance but improved outcomes in social and environmental sustainability.

We work with you to reposition your assets and increase sustainability credentials. We focus on operational actions to ensure comfort and productivity remain high while resource consumption is continually minimised.

BUILDING MONITORING, AUDITING AND TUNING

Any roadmap requires a process of validation in implementation to confirm that the anticipated emissions reduction or offset targets are being met.

NDY has considerable experience in the process of building tuning, both for new build and refurbished physical assets, using project-specific benchmarks to monitor performance over time and identify any areas requiring further attention to deliver optimum performance in collaboration with facilities management and contractors. We also use [NABERS](#) and international energy audit standards as recognisable and verified approaches to monitor and audit performance.

Collaborating with our smart buildings team, opportunities for new sustainability initiatives in existing buildings are endless. Using data blended from various sources, we measure, track and verify building performance and accurately align operations to user needs. This real time data provides us opportunities to influence outcomes rather than seeing performance retrospectively.

OPERATIONAL AND MAINTENANCE ACTION PLANS

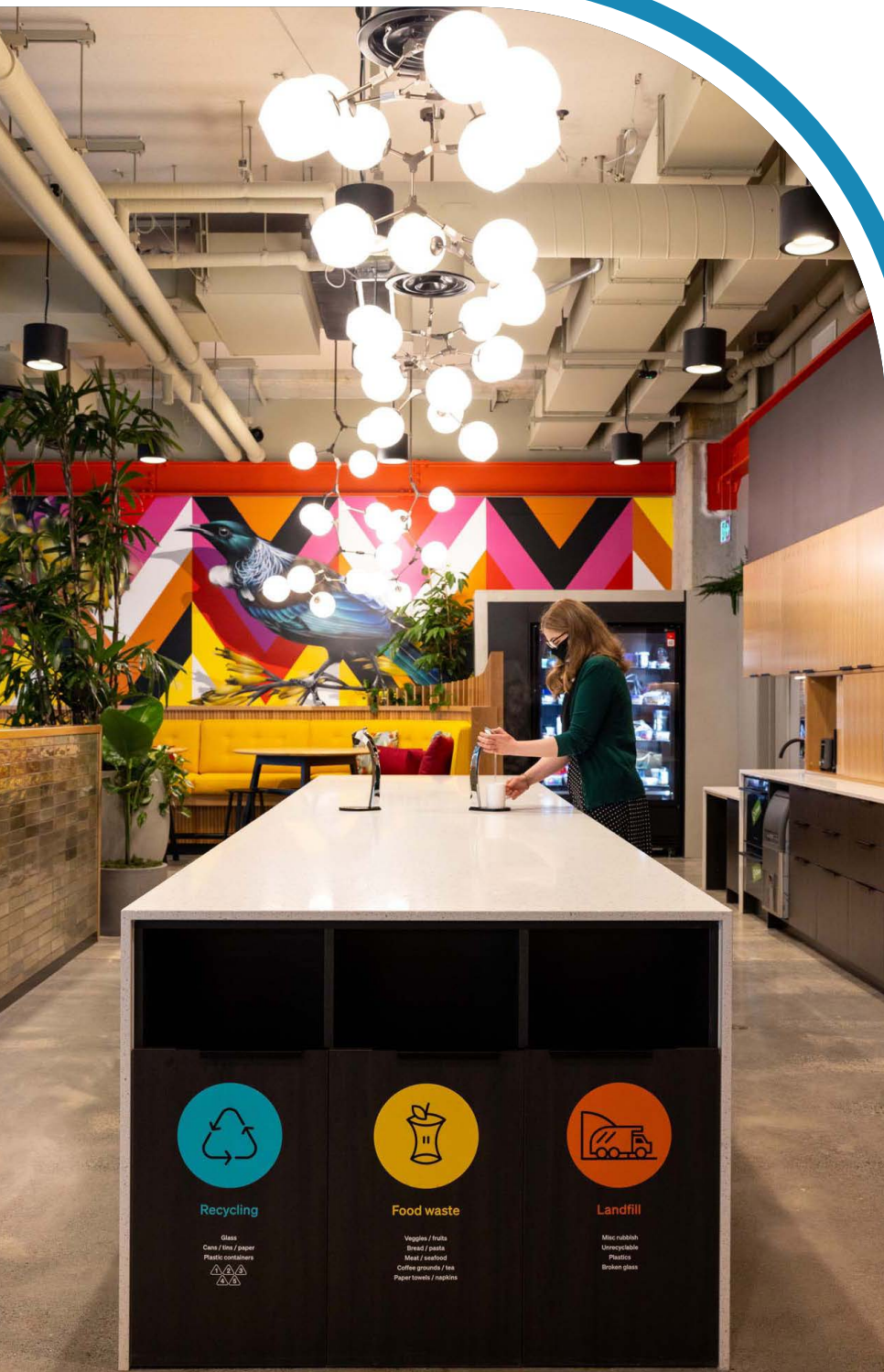
Often, our monitoring, auditing and tuning services will result in the need for a clear operational and maintenance action plan.

