

CAIRNS SHIPPING DEVELOPMENT PROJECT

Revised Draft Environmental Impact Statement

Chapter B13: Cultural Heritage



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B13.1 Introduction

B13.1.1 Scope

This chapter presents the results of baseline studies and impact assessments undertaken for Indigenous Cultural Heritage (ICH) and Non-Indigenous Cultural Heritage (NICH), carried out as part of the Cairns Shipping Development Project (the CSD Project) EIS, including an assessment of native title rights and interests. It is based on detailed technical studies and consultation with Aboriginal parties undertaken specifically for this Revised Draft EIS. It also draws on relevant information and findings from the Draft EIS where they are relevant to the current CSDP project.

Specifically the chapter addresses the following operational works and potential ancillary impacts:

- Terrestrial placement of soft clay dredge material, pipeline route and laydown area, offshore pump out point and placement area at Northern Sands DMPA.
- Terrestrial placement of stiff clay dredge material at Tingira Street DMPA.
- Installation of dolphins at Trinity Wharves 1-5 and demolition of Wharf 6.
- The upgrade of Cairns shipping channel
- Upgrade of Wharf Side infrastructure

B13.1.2 Project Area

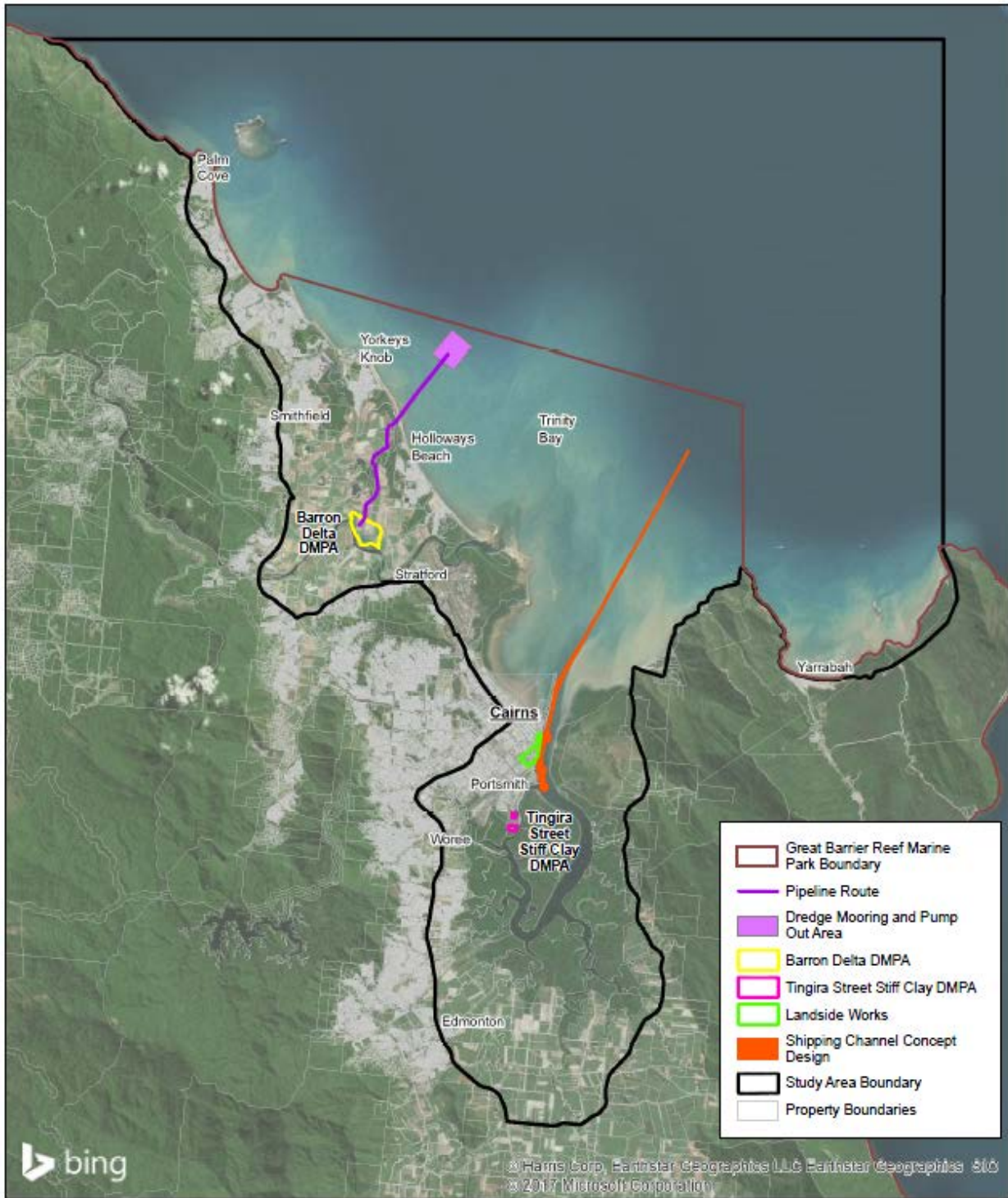
The 'study area' for the EIS varies depending on the issue at hand while various 'project areas' are the immediate footprints of the proposed works. For the consideration of ICH and NICH, the 'local scale' is considered to be appropriate. Elements of local scale ICH and NICH interest relevant to this chapter are the Cairns coastal plain generally between the Wet Tropics World Heritage Area and the coast between Trinity Inlet and Cairns' Northern Beaches. This area is characterised by (from south to north):

- the Trinity Inlet wetlands
- the Cairns CBD (fronting the Cairns foreshore between Trinity Inlet and the Barron River and spreading south-west, west, and north-west) to the coastal ranges
- the Port of Cairns and the allied industrial area east of the CBD and fronting Trinity Inlet
- the Barron River flood plain with its mosaic of agricultural, industrial, and residential developments of the southern Northern Beaches (Machans Beach to Yorkeys Knob)
- the township of Smithfield and the balance of the Northern Beaches.

Study area and Project areas are shown on **Figure B13-1** (and on more detailed figures throughout this chapter where relevant) and encompass:

- **Channel Project Area** including the shipping channel, and the route to the pump-out point at the seaward end of the pipeline to the Northern Sands DMPA.
- **Land-side Works Project Area** for wharf upgrades and berthing of cruise ships.
- **Northern Sands DMPA Project Area** consisting of the DMPA, the inlet pipeline corridor, and the tailwater pipelines corridor.
- Tingira Street DMPA Project Area.

Because Indigenous sites in the study area reflect the strong connection between Aboriginal people and the cultural and physical landscape and a strong focus on marine resources, the study area includes an extended area of coastal landforms and waters.



Ports North

Cairns Shipping Development Project
Revised Draft EIS

Project Location Plan

Ref: 3527-02-02
Date: 25/05/2017
Projection: MGA94 Zone 55
Scale at A4 Size 1:200,000

0 2 4 8 Kms

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Figure B13-1 Study Area and Project Areas.

B13.2 Methodology

B13.2.1 Detailed Technical Assessments

Several detailed technical assessments have been undertaken to establish existing cultural heritage values that could be impacted by the project. These are listed in **Table B8 1** below. The final column shows where these reports are located in this Revised Draft EIS.

TABLE B13-1 DETAILED TECHNICAL ASSESSMENTS

STUDY	REFERENCE	DETAILS	LOCATION
Cairns Shipping Development Project Cultural Heritage Assessment	Alice Buhrich (2016)	Existing Situation and Assessment of Impact for Barron Delta Void / Pipeline, East Trinity, Shipping Channel and Wharf side Works	Appendix U
Cairns Concrete Wharves Heritage Impact Assessment	Extent Heritage (2016)	Existing Situation and Assessment of Impact for Wharves 1-6	Incorporated into Appendix U
Stiff Clay DMPA, Tingira Street Cultural Heritage Assessment- Technical Report	Alice Buhrich (2017)	Existing Situation and Assessment of Impact for Tingira Street DMPA	Appendix BB
Condition Assessment Report Wharf 6, Wharf Street , Cairns	Flanagan Consulting Group (2017)	Assessment of Structural Condition	Appendix AE

B13.2.2 Assessment Structure

Australia's cultural heritage is protected by legislation at the commonwealth, state and local levels as summarised in **Table B13-2**. In Queensland, significant Aboriginal heritage places are identified by the relevant Aboriginal party and can include archaeological, anthropological or contemporary places. Torres Strait Islander heritage is dealt with through separate legislation that is not relevant to this report.

Terrestrial NICH values are assessed against a set of criteria and threshold levels to determine international, national, state and local significance under the *Queensland Heritage Act (1992)*. Shipwrecks are deemed historic relics after they are 75 years old.

TABLE B13-2 SUMMARY OF RELEVANT CULTURAL HERITAGE LEGISLATION

LEGISLATION	DESCRIPTION
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	Protects Aboriginal places on the world, national and commonwealth registers.
<i>Native Title Act 1993</i>	Protects rights and interests over lands and waters held by Aboriginal people.
<i>Historic Shipwrecks Act 1976</i>	Protects all shipwrecks and associated relics over 75 years old.
<i>Aboriginal Cultural Heritage Act 2003</i>	Protection of Aboriginal cultural heritage in Queensland.
<i>Qld Heritage Act 1992</i>	Protection of non-Indigenous places that contain state & local heritage value.
<i>Sustainable Planning Act 2009 and regulations</i>	Integrates planning and development process of heritage listed places.
<i>CairnsPlan2016</i>	Maintains a local heritage register.

B13.2.3 Desktop Reviews

Publications, consultancy reports, historical sources, the state heritage database and register and Alice Buhrich's current doctoral research were consulted to identify:

- the physical context of the study areas in terms of past Aboriginal use of the landscape and preservation factors affecting Aboriginal sites and preservation of those sites
- the cultural context of the study area in terms of relationships between Aboriginal parties and their connection to country
- a summary of archaeological research findings in the area
- previous recorded sites from published sources, unpublished reports and the state heritage database.

Historic aerial photographs were accessed using the QImagery web-based search tool (<https://qimagery.information.qld.gov.au>), including a review of aerial photographs taken between 1949 and 1990 that reveals the history of use of the Tingira Street property. These photographs formed a basis for discussion with Aboriginal parties on past land use and to identify the likelihood of the presence of cultural material at the site.

The NICH heritage desktop review aimed to identify the history of the sites and determine the types of heritage places potentially impacted by the proposed work.

The following statutory and non-statutory heritage registers and databases were consulted:

- National Heritage list
- Australian National Shipwreck Database
- Queensland State Heritage Register
- Cairns Heritage Register
- Australian Heritage Places Inventory

B13.2.4 Indigenous (Aboriginal) Parties

Identification of the relevant Aboriginal party for a particular area is linked to native title determinations and registered native title claims. The Aboriginal party is determined in the following order.

