AUSTRALIAN NAVAL INFRASTRUCTURE

FAQS

NUCLEAR-POWERED SUBMARINE CONSTRUCTION YARD

What is the Nuclear-Powered Submarine Construction Yard?

In September 2021, Australia, the United Kingdom, and the United States established the AUKUS trilateral security partnership. The partnership includes a commitment to support Australia in acquiring and ultimately building conventionally-armed nuclear-powered submarines, known as the SSN-AUKUS.

The Osborne Naval Shipyard in Adelaide is Australia's most advanced and modern shipbuilding hub and contains an area that has been identified as the preferred site for the Nuclear-Powered Submarine Construction Yard. This is where the nuclear-powered submarines will be built and commissioned.

Australian Naval Infrastructure (ANI) is the owner, developer and manager of the Osborne Naval Shipyard and the future Nuclear-Powered Submarine Construction Yard.

The site is divided into three areas, consisting of:

- Fabrication (Area 1) which includes buildings and workshops to manufacture submarine components.
- Outfitting (Area 2) which includes buildings used to fit out the submarine sections.
- Submarine consolidation, launching, testing and commissioning (Area 3) which includes a launch facility and wharf.

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Who are the Nuclear-Powered Submarine Construction Yard project partners?

Australian Submarine Agency

The Australian Submarine Agency (ASA) was established on 1 July 2023 to safely and securely acquire, construct, deliver, technically govern, sustain and dispose of Australia's conventionally-armed nuclear-powered submarine capability for Australia, via the AUKUS partnership.

Australian Naval Infrastructure Pty Ltd (ANI)

ANI was created in 2017 as a Commonwealth Company and Government Business Enterprise. ANI has been tasked with developing and managing naval shipbuilding infrastructure and related facilities and is the proponent for the site licence application for the relevant regulated facilities as required under the Australian Naval Nuclear Power Safety Regulations.

ANI is the owner and developer of the Osborne Naval Shipyard and is the Commonwealth's partner to deliver the Nuclear-Powered Submarine Construction Yard, working in collaboration with the ASA.

The Shipbuilder

In March 2024, the Australian Government announced that shipbuilders ASC and BAE Systems will form a joint venture to lead the build of Australia's SSN-AUKUS submarines. This joint venture will establish an enduring partnership between ASC and BAE Systems to bring together and leverage their unique and complementary capabilities, skills, expertise and resources to deliver Australia's SSN-AUKUS submarines.

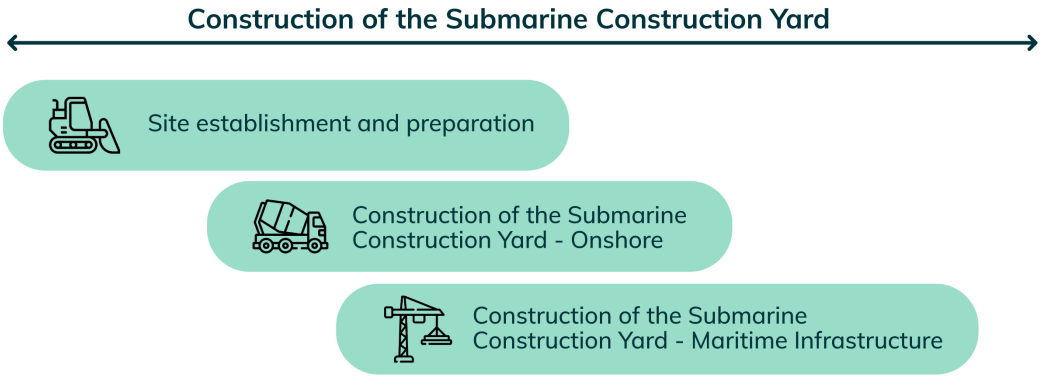
What is the timeline for the project?

Construction of the Nuclear-Powered Submarine Construction Yard is expected to take more than a decade.

Works will be subject to multiple legislative and regulatory requirements and will be completed in three phases:

- Site establishment and preparation - This involves site establishment works, bulk earthworks and services to make the site ready for construction and includes excavation, ground improvements and drainage.
- Onshore construction - This involves construction of onshore infrastructure (such as services, roads and carparks, lighting, security, submarine launch facility, wet basin and wharf) and buildings (such as warehouses, workshops, offices, commercial canteen, health centre and other amenities).
- Marine/Maritime construction - This involves construction of maritime infrastructure within the Port River and includes dredging and hardening the edges along the waterfront of Area 3.

