

Sustainability delivery

Partnering with NSW agencies
and councils to **turn sustainability
ambition into action**



NSW Public Works acknowledges that it stands on Country which always was and always will be Aboriginal land.

We acknowledge the Traditional Custodians of the land and waters, and we show our respect for Elders past, present and emerging. We are committed to providing places in which Aboriginal people are included socially, culturally, and economically through thoughtful and collaborative approaches to our work.

Artwork: 'On Country', Charmaine Mumbulla, 2022



Sustainability delivery

Turning ambition into action: making sustainability practical, profitable and possible for every organisation

Climate policy, net zero targets and rising expectations are reshaping how NSW Government agencies and local councils operate.

For NSW Government agencies, this means meeting the **Net Zero Government Operations (NZGO) Policy**, covering energy-efficient buildings, electrified fleets, water, waste and circular economy goals. For local councils, sustainability is delivered through the **Integrated Planning and Reporting (IP&R) framework**, while aligning with evolving climate legislation and planning controls.

From the **Climate Change (Net Zero Future) Act 2023** to the **Sustainable Buildings SEPP**, councils and agencies are expected to embed sustainability into daily operations, projects and decisions.

Without clear implementation, organisations risk non-compliance, missed targets, delays, higher costs and reputational risk.

NSW Public Works (PW) helps councils and agencies turn policy into practice. We combine delivery expertise, governance and strategic insight to support compliance, manage risk and achieve long-term community outcomes. Our approach also identifies opportunities to improve efficiency and reduce operating costs.

With over **400 specialists across 17 regional offices**, our locally led projects are backed by state-wide capability, ensuring sustainable infrastructure delivers real benefits for communities across NSW.

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Expert staff in every corner of NSW

With more than **400 specialised staff across our network of 17 regional offices**, we quickly assemble the expertise needed to address complex sustainability challenges, delivering tailored solutions across solar, waste, procurement, organisational change and risk management.

Our purpose-built sustainability team includes:

- › Energy regulator consultation leads
- › Sustainability strategists
- › Electrical engineers
- › Mechanical engineers
- › Water engineers
- › Major development and precinct project managers
- › Heritage architects
- › Environmental planners
- › Facilities management leaders
- › Project managers
- › Utilities experts
- › Digital design professionals
- › Data analysts



Government sustainability obligations

NSW Government

The **NSW NZGO Policy** mandates that all general government sector agencies with 100 or more staff implement 24 targeted actions to reduce operational emissions.

Agencies must develop long-term net zero transition plans, decarbonise buildings and fleets, prioritise recycled content in procurement, and report annually on compliance.

The policy also addresses broader sustainability outcomes, including water conservation, waste reduction and circular economy practices.

These requirements align with the **Climate Change (Net Zero Future) Act 2023** and support NSW's legislated emissions targets.

Local councils

NSW local councils are required to integrate sustainability into their operations through the **IP&R framework**.

This includes aligning community strategic plans, delivery programs and operational plans with environmental, social and economic objectives.

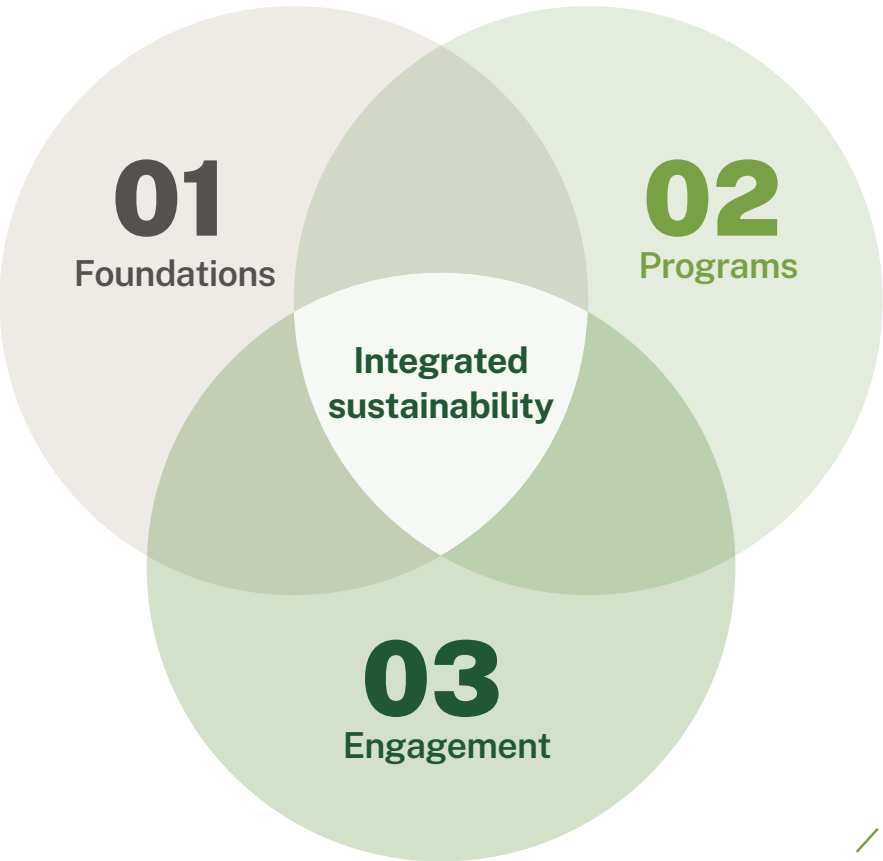
Councils must also comply with evolving climate legislation and planning controls, such as the **Sustainable Buildings SEPP**, which mandates higher sustainability standards for new developments.