1. Where native title has been determined, the Aboriginal party is the native title holder.
2. Where a native title claim is registered, the applicant is the Aboriginal party.
3. If there is no existing native title claim, but there was a previous native title claim, the previous applicant is the Aboriginal party (the last claim standing).
4. If there has never been a native title claim, the Aboriginal party is a person or group with particular knowledge about traditions, observances, customs and beliefs associated with particular area and has responsibility for that area under Aboriginal tradition. Registered Cultural Heritage Bodies, where they exist, are the appropriate group to identify the Aboriginal party for a particular area.

There are three Aboriginal parties relevant to the CSDP, with some overlapping interests (**Figure B13-2**):

- Yirrganydji Gurabana Aboriginal Corporation YAC (QC2015/004) have a registered native claim from Trinity Inlet to Port Douglas that incorporates the Northern Sands site extending eastwards to the beach and Trinity Inlet. YAC are the Aboriginal party for the Northern Sands site (although see below for future registration of Cairns Regional Claim) and have an overlapping claim with GWY over the shipping channel.
- Mandingalbay Yidinji (MY) has a determined claim over claimable land at East Trinity (QCD2006/004). MY have a Cultural Heritage Body that includes East Trinity. MY are the Aboriginal party for East Trinity and have interests in the shipping channel.
- Gimuy Walubara Yidinji People (GWY) (QC2012/017) have a registered native claims over Cairns and Trinity Inlet that extends south near Gordonvale. GWY have an overlapping claim with YAC over the shipping channel.

Mandingalbay Yidinji, Yirrganydji Gurabana and Gimuy Walubara all have interests in the Cairns and Trinity Bay areas, and following the process of advertisement for interested parties were accepted by Ports North in 2014 as the parties to consult with in regards to marine disposal of dredge material.

In addition to the three Aboriginal parties identified above there are a number of other current and future interests by Aboriginal groups:

- Mandingalbay Yidinji (MY) currently manage part of the East Trinity site as an Indigenous Protected Area (IPA), MY aspirations for future use of the site include tourism and conservation. The MY IPA extends across half of the shipping channel.
- Dawul Wuru Aboriginal Corporation, representing Yirrganydji interests, have entered into a Traditional Use of Marine Resources Agreement (TUMRA) from north of Barron River to Port Douglas, extending to Green Island.
- North Queensland Land Council have lodged a Cairns Regional claim which brings together five Aboriginal groups (Bulway, Djabugya, Yirrganydji, Nyakali and Guluy) under a single claim and will extend north of the Barron River to Port Douglas and west to Mareeba. Jeannette Singleton is an applicant to the Cairns Regional claim and advice from NQLC confirms Yirrganydji are the correct people to speak for the Northern Sands site.
- An approved Traditional Use of Marine Resources Agreement (TUMRA) between the GBRMPA and Yirrganydji which covers the sea country off the northern beaches (refer <http://dawulwuru.com.au/land-management/yirrganydji-tumra/>).
- Jeanette Singleton has advised that Yirrganydji intend to lodge a sea claim that will extend south of the existing TUMRA and potentially intersect the shipping channel.

B13.2.5 Consultation with Indigenous (Aboriginal) Parties

Aboriginal parties with interests in the project area who were consulted for this project include:

- Yirrganydji Gurabana Aboriginal Corporation (YAC)
- Mandingalbay Yidinji (MY)
- Gimuy Walubara Yidinji (GWY)
- North Queensland Land Council (NQLC).

Consultation took place by phone calls, email and meetings. Discussions about the project and its implications on cultural heritage and aspirations in relation to lands took place during site inspections. Interests are overlapping as shown on **Figure B13-2**. Mandingalbay Yidinji, Yirrganydji Gurabana and Gimuy Walubara all have interests in the Trinity Bay area including the shipping channel.

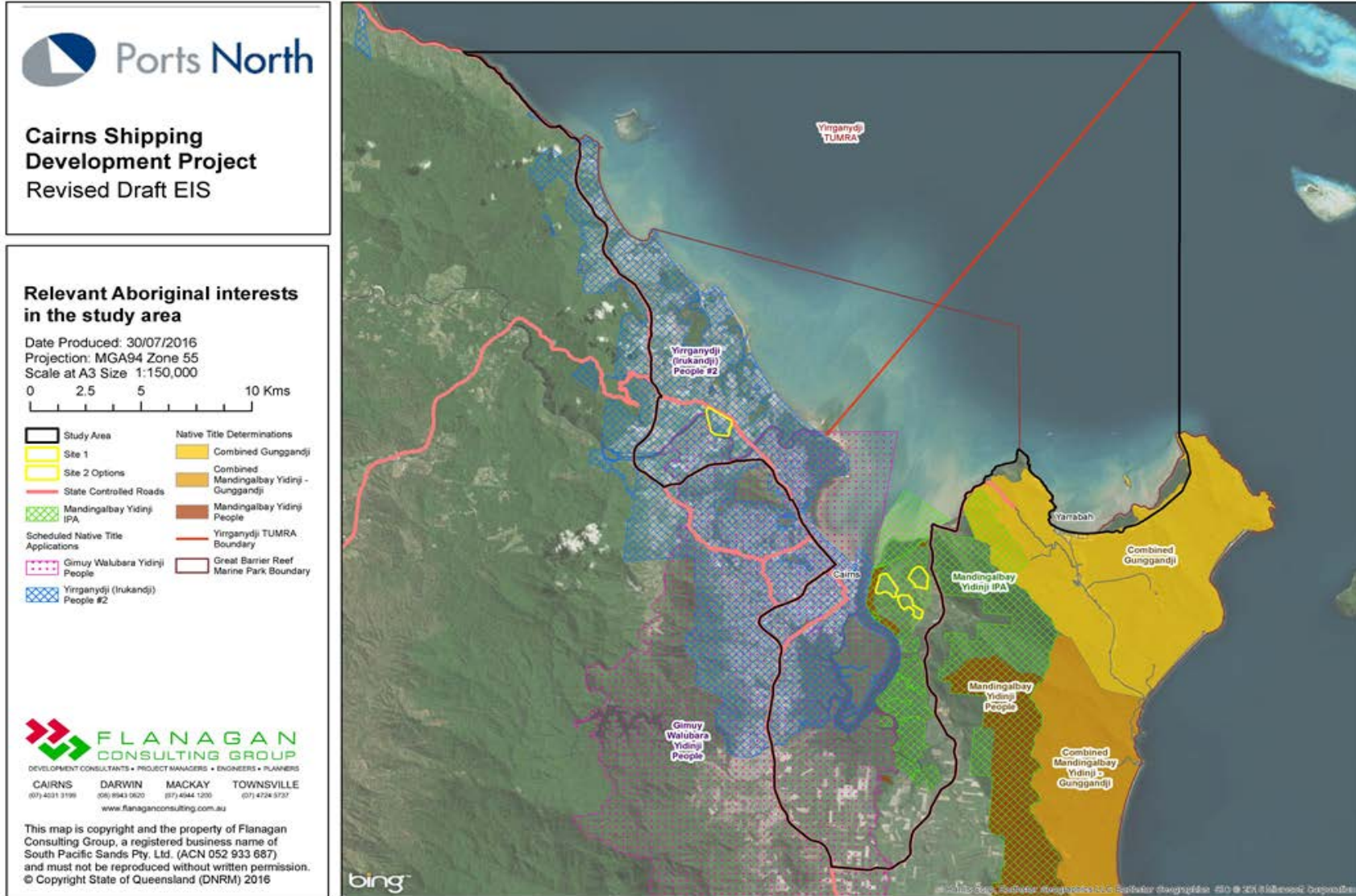


Figure B13-2 Indicative Layout of the proposed installation of Berthing Dolphins at Cairns Wharf (Ports North).

B13.2.6 Site Surveys of Indigenous and Non-Indigenous Heritage Places

B13.2.6.a Indigenous Cultural Heritage

Site inspections were undertaken with Aboriginal party representatives at the following locations.

Northern Sands DMPA

Site inspections were conducted with Indigenous party representatives, with the aim to identify cultural heritage areas and areas requiring future examination. The Northern Sands DMPA is a highly degraded environment from previous quarrying land use, so surveys concentrated on places of known significance and areas not previously disturbed, e.g. creek lines and extant vegetation. Site inspections were conducted to identify potential non-Indigenous heritage and to document the integrity of any identified heritage places.

Tingira Street DMPA

Site surveys were not undertaken with the Aboriginal parties at the Tingira Street DMPA; during face to face meeting historic aerial photographs were used to review the site and extent of historic disturbance.

Channel and Wharf Side Works

Site surveys were not undertaken with the Aboriginal parties at the channel and wharf side sites; during face to face meetings historic aerial photographs were used to review the site and extent of historic disturbance.

B13.2.6.b Non Indigenous Cultural Heritage

A detailed site assessment of the Trinity Wharf complex was undertaken by an industrial archaeologist (Extent Heritage) from which a Statement of Heritage Impact was prepared (**Appendix U**).

B13.3 Existing Situation

B13.3.1 Study Area Overview

B13.3.1.a Indigenous Cultural heritage

The Cairns region is rich in Indigenous cultural heritage, of both contemporary and archaeological significance. Aboriginal sites in the study area reflect the strong connection between Aboriginal people and the cultural and physical landscape, and a strong focus on marine resources. The rainforest region was home to a relatively large number of small, tightly bound language and clan groups connected to land and each other by the 'story waters' or bulurru (known in other areas of Australia as 'dreamtime').

The Aboriginal landscape in the Cairns region is imbued with stories that linked each group to their bulmba (homeland), to their Gurra Gurra (ancestors) and to each other (Bottoms 2015:41 in **Appendix U**). For example, according to oral history, Gudju Gudju, the rainbow serpent, resides across the whole Cairns coastal area and is embodied in specific landscape features from Double Island to Yarrabah. Damarri and Guyula were brothers whose activities traversed Trinity Inlet, the Barron River and Yarrabah, their actions link the Yidinji, Gunggandji, Yirrganydji and Djabugay estates (Bottoms 2015 in **Appendix U**). For Aboriginal people the stories of the ancestral beings provide tangible links between people and place, in the past, present and future.

Within the Cairns area Aboriginal groups were highly mobile, using outrigger canoes and walking tracks to access resources and to visit neighbouring estates for ceremonial and other purposes (Bottoms 2015 in **Appendix U**). Moieties are another form of tribal identity that spanned language and clan boundaries. Yidinji, Djabugay and Yirrganydji had a two-moiety system where each individual was assigned one of the two moieties. For Djabugay the two moieties were Gurrabana (wet season) and Gurraminya (dry season), for Gunggandji it was Gurrabana and Guragulu (Bottoms 2015 in **Appendix U**).

The special link between Aboriginal people and the rainforest was recognised through the inclusion of the Wet Tropics of Queensland for its cultural values in 2013 (Place ID: 105689). The Wet Tropics is considered an outstanding environment in the course of Australia's history as the only rainforest permanently occupied by Aboriginal people. The National Heritage Listing recognises the ability of rainforest Aboriginal people to process wide toxic plant resources, development of unique material culture including nut cracking rocks and bicornual baskets and use of fire to maintain patches or 'pockets' of open forest as outstanding heritage elements. The heritage listing recognises the significance of story places inscribed in the landscape, including those relating to Damarri and Guyula (http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;place_id=105689).