We provide action plans for facilities managers with clear short, medium and long-term objectives to prioritise efficient and low carbon operations. This may include inspection and audit schedules, tuning benchmarks, plant replacement strategies and sustainable procurement considerations.

ZERO CARBON ACTION PLANS

We provide zero carbon action plans for precincts and buildings with clear actions to achieve zero carbon. This starts with design and follows into procurement, construction and operation.

Our plans future-proof buildings to accommodate any future additional loads, energy storage or demand response solutions which may occur or be implemented during a building's lifetime. We also consider end-of-life scenarios and provide insight into future solutions for carbon risks such as back-up generation and refrigerants.



VERIFIED SUSTAINABILITY CERTIFICATIONS

We believe that a robust design framework or certification can help ensure a project's environmental and social sustainability aspirations are realised in design, construction and operation.

We offer formal management and administration against all industry recognised sustainability certification schemes including [Green Star](#), [BREEAM](#), [LEED](#), [NABERS](#), [WELL](#), [Passive House](#) and [Living Building Challenge](#).

WORKPLACE POLICY DEVELOPMENT

Clear workplace policies and procedures provide governance and communicate an organisation's commitments along with supporting employees' physical and mental wellbeing. They can make adopting and maintaining healthy behaviours easier and create and foster a positive company culture.

We can help you review existing policies, identify gaps and develop workplace policies and processes to support in the achievement of verified sustainability certifications, such as WELL, or generally improve your organisation's performance. Both certification and improved organisational performance will contribute to an increased GRESB score.



Offices, Australia

500 COLLINS STREET

Melbourne, VIC

Services

Verified sustainability certifications, workplace policy development

Client: Kamrice

Completion: 2021

Completed in 1973, 500 Collins Street is a 26-storey tower featuring approximately 26,000 m² of net lettable area comprising an office tower with a retail plaza at ground level. 500 Collins Street is the first existing building in Australia to achieve WELL Certification™ at the Platinum level, positioning it as an industry leader in the advancement of health and wellbeing in existing buildings.

NDY was initially engaged to undertake a gap analysis of the building to determine the potential to achieve WELL certification. Following a positive result, NDY led Kamrice through full certification, assessing the building's design, operations and policies under the internationally recognised WELL Building Standard.

500 Collins Street earned the Platinum distinction based on its performance across the 10 categories of the WELL Building Standard – air, water, nourishment, light, movement, thermal comfort, sound, materials, mind and community.

To achieve this certification the building underwent rigorous testing on its air quality, water quality, ventilation, thermal and acoustic comfort.

Other initiatives include the use of non-toxic cleaning products, mindful eating promotion through a healthy vending machine, and the creation of an online tenant portal to share nutritious recipes and promote mental health.

The certification demonstrates how an older, existing building in which investment and upgrades has been consistent and focused over the years, was able to achieve recognition at the highest level without requiring top to bottom refurbishment.

Mark Ross, Managing Director of Kamrice, states “500 Collins Street sets a benchmark in how existing office buildings can be transformed to lead the way in workplace health and wellbeing, for both small and large tenants alike.”



Offices, New Zealand

ENERGY EFFICIENCY ON EXISTING BUILDINGS

Auckland & Wellington

Services

Building monitoring, auditing & tuning,
verified sustainability certifications

Client: Precinct Properties

Completion: Ongoing

Precinct Properties is the largest owner and developer of premium inner-city office real estate in Auckland and Wellington, New Zealand. Committed to delivering a premium product with a reduced carbon footprint, Precinct Properties has set targets in their publicly disclose sustainability reporting for both new and existing building stock to achieve NABERSNZ thresholds. These commitments in line with NABERSNZ also supports Precinct's wider benchmark reporting such as the TCFD framework, Toitū envirocare, GRESB and MSCI ESG Ratings.

