

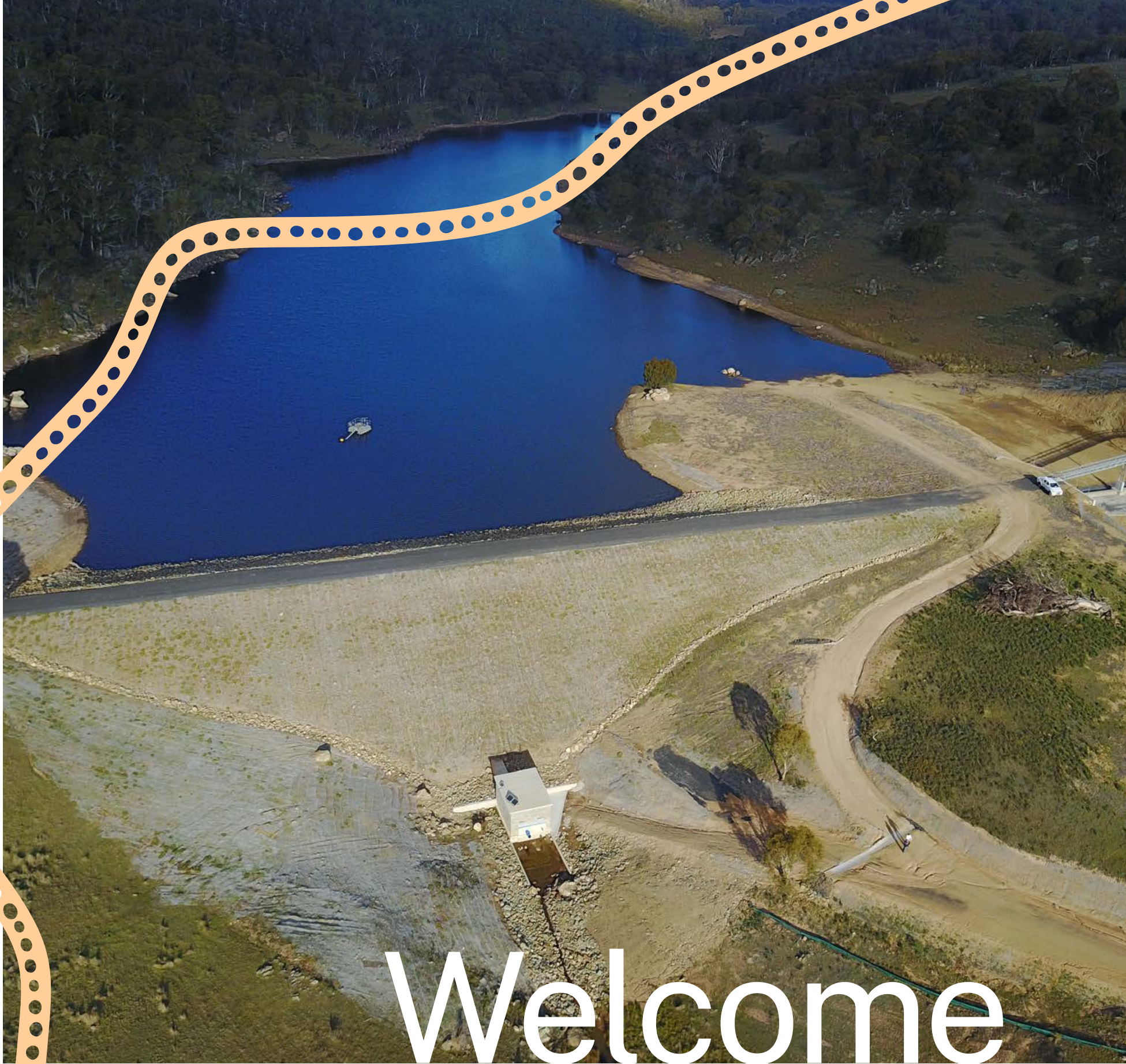
Water infrastructure services



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.

