



**Introduction.** The 2024 WA Jobs, Education and Training (WAJET) Industry Survey required a 600 word profile on each occupation. Below is 233916 Naval Architect. The text below is open source and free for use when LDSC is correctly acknowledged. The text is open to correction. The Logistics and Defence Council (LDSC) welcomes input on 08 9388 8781 or <https://www.ldsc.asn.au/contact.html>

**Industry Advisory Group.** LDSC invites stakeholders to join our Maritime Industry Advisory Group 08 9388 8781 or <https://www.ldsc.asn.au/contact.html>

**Based on your Maritime industry consultations and the feedback provided please provide a 600 word summary for Occupation ANZSCO 233916 Naval Architect**

**ANZSCO definition.** The ANZSCO definition of 233916 Naval Architect (Aus) / Marine Designer (NZ) states: designs and oversees the construction and repair of marine craft and floating structures. Registration or licensing may be required. The ANZSCO Skill Level is 1.

**Engineering specialisation.** Naval Architect / Marine Designer is an engineering profession. 2021 census data shows 399 in Australia with 115 in WA. Shipbuilding Designer was added as a specialisation to ANZSCO 233916 Naval Architect on 23 Nov 21 on evidence provided by the National Shipbuilding College. Shipbuilding Designer reflects workforce development in the Defence Industries to support the National Shipbuilding Plan 2017.

**Role.** The Naval Architect plans across systems to coordinate specialist teams in an operational sequence to an Integrated Logistics Plan based on commercial targets and possibly to Defence specifications to design, construct and repair of marine craft and floating structures. Floating structures includes offshore oil & gas rigs that may be towed and permanently moored.

**Edith Cowan University and University of Tasmania.** The Bachelor of Maritime Engineering (Specialisation) Honours (course W91) is offered by in Edith Cowan University, Joondalup, WA in collaboration with the Australian Maritime College at the University of Tasmania in Launceston, Tasmania. Students spend Years 3 and 4 of this course at the University of Tasmania (Australian Maritime College). The ECU course has a small intake. Graduation rates are low with transfer to the WA mining and resources stream common.



**Acute WA demand.** 233916 Naval Architect is a specialised engineering occupation. The WA demand is acute for expertise in shipbuilding for the Defence Industries and Maritime Defence Supply Chain related to the National Shipbuilding Plan 2020. Defence Industries in WA have no deep historical bed of skills from a history of end-to-end warship or submarine construction. WA does have warship and submarine maintenance experience and successful marine work with offshore oil & gas structures. WA has successful ship and submarine docking for scheduled maintenance as part of Integrated Logistics contracts synchronised to Defence and commercial necessities. WA and Australia do not have a deep pool of Engineers and Technicians trained in these systems therefore demand is acute. Demand factors are:

- The Naval Shipbuilding Plan 2017
- SSN-AUKUS
- Demand for Engineers and Technicians

**The Naval Shipbuilding Plan 2017.** The Commonwealth Department of Defence White Paper (2016) reaffirmed the Government commitment to a strong, internationally competitive and sustainable Australian naval shipbuilding industry. The Naval Shipbuilding Plan 2017 identified naval architects as key enablers in the Australian naval shipbuilding workforce. Employment of Naval Architects occurs in the Department of Defence and RAN. Examples of WA Defence Industry contribution to the National Shipbuilding Plan are the build of Offshore Patrol Vessels, Guardian Class Patrol Boats plus Collins-class Submarine sustainment and upgrades (mid-cycle docking).

**SSN-AUKUS.** The 'Optimal Pathway for Australia to acquire a conventionally armed, nuclear-powered submarine (SSN-AUKUS)' will require specialist knowledge in submarines and nuclear power that must be imported initially. The experts in construction, operation and maintenance may use the occupation code 233916 Naval Architect / Marine Designer where not elsewhere covered in ANZSCO.

**Demand for Engineers and Technicians.** The Naval Shipbuilding Plan, METRONET, the construction of remote railways for Heavy Haul Rail in the Pilbara, and offshore oil & gas exports are creating acute demand for a small graduation of Engineers, supporting technicians and associated STEM and systems expertise. The applicant pool is small. WA needs a coordinated training plan to generate the Engineers and related Technicians required by Rail, shipbuilding in the Defence Industries, Maritime, Civil construction and the Heavy Haul Rail section of the WA resources sector.

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