

NSW Public Works and the Soil Conservation Service

Our capability in maritime and coastal management





Combined, the legacies and expertise of NSW Public Works and the Soil Conservation Service will deliver an end-to-end service solution for your maritime and coastal projects.

Who are we?

Both NSW Public Works and the Soil Conservation Service are agencies within the Department of Regional NSW and work to improve the environment and infrastructure of NSW.

We are proud of the rich legacies and track records of both our organisations. Together, we have a combined 250 years' experience in supporting the State of NSW, our communities and the environment. This history and service are something to be celebrated and built upon.

Over this time our people have delivered best practice infrastructure solutions at all scales.

NSW Public Works have a long history of delivering large-scale, complex projects for the NSW public. The projects are often outside standard operations, requiring specialist procurement and project management.

Likewise, the Soil Conservation Service has developed a reputation as a trusted provider of specialist end-to-end services in environmental consulting, conservation earthworks, program management and project delivery.

We have long-term working relationships with highly skilled sub-contractors and together we have an unrivalled capacity to deliver.

Through our partnership we can meet your needs through the life of your maritime or coastal project — from concept, design, approvals and construction to handover. This specialist skill set will see the project team take the lead to deliver your project.

Our strength in environmental management and rehabilitation

The eastern seaboard is home to around nine million people and billions of dollars of infrastructure.

East coast low storm events cause significant damage to the natural assets of the community, as well as public and private infrastructure.

Erosion mitigation solutions have evolved over this time to adapt to both government and community concerns.

NSW Public Works and the Soil Conservation Service have both been at the forefront of this progression and have implemented innovative solutions evolved from the traditional harder structures.

Coupled with this dynamic, is the coastal infrastructure that needs ongoing maintenance, upgrades and replacement.

Our specialist staff work closely with public land managers to manage and protect these assets.





About NSW Public Works

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

The original Department of Lands and NSW Public Works was set up in 1856, with NSW Public Works forming its own department in 1859.

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

The State's roads, railways, tramways, telegraphs, electricity supply, lighthouses, metropolitan water and sewerage, fortifications, local government infrastructure, port and dockyards were all at some time in the care of NSW Public Works.

With a solid foundation of over 160 years of effective delivery and management of critical infrastructure projects for the State of NSW, NSW Public Works leverages this rich heritage as the advisor and enabler of the best possible infrastructure solutions for the future.

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



About the Soil Conservation Service



The Soil Conservation Service was established in 1938 to meet the challenges of soil erosion. Over this time we have evolved to become a leader in all aspects of soil and environmental rehabilitation, including coastal erosion management and infrastructure protection.

We have a proud history of building and rehabilitating Australian environments, and are committed to connecting with local communities, contractors and suppliers.

We offer a suite of construction, infrastructure and environmental services to deliver high quality environmental outcomes. Our projects are founded on a detailed understanding of what is practical, cost effective and environmentally friendly.

Our reputation for seamless project management and expert knowledge is backed by decades of experience.

Through planning, practical application and experience, we have built a long-term working knowledge of the complexities of coastal degradation issues facing local communities and land managers.

Our specialist staff have a strong track record in delivering successful projects across the eastern seaboard. These projects range from emergency works for temporary asset protection, through to long-term rehabilitation projects and works to defend the coastline, protect valuable infrastructure and create places of community recreation.

Our joint expertise

NSW Public Works and the Soil Conservation Service can provide you with tailored solutions to deliver your maritime and coastal projects and where necessary coordinate any specialist consultants on your behalf.



Our planning and on-site experience, operational frameworks and staff expertise mean that we provide an end-to-end solution to meet your individual project's needs.

We can support you with tailored services to meet your needs, including:

- project planning and management
- oceanographic and estuarine investigations
- beachhead erosion rehabilitation and mitigation
- vegetation restoration
- physical modelling
- concept development
- diving and condition assessment
- bathymetric surveys
- design management
- review of environmental factors
- procurement
- construction management
- site surveillance
- dune formation and shaping works
- repair of blow outs
- working with land managers to sustain public use
- breakwater construction
- maintenance dredging
- condition assessments
- installation of cathodic protection systems to concrete structures
- wharf and jetty construction and maintenance
- mooring pile repairs
- heritage seawall restorations
- boat launching ramp facilities.



Strong focus on safety, environmental and quality management

Both NSW Public Works and the Soil Conservation Service operate under triple certification for occupational health and safety, environmental and quality management (SEQ) systems.

Our quality delivery is underpinned by a fully-certified Integrated Management System which is accredited against the following standards:

- ISO 45001:2018 Work Health and Safety Management System
- ISO 14001:2015 Environmental Management System
- ISO 9001:2015 Quality Management System.

These accreditations give you surety that we operate under a set of parameters that align with internationally recognised quality assurance standards and policies.

These systems and processes provide the foundation for delivering quality projects and a continuous improvement culture that embraces SEQ leadership at all levels and activities.

We have a clear set of policies and procedures that direct all aspects of our work, including:

- working with clients
- establishing and managing projects
- addressing environmental and safety issues
- assessing, selecting and managing contractors
- document and design control.

Engineering success with our trusted partners

We have strong, long-term relationships with suppliers throughout the project life cycle, including engineers.

The NSW Public Works memorandum of understanding with Manly Hydraulics Laboratory means we can start your project on strong foundations through their expertise in coastal and water engineering and water flow assurance. Likewise, we can work directly with our other trusted suppliers and the internal NSW Public Works engineers to deliver the right solutions for your project.