Cover: Junee Sewage Treatment Plant augmentation.
To right: Lake Wallace Dam.
Artwork: 'On Country', Charmaine Mumbulla, 2022.



Water infrastructure services

NSW Public Works (PW) assists NSW local water utilities to plan and deliver appropriate, affordable, cost-effective and sustainable water supply, wastewater, dams and river infrastructure that meet community needs and protect public health and the environment.

Our teams are at the forefront of water management in NSW and have a strong technical base of designers, planners and project managers who implement water infrastructure projects for the communities of regional NSW.

PW has specialist teams that support clients across the lifecycle management of civil infrastructure, including water and wastewater, dams, rivers and stormwater projects.

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Helping at every stage of the water cycle

Strategic planning for water infrastructure



- 30-year total asset management plan
- 30-year financial plan
- Development servicing plan
- Drought and emergency response contingency planning
- Water and sewer hydraulic modelling
- Options assessment

Investigation and design



- Water quality investigations
- Spatial asset data capture and analysis
- Environmental assessments
- Geotechnical investigation
- Concept design
- Detailed design, tender specifications and 3D modelling
- Peer reviews by subject matter experts

Construction



- Strategic procurement advice
- Project management
- Pre-tender cost estimates and contractor procurement
- Contract management
- Construction surveillance and audits
- Environmental and safety monitoring

Operation and maintenance



- Operational advice and troubleshooting
- Real-time monitoring
- Remote monitoring and operational advice
- Regulatory compliance
- Emergency response

Asset management



- Dam safety management systems
- Precision surveys and dam monitoring
- Operation and maintenance manuals
- Condition assessments, fair value, and asset management plans
- 3D modelling of existing assets
- Digital twin for different asset types
- Digital transformation for asset management



Gundagai Sewage Treatment Plant

Nambucca Valley Integrated Catchment Water Management (ICWM) strategy

Client: Nambucca Valley Council (NVC)	Location: Macksville	Services provided: Population analysis, demand forecasting, system performance assessment and option development
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A long-term strategy was developed to support sustainable water supply and sewerage planning, addressing current needs and future growth pressures. Due to the coastal location, some towns experience unique infrastructure challenges, with populations doubling during holiday periods, while the permanent population continues to grow, requiring careful balancing of short-term capacity constraints with long-term investment planning.

The strategy incorporated hydraulic modelling of water supply and sewer networks, and assessment of water and sewage treatment plant capacity and performance, to identify constraints and opportunities. Servicing options were developed and evaluated, supported by financial modelling and estimation of developer charges to inform strategic decision-making and future funding pathways.



Gundagai Sewage Treatment Plant

Client: Cootamundra-Gundagai Regional Council (CGRC)	Location: Gundagai	Services provided: Option assessment, concept and detailed design, site investigation, geotechnical assessment, site survey, environmental assessment
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The Council engaged Public Works (PW) to deliver the sewage augmentation project from inception to completion. PW led a planning and options assessment to identify a solution, followed by concept and detailed design. This work was supported by site investigations, geotechnical assessments, surveys and environmental studies to ensure a compliant and constructible outcome. PW then managed the tender process to appoint an experienced contractor and provided contract administration and site supervision throughout construction, including during the COVID-19 pandemic.

The completed augmentation will meet community sewerage needs for at least the next 30 years.



Tenterfield Dam safety upgrade

Client: Tenterfield Shire Council (TSC)	Location: Tenterfield	Services provided: Full suite of dam engineering advice
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PW has supported the Council with engineering advice for Tenterfield Creek Dam since 1996.

Following a 2012 dam wall stability assessment that identified non-compliance with ANCOLD guidelines, PW completed a detailed strengthening design in 2014.

Construction was finalised in 2018, delivering 7,100 m³ of mass concrete with an ogee crest and stepped downstream profile, outlet upgrades, erosion protection works and ancillary works, with no change to storage capacity.

