

● — AUSTRALIAN
— ● NAVAL
● ● INFRASTRUCTURE

THE MORSE

Osborne Naval Shipyard
Project Newsletter

OCTOBER 2018

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Australian Naval Infrastructure

Australian Naval Infrastructure (ANI) was established in March 2017 to facilitate the development and construction of infrastructure at the Osborne Naval Shipyard as part of the Federal Government's Naval Shipbuilding Plan.

This Plan is aimed at expanding Australia's naval capabilities in continuous shipbuilding programs, creating economic growth through maximised local industry involvement, and securing jobs for our future generations.

To enable this, the Government is investing:

- \$90 billion in new naval ships and submarines
- More than \$1 billion in modern shipyard infrastructure, and
- Up to \$62 million in workforce growth and education initiatives to enable the delivery of these programs.

ANI's primary objective is to support the Government's Program through its role as owner, developer and manager of shipyard infrastructure and related facilities. To date, ANI has focussed on fulfilling this objective through the acquisition of land and the construction of the Osborne South Development Project, which involves expansion of the existing Osborne South shipyard and the development of modern facilities.



The naval industry has a long and rich heritage and in respect to this, our corporate identity uses Morse code, a communication method still used today on seafaring vessels as a means of silent communication, or as a fall back when other methods are unavailable or disabled.

The Morse graphic literally translates as ANI.

Piling Works

Piling for the new OSDP buildings commenced in February 2018.

The complex process has been undertaken using a mix of Franki and precast piling methods. Known as displacement piling, these methods ensure underground soils are not brought to the surface, eliminating the need to manage additional dust and spoil.

These methods also enable the works to be completed in a shorter time, reducing the length of time community and workers are exposed to noise and vibrations generated by such works.

Piling for the new shipbuilding facilities is almost complete apart from two small foundation areas east of the former Mersey Road North. These remaining piling works are targeted to occur before Christmas, and will only be undertaken within normal construction hours, which is Monday to Saturday between 7am and 7pm.

Osborne South Development Project

The Osborne South Development Project (OSDP) objective is to refurbish, modernise and construct facilities that support the continuous build of major surface combatant vessels.

The facilities to be delivered under this Project are designed and built not only for the current planned capacity (the BAE Systems Hunter Class Frigates), but to support a continuous build program for future vessels up to Destroyer size.

The OSDP involves the construction of three large, new industrial buildings on the land west of Mersey Road North, and a smaller building to the east. These buildings will house the future shipbuilding operations. The modernisation of existing facilities, involving the upgrade of buildings and equipment in readiness for future shipyard requirements will also be undertaken.

Lendlease was appointed in October 2017 by ANI as the Managing Contractor responsible for advancement of the design and procurement process, and for the construction of the specially designed new industrial buildings - an important step in improving Australia's shipyard productivity and performance to internationally competitive standards.

With design works progressing, construction works on the new buildings have commenced under appropriate Development Approvals. These works have included the closure of Mersey Road North to connect the existing and new facilities, as well as piling and concreting works for the 1.5m thick foundations that will support the new shipbuilding facilities.

COMMUNITY DROP-IN

Want to know more? Talk with members of the Project Team at ANI's Community Drop-In.

Osborne Community Hall, 539 Victoria Road
Thursday, 1 November 2018
9am to 10am and 530pm to 7pm



Artist Impression of Osborne South Development Project

Concrete Works

Concrete works are now underway in preparation for the erection of the substantial structural steel that will form the skeleton of the new Shipyard facilities.

This involves approximately 55,000m³ of expansive concrete floors up to 1.5m thick in some places. These slab designs are unique – they need to ultimately support 10,000 tonne ships – so it is critical that the quality of this Australian asset is maintained to the highest level.

With individual pours up to 700m³ in size and 1.5m thick, the concrete needs to be placed in three layers during a ‘continuous pour cycle’. This continuous pour cycle is designed to prevent excessive cracking. The sequencing of the concrete pours therefore, has been carefully planned to meet the necessary high standards in safety, quality, environment, programme and end user performance criteria, with the pour, placement and finishing sometimes taking up to 15 continuous hours – in fact, the very first concrete pour occurred in early September and took 6.5 hours to pour before finishing works could even commence.