Councils are encouraged to support state-wide emissions targets and climate resilience goals associated with the **Climate Change (Net Zero Future) Act 2023**.

Our expertise

PW has the capability and experience to provide clients with tailored solutions for the delivery of their sustainability projects.

We can help with all stages to set up core foundational systems and tools, deliver programs and projects, and engagement across staff, people and partnerships.



01 Foundations

Build the core systems so sustainability becomes normal business and can endure leadership and budget cycles

- **Vision and case for change:** define a clear vision, goals and priority areas
- **Goals targets and priorities:** translate NSW targets into practical goals
- **Governance and decision making:** governance that ties sustainability to key decisions
- **Baselining and performance reporting:** track progress and design simple reporting for leaders and boards
- **Funding models and reinvestment:** develop reinvestment and cost-recovery approaches to scale programs, including payback period analysis, opportunity identification and business case development
- **Sustainability certification:** apply relevant frameworks (e.g. NABERS, Green Star, ISO)
- **Program roadmap:** create a 3-5 year sustainability plan with staged actions and budgets

02 Programs

Design and deliver practical sustainability initiatives across key resource areas

Core streams:

- **Energy:** solar, batteries, lighting upgrades, energy audits, electrical system optimisation and coordination with energy authorities
- **Water and sewerage:** efficiency, reuse, wastewater treatment, stormwater quality
- **Flood and resilience:** flood management programs, riverbank stabilisation and rehabilitation, and resilient infrastructure design and material selection
- **Zero waste and circular economy:** waste reduction programs, recycling and resource recovery, wastewater reuse, biosolids repurposing, and circular economy pilots
- **Transport and fleet:** electric vehicle infrastructure programs, fleet electrification, charging strategy and rollout, and supporting energy and network coordination
- **Procurement and supply chain:** sustainable procurement planning, embedding sustainability requirements in contracts, and supporting delivery of energy, water and waste programs through procurement pathways
- **Infrastructure and sustainable asset management:** building design guidelines, integration of targets, asset condition and performance reviews, lifecycle costings, building and site drone and 3D scans, integration of digital tools with asset registers
- **Cultural and environmental planning:** REFs, SEEs, impact assessments, ESD, biodiversity and Aboriginal cultural heritage

03 Engagement

Strengthen culture, capability and partnerships

- **People and culture:** build engagement through storytelling, recognition and cross-agency collaboration
- **Staff capability:** on-site campaigns, sustainability champions, training and workforce development
- **Communities and Aboriginal partners:** co-design place-based initiatives and embed Caring for Country principles
- **Innovation and recognition:** connect with research partners, support pilots, and prepare awards, case studies and communication materials

Demonstrated experience

These projects highlight how our flexible approach improves delivery outcomes across different contexts.

“NSW Public Works have been excellent to work with, bringing valuable experience and expertise in delivering big complex infrastructure projects. Their guidance throughout the building design, construction and completion phases has been greatly appreciated by BDA.”

— Kris Letsch, Program Director, Bradfield Development Authority

GREEN STAR CASE STUDY

Advanced Manufacturing Readiness Facility (AMRF) – Bradfield City

Client: Bradfield Development Authority (BDA)	Location: Western Sydney	Services provided: Project management, procurement strategy and contractor engagement
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PW played a key role in developing Bradfield City Centre, overseeing the construction of its First Building, which blends modern design with functionality and sustainability.

