

# Cairns Shipping Development Project

An unprecedented opportunity for Cairns and Far North Queensland



## At a Glance

- ✓ Accommodate forecast demand for 150 cruise ships through the Port of Cairns annually by 2031
- ✓ Project design for port access by large cruise ships up to 300 metres
- ✓ A workable and environmentally sound land-based solution for relocation of the capital dredged material
- ✓ No sea disposal of capital dredged material
- ✓ Estimated cost \$127 million
- ✓ Significant economic benefits delivering more than \$849 million to the region
- ✓ Potential for 800 new direct and indirect jobs during construction and more than 2,700 ongoing jobs by 2031



The Cairns Shipping Development Project involves widening and deepening the existing navigation channel to allow larger cruise ships up to 300 metres in length to berth at the Cairns Cruise Liner Terminal to accommodate the forecast demand for 150 cruise ships through the Port of Cairns annually by 2031.

The Project builds upon the significant existing tourism infrastructure network in Cairns to support increased tourism opportunities in Far North Queensland and encourages the overall growth of the cruise ship sector in Queensland.

## About the Project

Channel expansion will require up to 1 million cubic metres of uncontaminated material to be dredged from the existing channel and placed on land. Historically, the channel has been expanded several times (most recently 27 years ago) to cater for the growth of the Cairns economy and changes in shipping.

The Project also includes the upgrading of wharves 1-6 at the Cairns Cruise Liner Terminal to accommodate the larger cruise ships.

The Project will provide a significant stimulus to Cairns and Far North Queensland creating local jobs, increasing the competitiveness of the region and strengthening the economic resilience of the local economy.

While the main purpose of the Project is to take advantage of cruise shipping opportunities, there are also significant other benefits including:

- ✓ enabling future expansion of the HMAS Cairns Base by relocating the existing cargo swing basin.
- ✓ allowing improved channel access for the existing Royal Australian Navy vessels allowing larger visiting overseas Navy vessels (in particular US Navy carriers) to enter the Port for rest and relaxation visits.
- ✓ reduced tidal and loading restrictions on bulk cargo ships accessing the Port of Cairns, improving Port efficiency.
- ✓ increased resilience for the Port of Cairns against an extreme weather event which can result in the loss of depth and reduced ability for large cargo ships to safely navigate the channel.



# Protecting the Environment



Ports North approached this Project with a firm commitment to understanding the existing environment within Trinity Bay and to minimise any potential adverse environmental, social and economic impacts of the project, while maximising potential economic benefits. The goal was to develop a workable solution for the Port of Cairns that protects the Great Barrier Reef and delivers this opportunity to Cairns and the region.

The Project has been designed to be consistent with the Queensland Government's key plans and strategies adopted to protect the Great Barrier Reef such as the Reef 2050 Long Term Sustainability Plan and the Queensland Ports Strategy (2014).

Ports North placed considerable emphasis on examining all options to minimise the amount of dredging required. After completing extensive marine studies of currents and winds in Trinity Inlet, Ports North used cutting-edge cruise simulation technology in collaboration with the cruise ship companies and the Cairns Regional Harbour Master to make the most effective use of the channel design while providing additional access for cruise ships up to 300 metres.

State-of-the-art water quality and sediment transport computer modelling has also been undertaken to consider a range of potential impact scenarios from best to worst case. A conservative approach has been adopted to ensure that Project risks are comprehensively identified and appropriate strategies developed so that potential impacts can be effectively managed, minimised and mitigated.



# Project In Detail

The Project will deliver a wider and deeper entrance channel and cruise ship swing basin to allow port access for larger cruise ships, upgrade of the wharf infrastructure within Trinity Inlet to cater for the larger vessels and the relocation of the cargo ship swing basin to allow future Navy base expansion. Approximately 4km of the 10km outer channel is proposed to be widened and the inner channel widened to maintain safe navigation of ships. The channel's declared depth will be increased by 0.5 metres from 8.3 to 8.8 metres.

Dredging operations involve the removal of uncontaminated sediment from within and adjacent to the existing channel and placing that material on land. There is no sea disposal of the dredged material.