Ongoing support includes surveillance inspections, dam break studies and a 2025 risk report confirming tolerable failure risk.



Cobar Water Treatment Plant

Client: Cobar Shire Council (CSC)	Location: Cobar	Services provided: Investigation, procurement, technical advice, project and contract management
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Cobar’s original Water Treatment Plant (WTP), at more than 70 years old, was in urgent need of replacement to ensure safe, secure and reliable access to potable water for the communities of Cobar and surrounding towns.

The Council engaged PW to support the procurement of a new WTP, providing technical advisory services across all stages of the project. This included options development, concept design, preparation of technical specifications, and management of the tender process and evaluation.

PW oversaw overall project management and supported the commissioning of the new plant.



Mount View Flood Detention Basin

Client: Cessnock City Council (CCC)	Location: Cessnock	Services provided: Full suite of dam engineering advice, surveillance and reporting
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Since 2019, PW has supported the Council by providing dam engineering advice for the basin. The engagement focused on strengthening dam safety governance and achieving compliance with the Dams Safety Regulation 2019 through review and update of all required dam safety documentation.

PW prepared the Dam Safety Management System document, Emergency Plan, and Operations and Maintenance Plan, supported by targeted field and laboratory geotechnical investigations. Technical assessments also included a dambreak analysis and Potential Loss of Life study, alongside a Comprehensive Safety Review.

The scope extended beyond documentation to practical preparedness and assurance activities. Detailed design for the flood security upgrade is planned as the next phase of works.



Winburndale Dam flood security upgrade

Client: Bathurst Regional Council (BRC)	Location: Bathurst	Services provided: Investigation, concept and detailed design, contract documentation, project and contract management, construction liaison and technical leadership
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Winburndale Dam is located approximately 20 km east of Bathurst, NSW, and is used primarily to supply untreated water to municipal parks, rural users, and some industrial customers.

Constructed in the 1930s with a storage capacity of 1,700 megalitres, the dam served as the city’s primary water supply until the 1950s, when Chifley Dam was built. The original wood stave pipeline between the dam and the city remains in place.

The dam has recently been upgraded to improve flood security for the Council. The main features of the upgrade include the installation of post-tensioned ground anchors, reinforced concrete parapet walls, construction of valve house buildings, modifications to inlet and outlet works, and dam toe erosion protection works.





Junee Sewage Treatment Plant augmentation

Client: Junee Shire Council (JSC)	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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With the existing plant nearing its capacity, JSC engaged PW to augment the plant. The Council required the plant to cater for growth projections and to satisfy EPA requirements for discharge into sensitive waters and the production of Stabilised Grade-B Biosolids.

A new biological treatment process was proposed based on PW’s robust, reliable and low cost Intermittently Decanted Extended Aeration (IDEA) treatment process, where the micro-organisms within the sewage treatment process’ bioreactor work to break down organic matter. Management of the treated effluent from the new IDEA plant would then continue via the existing effluent reuse system.

PW worked closely with the Council throughout the project, from inception to commissioning.



Lake Wallace Dam water supply

Client: Cooma Monaro Shire Council (CMSC)	Location: Nimmitabel	Services provided: Tendering, contract administration, construction management, site surveillance, inspections and environmental monitoring
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The Council engaged PW to manage all aspects of the construction of a new water supply dam process including tendering, contract administration, site surveillance, inspections by specialist technical personnel and environmental monitoring.

During construction, PW worked with the contractor to implement environmental controls, which included three temporary cofferdams, a clearwater bypass line, and an off-stream treatment facility in order to address water quality requirements.

Lake Wallace Dam was named in honour of the landowner who made the land available for the dam, storage area and conservation area.



Wagga Wagga town levee upgrade

Client: Wagga Wagga City Council (WWCC)	Location: Wagga Wagga	Services provided: Inspections, investigation and design, and modelling
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The Council engaged PW to provide a detailed design for the upgrade of the main flood levee system to cater for the 1% AEP design flood event with an appropriate freeboard.