The 3,500 sqm (GFA) building incorporates the AMRF hall, events and function spaces, and commercial office space.

In line with BDA's sustainability objectives, the building is designed to achieve a high Green Star Building rating. It incorporates Indigenous culture into the design and sets a benchmark for sustainability and innovation.

First Building has been recognised by multiple institutions for its design, impact and sustainability, including by winning the 2025 Australian Good Design Award for Sustainability.



WASTE MANAGEMENT CASE STUDY

Expansion of waste cell at Kempsey Waste Management Centre

Client: Kempsey Shire Council	Location: Kempsey	Services provided: Technical support, project and contract management
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The Kempsey Waste Management Centre, serving the waste and recycling needs of Kempsey Shire Council and the local community, faced capacity challenges in its active landfill cell.

To address environmental responsibilities, the facility expanded with the construction of a new waste cell, supported by PW with technical advice and project and contract management.

Overcoming incremental weather and supply chain challenges, NSWPW assured construction compliance with environmental guidelines and EPA endorsement. The project enhances Kempsey Shire Council's long-term waste strategy, supports community growth and sustainability initiatives.



ENERGY EFFICIENCY CASE STUDY

Hunter New England Local Health District Solar Program

Client: Hunter New England Local Health District (HNE LHD)	Location: 35 locations in HNE	Services provided: Technical advice, project and contract management
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HNE LHD’s Sustainability Strategy sets a target to be carbon and waste neutral by 2030. PW has delivered installation of over 10,000 solar panels installed across various sites, with Newcastle’s John Hunter hospital now the largest hospital rooftop photovoltaic solar system in the southern hemisphere covering 12,000 square metres. Construction safety was a critical success factor, with work occurring on an operating public hospital during the COVID-19 pandemic and managing multiple crane lifts within a busy medical helicopter flight path.

Procurement was in two stages due to the size of the system and allowed the HNELHD to achieve maximum returns from small-scale technology certificates (STCs) and energy savings.



WATER AND SEWERAGE CASE STUDY

Gundagai Sewage Treatment Plant

Client: Cootamundra-Gundagai Regional Council	Location: Gundagai	Services provided: Design, project and contract management
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PW were engaged to deliver a new state-of-the-art sewage treatment plant, pump stations and rising mains constructed above the 1:100-year flood level with a capacity of 3000 EP (equivalent persons).

The treatment plant provides biological treatment based on the Intermittently Decanted Extended Aeration (IDEA) treatment process, to which micro-organisms contained within the sewage treatment process aid to break down organic matters. Ultraviolet treatment and chlorination provide final disinfection for effluent reuse, adding sustainability benefits through drought proofing the adjacent Bidgee Golf Course.

The project was completed on time and budget, whilst also meeting operational compliance and design objectives. The state-of-the-art sewerage augmentation will safeguard the Gundagai community over the next thirty years and beyond.



WATER EFFICIENCY CASE STUDY

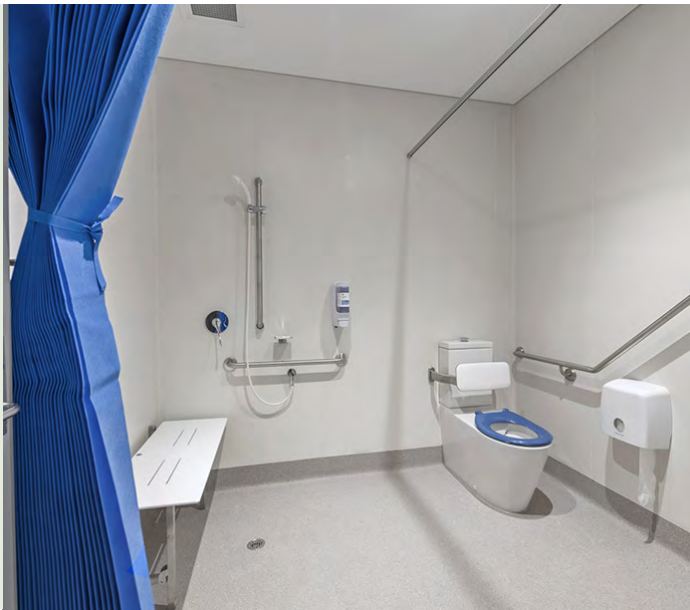
Water security and efficiency project

Client: Western NSW Local Health District	Location: 39 regional locations in Western NSW	Services provided: Advisory, procurement and contract management
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The Western NSW Local Health District approached PW to manage a project of assessing the water security of the 39 hospitals in the region.

