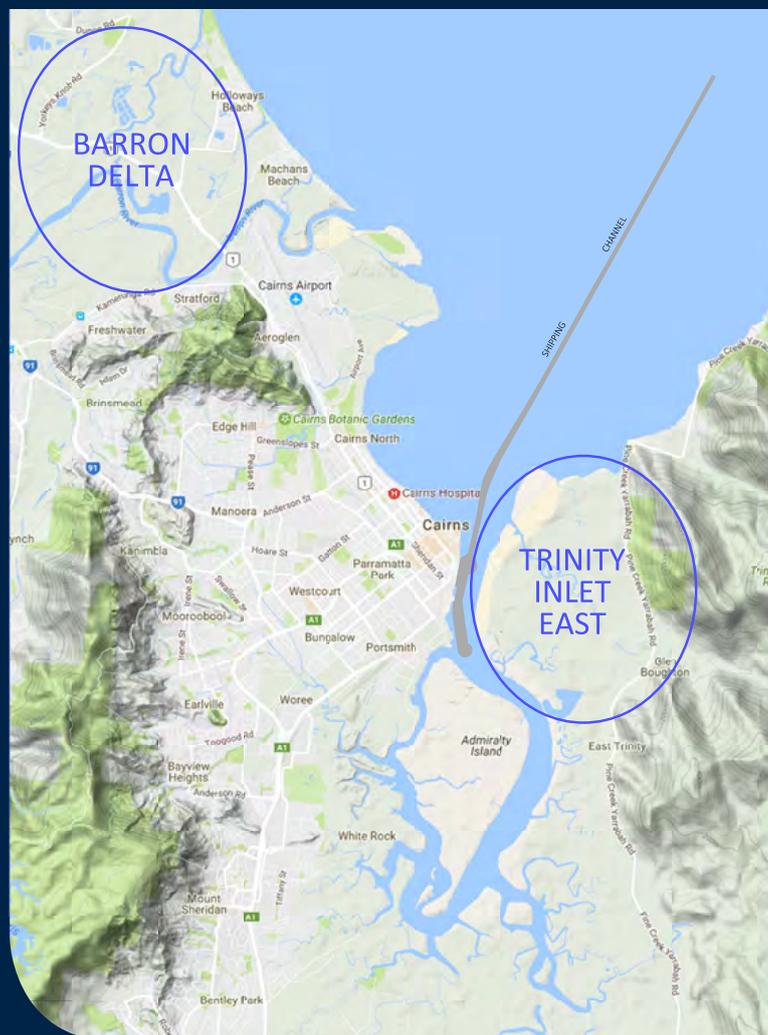


# Planning for the future

## Project Update

Ports North is continuing to progress the Cairns Shipping Development Project to deliver a new opportunity to expand the Port of Cairns. The Project will see an additional 37 new Mega cruise ships by 2026, increasing to 59 with the continuation of home-porting in Cairns and development of new Brisbane cruise liner terminal. The Environmental Impact Statement remains on track with baseline studies for two land-based disposal options for the significantly reduced capital dredge volume of 1 million cubic metres being completed.

The study sites being investigated.



At an estimated cost of \$120 million the Project is expected to deliver significant economic benefits to the Region while supporting future growth opportunities for Cairns.

- Improved economic benefits due to increased cruise ship visitations to Cairns
- Enable future expansion of the HMAS Cairns Navy base and provide access for the existing RAN LHD
- Increased channel resilience against extreme weather events and improved efficiencies for bulk cargo ships accessing the Port of Cairns

