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## ENVIRONMENTAL

Draft : Environmental Impact Statement

## Chapter B13 Cultural Heritage

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This chapter describes the Indigenous (Aboriginal) cultural heritage (ICH) and non-Indigenous cultural heritage (NICH) values, impacts and proposed management measures associated with the Cairns Shipping Development Project (the project).

## B13.1 Methodology and Assumptions

### B13.1.1 Preliminary Desktop Assessment

A contextual desktop assessment was undertaken to determine the existence, extent and probable levels of significance of known places within the study area and identify the potential for currently unknown places of cultural heritage significance. This assessment comprised searches of statutory and non-statutory registers and databases, a review of available published and unpublished reports and a review of the contextual history of the vicinity of the study area.

Key registers and databases included:

- The World Heritage List (WHL)
- The Australian Heritage Places Inventory (AHPI)
- The Australian Maritime Sites Database (AMSDB)
- The DATSIMA Cultural Heritage Unit (CHU) Database
- The Queensland Heritage Register (QHR)
- Relevant overlay information and local heritage list from the CairnsPlan 2009
- Queensland National Trust Register
- Register of the National Estate (former) (RNE)
- Environmental Protection Agency (EPA) listed sites.

A great many cultural heritage reports have been prepared for the areas in the vicinity of or within the study area. Key reports that were considered as part of this report are detailed in **Table B13.1.1a**.

**Table B13.1.1a Key cultural heritage reports**

Date	Author	Title
2000	Allom Lovell Architects	Cairns Cityport Wharf Area; a conservation management plan for Cairns Port Authority.
2008	ARCHAEO (now Converge)	Mount Peter Indigenous Cultural Heritage Assessment.
2000	Burke , H. et al	Cultural Heritage Assessment; Indigenous Heritage Component, Southern Cairns Land Use and Transport Study.
2008	Converge	Preliminary Heritage assessment for PNQ's Marino's Property, Kamerunga, Far North Queensland.
2009	Converge	Site Master Planning Report – Historic Cultural Heritage, Cairns Cityport, Cairns Ports. 09125C/2009.
2011a	Converge	Cairns Entertainment Precinct, Heritage Considerations, Cairns Regional Council, 11084C/2011.
2011b	Converge	Completion Report, Abbot St, Wharf St Storm Water Drain Archaeological Monitoring, Cairns, Far North Queensland.
1996	DEHP	QHR citation: False Cape Second World War Defence Facility.
1999	DEHP	QHR citation: Cairns Wharf Complex.
1995	Fourmile, H. And W. Mundraby	Trinity Inlet Crossing Mundingulpai and Gimuy Yidinji Cultural and Social Impact Assessment Study.
1996a	Grimwade, G, and K. Townrow	Earl Hill Development, Captain Cook Highway, Cairns, Qld

Date	Author	Title
1996b	Grimwade, G, and K. Townrow	Cultural Heritage Study, Buchan Point: Assessment of Impact on Lot 1 RP 748655 and Lot 3 RP 747724, Parish of Smithfield.
1999	Hatte E.	Report on a Desktop Study of Cultural Heritage Constraints and Opportunities to Transport Infrastructure in the Trinity Inlet Catchment.
2006	Rowney M. et al	Double Island Cultural Heritage Impact Assessment.
1995	Taylor, J. C.	Anthropological Assessment of Reports by Aboriginal Liaison Officers; Trinity Inlet Crossing impact assessment study.

The results of this desktop assessment were used to:

- Inform the development of Cultural Heritage Management Plans (CHMPs)
- Develop a targeted field survey of the study area
- Inform an impact assessment of the NICH within the study area.

## B13.1.2 Study Area

The study area considered for the project was as identified in **Figure B13.1.4.2a**. The study area was larger than the proposed development area so as to provide a wider context for the assessment of, and likely impact to, cultural heritage places and values which may be affected by the project.

For a further description of the proposed works, refer to Chapter A4, Project Description.