PW worked with the various sites and the sustainability leads across the organisation to determine the parameters to focus on including but not limited to payback period and internal rate of return.

The resultant report included the data and summarised opportunities for all facilities collectively and identified potential larger and/or scalable projects. Opportunities were identified for short, medium and longer term implementation, which allowed the client to have some immediate wins, and plan for larger refurbishments or new designs. The report was also intended to support the client’s funding applications for larger projects.



WATER SECURITY AND BIODIVERSITY CASE STUDY

Water river project Walgett Weir

Client: Walgett Shire Council	Location: Barwon River, Walgett	Services provided: Design, project and contract management
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PW played a crucial role in the water river project at Walgett Weir which aimed to address the insufficient water storage during droughts and improve fish passage.

The PW team were responsible for the initial investigation, design, construction procurement, technical advice and overall project management. We also engaged in extensive consultation with community and government stakeholders including DPI Fisheries and Water NSW.

Despite challenges like flooding, PW successfully raised the weir by 1m, increased the weir pool storage from 3 to 7 months, and constructed a 115m long fishway with 30 bays. The fishway provides significant environmental benefits by facilitating fish passage in the Barwon and Namoi rivers whilst also securing Walgett’s water supply.



WATER AND SEWERAGE CASE STUDY

Junee Sewage Treatment Plant augmentation

Client: Junee Shire Council	Location: Junee	Services provided: Project management, options study, environmental assessment, geotechnical investigation and survey, concept design, detailed design, tender procurement, contract administration, site supervision, testing and commissioning
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PW were engaged to investigate options to augment the old plant, which was nearing capacity.

An innovative biological treatment process was proposed based on PW’s sustainable and low cost Intermittently Decanted Extended Aeration (IDEA) treatment process, where micro-organisms contained within the sewage treatment process’ bioreactor aid to break down organic matter.

The design also incorporated a solar panel array to offset power loading of the modern treatment process. The augmented plant will meet Council’s treatment capacity requirements for the next 30 years, helping to secure their water management plan objectives for effluent reuse and better environmental outcomes.



SUSTAINABLE HOUSING CASE STUDY

Teacher’s Housing Program

Client: Teacher Housing Authority NSW	Location: 108 properties in 28 across NSW	Services provided: Procurement, project and contract management
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Attracting and retaining teachers in regional and remote areas is a challenge. PW partnered with the Teacher Housing Authority of NSW to improve the living conditions for teachers in regional and remote areas of NSW by delivering quality housing.

The internal and external refurbishment of the identified properties included new roofs and drainage, kitchens, painting and carpeting, whilst also replacing 347 evaporative cooling systems with more energy and water efficient systems, as well as installation of solar panels on these properties. As part of the program ten new homes were also constructed.



ENERGY EFFICIENCY CASE STUDY

Smart Energy Schools Program

Client: Schools Infrastructure NSW	Location: 79 schools across NSW	Services provided: Consultant, contract and project management
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Solar and battery systems were installed at public schools from Coraki to Gerogery and as far west as Lake Wyangan under the Smart Energy Schools Pilot Project. PW led the rollout statewide through the Cooler Classrooms Program funded by School Infrastructure NSW, supplying up to 50% of the schools’ energy needs.

The project also included testing two energy management devices to find the best technology to turn a selection of schools into virtual power plants (VPP). The VPP will allow the schools to use solar for their energy needs, to charge the battery and to export and import energy to the grid. This enables schools to buy low and sell high, creating advantages for NSW schools and beyond.



ENERGY EFFICIENCY CASE STUDY

Cooler Classrooms Program

Client: Schools Infrastructure NSW	Location: 900 schools across NSW	Services provided: Technical leadership, procurement, heritage advisory, electrical expertise, environmental planning, project management and contract management
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This program provides sustainable reverse-cycle air conditioning and ventilation to schools across NSW, with the aim to improve learning and work environments for students and staff. The systems improve air quality and promote sustainability and energy awareness by using renewable energy sources and smart energy management systems.