PW provided construction works inspection services to ensure that design specifications and expectations were met.

In collaboration with the Office of Environment and Heritage, PW carried out the investigation, modelling and design of spillway structures to delay flood overtopping of the levee embankment for events more severe than the 1% AEP design flood event.



Lake Parramatta Dam Risk Report

Client: City of Parramatta (CoP)	Location: Lake Parramatta Recreation Reserve	Services provided: Engineering advice, Inaugural Risk Report
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PW has provided the Council with dam engineering advice for approximately 10 years. The dam is listed by ANCOLD as the oldest dam in Australia and one of the oldest masonry arch dams in the world still standing.

In 2024, PW partnered with Worley’s Stability Finite Element Analysis (FEA) specialists to complete the dam’s inaugural Risk Report. The report was independently peer reviewed and concluded the Societal and Individual Risk Ratings to be below the safety threshold, indicating that the failure risk is tolerable.

Since then, PW has been planning a sensitive geotechnical and geological drilling investigation of the dam wall and foundation. The investigation will inform a more robust revision of the Stability FEA in preparation for the dam’s upcoming Comprehensive Safety Review.



Batemans Bay Sewage Treatment Plant

Client: Eurobodalla Shire Council (ESC)	Location: Batemans Bay	Services provided: Project management, construction advice, survey, geotechnical and environmental studies
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Batemans Bay Sewage Treatment Plant was originally constructed in the 1970s and upgraded in 2012 to increase capacity to 27,300 equivalent population (EP). Despite the upgrade, the plant did not achieve the expected required treatment capacity. An assessment identified the tertiary filtration system as a key constraint, particularly during wet weather flows.

PW undertook a detailed assessment and developed targeted recommendations to improve and optimise treatment capacity. The design team supported the project from concept and detailed design through to delivery of the upgrade, providing construction advice as well as survey, geotechnical, and environmental studies to inform design decisions.

Project management services were provided across all stages, including concept design, construction tendering, and construction management.



Eurobodalla Southern Storage

Client: Eurobodalla Shire Council (ESC)	Location: Bodalla	Services provided: Planning, design, tender, construction management and site surveillance
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PW has supported the Council in the planning and delivery of one of its largest and most complex infrastructure projects for almost two decades. The project comprised major dam and pump station components and required long term coordination across planning, design, and construction phases.

PW oversaw the design development and preparation of the Environmental Impact Statement undertaken by SMEC from August 2016 to design finalisation in 2018, with planning approval granted in 2019. PW's role spanned the full project lifecycle, ensuring continuity from planning to delivery.

Through sustained involvement, PW assisted the Council in planning and delivering critical infrastructure.



Safety advisory services for flood detention basins

Flood detention basin embankments share many characteristics with water supply dam walls, and PW has drawn on this connection for decades. Since the 1970s, PW has built deep expertise in the investigation, design and construction of water supply dams and flood levees.

PW has delivered solutions ranging from small to large basins, using both concrete and earth embankments, tailored to diverse site conditions and risk profiles.

From the 1980s onward, this capability has been applied to flood detention basins across NSW, responding to growing community expectations and environmental demands, while easing pressure on ageing local stormwater systems.

Today, PW offers end-to-end engineering services for flood detention basins, combining dam safety management, risk and emergency planning, geotechnical investigation, advanced surveying, inspection and auditing, and concept to detailed design, supported by proven experience and contemporary best practice.

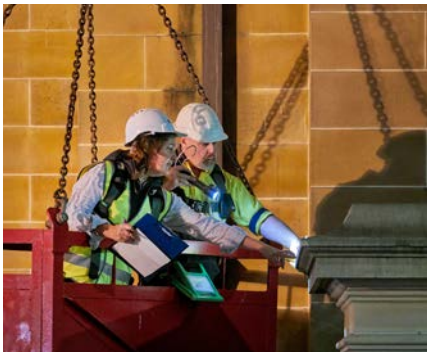


Why choose NSW Public Works?

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

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