B13.3.1.b Non-Indigenous Cultural heritage

The first Europeans to discover the true nature of Trinity Inlet were beche-de-mer fishermen, of whom J.S.V. Mein is reputed to be the earliest. He claimed to have set up a station on Green Island in 1857/8 during which time he examined Trinity Inlet and tributaries. Throughout the 1860s and 1870s the beche-de-mer fishermen continued to use Trinity Inlet. William Smith, one of the founders of Cairns (**Figure B13-3**), was among them (Jones 1976 in **Appendix U**).

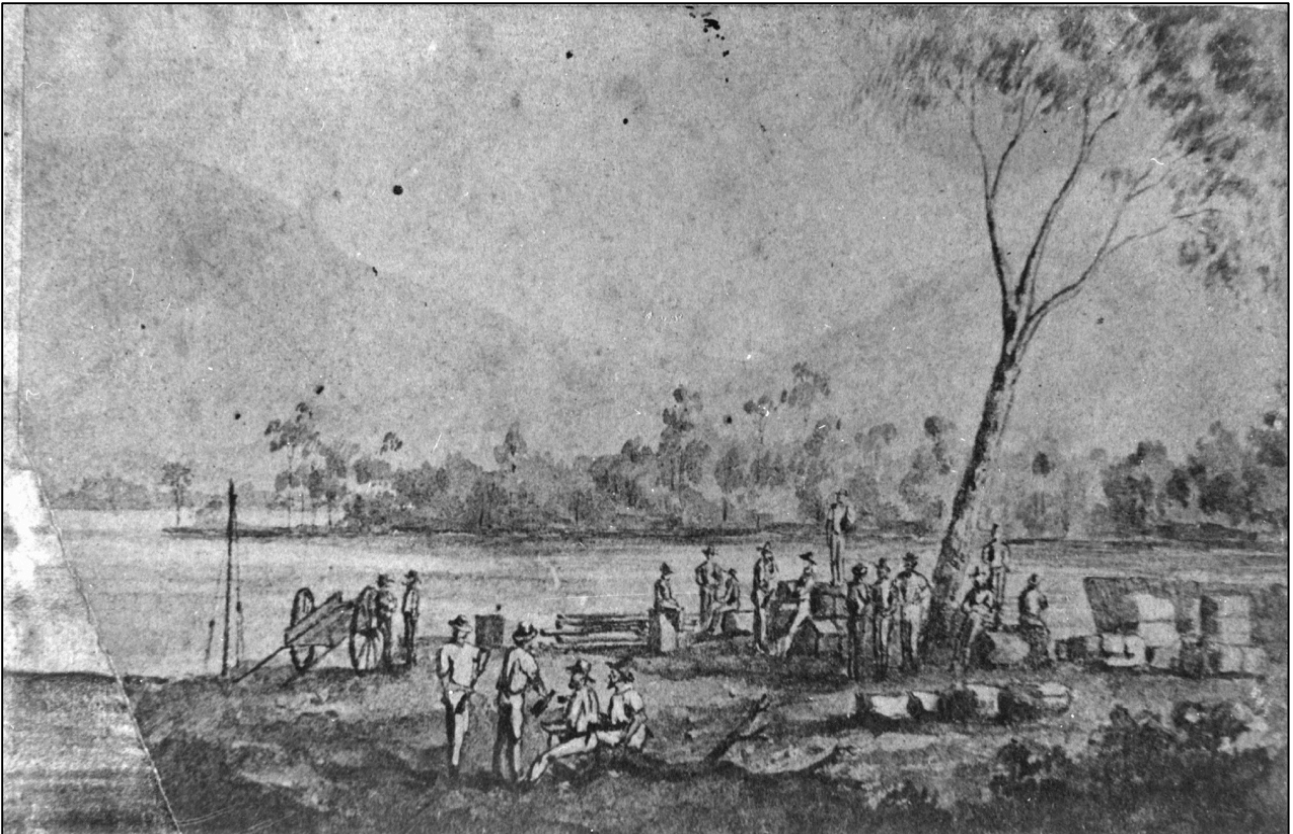


Figure B13-3 First Landing at Cairns (background indicates this is Smiths Landing) 1876.

Source: State Library Queensland.

In 1873, George Dalrymple was commissioned with the government botanist, Walter Hill, to undertake a survey of the land north of Cardwell to determine both its suitability for agriculture and to search for likely harbour sites. In spite of the impenetrable mangrove swamps they encountered, Dalrymple and Hill reported favourably on Trinity Bay. This was to be the access port for the Hodgkinson gold field. The government's priorities were to swiftly establish its presence and provide port facilities. B. G. Sheridan, Cardwell's Police Magistrate, was sent to Trinity Bay in July 1876 to identify a town site. Sheridan selected what he felt to be the most suitable position for a town at the mouth of the Inlet. The new port was renamed Cairns, after the then Governor of Queensland, in 1876 (Converge Heritage + Community 2009 in **Appendix U**).

Cairns was practically abandoned by 1878 and was in desperate straits as the success of Port Douglas with its proximity to the 'Bump Track' made it a more suitable port at this time. By 1882 sugar was being seen as an industry which could revive the region's fortunes. Land was gradually taken up along the coastal areas. Many early farmers in the Cairns area practiced mixed agriculture, growing cane, maize and rice with some grazing cattle (Converge Heritage + Community 2008 in **Appendix U**).

Development in the harbour was slow. It was obvious to the local businessmen that the harbour needed to be dredged to accommodate the coastal steamers and thereby obviate the need for lighters to load goods and passengers from steamers at the Fairway Buoy. At the end of the nineteenth century, the government, under the auspices of the Sub-Collector of Customs and the Harbour Master, collected dues and duties from shipping entering and departing the port. However, it was felt by the Cairns Chamber of Commerce that the port of Cairns would be better served by forming a Harbour Board (Jones 1976 in **Appendix U**). With control of formerly privately-owned jetties, the CHB was able to instigate plans to redesign the harbour, wharves and foreshore, including continuous concrete wharves and a seawall.

In the early part of World War II, Cairns was used as an emergency port. However, after the fall of Singapore in February 1942, troops and naval traffic were rushed north to counter the Japanese push south. The Port of

Cairns was then classified as a 'Defended Port'. By mid-1942 the threat had eased and new plans for Cairns were put into place which resulted in the development of the port into a massive transshipment hub servicing the allied military need in North Queensland and the Pacific Theatre of Operations (S. Fowler pers. comm. In Buhrich 2016). Cairns was designated 'Fortress Cairns' and coastal and anti-aircraft defences were established.

Other World War II facilities included United States Navy Base, a Royal Australian Navy Base, Royal Australian Air Force (RAAF) flying boat base slipways, workshops, a floating dock at the mouth of Smiths Creek and a submarine boom at the mouth of Trinity Inlet.

By the late 1960s a thriving boat building industry had developed in the inlet, resulting in the development of the area on the north side of Smith's Creek, in front of the Bulk Sugar Terminal, including construction of a slipway and dry dock. Game boat fishing, particularly for marlin, resulted in an increase to the recreational small boat fleet. This period also saw the development of the local prawn industry and consequent construction of a trawler base upstream of the slipway at the mouth of Smiths Creek.

Tourism also became increasingly important in Cairns from the early 1980s. From this period onward, wharf facilities were increasingly turned over for tourism or demolished for the same purpose. Wharf Shed No. 1, for example, was demolished in 1984 in order to build a cruise liner terminal (Trinity Wharf) which was completed in 1986. Wharf Sheds No. 4 and 5 were also demolished in the 1990s. The No. 2 Wharf Shed then became the terminal for cruise liners.

B13.3.2 Desktop Review

B13.3.2.a Indigenous Cultural Heritage

Barron Delta DMPA and Pipeline

The desktop review found that there is a relatively extensive record of Indigenous cultural heritage surveys in the Cairns area, particularly in relation to proposed developments. Indigenous sites recorded in unpublished reports for developments in the project area (refer **Table B13-3**), identify middens, scar trees and stone tools, however no places were recorded in the immediate vicinity of the Barron Delta DMPA and pipeline and Tingira Street DMPA footprint.

The review of unpublished reports identified a number of relevant factors pertaining to Indigenous places, including:

- Tangible and non-tangible Aboriginal cultural heritage values remain despite urban and rural development.
- The high potential for middens and other evidence of marine use in coastal areas, particularly dunes systems and sand ridges.
- Intangible heritage places including story places, campsites and resource collection sites continue to hold significance to Aboriginal people in the study area even if they contain no material evidence.
- Individual stone tools continue to be found, particularly on agricultural land below a depth of 60cm.
- Cultural sites reflect the strong ties of Aboriginal people to marine resources in the past and present.
- The physical landscape is inhabited by Ancestral beings that provide tangible links between people, place and cultural practices in the past, present and future.
- Coastal archaeological sites are unlikely to be older than 5000 years old, although age does not affect the significance under the ACHA.

TABLE B13-3 INDIGENOUS SITES IDENTIFIED IN UNPUBLISHED REPORTS FOR THE PROJECT STUDY AREA

REPORT	SITES RECORDED	RELEVANCE
Grimwade & Cribb (1991). An assessment of the cultural resources of the Rainbow Harbour Development site, Yorkey's Knob, Cairns.	Yorkeys Knob a high resource area with relatively little disturbance. Stone tools – hammer stone, grindstone, axe – midden. Back of beach dunes.	Good potential for arch material in river mouths, mangroves, sand dunes.
Bottoms (1990). Djarragun: The Last of the Nesting. MA Thesis, James Cook University, Cairns.	Gingurai – story place at East Trinity associated with Damarri and the crocodile.	Evidence of story waters in physical landscape.
Grimwade (1994). Cultural Heritage Study: Proposed Development, Taylor Point, Trinity Beach, North Queensland	Midden	Potential for middens in coastal areas.
Cole & Van Acker (1996). Preliminary cultural heritage survey and monitoring, James Cook University.	Axes found on old cane farm	Individual stone tools still present despite farming activities.
David (1994). The Trinity Inlet Ethnographic Study: planning the management of traditional Yirrganydji, Yidinji and Gunggandji country. Unpublished report to Trinity Inlet Management	64 sites including middens, rock art, story places and contemporary use. Trinity Inlet highly significant to Gunggandji, Yidinji & Yirrganydji	Coastal areas retain high social & archaeological value to Aboriginal custodians.
Bird & Hatte (1995). Cairns International Airport Baseline Environmental Study.	Middens including post-contact items	Post contact use of Ellie Point.
Grimwade & Townrow (1996). Earl Hill Development, Captain Cook Highway, Cairns, Qld.	3 scarred trees, possible stone pounder	Scarred trees possible in extant vegetation.
Buhrich, Border, Skeene & Skeene (2008). Cultural Heritage Survey of Proposed Cairns International Airport Expansion Eastern and Western Development Sites. Cairns Port Authority.	19 Middens recorded on sand ridges east of the airport (Anadara granosa)	High potential for middens on sand ridges above high tide mark. Ellie Point significant cultural landscape.
Horsfall, N. (2009). Cultural Heritage Overview Cairns Transit Network. Cairns. Environment North.	Camps, massacres sites, graves, walking tracks, middens, story places, WWII sites	Breadth of Aboriginal site types – some pre settlement but post contact sites also important to Aboriginal people.
Converge Heritage + Community Pty Ltd. (2013). Aquis Resort at Great Barrier Reef: Indigenous Cultural Heritage Review. Cairns.	From state database - 3 shell middens, one with hearth	Middens on river systems where relatively undisturbed. These sites should be ground truthed.
Buhrich, A. (2014). Yirrganydji Intangible Cultural Heritage Values, AQUIS Development Site, Yorkeys Knob. Converge Heritage.	Contemporary importance to Yirrganydji individuals	Contact sites continue to hold significance to Aboriginal people
Buhrich, A. (2014). Skeene stone tool collection.	Axe found in backyard during excavation for pool, Machans Beach	Potential for stones under surface even in urban environment

The state heritage database records a number of Aboriginal cultural places in the study area, including Aboriginal middens, story places and contact sites, however the reliability of records is variable and ground surveys are necessary to determine precise locations and integrity of the sites.

