

# Coastal







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# Coastal

NSW Public Works is uniquely equipped to provide a broad range of engineering services across NSW, assisting clients to procure, manage, construct and maintain their maritime facilities.

We have a long history of assisting our clients with specialist procurement and project management services for projects outside of standard operations.

Services include breakwater constructions, maintenance dredging, condition assessments, installation of cathodic protection systems to concrete structures, wharf and jetty construction and maintenance, mooring pile repairs, heritage seawall restorations and boat launching ramp facilities.

NSW Public Works has a state-wide presence and a team of experienced infrastructure project managers that can be drawn upon as required to address short and long term resourcing requirements.

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# Our Expertise

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NSW Public Works can provide clients with **tailored solutions** for the delivery of their **coastal projects**.

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- Oceanographic & estuarine investigations
- Physical modelling
- Concept development
- Diving & condition assessment
- Bathymetric surveys
- Design management
- Review of environmental factors
- Procurement
- Construction management
- Project planning & management
- Site surveillance

# Coffs Harbour Eastern Breakwater

The Coffs Harbour Eastern Breakwater was identified as requiring remedial works related to structural integrity and public usage/safety.

Following the review of the initial concept sketches and physical modelling, it was concluded that a steeper batter slope on the ocean side and no hanbars on the harbour side batter would achieve an improved degree of protection.

NSW Public Works were initially engaged to run two procurement workshops with DPI representatives. After award of the REF and detailed design engagements, DPI also engaged us to manage these engagements and the construction phase and to manage the early works casting phase, site surveillance of the construction works, and stakeholder consultation for the project.



# Wollongong Harbour Seawall Restoration

Hand built by convicts in the 1840s using locally occurring stone, three seawalls within Wollongong Harbour required restoration to extend their structural life and preserve their heritage significance.

Works carried out included repair and replacement of failed blocks, rectification of damage caused by drainage and erosion, repointing between stone blocks, removing previous repair attempts of degraded concrete and replacing capping stones.

This project has successfully conserved important heritage structures within the Wollongong Harbour foreshore area. The seawalls now continue to provide the protection for the Harbour against the forces of the sea and provide a highly visual reminder of Wollongong's early pioneer development.





# Coffs Harbour Northern Breakwater Repairs

The project was managed over two stages requiring upgrading and repairs to the existing breakwater, including placement of 30,000 tonnes of rock to widen and raise the wall and placement of over 1,200 concrete hanbars. The contract also included the electrical systems upgrade and the installation of a disabled access ramp.

A significant design change was made to accommodate a critically endangered type of marine algae and to promote additional habitat. This required working closely with Fisheries, Solitary Islands Marine Park Authority, and Southern Cross University to ensure the habitat was enriched.

NSW Public Works role included tender development, tendering and construction management of the project.



# Iluka Boat Harbour and Approach Channel

As part of the upgrade of the sewerage schemes in the coastal townships of Yamba and Iluka, two ebb tide release systems were required to release excess recycled water to be beneficially reused.

A team of industry experts and consultants were engaged to undertake detailed concept designs including a range of field investigations and hydrodynamic modelling of the Clarence River.

NSW Public Works partnered with council over several years and performed project management of the concept design, co-ordination of the consultants, review of environmental factors, community consultation and procurement of the design and construction contract.



# Ulladulla Marine Rescue

NSW Public Works were engaged to provide project management services to clean-up, demolish and remove the fire-damaged Marine Rescue Unit and design and construct a new replacement building.

We were asked to assist because of our experience in managing technically difficult projects and our considerable expertise in and knowledge of procurement and project and contract management in accordance with NSW government requirements.

The \$1.28 million project was completed on budget and met the tight timeframe, enabling full rescue services to be reinstated. The new facility has been designed to provide a modern building that caters for the current work practices and operations of the Marine Rescue service and has potential for future expansion.

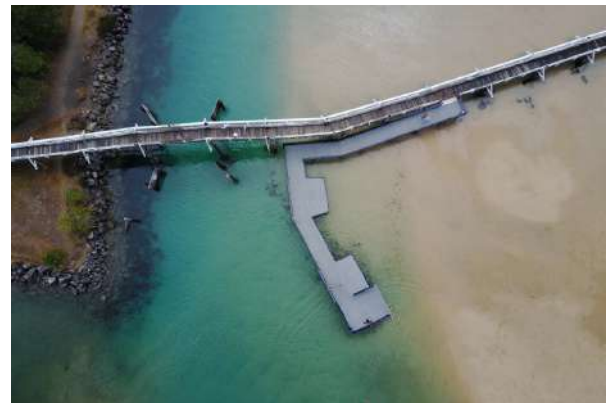


# South West Rocks Fishing

A fishing platform was designed and constructed to allow for disabled access to the adjacent sand bank and for safe berthing of emergency response vessels.