State and Local Government project procurement

Our specialist staff work with government to deliver concept-to-construction services.

There are NSW and Local Government procurement guidelines which can reduce your project's procurement costs and timeframes. These guidelines mean that Local Government and NSW Government agencies can directly engage our services under the provision of NSW Government Procurement Board Direction PBD 2021-04 and Section 55 of the *Local Government Act 1993*. You may still want to engage the market to confirm our position as a competitive supplier, however a direct engagement can provide a stronger and more integrated partnership, and offer you time and resource savings.



Projects in profile

We have a strong track record in delivering effective maritime and coastal project management and infrastructure protection across the eastern seaboard.

The following pages showcase a number of our recent projects.

Collaroy seawall project protects public assets

Soil Conservation Service specialist staff were engaged by the Northern Beaches Council to construct a 250m rock revetment seawall in front of the Collaroy Beach carpark.

The Collaroy area suffered extensive erosion damage in the June 2016 east coast low swells and is threatened by further erosion events.

This infrastructure will protect this public asset against erosion caused by storm events. The seawall was constructed with geotextile fabric and around 14,000 tonnes of sandstone and resulted in a stable site that can be used and enjoyed by the public.



Coffs Harbour northern breakwater repairs

The NSW Public Works team managed this project 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 an 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.



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.



Protecting infrastructure with Bluemont rockbags

This project with client Northern Beaches Council, saw our specialist staff implement Bluemont rock bags to protect coastal infrastructure from storm events.

A Soil Conservation Service unique initiative — using rock bags to protect an existing sandstone wall. The wall was damaged over a 30m section and under significant risk of failure in a large storm event.

Our team designed and implemented the rock bag wall to stabilise the area and dissipate wave energy, protecting the site from future storm events.



Lake Macquarie foreshore rehabilitation

Following the collapse of a residential and commercial building into the channel of the largest saltwater lake in Australia, quick action was needed.

NSW Public Works structural engineers were soon on site to assess the damage, implement urgent make-safe and environmental protection works, and manage the high-risk demolition and clean-up of the destroyed building and marina.

Soil Conservation Service specialist staff and contractors then worked with client, Crown Lands, to transform the site into a public recreational area through a constructed mitigation solution.

Geo-container revetment and groynes have stabilised the site, addressing environmental and public health and safety concerns. Sediment from the degraded bank is no longer entering the channel and bank stability is no longer a danger.

Highlighting the success of the project, the works were also awarded the IECA Award for 'Innovation, Contribution or Education to the Erosion and Sediment Control Industry'.



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 the Local Council over several years and performed project management of the concept design, coordination of the consultants, review of environmental factors, community consultation and procurement of the design and construction contract.



Ulladulla Marine Rescue removal and replacement

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.



Long-term dune rehabilitation in Kurnell

In 1974, the Soil Conservation Service commenced Sydney's largest dune stabilisation project and succeeded in stopping the severe erosion of the peninsula, which was moving at up to 15 metres per year inland.

Since then, our specialist team has been rehabilitating, maintaining and protecting sand dunes on the land between Cronulla and the Kurnell Peninsula. We continue to maintain the dunes against ongoing erosion pressure, demonstrating that early intervention and revegetating are powerful tools in coastal management.

We act as the site manager on behalf of Sutherland Shire Council and Crown Lands.



Putney groyne construction and beach nourishment



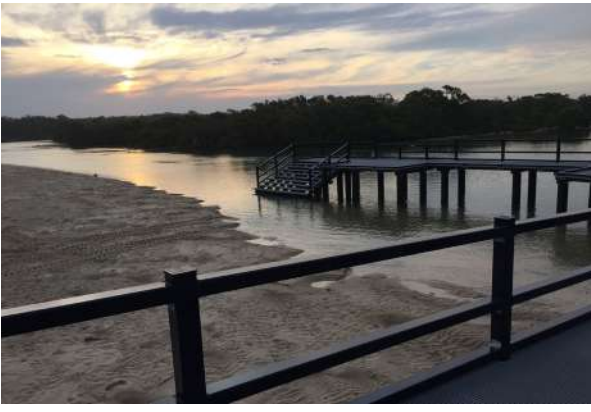
The shoreline adjacent to Kissing Point Park experienced ongoing erosion, resulting in the loss of beach sand, exposure of underlying bedrock and progressive reduction in mangrove extent over time.

This significantly reduced the amenity of the foreshore for launching and retrieving sailing vessels.

To improve this amenity, consultants developed a solution on behalf of Transport for NSW and the City of Ryde. The Soil Conservation Service was engaged in 2019 to successfully construct the groyne and beach nourishment to rehabilitate the site.

The project was completed on time and to design specifications.

Making South West Rocks fishing more inclusive and safer



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 of 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 tidal flushing



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 being 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 have resulted in increased tidal flushing and a more environmentally sustainable estuarine system.

Innovation in award-winning coastal project



When the 2019 east coast low exposed a former Stockton tip site, Hunter Water initiated an emergency response to protect the community and environment.

Hunter Water took the lead to decontaminate the area, while Soil Conservation Service staff and contractors set up a sheet pile-protected site to construct 20m long sand-filled geo containers. The site is safe now for people to enjoy the beach.

This project was awarded the 2019 'Excellence in Innovation, Contribution and Education' for the ICEA awards.

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