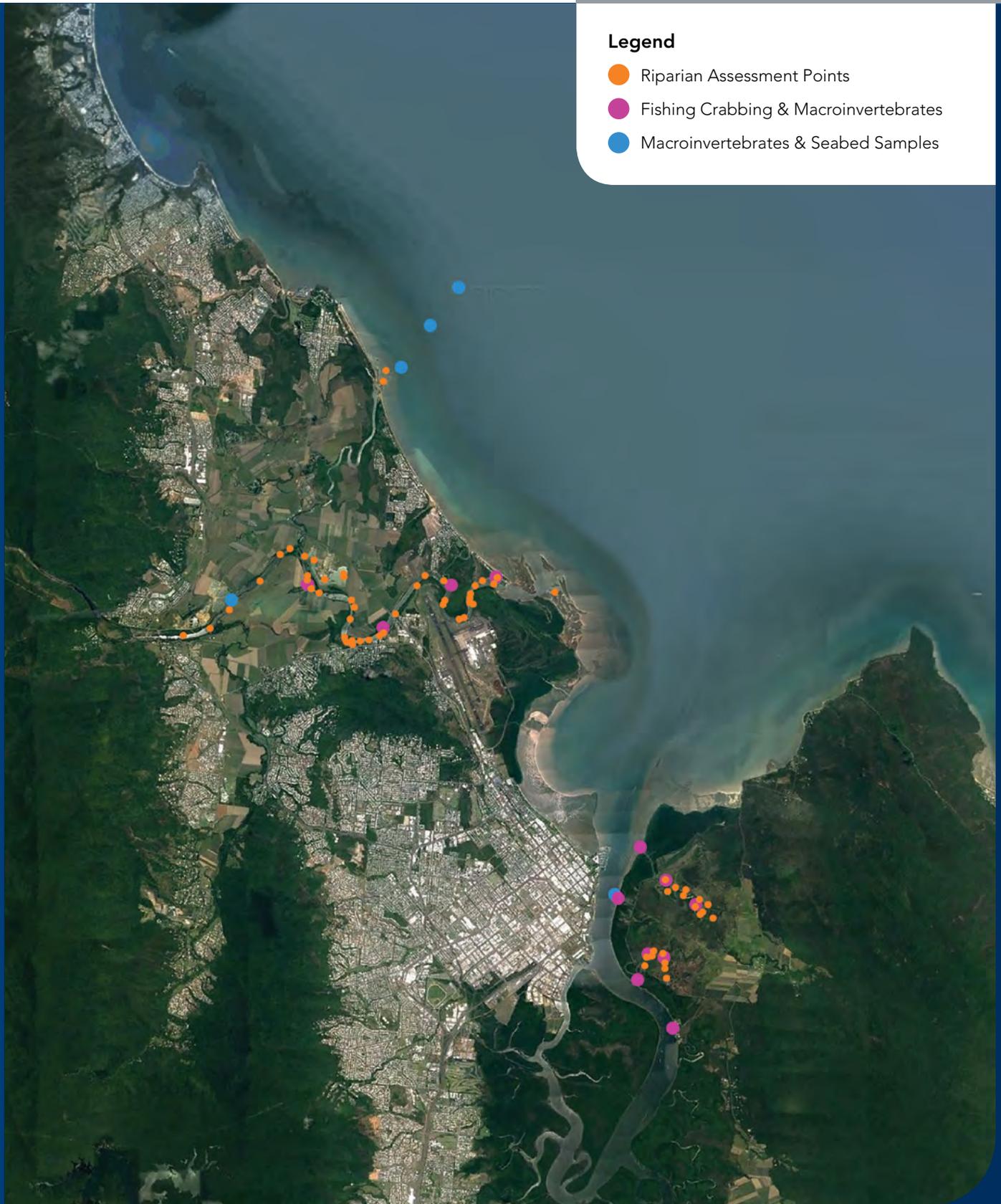
Extensive marine studies informing technical investigations, channel design and dredging methodologies as well as successful channel simulations with cruise ship companies and Defence have all been completed.

The data from these studies will now form the basis of the next phase of work being impact and mitigation assessment.

# Work Completed

Work undertaken to date includes a variety of study topics encompassing extensive assessment of coastal marine processes, marine water and groundwater quality, marine and terrestrial flora and fauna, sediment quality, geology and soils, dredge material placement options and cultural heritage and native title values.

The study sites being investigated are shown below.



# Study Findings

## EIS Baseline Study

### Socio-Economic

Update of social and economic benefits of project

- Ship simulations conducted with cruise companies and Navy to verify safe navigation of vessels in proposed channel upgrade
- Cruise ship demand study updated to reflect emerging and future trends, latest Australian fleet mix and changes to recent Cairns cruise schedule i.e. home porting.
- Cruise passenger surveys undertaken to determine passenger spend rates at Cairns and Yorkeys Knob

### Coastal Processes

Collection of baseline data on tides, currents, waves, turbidity & sediment transport

- Data collection instruments installed in Barron River and Trinity Inlet
- Establish numerical models for assessing tailwater impacts on receiving waters
- Barron River and Trinity Inlet are estuarine environments, influenced by tidal exchange and wet season runoff.