The Northern Sands DMPA site is extensively disturbed by agriculture and sand quarrying and not likely to contain any material of Aboriginal heritage. Yirrganydji oral history records a camp on the southern banks of the intersection of the Barron River and Thomatis Creek outside the footprint of the DMPA.

Tingira Street DMPA

No cultural heritage sites were identified on the Tingira Street site due to:

- the original vegetation, consisting of a tidal mangrove estuary, would have restricted any human activity
- past human activities were probably restricted to resource gathering such as fishing and crabbing are unlikely to leave cultural material
- the site has been subject to extensive land disturbance including clearing of vegetation and infilling with material brought from elsewhere.

Channel and Wharf Side Works

The shipping channel contains places of significance to multiple Aboriginal parties. The waterway is associated with travels of the ancestors including Gudju Gudju (rainbow serpent), Damarri and Guyulu and the Cassowary Story.

The channel and wharveside works area occurs within the Cairns Tidal Wetlands which is listed on the Australian Places Heritage Inventory (APHI) for its significant heritage values, including unusual and diverse combinations of landform and habitat zones for several rare and endangered birds, nursery habitat for fish, prawn and crab and examples of sand ridges once common in the Cairns area. The APHI notes the area also contains significant Indigenous values, presumably associated with the marine resources, story places and potential for archaeological remains.

B13.3.2.b Non-Indigenous Cultural Heritage

Barron Delta DMPA

Following clearing by early pioneers in the mid-1800s, the Barron Delta DMPA has been used for agriculture; in more recent times the area has almost exclusively been used for sugar cane production and since the 1990s a sand quarry has operated on the site. No items of non-Indigenous cultural heritage have been recorded on site.

Tingira Street DMPA

A search of Cairns Regional Council website heritage pages revealed that Tingira Street is named after the SS Tingira which regularly brought goods and passengers from Brisbane to Cairns prior to the 1930s.

Following the discovery of the Trinity Inlet explorers, timber-getters, traders and miners travelling to the goldfields constructed a port area nearer to the mouth of the Inlet at 'Battle Camp' or 'Smiths Creek' in the vicinity of the current east extent of Abbott Street. None of the early European landing sites or camps were located on the Tingira Street site.

A review of historic aerial photographs of the Cairns area between 1949 and 1990 showed that the Tingira Street DMPA remained undisturbed mangrove vegetation until shortly before 1983, when it began to be cleared and reclaimed for port development.

A search of relevant registers and databases identified no non-Indigenous heritage sites listed on Queensland Heritage Register, CairnsPlan2016, Australian National Shipwreck Inventory, Qld WWII Historic Places or National Heritage List that relate to the Tingira Street site.

Channel and Wharf Side Works

The Cairns Shipping channel contains significant non-Indigenous heritage including evidence of European exploration, shipwrecks and World War II remnants such as the 1878 Bessie Point Hydrographic Survey Benchmark and Submarine Boom Net foundations, however these sites are all outside the footprint of the proposed shipping channel.

At least two historic shipwrecks, one of which is protected under the HSA, are possibly partly located within the proposed Crystal Swing Basin, however the exact locations and integrity of the wrecks is unknown and it is noted that such material has not been picked up in any previous maintenance dredging programs.

The wharf area was the site of the first landing of Europeans on what was to become the city of Cairns. The wharf area was reclaimed in the 1940s. Reclamation involved filling in the mouths of Lily and Alligator Creeks, which once housed a fishing settlement known as Malay Town (**Figure B13-4**). There is a possibility some remnants of Malay Town exist under the southern end of the existing wharves.



Figure B13-4 Malay Town, Alligator Creek, before 1934.

Source: Cairns Historical Society.

The Trinity Wharf complex incorporates a Queensland Heritage Registered place (Cairns Wharf Complex Place ID:601790) for aesthetic, scientific, historic and social values.

Wharf 6 contains different historical values and construction techniques to those of Wharves 1-5. The Queensland Heritage Register report noted the significance of Wharf 6 as:

The construction of number 6 wharf in 1942 demonstrates the importance of Cairns as a centre for Pacific forces during World War II and its timber and reinforced concrete construction reflects war-time expediency.

Extent Heritage 2016 (**Appendix U**) noted that:

Wharf 6 represents physical evidence of the role of Cairns in WW2 and its demolition will remove this historical connection. It may be noted, however, that the timber substructure has only ever been visible from the seaward side and, as there is no apparent difference between Wharf 6 and the other five wharves, this aspect of its significance has not been apparent to most observers. Nonetheless, there is no other primary evidence of the impact of WW2 upon the waterfront at Cairns associated with the Trinity Wharves, although there may be evidence in other locations within Cairns.

B13.3.3 Aspirations of Aboriginal Parties

Each of the Aboriginal parties maintains strong aspirations to manage their land and culture for social, cultural and economic outcomes for present and future generations. The following aspirations are not exhaustive, they are a summary of information obtained through planning documents and consultation with key representatives of Aboriginal parties.

B13.3.3.a Yirrganydji

Yirrganydji Gurabana Aboriginal Corporation is the Aboriginal party for the Northern Sands placement area. Consultation with Jeanette Singleton, Chair of YAC, identified the following issues:

- Yirrganydji are concerned about potential impacts to marine resource for current and future generations. They note the impact dredging has had historically on the marine resource in the Cairns area.
- Yirrganydji welcomes long-term employment opportunities outcomes from the proposed project for caring for country (ranger) or mainstream economies.
- The YAC want to be recognised as sole custodians for the area from Trinity Inlet to Port Douglas. They consider it appropriate to be recognised as custodians through interpretive material placed at Trinity Wharves as part of the proposed upgrade.
- Jeanette Singleton has advised a proposed sea country claim incorporates part of the shipping channel.
- An agreement may need to be developed between YAC and Ports North regarding native title rights and interests.

Dawul Wuru Aboriginal Corporation (Dawul Wuru) operate independently of YAC, although some individuals serve on the Board of both corporations. While YAC are the Aboriginal party under the AHCHA, Dawul Wuru have entered into a Traditional Use of Marine Resources Agreement (TUMRA) with Great Barrier Reef Marine Park (GBRMPA). Dawul Wuru aspirations are described in Yirrganydji Kupul-Wu Mamangal: 'Looking after Yirrgaydji Sea Country' (2014). The following aspirations are relevant:

- protection, conservation and sustainability of the reef, resources and sea country
- continuing, preserving, expressing and sharing cultural values including management of sites
- creating business, employment and other economic activities for Yirrgayndji people
- building partnerships to ensure effective management of sea country.

Dawul Wuru currently oversee a Land and Sea Ranger Program to meet these objectives.

B13.3.3.b Mandingalbaj Yidinji

Mandingalbaj Yidinji Aboriginal Corporation currently manage portions of land at East Trinity (including areas over which Native Title has been determined) as a conservation area (IPA) and have strong aspirations to develop a tourism enterprise that includes development of a nature reserve, tourism infrastructure, guided tours, nursery and arboretum, commercial boat ramp and water taxi/ferry landing at the existing tramway. MY also have interests in the shipping channel. Cruise ships and Chinese visitors are identified as the major source of markets to the MY proposal.

B13.3.3.c Gimuy Walubara Yidinji

Gimuy Walubara Yidinji maintain interests in the shipping channel and Trinity Wharves. Consultation with Gudju Gudju (formerly known as Seith Fourmile) identified the following issues:

- There are three significant GWY story places within or adjacent to the shipping channel
 - The Cassowary story associated with Admiralty Island and the inlet, including surrounding estuaries. This is a highly significant spiritual landscape for GWY.
 - A Story Rock, destroyed for shipping expansion, possibly in the 1940s or 50s, near the eastern end of Admiralty Island. Even though the rock is no longer extant the area continues to be significant.
 - Wharf 1 is the location of a story place that links coastal and Tableland Yidinji people.
- Art and interpretive material included as part of the new development should be culturally appropriate for Aboriginal custodians (e.g. local artists). Protocols should be developed to create an art and interpretive material policy.
- Effects of the project on the broader environmental health including not only the local mangroves and estuaries but the reef broader environment.

B13.3.3.d Other Aboriginal Groups

Yarrabah residents and other Aboriginal people may also have interests, particularly in marine resources at East Trinity, Barron Delta and within and adjacent to shipping channel. Any interests outside of the relevant Aboriginal parties are discussed in **Chapter B9** (Socio Economic).

B13.4 Assessment of Potential Impacts

B13.4.1 Impact Assessment Methodology

B13.4.1.a Risk-based Assessment

The following impact assessment has been undertaken for each of the matters described in the previous chapter. It uses the risk-based process adopted for the Revised Draft EIS as outlined in **Chapter A1** (Introduction) and includes an assessment of the following:

- the magnitude of impacts (significance / consequence) (**Table B13-4**)
- the duration of impact (**Table B13-5**)
- the likelihood of impact (**Table B13-6**).

These are considered together to determine the final level of impact risk, which is described in **Table B13-7**.

B13.4.1.b Impact Significance / Consequence Criteria

Impact significance / consequence criteria are different for each matter under discussion. **Table B13-4** shows the criteria used for this chapter.