PW developed a bespoke delivery model using our state-wide network and ability to harness in-house experts in areas such as environmental planning, heritage advisory, electrical supply, procurement and contract administration. Our specialist input saved the program over \$25m through identifying electrical system design optimisations.



IN FOCUS:

Smart management of electrical designs saves \$26 million

As part of managing the roll-out of the \$500 million Cooler Classrooms Program, PW was responsible for managing all required electrical design works, which PW delivered for \$26 million under budget.

Through the program, a typical school classroom received new air conditioning to provide thermal comfort, an air extraction system to improve ventilation, and a carbon dioxide sensor to monitor air quality. In addition, ceiling fans were added where necessary, and existing unflued gas heaters were removed.

To deliver these works, more than 200 of the 800 schools required upgrades to the high voltage electrical network. The high voltage upgrade costs were estimated at \$90 million, accounting for 20 percent of the program budget.

“For each of these 200 schools, we reviewed and closely scrutinised the power requirements,” said Brad Fisher, Electrical Services Team Leader, PW.

“We achieved tens of millions of dollars in savings by optimising high voltage designs, collaborating with supply authorities to negotiate reduced scopes, challenging design assumptions, and minimising variations.”

For example, at Baradine Public School in central NSW, the supply authority initially required 14 km of high voltage lines to be augmented as part of a network upgrade.

“After negotiating with the supply authority, this requirement was revised and greatly reduced,” said Andrew Cruckshank, Director of Construction Procurement and Social Benefit, PW. “This saved millions of dollars and significantly reduced the delivery time.”



In the case of Coffs Harbour High School, the supply authority initially requested the installation of a new pad-mount substation onsite, costing around \$1 million.

“NSW PW challenged this need for a network upgrade and proposed an alternative solution,” said Mr Cruckshank. “After extensive negotiations, the supply authority agreed that only minor modifications to the network were needed. The resulting simple works cost less than \$50,000 and were delivered in weeks instead of months.”

In many other instances, like with Canobolas Rural Technology High School and Forbes Public School, PW proposed alternative solutions to the supply authority’s initial requirements for a significantly reduced cost.

The team’s success on the program has led to new work, such as management of the electrical network augmentation works for the North Coast Temporary Housing Accommodation Program, providing electrical advice for the Belmont COVID 19 Mass Vaccination Hub, and Wagga Wagga and Parkes Special Activation Precincts.

CIRCULAR ECONOMY CASE STUDY

Preserving Sydney’s heritage: The Minister’s Stonework Program

Client: The Government Architect / Minister’s Stonework Program	Location: Sydney	Services provided: Heritage asset advisory, stone sourcing and quarrying, restoration, sustainability
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The Minister’s Stonework Program is administered and managed by PW on behalf of the Government Architect. The Program assists agencies in managing their stone heritage assets, with over 800 sandstone-built assets across NSW.

The program has been innovative in sourcing stone, with Yellow Block Sandstone harvested from development sites across Sydney CBD.

A condition of development consent requiring the sourcing of Yellow Block Sandstone from excavations for the restoration of Sydney heritage buildings was implemented by the City of Sydney and the program’s requirement, as it is equivalent in quality to the original stone used to construct the assets.



5-STAR GREEN STAR CASE STUDY

Western Sydney Start-Up Hub

Client: Property and Development NSW	Location: Parramatta	Services provided: Procurement, project and construction management
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PW successfully managed the procurement and delivery of Western Sydney start-up hub, a 5-star Green Star refurbishment of 1800s buildings. Engaged by Property and Development NSW, PW seamlessly blended heritage conservation with modern functionality, incorporating slate re-roofing, sandstone restorations, and structural repairs.

The 13-month project was recognised with the ‘2022 Master Builders NSW Excellence in Construction award’ for the restoration/adaptive re-use of an historic building. The Hub provides 1,500 square metres of affordable co-working space to start-ups, scale-ups and small businesses as well as programs and events to support new businesses and the local economy.



Photo credits: Fretwell Photography



SUSTAINABLE HOUSING CASE STUDY

Rural Hospital Staff Accommodation Program

Client: Hunter New England and Far West Local Health Districts	Location: Hunter New England and Riverina Western Regions	Services provided: Program management and contract management
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PW are collaborating with Hunter New England Local Health District and Western NSW Local Health District to deliver the Rural Hospital Staff Accommodation Program.