The major risk on the project was working in and above the waterway from both a safety and environmental perspective. NSW Public Works liaised with NSW Fisheries to understand the environmental controls required and ensured that these were implemented.

NSW Public Works were engaged to complete contract and construction management services, as well as safety, environment and quality reviews of the contract works and documentation to ensure the contractual obligations were being met.





# Lake Illawarra

The condition of the Lake Illawarra entrance controls the tidal range within the lake and as a result, the degree of tidal flushing.

Conditions at the lake's entrance can vary from substantially open after floods to completely closed. As a result of previous drought conditions the entrance was closed off to tidal flows leading to poor estuarine health. The Lake Illawarra Authority engaged NSW Public Works as the construction manager for both stages of the project. We were responsible for tender management, contract administration and construction management for two separate but concurrent contracts.

The extension of the southern training wall, construction of the northern breakwater and major channel dredging has resulted in increased tidal flushing and a more environmentally sustainable estuarine system.



# Evans Head Dredging

NSW Public Works was engaged by NSW Trade & Investment Crown Lands to manage the procurement and contract delivery phases of dredging the Evans Head Channel approaches to the boat harbour and boat ramp.

The project's scope of works was to undertake maintenance dredging of the navigation channel at several locations in the lower Evans River and at one site within the Evans Head Boat Harbour to maintain safe boat passage at these locations.

Dredged sand of suitable quality from the Evans River navigation channel was pumped to Evans Heads Main Beach, dewatered and was utilised in beach nourishment works. Dredged material from the boat harbour was dewatered on site using Geo-Tubes and disposed at a licensed water facility.



# The Entrance Rock Groyne

Crown Lands engaged NSW Public Works to manage the construction of a 100-metre-long rock groyne at The Entrance Beach. The project involved the relocation of the Surf Life Saving Tower, excavation of the sand down to bedrock, placement of more than 5000 tonnes of rock revetment, reconstruction of the sand dune and restoration of the beach.

The project was carried out in an environmentally sensitive area. NSW Public Works managed the high level technical, environmental and safety risks using a comprehensive monitoring program and specific equipment and methodologies.

The rock groyne is expected to increase the length of time that sand is retained on the beach by up to five years, limiting the need to dredge the channel and ensuring the community continues to enjoy the popular swimming spot.



# Bermagui Harbour Jetty Replacement

Upon assessment of the existing concrete jetty, it was identified that the mooring jetty in Bermagui Harbour required a significant upgrade.

The scope for this project was the design and construction of a new floating pontoon jetty to replace the existing concrete structure. The jetty included services (water and power) with a fuel bowser to enable refuelling of vessels, fire services and lighting.

NSW Public Works managed the design and construction phase of the works. The completed project met all requirements of the Client and the local community. The project was delivered under budget with the final contract sum less than the awarded tender sum.





# Kiama Wharf Extension

Kiama Municipal Council engaged NSW Public Works to assist in the development of the Kiama Harbour boating facilities. These incorporated the design of a new finger jetty and wharf extension and the concept design for the eastern and western pier heads.

The new jetty and wharf boating facilities project was carried out in two stages. The finger jetty works were constructed, followed by the wharf extension.

The new wharf adjoins the existing wharf and provides deeper water berthing access for larger boats, including emergency vessels such as police and marine rescue vessels. It also improves temporary tie-up facilities for trailer boats and increases the wharf's capacity, which was limited during peak times.



# Eden Mooring Jetty

The mooring jetty at Two Fold Bay in Eden had suffered significant concrete deterioration and reinforcement corrosion from exposure to sea water (chloride action) and needed significant repairs and maintenance.

The works repaired corrosion induced deterioration and installed an impressed current cathodic protection system. This system is useful where there are high chloride ions. It applies an electrical charge to provide free electrons which prevent the steel from corroding.

The Department of Primary Industries engaged NSW Public Works to carry out the documentation, tendering and construction phases of the concrete repairs, installation of cathodic protection system, and protective coatings for sheet piles for the mooring jetty and breakwater wharf.



# 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

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

**The Rocks**  
66 Harington 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

## 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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