TABLE B13-4 DEFINITION OF ICH AND NICH IMPACT SIGNIFICANCE (CONSEQUENCE)

IMPACT SIGNIFICANCE/ CONSEQUENCE	DESCRIPTION
Very High	<p>DATSIMA registered sites and currently unknown cultural heritage sites and areas will be completely removed and the cultural values lost.</p> <p>Destruction of national or state significant NICH places or AMSDB places older than 75 years. Heritage values of a place on the national or state registers will be totally removed and the heritage values lost.</p> <p>There are no mitigation measures that can be applied to reduce the significance of impact.</p> <p>Prosecution under the ACH Act, the QHA or the HSA. Community outrage expected.</p>
High	<p>DATSIMA register and currently unknown cultural heritage sites and areas will be partly removed and the cultural values of these sites partially lost.</p> <p>Widespread impact on national or state significant NICH places or AMSDB places older than 75 years. Heritage values of a place on the national or state register will be largely removed and the heritage values lost to such an extent that the significance of the place is made redundant.</p> <p>Destruction of LHR NICH places or AMSDB places younger than 75 years. Mitigation measures can be applied to reduce the significance of impact. Possible prosecution under the ACH Act, the QHA or the HSA. Community outrage possible.</p>
Moderate	<p>Partial removal of DATSIMA registered sites and currently unknown cultural heritage sites with partial loss of cultural values with agreement of Aboriginal party (ies).</p> <p>Localised impact on national or state significant NICH places. Heritage values at a national or state level may be partially impacted, but not sufficient to remove all heritage values.</p> <p>Widespread impact on LHR NICH places or AMSDB places younger than 75 years. Heritage values of the place on the LHR or AMSDB will be partially removed, but not to the extent that the significance of the place is made redundant.</p> <p>Mitigation measures can be implemented to reduce the significance of the impact. Moderate level of public concern.</p>

(Continued over)

IMPACT SIGNIFICANCE/ CONSEQUENCE	DESCRIPTION
Minor	Impacts on ICH will occur, but are acceptable under the terms of the CHMPs. Impacts at a local level will occur to NICH places, but are easily mitigated. Nevertheless, they are of relevance in enhancing the design and in the consideration of mitigation measures. Little public concern.
Negligible	Negligible impact on sites of cultural heritage significance.
Beneficial	Heritage values of a national, state or local NICH sites are enhanced. The beneficial impacts may be low, moderate or high.

Table B13-5 shows the general approach to classifying the duration of the identified impacts.

TABLE B13-5 CLASSIFICATION OF THE DURATION OF IDENTIFIED IMPACT

Relative duration of impacts	
Temporary	Days to months
Short Term	Up to one year
Medium Term	From one to five years
Long Term	From five to 50 years
Permanent / Irreversible	In excess of 50 years

B13.4.1.c Likelihood of Impact

Likelihood of impact is described in **Table B13-6**.

TABLE B13-6 LIKELIHOOD OF IMPACT

LIKELIHOOD OF IMPACTS	RISK PROBABILITY CATEGORIES
Highly Unlikely	Highly unlikely to occur but theoretically possible
Unlikely	May occur during construction of the project but probability well below 50%; unlikely, but not negligible
Possible	Less likely than not but still appreciable; probability of about 50%
Likely	Likely to occur during construction or during a 12 month timeframe; probability greater than 50%
Almost Certain	Very likely to occur as a result of the proposed project construction and/or operations; could occur multiple times during relevant impacting period

Risk is described as the product of likelihood and consequence as shown in **Table B13-7**.

B13.4.1.d Risk Matrix

TABLE B13-7 RISK MATRIX

Likelihood	Significance				
	Negligible	Minor	Moderate	High	Very High
Highly Unlikely/ Rare	Negligible	Negligible	Low	Medium	High
Unlikely	Negligible	Low	Low	Medium	High
Possible	Negligible	Low	Medium	Medium	High
Likely	Negligible	Medium	Medium	High	Extreme
Almost Certain	Low	Medium	High	Extreme	Extreme

The rating of risk assessed above is shown in **Table B13-8** below.

B13.4.1.e Risk Rating

TABLE B13-8 RISK RATING LEGEND

Extreme Risk	An issue requiring change in project scope; almost certain to result in a 'significant' impact on National and State places of ICH or NICH with no mitigation potential
High Risk	An issue requiring further detailed investigation and planning to manage and reduce risk; likely to result in a 'significant' impact on National or State places of ICH or NICH with no mitigation potential
Medium Risk	An issue requiring project specific controls and procedures to manage
Low Risk	Manageable by standard mitigation and similar operating procedures
Negligible Risk	No additional management required

B13.4.1.f Role of Mitigation

In accordance with the adopted impact assessment process, impacts are assessed in **Section B13.4.3** and **Section B13.4.4** in the absence of mitigation. Recommended mitigation actions and residual impacts are described in **Section B13.5**.

Certain actions (i.e. such as cultural heritage monitoring of cleared areas are standard construction management) are assumed to be in-scope (i.e. not a mitigation recommendation). See 'Assumptions' below.

B13.4.2 Impact Definitions

Whilst the study area comprises a part of Trinity Inlet and the waters to the seaward side of Cairns in Trinity Bay, the area of direct impact of the project will be limited to the expansion of the channel and swing basins and the upgrading of the wharves within the QHR Cairns Wharf Complex and associated service infrastructure installation. Indirect impacts on cultural heritage of the marine environment may also potentially be associated with adverse water quality from sediment plumes resulting from the placement of dredged material and consequent impacts on fish resources, dugongs and turtles. Chapter B5, Marine Water Quality and Chapter B7, Marine Ecology outline potential impacts on the marine environment. The findings of these chapters are that the project is not expected to result in a significant impact on critical habitat that supports traditional resources.

Assessment of the significance (consequence) of potential direct impacts resulting from the project on the ICH and NICH places and values of the development area has been based on the following:

- The location of the Northern Sands DMPA, inlet and tailwater pipelines and tailwater ponds will be micro-located to minimise the requirement to clear riparian areas.
- The location of the Northern Sands DMPA, inlet and tailwater pipelines and tailwater ponds will be micro-located to avoid the Yirrganydji camp on the banks of Thomatis Creek to the north of the existing Northern Sands void.
- A buffer of 80 m from the Thomatis Creek line will be maintained as part of its environmental conditions and this is considered adequate to protect the cultural values of the Yirrganydji camp.
- The location of the Northern Sands DMPA, inlet and tailwater pipelines and tailwater ponds will be micro-located to avoid the Thomatis Creek middens and possible scar tree on the northern bank of Thomatis Creek.
- The Northern Sands DMPA, inlet and tailwater pipelines, tailwater ponds booster pumps and laydown areas associated with the inbound pipeline are located in areas with no known places of NICH (e.g. agricultural areas), and therefore have no direct impact NICH.
- The maximum clearing width for both the inlet pipeline and the tailwater discharge outlet pipeline is 10 m (this will be minimised where possible).
- Areas of disturbance will be rehabilitated following decommissioning of the pipelines. This is in-scope (i.e. not a mitigation recommendation).
- There will be a 10-15 m buffer between the edge of the bunds and the mangrove vegetation at Tingira Street study area.

B13.4.3 Indigenous Cultural Heritage

B13.4.3.a Northern Sands and Pipeline

ICH places in the vicinity of the project area are shown on **Figure B13-5**.

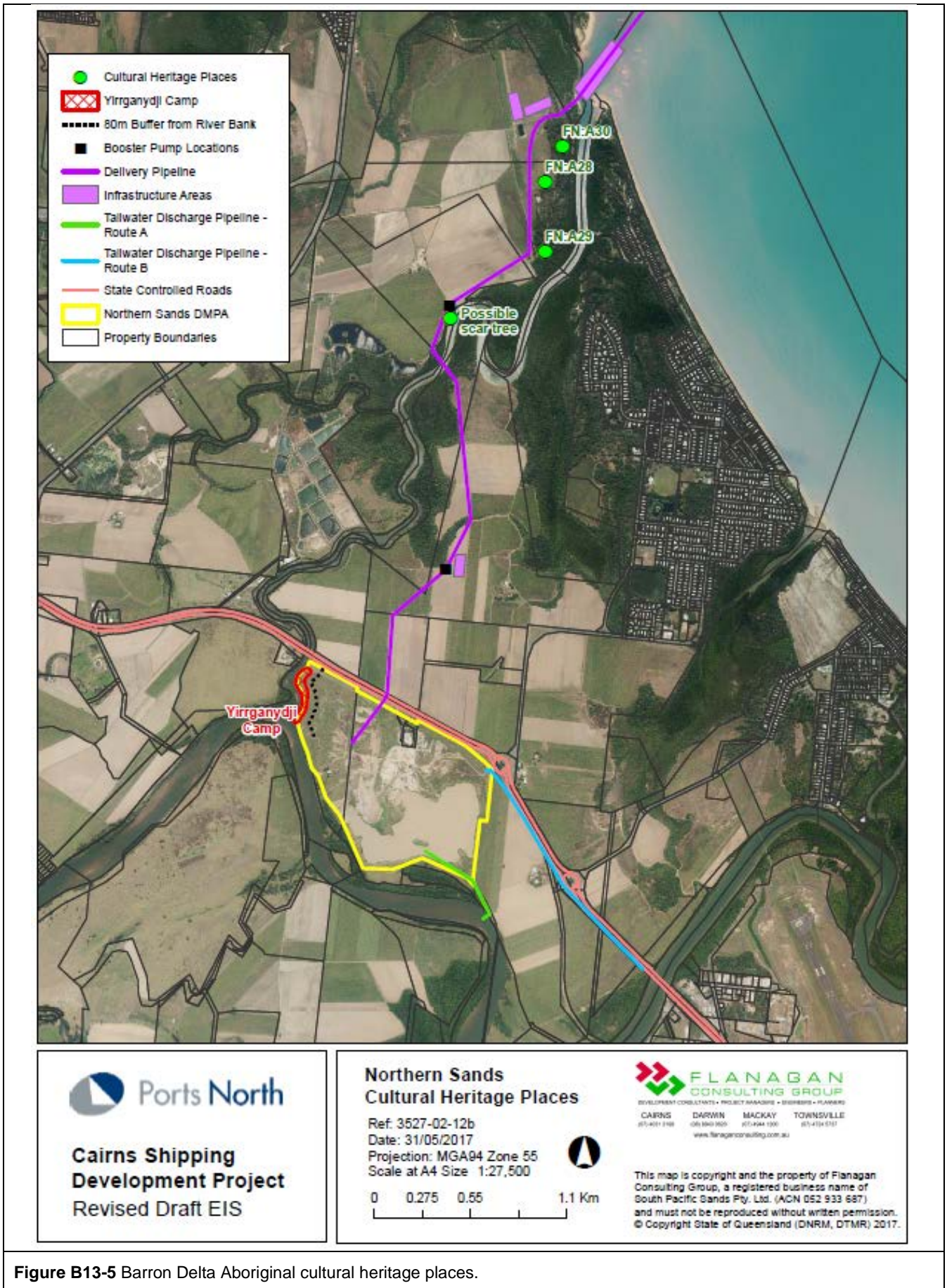


Figure B13-5 Barron Delta Aboriginal cultural heritage places.

Yirrganydji Camp

Yirrganydji oral history identifies a pre and post contact camp on the banks of Thomatis Creek, to the north of the existing quarry (J. Singleton pers. comm.). This would have been an attractive location, on the confluence of Barron River and Thomatis Creek, and also halfway between the coast and significant ceremonial grounds near Freshwater Creek.

The camp area is heavily vegetated with grass and tree plantings and it is unlikely any archaeological values remain. Further work could be conducted to determine the exact location of the creek bank over time, as extreme floods have caused the banks to move in the past. The bank is currently hardened with rock fill.