Dredging is due to be undertaken during the dry season between May – September 2019. Dredging will involve the separate removal of soft and stiff clays. The soft clays, which comprise most of the material to be dredged, have poor engineering qualities with no beneficial reuse potential. The stiff clays have better engineering qualities and some reuse potential as fill for land development.

## Land Disposal

A detailed assessment process was undertaken to identify suitable land-based sites where the dredged material could be placed.

Two sites were identified as providing the best environmental outcomes; Port land at Tingira Street, Portsmith, for the stiff clay material and the Northern Sands site for the placement of soft clay material.

## Tingira Street Site

The use of port land at Tingira Street for the stiff clays will allow this material to be beneficially reused as surcharge material on the land and ultimately incorporated into future land development. The stiff clay will be

dredged using a backhoe dredge. The dredged material will be delivered by barges to that site.

The soft clays will be dredged by a Trailing Suction Hopper Dredge and then pumped to the Barron Delta site by the dredge when moored at a temporary site approximately 3km offshore from the mouth of Richters Creek. A temporary delivery pipeline will transport the material from the dredge pump-out facility to the placement site (mostly through cane lands) with excess water being returned to the Barron River at the Captain Cook Highway bridge via a temporary clean tailwater discharge pipeline.

## Northern Sands Site

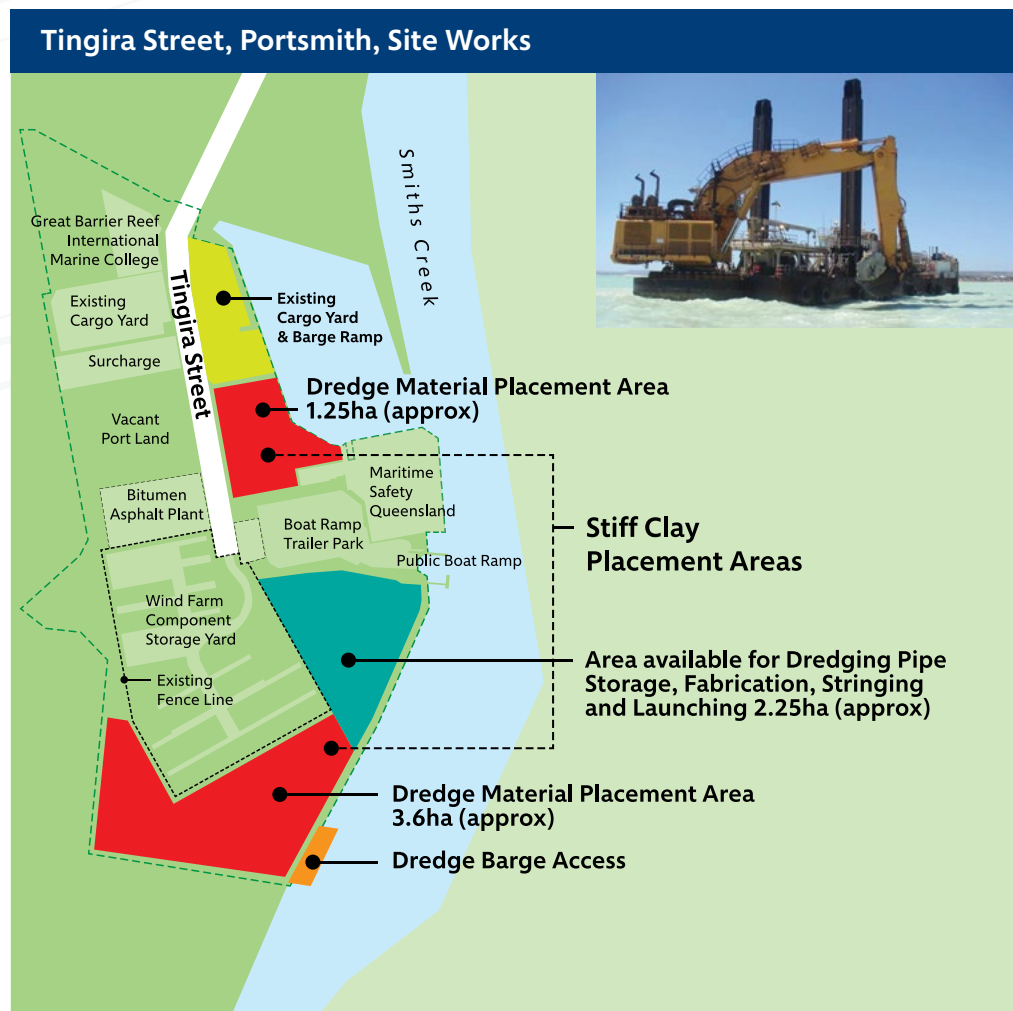
The Northern Sands site is an existing sand extraction mine which has low environmental value and is located in an area primarily used for sugar cane farming. It has existing approvals for the disposal of construction material

and potential acid sulphate soils and a pit that requires filling at the end of the existing sand mining operation.