Indicative construction phases



Once built, the Nuclear-Powered Submarine Construction Yard will be in operation for more than 30 years.

The first Australian built nuclear-powered submarine is expected to be delivered by the early 2040s.

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What are the economic and employment benefits of the project?

The Nuclear-Powered Submarine Construction Yard will deliver a significant expansion to the capability and capacity of shipbuilding infrastructure on the Lefevre Peninsula, and more broadly bring significant social, environmental and economic benefits to South Australia, including:

- Significant local employment opportunities with up to 4,000 Australian workers employed to design and build the infrastructure for the Nuclear-Powered Submarine Construction Yard in Osborne and a further 4,000-5,500 direct jobs created to build nuclear-powered submarines in South Australia.
- Local community and business benefits such as increased property values, upgraded roads, public transport, public spaces, schools, health facilities and retail services.
- Environmental measures that contribute to biodiversity, habitat and species protection.

How will public access be managed?

Changes to publicly accessible areas, including Mutton Cove, Falie Reserve and the Snapper Point carpark, should be anticipated with the development of the Nuclear-Powered Submarine Construction Yard.

Opportunities for public access to these areas once the site is fully operational will be confirmed as planning continues. Public access will be subject to site security and safety considerations.

What about the environment?

The Nuclear-Powered Submarine Construction Yard project was declared an 'impact assessed' development by the South Australian Minister for Planning, the highest level of assessment for major projects. The impact assessed development pathway required the preparation of an Environmental Impact Statement (EIS).

The EIS identified and considered potential impacts for building and operating the development, including its associated launch and berthing facilities, as well as any associated changes in land use both on land and in coastal waters.

This included considering impacts on plants, animals, heritage, community and the economy and how these impacts can be mitigated or minimised.

In parallel, the Australian Submarine Agency (ASA) has been conducting a separate Strategic Assessment process under the Environment Protection and Biodiversity Conservation Act 1999.

Community engagement on the EIS and Strategic Assessment was undertaken collaboratively in February 2025.

In addition to targeted briefing sessions with local and state government, four community drop-in sessions were held across three locations; Adelaide CBD, Port Adelaide and Osborne.

The EIS received over 180 submissions. A Response Document has been prepared for the State Planning Commission to help inform their recommendation to the Minister for Planning, who is ultimately responsible for the final determination.

What about the Adelaide Dolphin Sanctuary?

The Port River and surrounding marine area includes the Adelaide Dolphin Sanctuary which is protected under the Adelaide Dolphin Sanctuary Act 2005 (SA) and managed by the Adelaide Dolphin Sanctuary Draft Management Plan 2024. The objectives of the Act and Sanctuary are to protect the dolphins in the Port River and Barker Inlet area and to protect the habitat on which they rely.

Specific consideration has been given to the Adelaide Dolphin Sanctuary and protection of the Indo-Pacific bottlenose dolphins (Turisops aduncus).

The area impacted by the Nuclear-Powered Submarine Construction Yard development is very small in the context of the entire Adelaide Dolphin Sanctuary. This area is approximately 11,800ha in total, representing just 0.1% of the total area of the Sanctuary. This part of the Sanctuary is also a highly modified habitat in that it is used as South Australia's main shipping port and is exposed to human impacts, marine traffic, noise, light spill and stormwater pollution on a daily basis.

Impacts to the local population of Indo-Pacific bottlenose dolphins and other dolphins from construction activities has been assessed as part of the EIS process. Impacts will be managed through a range of mitigation measures including a Marine and Coastal Environmental Management Plan, a Storm Water Management Plan, a Biosecurity Management Plan and a Dredge Management Plan.

How will nuclear safety be managed?

For over 60 years the United Kingdom and United States have operated more than 500 naval nuclear reactors that have collectively travelled more than 240 million kilometres without a single radiological incident. UK and US SSNs (nuclear-powered submarines) have never had an adverse effect on human health or the environment.