Northern Sands currently maintains a buffer of 80m from the creek line as part of its environmental conditions and this is considered adequate to protect the cultural values of the Yirrganydji camp. According to the ACHA significant Aboriginal sites in Queensland are identified by the relevant Aboriginal party, so even if no archaeological material is present, the site has been identified as a significant Yirrganydji place and should be avoided by future work.

Assessment Summary

Assessment Summary	Yirrganydji Camp
Significant Values	Aboriginal
Threshold	Regional
Integrity	Low
Predicted Impact	Within Project Area
Mitigation	Avoid with Buffer or manage through CHMP

Risk Assessment Summary

Risk Assessment (impact summary prior to mitigation)

Consequence: Moderate

Likelihood: Highly unlikely

Duration: Permanent /Irreversible

Level of Risk: Low

Thomatis Creek Middens & Possible Scar Tree

Thomatis Creek contains extensive marine resources, including mangroves, mud mussel, fish, stingray that were and continue to be exploited by Aboriginal people. The area also has land based bush tucker including fruit trees. Three middens are recorded on the AQUIS site north of Thomatis Creek, one was investigated with George Skeene **Figure B13-5**. A possible scar tree has been recorded on the southern bank of Thomatis Creek. These sites should be avoided and managed through a CHMP with Yirrganydji Gurabana Aboriginal Corporation.

Assessment Summary

Assessment Summary	Thomatis Creek Middens and Possible Scar Tree
Significant Values	Aboriginal
Threshold	Regional
Integrity	Unknown, probably low
Predicted Impact	Nil- outside project footprint
Mitigation	Avoid

Risk Assessment Summary

Risk Assessment (impact summary prior to mitigation)

Consequence: Minor

Likelihood: Unlikely

Duration: Permanent /Irreversible

Level of Risk: Low

Potential Indigenous Heritage Places

Sand ridges have a high potential for Indigenous sites. The northern pipeline route crosses a sand ridge, and will need to be surveyed in detail prior to removal of any vegetation, in accordance with a CHMP. Similarly the potential pipeline routes cross small sections of remnant vegetation and these will require detailed survey prior to commencement of work.

It is possible that further significant Indigenous areas relating to either Indigenous tradition or Indigenous history under the meaning given in the ACH Act may be directly impacted by the project. Consultation with aboriginal parties has not identified any concerns in regards to direct or indirect impacts of the project to date, therefore the likelihood of an impact occurring is unlikely. This will be confirmed through the CHMP process. The significance of any impact on these places would be high; therefore the risk rating of this impact would be medium without mitigation being put in place.

All potential impacts to Aboriginal story places will be managed through CHMPs developed with each individual group.

Assessment Summary

Assessment Summary	Potential Indigenous Heritage Places
Significant Values	Aboriginal
Threshold	Regional
Integrity	Unknown, probably low
Predicted Impact	Within Project Area
Mitigation	Pre-construction Surveys; manage with CHMP

Risk Assessment Summary

Risk Assessment (impact summary prior to mitigation)

Consequence: Moderate

Likelihood: Unlikely

Duration: Permanent /Irreversible

Level of Risk: Low

B13.4.3.b Cairns Shipping Channel

A search of relevant databases and registers identified two Aboriginal cultural heritage values potentially impacted by the dredging of Trinity Inlet:

Story Places

The Cairns Shipping channel contains Aboriginal stories relating to the travels of ancestral beings including Gudju Gudju (rainbow serpent), Damarri and the crocodile and the boomerang story, the Cassowary story and others. Aspects of the stories may be shared by Aboriginal parties, but each group maintains individual interests and connections to their own stories and cannot speak on behalf of another group's story places.

YAC and MY advised these story places will not be impacted by the proposed work (J. Singleton, D. Mundraby pers. comm.).

GYW raised specific concerns about potential impacts to the Cassowary Story associated with Admiralty Island and Trinity Inlet and expressed the desire to control a long term environmental and cultural monitoring program of story places in the Inlet. Development of a CHMP (by both parties) will confirm any final agreements.

Assessment Summary

Assessment Summary	Aboriginal Story Places
Significant Values	Cultural Landscape
Threshold	National
Integrity	High
Predicted Impact	Unassessed
Mitigation	Develop appropriate management strategies through CHMPs with Aboriginal parties individually.

Risk Assessment Summary

Risk Assessment (impact summary prior to mitigation)

Consequence: Moderate

Likelihood: Unlikely

Duration: Permanent /Irreversible

Level of Risk: Low

Cairns Tidal Wetlands

Cairns Tidal wetlands comprise of tall dense mangroves and salt marshes in the Trinity Inlet and Barron River delta. The area is listed on the Australian Places Heritage Inventory (APHI) for its significant natural heritage values, which include unusual and diverse combination of landform and habitat zones for several rare and endangered bird species as well as nursery habitat for fish, prawn and crab. It includes some of the few remaining examples of sand ridges, once common in the Cairns area. The APHI notes the area also contains significant Indigenous values, presumably associated with the marine resources, story places and potential for archaeological remains.

All Aboriginal parties raised concerns about the ongoing impact to marine and terrestrial resources from the proposed dredging and land placement. For Aboriginal people, cultural heritage and environmental resources are not separate, the health of the animals, plants and waterways, both locally and regionally, are significant concerns.

Results of environmental assessments should be provided to Aboriginal parties, through face to face meetings with the individual Aboriginal groups.

Assessment Summary

Assessment Summary	Trinity Inlet Tidal Wetlands
Significant Values	Natural and Cultural Landscape
Threshold	National
Integrity	High
Predicted Impact	Low
Mitigation	Minimise impacts on health of natural environment. Work with relevant Aboriginal parties to ensure minimal impacts to Aboriginal cultural landscape

Risk Assessment Summary

<p>Risk Assessment (impact summary prior to mitigation)</p> <p>Consequence: Moderate</p> <p>Likelihood: Highly Unlikely</p> <p>Duration: Permanent /Irreversible</p> <p>Level of Risk: Negligible</p>
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B13.4.3.c Tingira Street DMPA

No significant cultural heritage places were identified on the Tingira Street site during consultation with the Aboriginal parties. No concerns were raised about the impacts from dredge spoil location on the Tingira Street site, considering the extent of previous disturbance. The Aboriginal parties did raise concerns about potential impacts from the overall project on intangible cultural heritage, specifically the marine resources and story places around Trinity Inlet. Assessments of impacts on Aboriginal story places and Cairns Tidal Wetlands are also applicable to the Tingira Street DMPA.

B13.4.4 Non-Indigenous Cultural Heritage

B13.4.4.a Northern Sands and Pipeline

There is a low potential for impact to non-Indigenous heritage at the Northern Sands site or on the pipeline route. One local heritage site (Old Smithfield Township) is upstream of the Northern Sands site; impacts are only relevant if the proposed dredge material placement area is expanded from the current Northern Sands proposed area.

B13.4.4.b Cairns Shipping Channel

The Cairns Shipping channel contains significant non-Indigenous heritage including evidence of European exploration, shipwrecks and World War II remnants. These sites are all outside the footprint of the proposed shipping channel. A preliminary acoustic survey conducted in the existing channel and a number of passes in the study area for the Draft EIS did not identify any potential shipwrecks.

Shipwrecks

At least two historic shipwrecks, one of which is protected under the HSA, are possibly partly located within the proposed Crystal Swing Basin (**Figure B13-6**). It is difficult to determine (given the accuracy of the location data) the exact location and integrity of the wrecks however, a search of the AHSDB shows the Adieu, A.P.A. and the Mary may be located in the vicinity of the proposed expansion to the swing basin. The Adieu (Shipwreck ID 2127) was a sailing vessel that sank in Cairns Harbour in 1895. Mary (Shipwreck ID 2838) was a cutter that sank in Trinity Inlet in 1909. A.P.A. (Shipwreck ID 2115) was a hulk that was wrecked in Trinity Inlet in 1961.

It has also been stated (Ryle 2006) that the loading of Catalina's during World War II resulted in some armaments being accidentally dropped into Trinity Inlet. The veracity of the data and the likely dispersal of material as a result of tidal action on the shipwrecks through time suggest that it is possible that some material may be located within the areas proposed for dredging. It is also noted that no shipwreck or historic material has been located during the current annual maintenance dredging of the existing channel and swing basin.

Assessment Summary

	Shipwrecks		
Assessment Summary	Adieu	Mary	A.P.A.
Significant Values	Historic	Historic	Historic
Threshold	National	State	Unassessed
Integrity	Unknown, probably low	Unknown, probably low	Unknown
Predicted Impact	Low	Low	Low
Mitigation	Avoid	Avoid	Avoid

Risk Assessment Summary

<p>Risk Assessment (impact summary prior to mitigation)</p> <p>Consequence: Moderate</p> <p>Likelihood: Unlikely</p> <p>Duration: Permanent /Irreversible</p> <p>Level of Risk: Low</p>
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 <p>Cairns Shipping Development Project Revised Draft EIS</p>	<p>Cairns Shipping Channel Cultural Heritage Places</p> <p>Ref: 3527-02-11 Date: 19/05/2017 Projection: MGA84 Zone 55 Scale at A4 Size: 1:35,000</p>  	 <p>DEVELOPMENT CONSULTANTS • PROJECT MANAGERS • ENGINEERS • PLANNERS</p> <p>CAIRNS DARWIN MACKAY TOWNSVILLE 075 401 1146 081 940 9201 075 404 1300 075 410 6707 www.flanaganconsulting.com.au</p> <p><small>This map is copyright and the property of Flanagan Consulting Group, a registered business name of South Pacific Sands Pty. Ltd. (ACN 052 933 687) and must not be reproduced without written permission. © Copyright State of Queensland (DNRM, DTMR) 2017. © Great Barrier Reef Marine Park Authority 2016.</small></p>
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Figure B13-6 Cairns Shipping Channel non-Indigenous cultural heritage sites.

B13.4.4.c Tingira Street

None of the early European landing sites or camps were located on the Tingira Street site. A search of relevant registers and databases identified no non-Indigenous heritage sites listed on Queensland Heritage Register, CairnsPlan 2016, Australian National Shipwreck Inventory, Qld WWII Historic Places or National Heritage List that relate to the Tingira Street site.

B13.4.4.d Trinity Wharf Complex and Associated Areas

Trinity Wharves were constructed between 1910 and 1942 and are listed on the Queensland Heritage Register for aesthetic, scientific, historic and social values. Therefore any potential impacts to Trinity Wharves 1-6 need to be considered under the Queensland Heritage Act 1992. Impacts are discussed in detail in **Appendix U**.

The wharf area was the site of the first landing of Europeans on what was to become the city of Cairns. The wharf area was reclaimed in the 1940s. Reclamation involved filling in the mouths of Lily and Alligator Creeks, which once housed a fishing settlement known as Malay Town. There is a possibility some remnants of Malay Town exist under the southern end of the existing wharves.