Hot weather also significantly impacts concrete curing times and increases the likelihood of excessive cracking, as well as exposing workers to the heat of the day, so works in the cooler, earlier hours of a morning ensures Project safety and quality requirements can be achieved.

Early morning starts commenced at the beginning of September and we expect that up to five pours a week will take place over the coming months. Whilst smaller concrete slab pour sizes will likely be completed by around 5pm, larger pour sizes may not finish until 9pm.

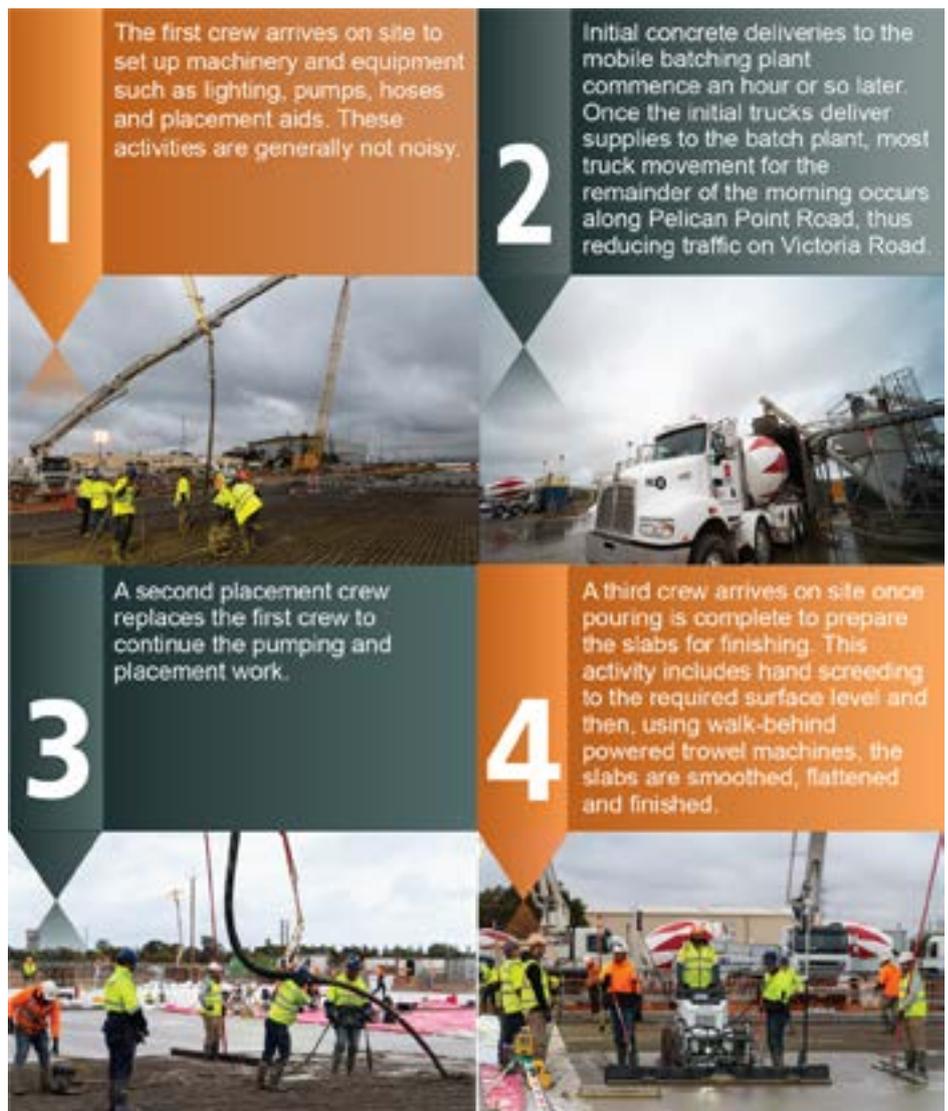
All works on site are undertaken in accordance with the Project’s EPA approved Construction Environmental Management Plan (CEMP) using methods that reduce impacts to the community and surrounding businesses, wherever possible. Lendlease engaged noise monitoring company, Resonate, who installed noise level monitoring stations along Victoria Road and within nearby residential areas.