### B13.1.2.1 Indigenous Cultural Heritage Consultation

The project is located within the boundary of the registered Gimuy Walubara Yidindji People native title determination application (NTDA) (QUD631/12), contiguous with the Mandingalbay Yidindji native title determined area (QUD6015/98) and in close proximity to the Yirrganydji (Irukandji) People registered NTDA (QUD602/2012) and the Combined Gunggandji native title determined area (QUD6031/01), as illustrated in **Figure 13.1.4.2b**.

In accordance with Section 34 of the ACH Act, the Gimuy Walubara Yidinji are the only Aboriginal party in relation to portside activities and that area of Trinity Bay falling within their registered claim area, however, the proximity of the Mandingalbay Yidindji determined area to the current project boundaries will also be taken into account during the development of CHMPs.

For offshore areas outside of the Gimuy Walubara Yidinji People's claim area, project activities fall within areas that are not subject to a current or former registered claim, with the result that public notification will be required under the ACH Act to identify the appropriate Aboriginal party.

Ports North have conducted preliminary discussions which have outlined the nature of the proposed project as summarised in **Table B13.1.2.1a**.

**Table 13.1.2.1a Consultation undertaken with Aboriginal groups**

Aboriginal Party	Details
Mandingalbay Yidinji People	Presentation provided to Elders, Djunbunji CEO and IPA Co-ordinator on 9 April 2013. Presentation given to Mandingalbay Yidinji Peoples Forum on 12 April 2013.
Gimuy Walubara Yidinji People	Presentation given to Elders on 10 April 2013.
Gunggandji People	Presentation given to Elders 10 May 2013.
Yirrganydji People	Presentation to Elders 23 May 2013.
All parties	Phone/email contact in relation to CHMP development notifications in August 2014.

A CHMP for the project will be developed in consultation with Aboriginal parties. This is to ensure there is clarity on the management of any finds or existing artefacts, etc. It is anticipated that two CHMPs will be developed; one over the project area for which Gimuy Walubara Yidindji is the Aboriginal Party, and the other over the area for which there is currently no known Aboriginal Party where public notification is required.

### B13.1.2.2 Non-Indigenous Cultural Heritage Consultation

Consultation with historians and long-term residents of Cairns was undertaken as part of the research for this assessment. Their assistance and contribution to this assessment is acknowledged with gratitude. Those that contributed were:

- Grant Luckman, Senior Program Officer, National Historic Heritage Section, Wildlife, Heritage and Mine Division, Department of Environment (DoE)
- Kieran Hosty, Manager – Maritime Archaeology, Australian National Maritime Museum
- Paddy Watterson, Senior Cultural Heritage Officer, Department of Environment and Heritage Protection (DEHP)
- Stephen Fowler, President, Cairns Historical Society
- Dr Nicky Horsfall, Cultural Heritage Consultant, Cairns.

### B13.1.3 Field Assessment

A NICH field assessment was undertaken to locate and assess land-based places of NICH in addition to that identified on the various cultural heritage registers within the Trinity Inlet area. The NICH field assessment was limited to this area as:

- The desktop research indicated this part of the study area had the most potential for further NICH places
- Project activities will be concentrated in this area.

Standard fieldwork procedures were adopted. These included sampling, surveying, site evaluation, recording, impact assessment and management recommendations.

The survey methodology adopted for this assessment incorporated an on-board vessel and pedestrian survey across the Trinity Inlet part of the study area targeting sites identified by the desktop review which were not already identified on the various cultural heritage registers. The QHA criteria and guidelines detailed in **Section B13.2.1.2** were applied in the assessment of all sites.

Historical cultural heritage areas were recorded with reference to site title, location, site integrity, ground surface visibility, condition and relevant comments, including the type of site and the type of artefacts located at the site. Descriptions of sites and places were general, with a view to providing direction for their future management where applicable, and to inform subsequent assessments of significance. A number of modern vessels have been beached at various locations within Trinity Inlet. These vessels were not considered to have any cultural heritage significance and were not recorded.

