

# Surveying







## Surveying

The NSW Public Works surveying team plays an integral role in government infrastructure projects throughout NSW.

We undertake all types of land surveys and provide expert land titling and land subdivision strategy advice to support NSW Public Works project delivery.

To ensure efficiency and accuracy across all our projects we utilise the latest surveying, 3D scanning and aerial survey technology to capture the project environment for project planning, design and implementation.

We possess a strong team of Registered Surveyors to ensure all our surveys are carried out to best practice standards and can also procure locally based surveyors to ensure value for money is achieved for our government clients.

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## Our expertise

NSW Public Works provides a comprehensive range of **surveying, property and spatial** information products and services tailored to **local and state government** asset and **infrastructure projects**.



- Control surveys and least squares data analysis
- Topographic and mapping surveys
- Spatial asset data capture and analysis
- Land and easement acquisition
- Aerial surveys using Remotely Piloted Aircraft (RPA)
- Utility service and property investigations
- Digital terrain modelling and volumes
- Laser scanning and point cloud data modelling
- CAD drafting and GIS products
- Precision surveys and dam monitoring
- Consultant engagement



# Dam monitoring

Nominated dams within NSW require regular deformation surveys under the Dams Safety Regulation 2019 to ensure the dam wall and its associated components are stable and secure. NSW Public Works has a long history of undertaking deformation surveys over critical dam assets on behalf of local and state government based agencies. A typical dam survey network will consist of a combination of concrete pillars, steel survey instrument plates and settlement pins placed strategically around the dam and surrounds to monitor and measure any potential movement or deformation.



# Laser scanning

We provide Terrestrial Laser Scanning (TLS) services to accurately capture 3D information on both natural and built environments. TLS offers the benefits of rapid and safe data capture where traditional survey techniques may not be suitable. The captured 'point cloud' containing millions of surveyed points can be used multiple times over in a CAD environment to integrate, measure and model the 3D data. Valuable outputs can be produced to inform project decisions and design such as volume calculations, building footprints, facade elevations, reality modelling, walk through and other visualisation products.



# Drone - Remote Piloted Aerial Systems

Remote Piloted Aerial Systems or commonly known as drones provide the opportunity to source aerial imagery and video for inspections and asset management. Drones allow imagery and measurements to be gained in areas which may not be accessible or safe for a person to physically access. With the use of photogrammetric techniques and incorporation of a LIDAR scanner, 3D models of the real world can be created. Our surveyors are licensed remote pilots and will ensure that all flights are carried out safely and in accordance with current CASA regulations. With our expertise, we can provide final products such as orthophotos, oblique images, videos, textured 3D meshes, and point clouds.



# Cadastral surveys

Land titling is a critical part of all infrastructure projects. Matters typically encountered are the acquisition of land and easements for infrastructure and services, creation of rights of access and carriageways, leasing of property, subdivision, consolidations and boundary adjustments, road opening and closing, dealing with old system titled and limit titled land, and many more.

Our Registered Surveyors with their wide expertise and experience can assist with all these matters, including carrying out of boundary surveys and preparation of plans, preparation of easement instruments, gaining of approvals from various agencies, and lodging of documentation with NSW Land Registry Services for registration and issuing of titles via their electronic portal. From big to small, our team will ensure to provide cost effective and efficient solutions to your land titling needs.



# Port Botany expansion

NSW Ports required the development and establishment of a major survey control network utilising least squares analysis, static GNSS, and precision total station observations to collect high precision survey data on more than 1000 monitoring marks at the new port terminal.

High-end survey data analysis and quality reporting supports further analysis by structural engineers. Monitoring continues at the site.



# Wyangala sewerage

NSW Public Works completed survey and design of a gravity sewer scheme for Wyangala Village. Our Registered Surveyors completed land and easement acquisition surveys and plans.

Our Infrastructure Property team are completing the acquisition of land and easements for power and sewerage infrastructure via negotiation and the compulsory process pursuant to the Land Acquisition (Just Terms Compensation) Act 1991.





# Why choose NSW Public Works?



**Accredited  
for planning  
and delivery of  
capital works**

NSW Public Works 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 NSW Public Works under the provision of NSW Government Procurement Board Direction PBD 2020-04 and Section 55 of the Local Government Act 1993, providing efficiencies and cost savings.



**Strong focus  
on quality,  
environmental  
and safety  
management**

NSW Public Works operates under triple certification for quality, occupational 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. NSW Public Works’ 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. NSW Public Works’ 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 NEW ENGLAND REGION

**Newcastle**  
117 Bull Street  
Newcastle West NSW 2302

**Tamworth**  
155-157 Marius Street  
Tamworth NSW 2340

**Inverell**  
240 Byron St  
Inverell NSW 2360

**Armidale**  
85 Faulkner St  
Armidale NSW 2350

## NORTH COAST REGION

**Lismore**  
120 Dally 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

## SYDNEY METRO REGION

**Parramatta**  
4 Parramatta Square  
12 Darcy Street  
Parramatta NSW 2150

**The Rocks**  
66 Harrington Street  
Sydney NSW 2000

## SOUTH COAST REGION

**Wollongong**  
Level 3, Block E  
84 Crown Street  
Wollongong NSW 2500

**Goulburn**  
Suite 5, 167 Auburn Street  
Goulburn NSW 2580

**Moruya**  
66 Campbell Street  
Moruya NSW 2537

**Queanbeyan**  
Ground Floor East  
11 Farrer Place  
Queanbeyan 2620

**Nowra**  
5 O’Keefe Avenue  
Nowra NSW 254

## RIVERINA/WESTERN REGION

**Bathurst**  
Level 1, 346 Panorama Avenue  
Bathurst NSW 2795

**Dubbo**  
34 White Street  
Dubbo NSW 2830

**Broken Hill**  
Level 1, 32 Sulphide Street  
Broken Hill NSW 2880

**Griffith**  
104 - 110 Banna Avenue  
Griffith NSW 2680

**Wagga Wagga**  
2-6 Coleman Street  
Wagga Wagga NSW 2650

**Dareton**  
1998 Silver City Highway  
Dareton NSW 2717



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