The self-contained units are designed to be comfortable, private, and secure, and are expected to attract and retain visiting medical professionals. All units were designed with energy efficiency and comfort in mind and include the use of solar panels and rainwater tanks.

67 housing units have been delivered across 20 rural hospital sites, as of August 2025.



COST ANALYSIS CASE STUDY

TAFE lighting upgrade business case

Client: TAFE NSW	Location: 130 sites across NSW	Services provided: Advisory, technical advice and cost analysis
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TAFE NSW are investigating energy efficient options for the replacement of the lighting at their campuses across the state. In order to secure funding for the program, they required data evaluation and cost analysis of their sites, to inform their option analysis and present a business case.

TAFE initially considered site audits for each site, but through investigation of the data they already had available, PW determined that a desk top analysis would suffice, thereby resulting in cost savings. PW analysed their site data to provide cost and payback period analysis to be used in the business case.



Why choose NSW Public Works?

With more than 400 dedicated staff across our network of 17 regional offices, we are able to quickly and efficiently take on new projects or programs, tailoring the approach to achieve optimal outcomes for the client.

➤ Accredited for planning and delivery of capital works

PW is accredited under the NSW Government Agency Accreditation Scheme for Construction to manage the planning and delivery phases of construction and capital works procurement. NSW State and Local Government entities can directly engage the services of PW under the provision of NSW Government Procurement Board Direction PBD 2021-04 and Section 55 of the Local Government Act 1993, providing efficiencies and cost savings.



➤ Strong focus on quality, environmental and safety management

PW operates under triple certification for quality, work health and safety (WHS) and environmental (QSE) management systems. These systems and processes provide the foundation for delivering quality projects and a continuous improvement culture, that embraces QSE leadership at all levels and integrates QSE into all activities. PW's Project Management Framework is the backbone of our quality system and is used to manage our projects and ensure we deliver to agreed requirements.



➤ State-wide resources

Regional clients benefit from our state-wide network of offices enabling them to source expert project management personnel familiar with the conditions and construction industry issues in their area. This proximity reduces servicing costs, facilitates improved stakeholder communications and enables us to respond quickly to your needs, providing a single point of contact for all services.



➤ Government relationships and knowledge

Successful delivery of complex infrastructure projects relies on effective interaction with stakeholders and regulatory government agencies. PW's unique position within NSW Government enables us to bridge the gap between our clients and Government stakeholders to ensure necessary consultations and approvals are undertaken efficiently and effectively.



➤ Managed risks

We place considerable emphasis on advising clients of their risks on projects, including the options and costs to manage these risks. Wherever possible, risks are identified early and inform our planning and procurement strategy development processes. Risks are continuously monitored and updated as projects progress and discussed and managed with clients and contractors.

Working across NSW



Hunter North West Region

- Newcastle**
117 Bull Street
Newcastle West NSW 2302
- Tamworth**
155-157 Marius Street
Tamworth NSW 2340
- Armidale**
85 Faulkner Street
Armidale NSW 2350
- Dubbo**
209 Cobra Street
Dubbo NSW 2830
- Broken Hill**
Level 1, 32 Sulphide Street
Broken Hill NSW 2880

Greater Sydney & Central West Region

- Parramatta**
6 Parramatta Square
10 Darcy Street
Parramatta NSW 2150
- Sydney CBD**
52 Martin Place
Sydney NSW 2000
- Bathurst**
Level 1, 346
Panorama Avenue
Bathurst NSW 2795

South Coast Riverina Region

- Wollongong**
Level 3, Block E
84 Crown Street
Wollongong NSW 2500
- Moruya**
66 Campbell Street
Moruya NSW 2537
- Queanbeyan**
257 Crawford Street
Queanbeyan NSW 2620
- Wagga Wagga**
4 Coleman Street
Wagga Wagga NSW 2650
- Griffith**
200 Murray Road
Hanwood NSW 2680
- Dareton**
1998 Silver City Highway
Dareton NSW 2717

North Coast Region

- Lismore**
120 Dalley Street
Lismore NSW 2480
- Coffs Harbour**
359 Harbour Drive
Coffs Harbour NSW 2450
- Port Macquarie**
Level 2, 41-47 Horton Street
Port Macquarie NSW 2444

> NSW Public Works

- > PROJECT MANAGEMENT
- > ADVISORY & ENGINEERING
- > ENVIRONMENT & PLANNING
- > SUSTAINABILITY
- > ASSET MANAGEMENT
- > SURVEY & SPATIAL



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