An assessment of NICH site integrity provides an indicator of the intactness and integrity of the site. Levels of site integrity were determined using a percentage range between 0-100 percent where 0 percent indicates all site integrity is gone, and 100 percent represents excellent preservation of the original context. Therefore: **Zero = 0 percent; Poor = 1-25 percent; Moderate = 26-50 percent; Fair = 51-75 percent; Good = 76-85 percent; Excellent = 86-100 percent.**

Assessments of NICH ground surface visibility provide an indication of how much of the ground surface can actually be seen. Ground surface visibility is most commonly inhibited by vegetation but other inhibitors might include concrete, gravel and bitumen. Levels of ground surface visibility were determined using a percentage scale: 0 percent represented zero visibility and 100 percent represented maximum visibility (bare ground). Therefore: **Zero = 0 percent; Poor = 1-25 percent; Moderate = 26-50 percent; Fair = 51-75 percent; Good = 76-85 percent; Excellent = 86-100 percent.** The better the visibility, the more potential there is for locating historical/archaeological material.

All assessment data was recorded on field recording sheets and locations of any items or places of historical cultural heritage significance were captured via a hand-held global positioning system (GPS) receiver, accurate to  $\pm$  five metres using datum GDA 94. This information was used to create maps identifying the location of sites and features noted during the assessment. Areas of interest were photographed.

## **B13.1.4 Assumptions and Technical Limitations**

### **B13.1.4.1 Survey and Significance Assessment of Aboriginal Sites**

Any survey of ICH sites and places will be undertaken as part of the CHMPs which will be developed with the endorsed Aboriginal party/ies. As such, a survey of Indigenous sites did not comprise a component of the EIS field assessment.

Similarly, under the ACH Act, the assessment of significance of ICH can only be determined by the Aboriginal parties. It is therefore anticipated that an assessment of significance (including scientific significance) of ICH will be undertaken as part of any survey undertaken as a component of the CHMPs.

### **B13.1.4.2 NICH Veracity of Data**

The major part of the study area is within Trinity Bay and below the low water mark within Trinity Inlet. As such, information in relation to the NICH of the area is reliant on the Australian Maritime Sites Database (AMSDB). Some of the sites on this register were entered prior to the advent of GPS and/or are based on historic research. Not all reported sites' information and locations have been verified.

Acoustic mapping was undertaken for the benthic ecology survey. No site scan and/or proton magnetometer data to identify sea floor anomalies has been undertaken to date although this is anticipated to comprise a component of pre-dredging works. The results of the acoustic mapping have some relevance to cultural heritage and are discussed further in Section **B13.3.3.4**. This and the desktop assessment were considered with a view to providing guidance for management and mitigation processes for the Dredge Management Plan (refer to **Chapter C2, Dredge Management Plan**).