To prepare this site for receipt of the dredged material, the existing sand mine will be expanded and a temporary flood protection bund wall erected around the placement area for the duration of the dredging and material consolidation period. This temporary flood protection bund wall will be removed at the end of the project and the remaining void in the dredge material placement area will continue to receive waste and be ultimately filled to ground level in accordance with the site rehabilitation requirements.

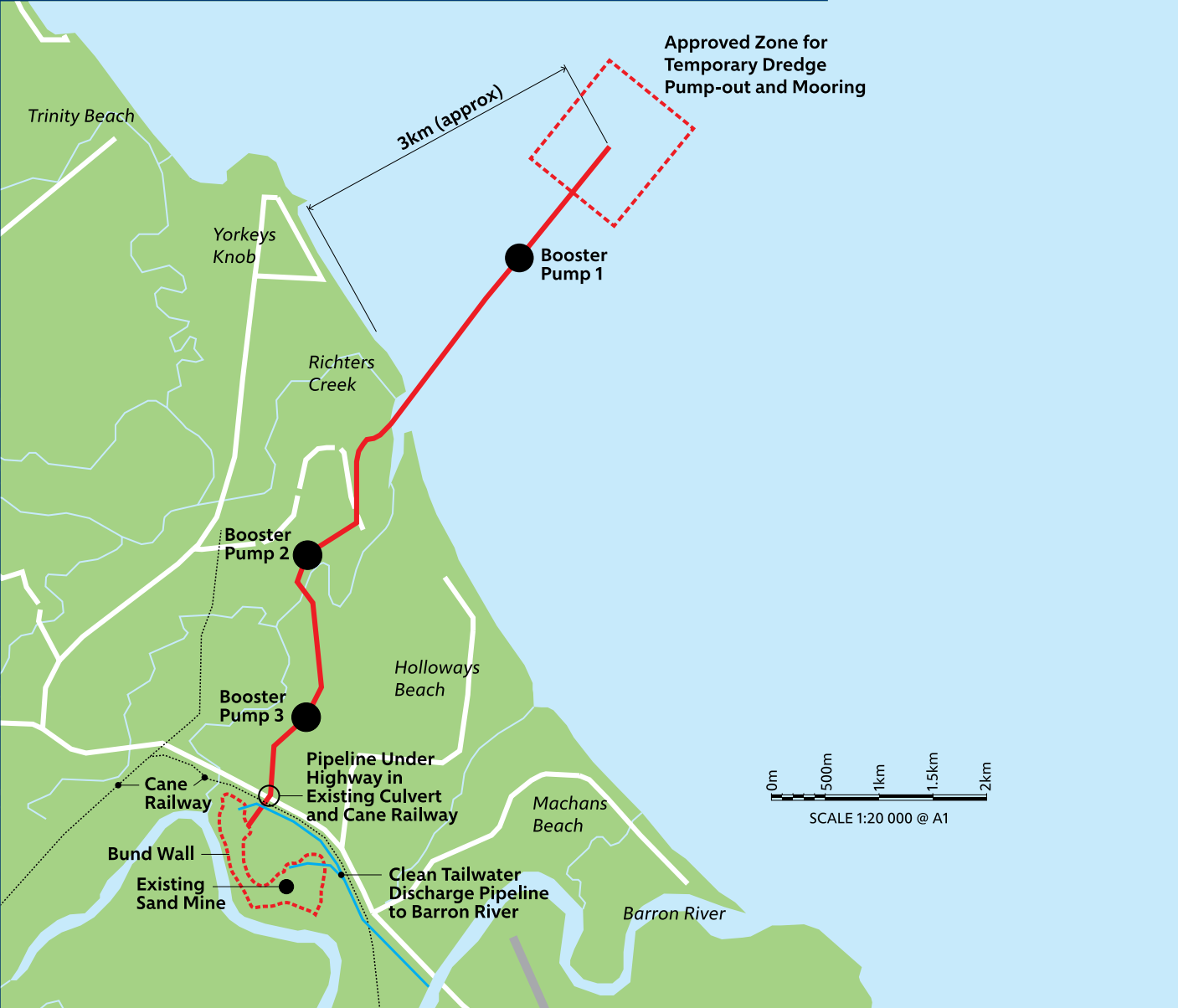
## Wharf Upgrade

Another major component of the Project will be the upgrade of wharves 1-6 to improve berthing and mooring capacity. This work is due to occur over a 12-month period from early 2019.

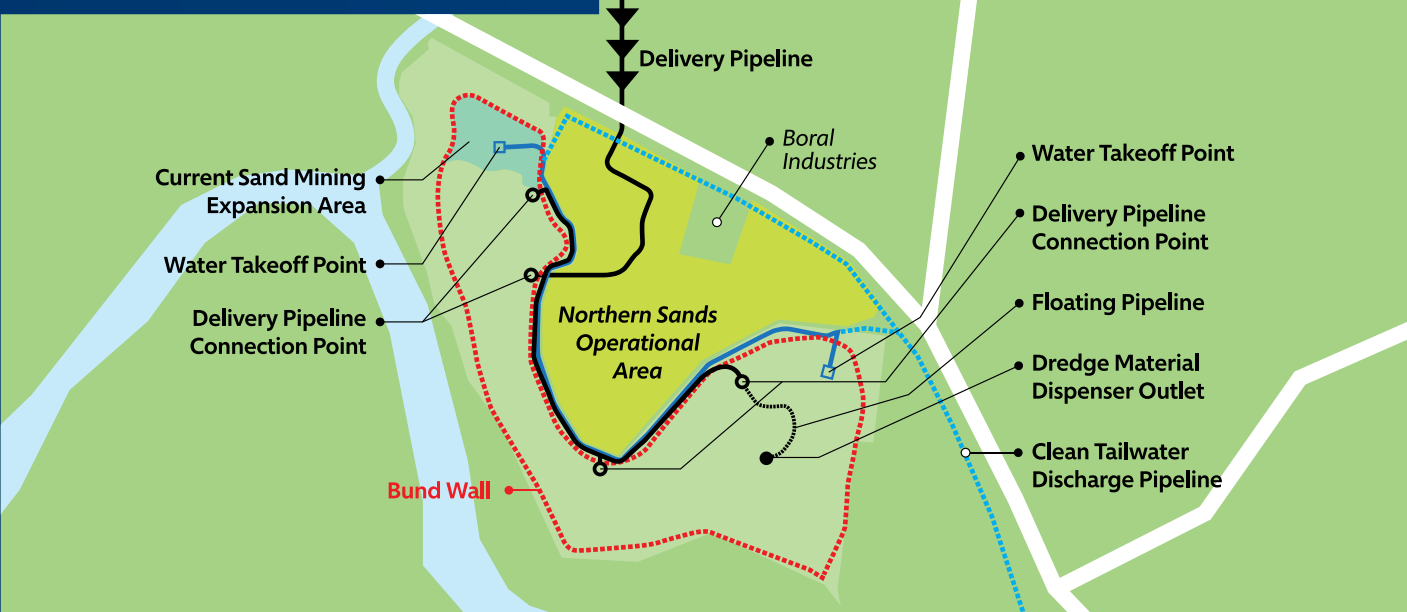




Temporary Dredge Mooring, Delivery and Discharge Pipeline Routes



Northern Sands, Barron Delta, Site Works





## Consultation

Ports North recognises the importance of the port communities in which it operates and is committed to engaging and consulting with communities regarding our business operations and future plans. Ports North has undertaken extensive consultation with key stakeholders throughout the Project since 2012 and stakeholders will continue to be engaged through the construction stage to Project completion.

Ports North encourages people to visit our website, facebook page or email for further information about the Project:

Website: [www.portsnorth.com.au](http://www.portsnorth.com.au)

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