### Marine Sediment Quality

Drilling of boreholes and sediment sampling in the shipping channel for assessment & testing of material properties

- 6 boreholes drilled to 10m depth in shipping channel
- Grab samples taken at 20 locations in shipping channel
- 83 samples tested in laboratory to confirm material properties (grading, density, moisture content, shear strength, etc.)
- 71 samples tested in laboratory for Acid Sulphate Soils
- The material to be dredged is approximately 85% soft clay and silts (mud) and 15% stiffer clays, all of poor engineering quality.
- The soft clays and silts are Potential Acid Sulphate Soils (PASS)

### Marine Water Quality

Collection of baseline data on pH, temperature, turbidity, salinity, dissolved metals & nutrients

- Data collection instruments installed in Barron River, Richters Creek and Palm Cove for Barron Delta and in Trinity Inlet, Hills Creek & Firewood Creek for East Trinity
- Extensive existing data retrieved from Ports North, Aquis, CRC, RRRC, JCU, DSITI and Wet Tropics Management Authority
- Established baseline water quality parameters for numerical modelling
- Salinity in Barron River is dependent on tidal phase and freshwater run-off with moderate salinity at Barron River bridge
- Water quality in Trinity Inlet is better than near coastal waters and Hills Creek is better than Firewood Creek
- Turbidity of receiving waters is naturally variable and at times elevated by rainfall, strong winds and larger tides

### Groundwater

Assessment of existing conditions & installation of boreholes to collect additional baseline data

- Extensive water quality data available from existing Barron Delta bores and DSITI monitoring of East Trinity Acid Sulphate Soils rehabilitation
- 5 new bores installed to collect 12 months data at Barron Delta
- Established hydrogeological model for assessing groundwater impacts

### Marine Ecology

Seagrass, fish, crab, benthic and riparian vegetation baseline surveys

- Fish and crab surveys at 4 sites in Barron River and 8 sites at East Trinity
- Catches revealed diverse and abundant native species none of which are considered threatened
- Riparian vegetation surveys revealed more prevalent mangroves downstream of Barron River bridge and Hills Creek vegetation to be in a more advanced state of recovery than Firewood Creek
- Limited evidence of seagrass in the surveys of Barron and East Trinity

### Terrestrial Ecology

Flora and fauna baseline surveys

- Limited biodiversity on Barron Delta with areas of widespread disturbance
- Moderate biodiversity at East Trinity with mapped wetlands and regional ecosystems however areas of anthropogenic grasslands with minimal natural value are available for placement sites

### Various

- Baseline investigations have also been conducted for Geology & Soils, Nature Conservation Areas, Air Quality, Noise, Visual Amenity, Cultural Heritage, Flooding, Storm tide & Hydrology and Dredge Design & Logistics



# Ongoing Studies and Next Steps

**Ports North is satisfied that the baseline studies have identified the values, threats, opportunities and constraints in terms of the existing environment at the two placement locations.**

Further studies and data collection will continue in some areas in order to better inform the assessment process. Ports North has been liaising with government approval agencies on the various study topics and following consultation have decided to collect additional wet season water quality and ecological baseline to better inform assessment outcomes.

Undertaking this further field work will add a little extra time to the EIS process, however it is important we have the best information available to inform the assessment. The Project is important to the community and economic development of Far North Queensland and it is essential that there is a robust and extensive investigation of all options and environmental impacts. To allow this important work to be undertaken, the Office of the Coordinator-General has approved an extension of time until December 2017 to complete the EIS process. Ports North is on track to submit the Draft EIS Report by June 2017.



## Contact Us

Details about the Cairns Shipping Development Project can be found by visiting the Ports North website at [www.portsnorth.com.au](http://www.portsnorth.com.au)

If you would like further information, please email [enquiries@portsnorth.com.au](mailto:enquiries@portsnorth.com.au)