Figure B13.1.4.2a Location of Study Area

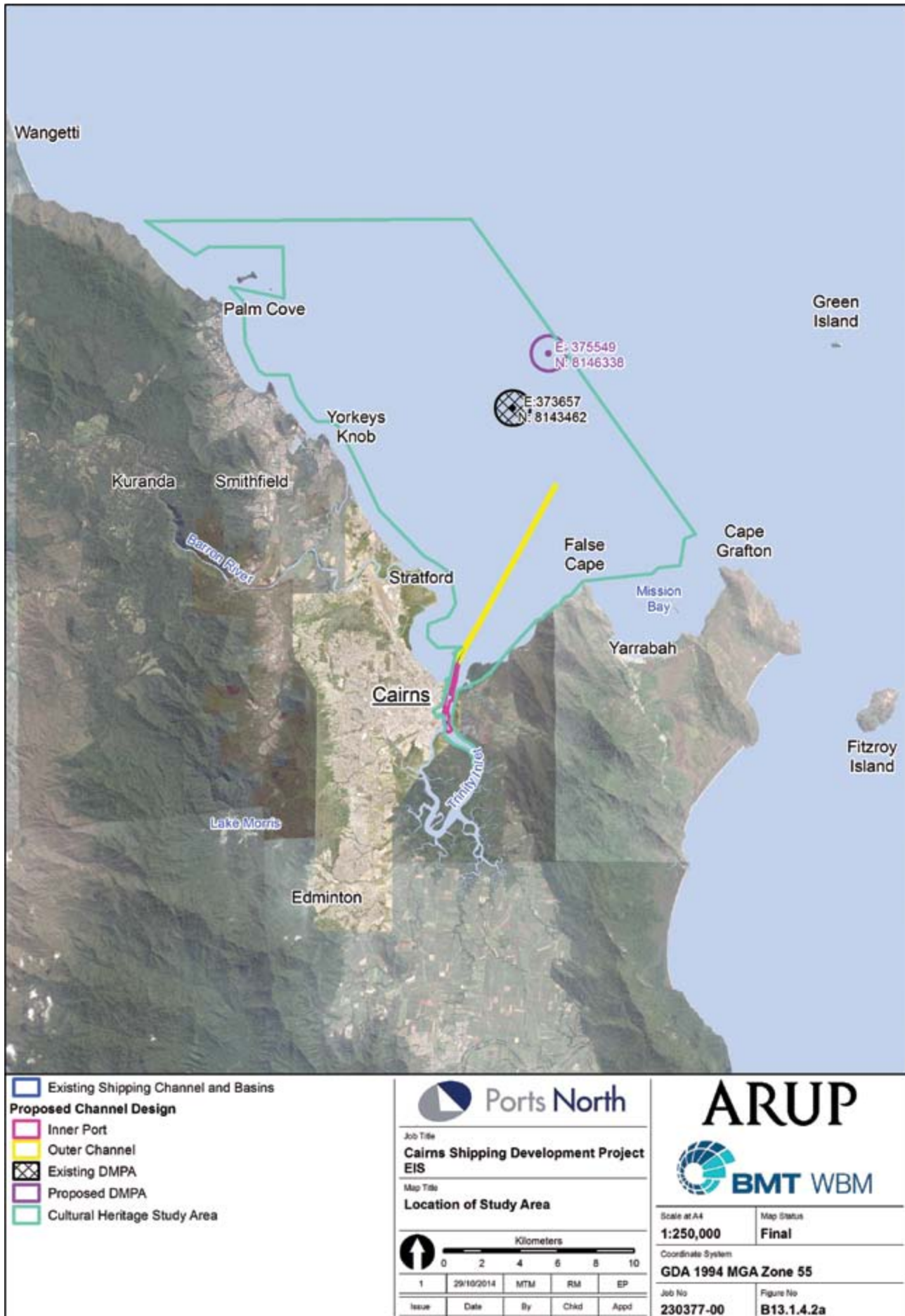
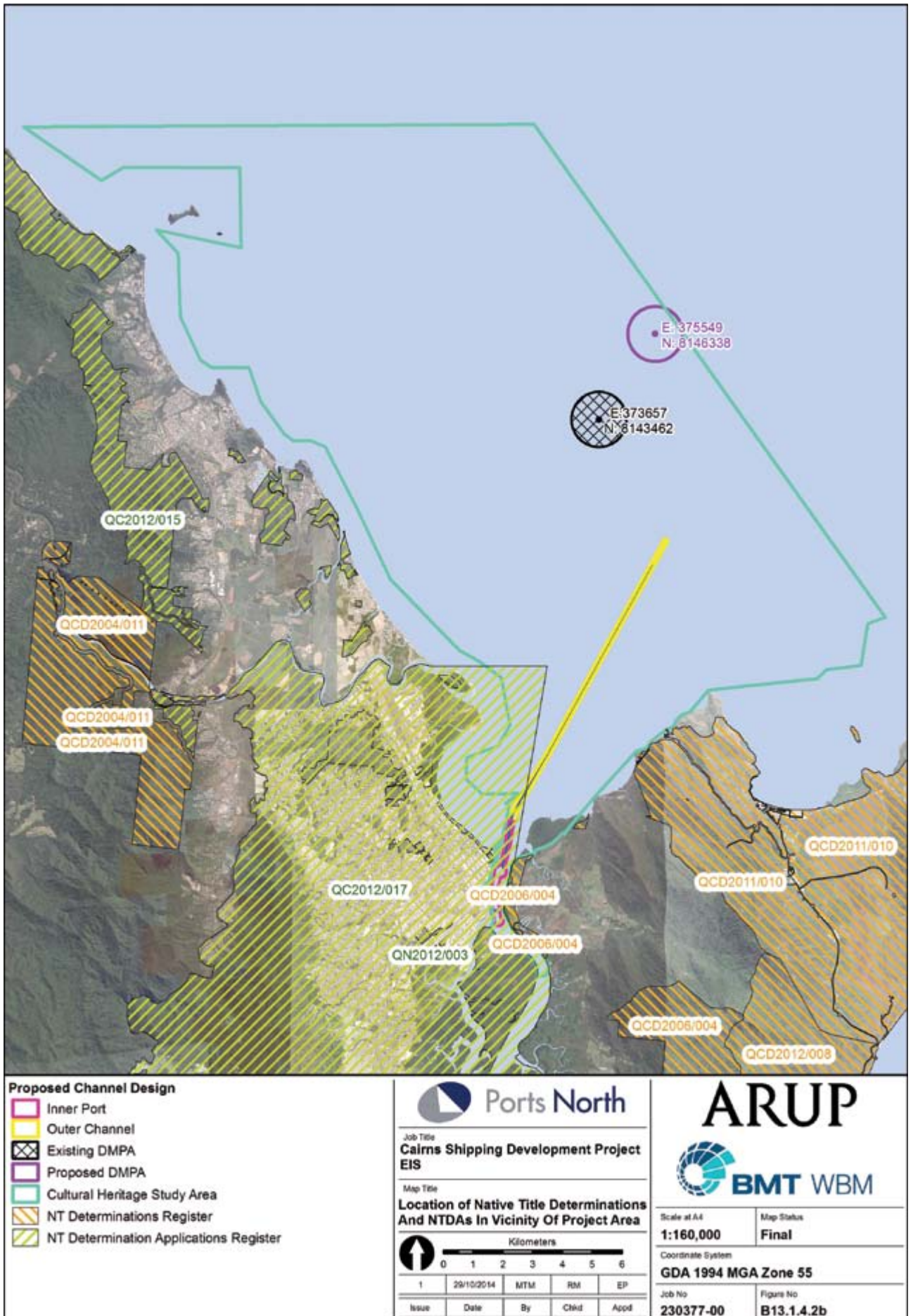