A sophisticated security and safety architecture will surround Australia's nuclear-powered submarine program, building on Australia's strong 70-year track record of safely operating nuclear facilities and conducting nuclear science activities. Australia will be supported by the UK and US, whose experience and advice will guide Australia in continuing to strengthen our capability.

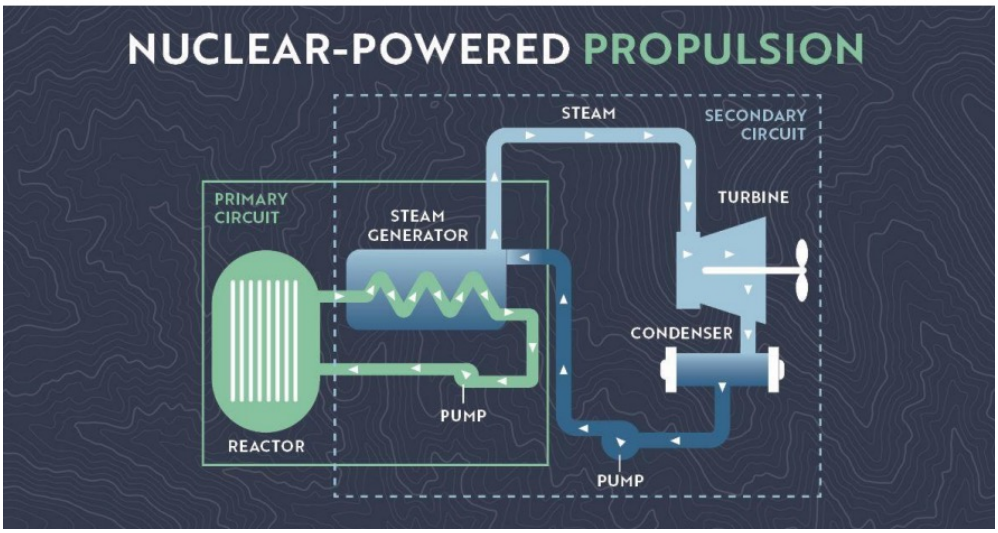
Nuclear regulation is a key component that provides confidence to the public, government and international communities that the highest levels of nuclear safety are being achieved and maintained. Regulatory approval is required for the preparation, construction, possession and control, operation, decommissioning and disposal of radiation facilities and activities.

As the owner, developer, and manager of infrastructure at the Osborne Naval Shipyard, ANI will apply to the Australian Naval Nuclear Power Safety Regulator (ANNPSR) for a site preparation licence.

What is Naval Nuclear Propulsion?

The construction of a nuclear-powered submarine includes the installation of the power unit, the propulsion system and its components. The power unit holds the nuclear fuel inside the reactor, the propulsion system is the entirety of the structures, systems and components that are used to generate steam and drive a turbine. Propulsion is generated across two thermally-linked but physically separated circuits:

- The Primary Circuit is where thermal energy is generated by the reactor which creates heat within a sealed system, this heat is then transferred across the steam generator into the Secondary Circuit.
- The Secondary Circuit receives heat from the Primary Circuit producing steam. This steam then turns the submarine turbine which is then condensed back into water to start the cycle again.



How will waste be managed at the Nuclear-Powered Submarine Construction Yard?

General waste from ancillary activities including office, amenities, packaging, scrap metal, warehousing, and organic matter will be sorted and disposed of appropriately according to South Australian waste management and disposal procedures under the Environment Protection Act 1993 (SA).

Hazardous wastes may be generated by manufacturing and fabrication activities within the Nuclear-Powered Submarine Construction Yard and would likely include materials such as paint, cleaners, solvents, degreasers and batteries. Hazardous wastes would be disposed of in accordance with the requirements of the Environment Protection Act 1993 (SA).

The testing and commissioning of the SSN-AUKUS submarines will generate low-level radioactive waste. This low-level radioactive waste will consist of disposable gloves, wipes, reactor coolant and used personal protective equipment, with minor levels of contamination from contact with radioactive materials.

The current expectation is that low level radioactive waste generated at the site will remain temporarily on site until a future permanent disposal site has been established. Temporary onsite storage is incorporated into the design to house low-level solid and solid mixed (hazardous) waste. It will then be transported to a permanent radioactive waste management facility, which is yet to be established.

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