Over time NDY has played a pivotal role in helping Precinct Properties realise these targets from both a design contribution of new developments and the optimisations of existing assets. To unlock the sustainability potential of Precinct's existing building stock, NDY have worked alongside Precinct to firstly rate the buildings against NABERSNZ and secondly interrogate the operational performance.

To do this NDY has undertaken a series of energy audits across a select number of buildings in Wellington. These audits involved site investigations and liaising with facilities management, contractors, energy providers and NDY's in-house services and digital infrastructure experts to interrogate the operational data and offer opportunities to improve

performance. This exercise put a spotlight on not only the power of data accuracy and metering integrity, but also the opportunities that exist in continual system tuning. Precinct Properties have executed several of NDY's recommendations and are seeing immediate reductions in building energy consumption.

Further to auditing the performance of existing buildings, NDY have conducted annual NABERSNZ ratings on a number of these buildings. NABERSNZ ratings allow a building to be benchmarked against others in the market. Precinct's maturity in reporting against NABERSNZ is in line with that observed in Australia and prepares them for regulatory NABERSNZ reporting and disclosures if/when introduced in New Zealand.



Sport & Entertainment, New Zealand

EDEN PARK

Auckland

Services

Workplace policy development, verified sustainability certifications

Client: Eden Park Trust

Completion: 2021

Eden Park is New Zealand's national stadium and the first stadium in Australasia to achieve the globally recognised WELL Health-Safety rating. Revered around the globe as the spiritual home of New Zealand sport, the venue hosts a range of content from sports to concerts and community, arts and cultural events.

Throughout 2021 in the midst of the COVID 19 pandemic, Eden Park was cast under a global spotlight, both as one of the only stadia operating globally through the year, and having recently being ranked as the number one concert venue in the world by Pollstar.

As WELL Accredited Professionals, NDY took the globally recognised stadium on the WELL Health-Safety journey. WELL Health-Safety provides a platform to recognise, promote and in some cases bring facilities and buildings 'up to spec' to provide clean, safe, healthy and prepared spaces for occupants to return to across the world. The WELL Health-Safety Rating benchmarks the performance of facility against the following categories:

- cleaning and sanitisation procedures
- emergency preparedness programs
- health services resources
- air and water quality management

- stakeholder engagement and communication.

The project also delivered:

- improved cleaning practices
- emergency preparedness and business continuity plans
- smoke-free environment.

Eden Park is proud to be leading the industry with this global WELL Health-Safety Rating.

“Our venue has always placed the highest importance on health and safety, so receiving the WELL Health-Safety seal just confirms that Eden Park is setting the standard for stadium buildings and public spaces across Australasia,” said Eden Park Chief Executive Officer, Nick Sautner.

OUR MARKETS

We design spaces that perform the way you need them to – spaces fit for your future. Whatever the size or complexity of your project, our global team of trusted advisors engineer integrated and sustainable solutions.



AGED CARE



CORRECTIONS & JUSTICE



DEFENCE



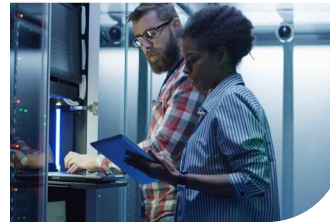
EDUCATION



HEALTH & SCIENCES



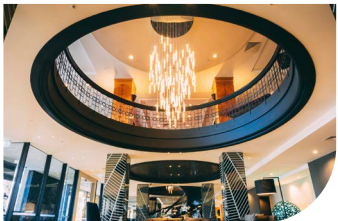
INDUSTRIAL



MISSION CRITICAL



OFFICES



**RESIDENTIAL, HOTELS
& MIXED-USE**



RETAIL



**SPORTS, ENTERTAINMENT
& PUBLIC BUILDINGS**



TRANSPORT

OUR SERVICES

Our project teams include technical specialists who span disciplines but share the same project goals, values and vision.