The reinforced concrete wharves at Cairns demonstrate that many cutting edge technologies and advancements in engineering were adopted (or were located) in regional Australia well before they appeared in the major population centres (which tended to be conservative in this respect). The recognition that regional Australia was well-informed and up-to-date regarding significant world developments is important in understanding the course of Australia's historic and economic development. (**Appendix U**).

Wharves 1-5

Wharves 1-5 are the oldest surviving reinforced concrete wharf structure in Australia and the second oldest outside Europe. In addition, the wharves demonstrate technical advancement in regional Australia. The existing wharf structure is not capable of safely berthing ships of significant size and weight. The current concept design is to install berthing/mooring dolphins cut into Wharves 1-5. The dolphins will sit on their own steel pile system and concrete caps will be level with the existing concrete slab, reducing visual impact. Additional mooring dolphins will sit independently of the wharf structure.

The removal of sections of deck to allow the installation of independent mooring dolphins, whilst clearly not ideal in heritage terms, may be the least worst option available for the future conservation of Wharves 1 - 5. The wharves are fundamentally utilitarian items of infrastructure that must serve their purpose (there are few, if any, practical opportunities for repurposing the wharf in the Cairns context) and their continued use for their designed purpose is the most preferable outcome in heritage terms. It is not unusual for any item of infrastructure to be modified and/or upgraded to maintain its utility and, in this case, the opportunity exists for the wharf, if modified, to continue to serve a significant economic role for at least several decades into the future. The options analysis undertaken in the Draft EIS established that, if Wharves 1 – 5 are to serve as the cruise ship berths for Cairns, this is least interference required to achieve the attendant level of operation (**Appendix U**).

Wharves 6

The current proposal includes the demolition of Wharf 6. Wharf 6 contains different historical values and construction techniques to those of Wharves 1-5. The particular significance of Wharf 6, as noted in the Queensland Heritage Register report, is:

'The construction of number 6 wharf in 1942 demonstrates the importance of Cairns as a centre for Pacific forces during World War II and its timber and reinforced concrete construction reflects war-time expediency.

Wharf 6 represents physical evidence of the role of Cairns in WW2 and its demolition will remove this historical connection.

It may be noted, however, that the timber substructure has only ever been visible from the seaward side and, as there is no apparent difference between Wharf 6 and the other five wharves, this aspect of its significance

has not been apparent to most observers. Nonetheless, there is no other primary evidence of the impact of WW2 upon the waterfront at Cairns associated with the Trinity Wharves, although there may be evidence in other locations within Cairns. It is inevitable that Wharf 6 will be demolished at some time, as the timber substructure will continue to degrade and the poured-in-situ concrete deck makes the replacement of timber fabric extremely difficult. Puncturing the deck to gain access to the substructure (to the degree necessary) would seriously compromise the structural integrity of the deck, probably requiring its replacement in any case. Consequently, it is reasonable to contemplate alternative approaches to the retention of the significance of the wharf (**Appendix U**).

Existing Wharf 6 is in poor condition and demolition is proposed (refer Appendix C of **Appendix U**). An assessment of the extent of structural deterioration of Wharf 6 is provided in **Appendix AE**. Wharf 6 is currently in very poor structural condition due to the severe deterioration of the timber piles, headstocks, timber girders and concrete deck. Testing of these key structural components has confirmed that significant loss of strength and durability has occurred and is continuing to occur at an increasing rate. The failure of any of these structural elements could result in catastrophic collapse of the deck and could endanger users and equipment. The assessment also found that Wharf 6 does not comply with current Australian Standards and is not fit for purpose.

Assessment Summary

Assessment Summary	Trinity Wharf Complex
Significant Values	Aesthetic, Scientific, Historic, Social
Threshold	National
Integrity	High
Predicted Impact	Low
Mitigation	Begin development application process for required approvals from Queensland Heritage Council using Statement of Heritage Impact (Appendix U)

Risk Assessment Summary

<p>Risk Assessment (impact summary prior to mitigation)</p> <p>Consequence: Moderate</p> <p>Likelihood: Almost Certain</p> <p>Duration: Permanent /Irreversible</p> <p>Level of Risk: High</p>

Malay Town

Malay Town was a notorious multiracial camp on the banks of Lily Creek that grew from the late 1890's until Cairns Harbour Board demolished it from 1941 onwards as part of the Alligator Creek land reclamation (**Figure B13-7**). The Cairns Post documents numerous reports of drunkenness, violence, deaths, illegal fishing, gambling, arson, plague, vagrancy and general untidiness of the residents that included Chinese, South Sea Islanders, Melanesians, Malays, Timorese, as well as Aboriginal and Torres Strait Islanders and other people associated with the pearling, beche-de-mer and fishing industries. Artists Donald Friend and Ian Fairweather painted Malay Town and residents, attracted by the relaxed lifestyle and northern characters.

The Pitt and Douglas families from Torres Straits were notable residents. It is possible that remnants of Malay Town still exist under the reclamation of Alligator and Lily Creek near the southern end of the Trinity Wharf complex.

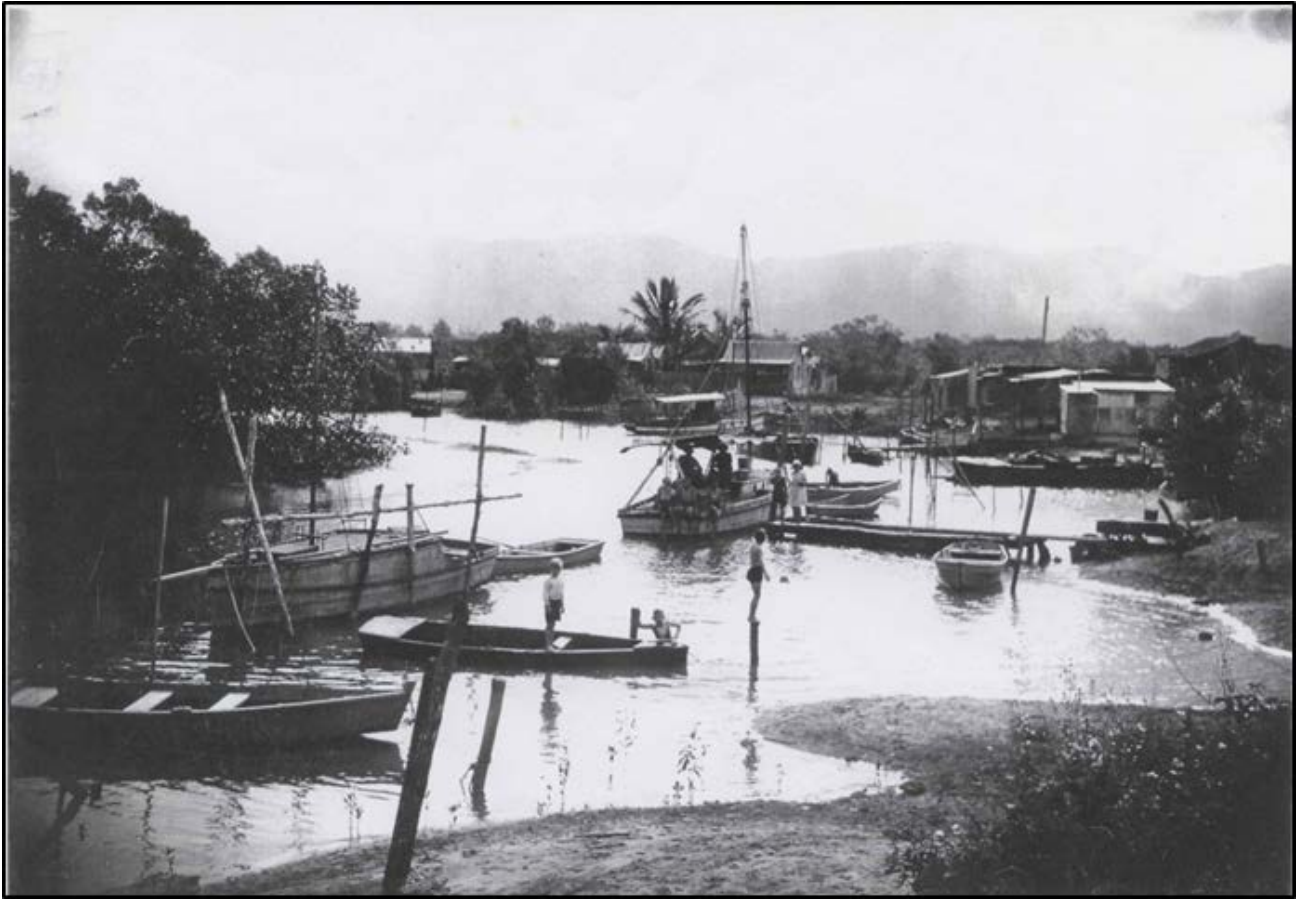


Figure B13-7 Malay Town, Alligator Creek before 1934.

Source: Cairns Historical Society.

Assessment Summary

Assessment Summary	Malay Town
Significant Values	Scientific
Threshold	Local
Integrity	Unknown, probably low
Predicted Impact	Low
Mitigation	Monitoring by qualified archaeologist

Risk Assessment Summary

Risk Assessment (impact summary prior to mitigation)

Consequence: Moderate

Likelihood: Unlikely

Duration: Permanent /Irreversible

Level of Risk: Low

B13.5 Recommended Mitigation Measures and Residual Impacts

B13.5.1 Proposed ICH Mitigation Measures

On the basis of desktop review, analysis of legislative requirements, initial consultation with relevant Aboriginal parties and site inspections, it is recommended that the following measures are taken to ensure any potential ICH impacts are minimised or mitigated:

- CHMPs will need to be developed with YAC and should include precautionary measures such as survey of the proposed pipeline at Northern Sands.
- The existing 80 metre buffer from waterways, as per existing quarry conditions, should be retained to ensure an adequate buffer around the Yirrganydji camp. This should be confirmed during further site inspections with Yirrganydji representatives during development of the CHMP.
- Develop a CHMP with GWY regarding management of impacts to story places within and adjacent to the Shipping Channel.
- Facilitate face to face meetings with the Aboriginal parties regarding potential environmental impacts.
- Address Native Title implications prior to commencement of any works.
- Aboriginal parties should be kept informed during design, construction and operation of the project about the potential impacts and results of monitoring the environmental health of the mangroves, rivers, creeks and harbour from the proposed project.

As a minimum, the CHMPs for the project will contain the following in accordance with Part 7 of the ACH Act:

- approaches that will manage avoidance of harm to ICH, or if harm cannot reasonable be avoided, to minimise harm
- the reasonable requirements and methodologies for carrying out cultural heritage surveys and preparing cultural heritage survey reports
- ways in which acceptable management or mitigation of ICH will be conducted
- arrangements to ensure workplace health and safety requirements are observed during cultural heritage surveys and management or mitigation work programs
- arrangements for notification about project activities and work programs, including project area access
- a dispute resolution process
- a new finds process
- DETAILS of Cultural Awareness Training.

