

Managing construction impacts - Marine fauna

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The Joy Baluch AM Bridge is an important link in the National Land Transport Network at Port Augusta, providing access across the Spencer Gulf for commuter, commercial and freight vehicles in the northern region of South Australia. It is also a key tourist connection to the Eyre Peninsula, northern South Australia and beyond. The Joy Baluch AM Bridge Duplication Project is a joint initiative of the Australian and South Australian governments and will be delivered by the Port Wakefield to Port Augusta Project (PW2PA) Alliance.

The Joy Baluch AM Bridge Duplication spans the Upper Spencer Gulf and lies within Marine Park 10 - Upper Spencer Gulf: established under the *Marine Parks Act*. This marine park is associated with warm waters, expansive seagrass and tidal mangrove forests, all of which are present in the project's vicinity.

What works are happening over marine waters or close to the Gulf?

Temporary works

The new Joy Baluch AM Bridge will be constructed using a crane positioned on a jack up barge, supported by a series of pontoons and workboats. The jack up arrangement allows the barge to be lifted clear of the sea and will minimise disturbance of the marine sediments.

Marine works will be serviced from a temporary wharf, constructed on the Eastside Foreshore between the Great Western Bridge and the existing Joy Baluch AM Bridge.

A crane positioned on the temporary wharf will load the materials required for the construction of the new bridge onto the barge.

This construction method allows the existing bridge to remain operational for vehicles and pedestrians while the new bridge is being built.



Artist impression of the temporary wharf and jack up barge in operation

Construction of the new bridge

The new bridge will be supported by 46 steel piles installed vertically into the ground using a piling hammer to provide support to the bridge structure.

After the steel piles have been installed, bridge beams, which will support the bridge deck, will be installed using the jack up barge. The remainder of the bridge works will be completed by accessing the bridge deck from both banks of the Gulf, with some support from pontoons where required.

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How will marine fauna be protected from underwater noise and vibration?

Disturbance of marine fauna from underwater noise and vibration from piling will be minimised by:

- Programming the works in summer, when the risk of whales in the area is very low.
- Using soft starts, where the energy of piling is gradually increased, allowing fauna to leave the area.
- Training and assigning marine fauna spotters for continuous monitoring during all impact piling activities.
- Establishing observation zones:
 - an outer zone where if marine fauna is observed, piling works will be placed on standby and if necessary, slowed or paused in order to guide the fauna away; and
 - an inner zone, where if fauna is observed and cannot be directed away, the piling works will be shut down as soon as reasonably practicable.
- Undertaking detailed monitoring of the first piling event to confirm predicted noise and vibration levels and the suitability of the controls that have been put in place, and then modifying the controls if required.
- Subsequent noise and vibration monitoring as required.

How will we safeguard the Gulf against pollution?

Pollution of marine waters and damage to the nationally important wetland and marine park will be mitigated through:

- Using precast concrete where possible to reduce the need to place concrete over water.
- Installing erosion and sediment controls including silt curtains, silt fencing and other sediment controls to prevent runoff.
- Ongoing monitoring of water quality.
- Storing fuel, oil, lubricants and other chemicals in an area with an impervious floor away from areas that are subject to flooding or tidal movements.
- Training of personnel in spill management and use of spill control equipment, including marine booms.

What will be the impact on users of the Gulf – boaties, kayakers, swimmers and fishers

A marine exclusion zone will be established to allow for the safe completion of the marine works. Buoys will be placed around the site with all boaties and water recreational users (kayakers, swimmers etc.) instructed to stay outside the zone.

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