Acoustics



Asset Performance



Audio Visual



BIM Building Information Modelling



Commissioning Management



Communications (ICT) Consultancy



Controls & Integration



Electrical



Fire Engineering



Fire Protection



Hydraulics



Interiors



Mechanical



NDYLIGHT



Property Consultancy



Security



Smart Buildings



Structural & Civil



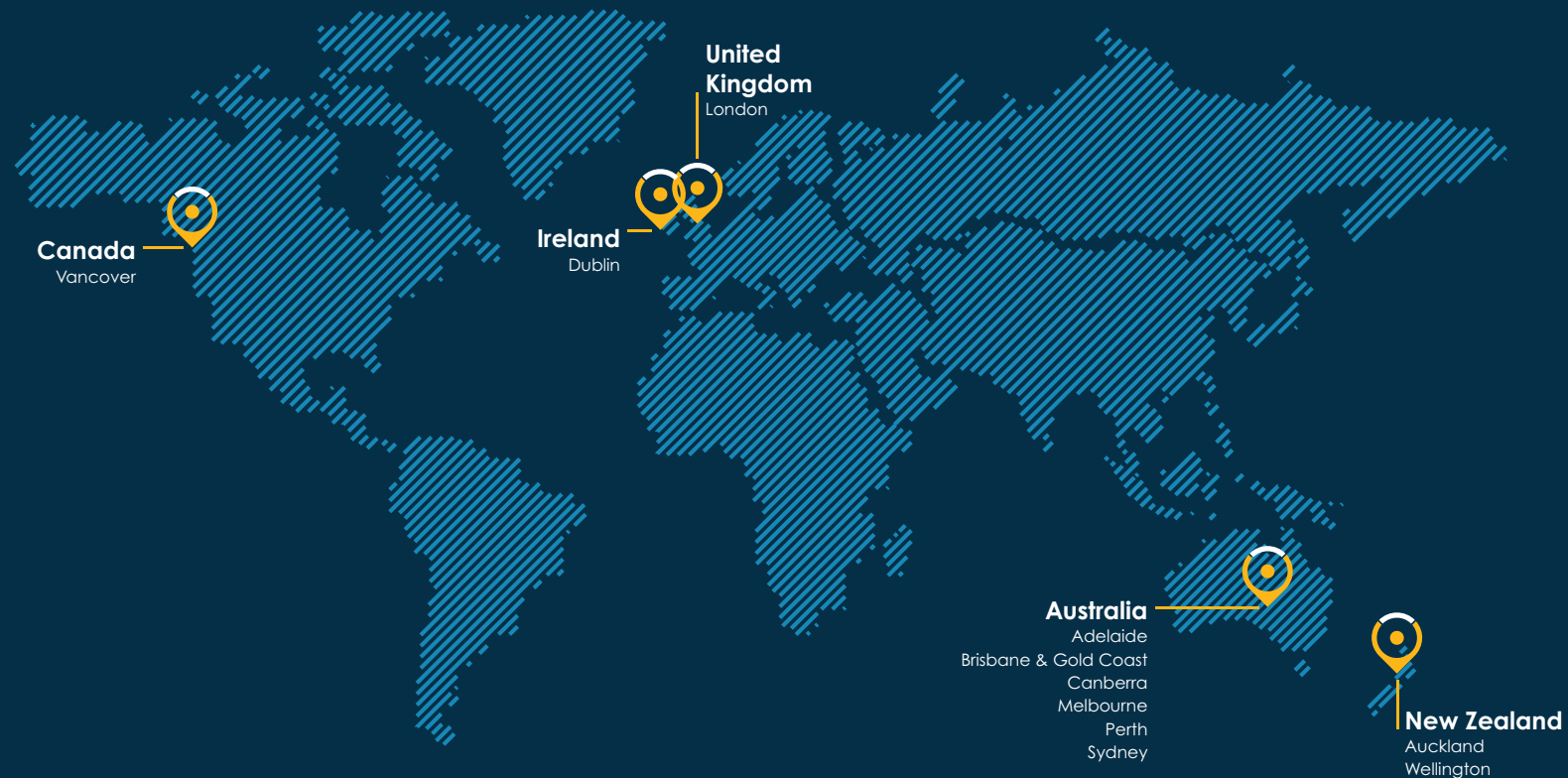
Sustainability



Vertical Transport

NDY AT A GLANCE

We tap into a well-resourced network of technical specialists and consulting engineers from around the world to bring you the best project team.



MAKING SPACES WORK

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