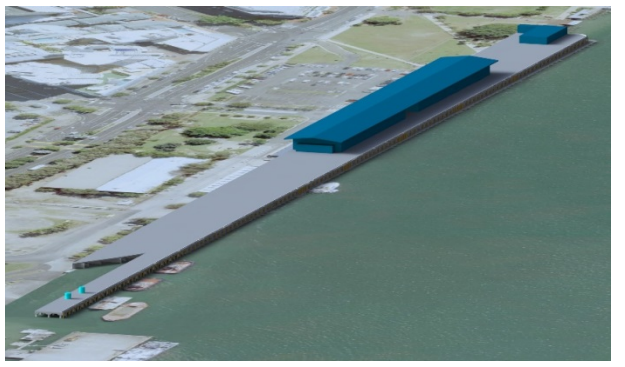

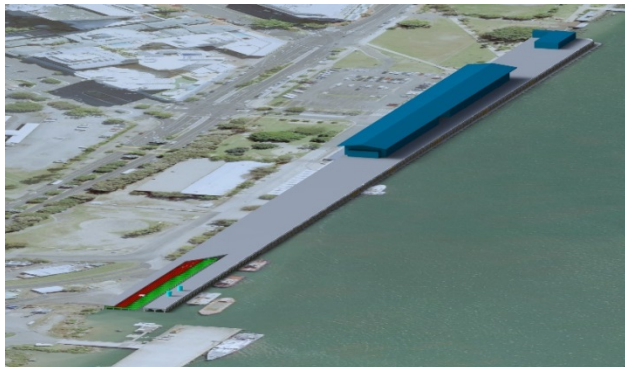

The implementation of these mitigation measures will reduce the residual impact risk rating for ICH values to low or negligible (refer **Table B13-9**).

B13.5.2 Proposed NICH Mitigation Measures

B13.5.2.a Wharf 6

Existing Wharf 6 is in extremely poor condition and will be demolished. Options have been considered and, amongst other possibilities, the partial retention of a section of wharf deck along the foreshore, with several rows of remnant piles projecting from the tidal zone, remains an achievable outcome. This approach would retain fabric, expose the relevant characteristics relating to the heritage significance of the wharf (the timber substructure) and facilitate interpretation of the wharf's heritage values by providing a conserved 'heritage element'. It is consistent with the retention of remnant piles within the tidal zone that has occurred on the northern side of Wharves 1 – 5 as part of the Cairns Foreshore Development project. This approach is illustrated as Option 2 in **Figure B13-8**. Option 1 is for the complete removal of Wharf 6 and clearly provides a lower value outcome in cultural heritage terms than Option 2.

The implementation of these measures will reduce the residual impact risk rating for Wharf 6 to low (refer **Table B13-9**).

	<p>Option 1 – Proposed treatment of the demolition of Wharf 6 and addition of extension to Wharf 5 at Cairns wharf (Ports North).</p>
	<p>Option 1 – Detail of Wharf 5 & 6 interface area – Proposed treatment of the demolition of Wharf 6 and addition of extension to Wharf 5 at Cairns wharf (Ports North).</p>
	<p>Option 2 – Proposed treatment of the demolition of Wharf 6 and addition of extension to Wharf 5 at Cairns wharf (Ports North) – showing a small section of Wharf 6 retained along the foreshore, with exposed piles in the waterway between</p>
	<p>Option 2 – Detail of Wharf 5 & 6 interface area – Proposed treatment of the demolition of Wharf 6 and addition of extension to Wharf 5 at Cairns wharf (Ports North) – showing a small section of Wharf 6 retained along the foreshore, with exposed piles in the waterway between</p>
<p>Figure B13-8 Options for demolition of Wharf 6 and addition of extensions to Wharf 5.</p>	

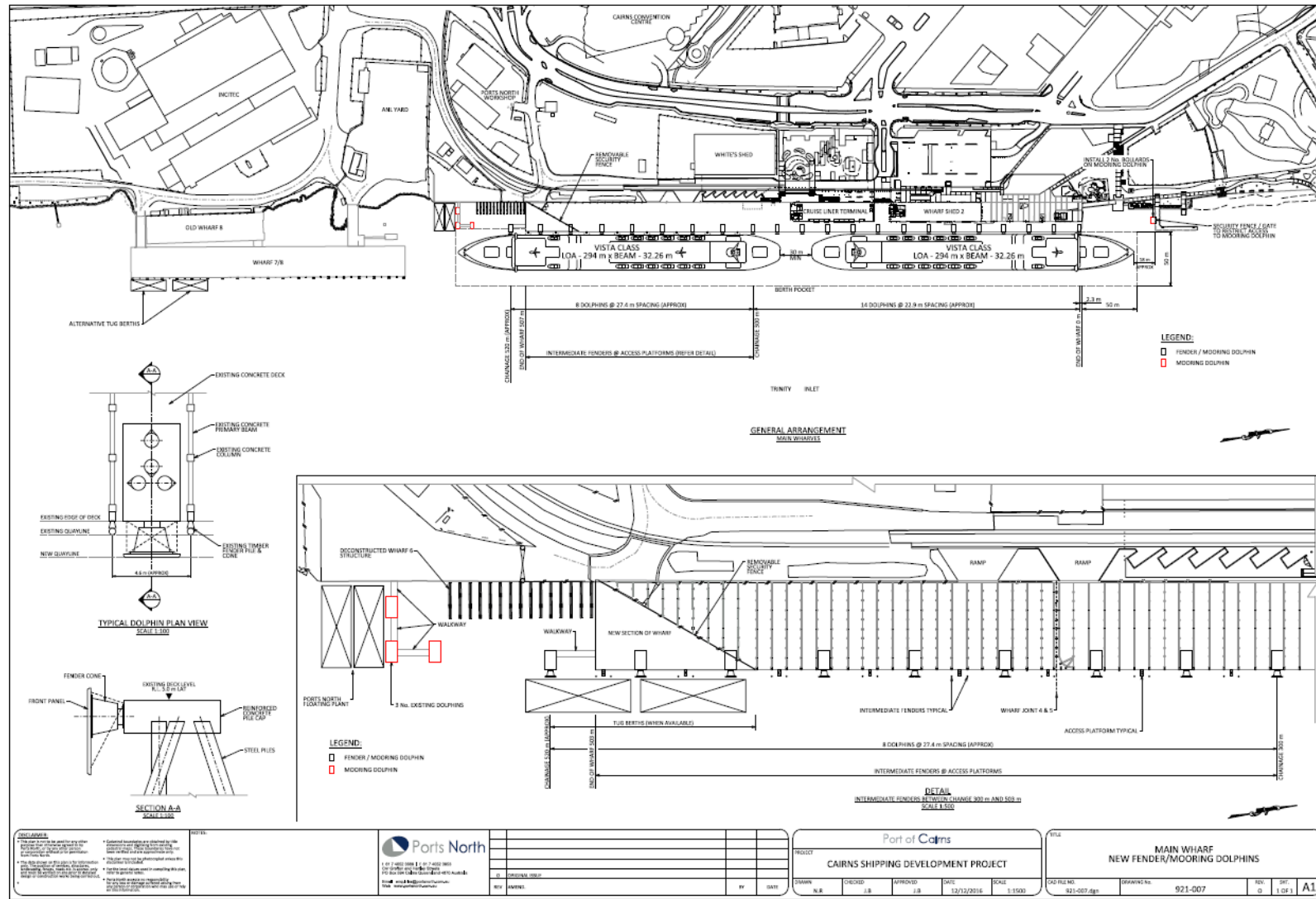


Figure B13-9 Indicative Layout of the proposed installation of Berthing Dolphins at Cairns Wharf.

Source: Ports North.

B13.5.2.b Wharves 1-5

All things considered, the removal of sections of deck of Wharves 1-5 to allow the installation of independent mooring dolphins (refer **Figure B13-9**), whilst clearly not ideal in heritage terms, may be the least-worst option available for the future conservation of the wharves (**Appendix U**). The wharves are fundamentally utilitarian items of infrastructure that must serve their purpose (there are few, if any, practical opportunities for repurposing the wharf in the Cairns context) and their continued use for their designed purpose is the most preferable outcome in heritage terms. It is not unusual for any item of infrastructure to be modified and/or upgraded to maintain its utility and, in this case, the opportunity exists for the wharf, if modified, to continue to serve a significant economic role for at least several decades into the future. The options analysis undertaken in the draft EIS established that, if Wharves 1 – 5 are to serve as the cruise ship berths for Cairns, this is the least interference required to achieve the attendant level of operation.

The implementation of these measures will reduce the residual impact risk rating for wharves 1-5 to low (refer **Table B13-9**).

B13.5.2.c Other NICH Places

On the basis of desktop review, analysis of legislative requirements and site inspections, it is recommended that the following further work is undertaken to ensure any potential NICH impacts are minimised or mitigated:

- Known shipwreck locations should be avoided. There is a possibility that undocumented marine heritage could be remaining within the development area. If items of possible marine heritage are found during hydrographic surveys an appropriately qualified marine archaeologist should be contacted immediately.
- This is a low risk that evidence of the old Malay Town may be uncovered by the possible fuel line installation at the southern end of the Wharf complex. It is recommended that a qualified archaeologist monitor works in this area.

The implementation of these measures will reduce the residual impact risk rating for other potential NICH places to low (refer **Table B13-9**).

B13.5.3 Summary of Residual Risk to ICH and NICH Values

A summary of unmitigated and mitigated residual risk, following implementation of mitigation strategies is provided in **Table B13-9**.

TABLE B13-9 UNMITIGATED AND MITIGATED RESIDUAL CULTURAL HERITAGE IMPACT RISK ASSESSMENT SUMMARY

PRIMARY IMPACTING PROCESSES	INITIAL ASSESSMENT WITH STANDARD (STATUTORY) MITIGATION MEASURES IN PLACE			RESIDUAL ASSESSMENT WITH ADDITIONAL (PROPOSED) MITIGATION MEASURES IN PLACE		
	Consequence of Impact	Likelihood of Impact	Risk Rating	Consequence of Impact	Likelihood of Impact	Risk Rating
ICH						
Disturbance to Yirrganydji Camp	Moderate	Unlikely	Low	Moderate	Highly Unlikely	Low
Damage to Thomatis Creek Middens and Possible Scar Tree	Minor	Unlikely	Low	Minor	Highly Unlikely	Negligible
Damage to potential Indigenous Heritage Places- Pipeline	Moderate	Unlikely	Low	Moderate	Highly Unlikely	Low
Impact on Aboriginal Story Places- Shipping Channel	Moderate	Unlikely	Low	Moderate	Highly Unlikely	Low
Impact on Trinity Inlet Tidal Wetlands	Moderate	Highly Unlikely	Negligible	Moderate	Highly Unlikely	Low
NICH						
Damage to Shipwrecks- Trinity Inlet	Moderate	Unlikely	Low	Moderate	Unlikely	Low
Disturbance to Trinity Wharf Complex (Wharves 1-6)	Moderate	Almost Certain	High	Minor	Unlikely	Low
Disturbance to remnant Malay Town materials	Moderate	Unlikely	Low	Moderate	Highly Unlikely	Low

B13.6 References

Refer **Appendix U**.

Refer **Appendix BB**

Refer **Appendix AE**