Resonate gathered readings before construction works commenced to establish a base line, and also during the first few pours.

To ensure the integrity of this data, project personnel were also placed at various locations in the early hours to specifically listen for noise generated by either concrete trucks or the works on site. ANI also deployed their own personnel to further verify that noise impacts were minimal.

The results of the first concrete pours obtained from the stations and personnel indicate that traffic and activities relating to the concrete works did not exceed existing noise levels in the vicinity of Victoria Road.

Should you have any issues however, please contact the Project Team on 8221 6332 or at info@propertyandconsulting.com.au.



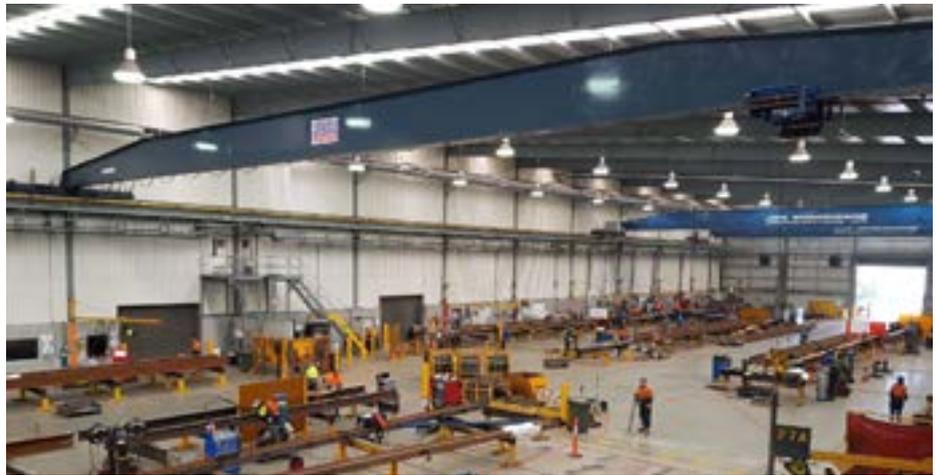
Dust Management

Dust of course, is one of the unfortunate side effects of construction, wind and other works in the region.

Lendlease implement a number of measures to minimise dust generating from the Project site, and the installation of concrete topping layers and the foundation slabs has done much to decrease dust from our site.

Dust suppression in other areas around the site is undertaken through the regular use of water carts, the spraying of stock piles, the use of appropriate materials (eg lighter materials mixed with heavier materials), and by implementing lowered speed limits on the site itself. Spraying using water carts occurs daily, and the regularity of runs increases on windy days. These dust suppression methods will continue to be implemented throughout the Project until late 2019.

The safety of both the community and workers is of the utmost importance to ANI and Lendlease, and the risk of contact with potential contaminants is treated seriously. Soil within a work zone is therefore categorised in accordance with EPA requirements, and any soils deemed to contain contaminants are dealt with as required by legislation. The displacement piling method used on site also aids in minimising dust or exposure to potential contaminants.



Australian Steel and SA Fabricators

Lendlease will soon commence the erection of structural steel, which will form the skeleton of the OSDP buildings, and these will be brought to the site under escort over the coming months.

More than 89% of this steel is sourced from Australian steel mills based in Whyalla and Port Kembla with South Australian companies, SA Structural Steel and Samaras, contracted to undertake fabrication and erection works. This work has led to increased job opportunities for local companies, including SA Structural Steel who recently engaged additional staff to service Projects such as the OSDP.

Piling

Balance of piling scheduled to occur before Christmas

93% Complete

Structural Steel

Australian sourced whenever available

89% Australian

Concreting

Concreting will continue over the coming months

27% Complete

Subcontractors

Businesses located within 150km of the project

82% Local



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