Figure B13.1.4.2b Location of Native Title Determinations and NTDAs in vicinity of project area (NNTT2014)



## B13.2 Policy Context and Legislative Framework

Heritage is the recognition that some things from the past are important to people in the present and should be conserved for future generations. Heritage can include buildings, archaeological places, landscapes, views, objects, traditions, ideas and cultural practices.

Heritage is fundamentally shaped by the idea of significance, regardless of its form. Like history, many things occurred in the past, but we only choose to remember certain things at particular times. Heritage is bound to time, but not a particular time. Some things are significant due to their age, but other things are significant for their association with particular historical processes or events, regardless of the distance in time. Once again, significance is the fundamental basis for assessment of heritage, not time.

The idea of what is significant changes over time and in different cultures, but significance nonetheless remains the essential, defining feature of heritage and determines its value. The assessment and management of heritage is therefore the assessment and management of significance.

A range of legislation, standards and criteria are available to assist with determining cultural heritage significance. Those that are relevant to the project are outlined below.

### B13.2.1 Legislation

#### B13.2.1.1 Commonwealth Legislation

##### Environment Protection and Biodiversity Conservation Act, 1999

This Act promotes biodiversity conservation and heritage protection and recognises the role of Indigenous people in the conservation of Australia's biodiversity. It is the key national heritage legislation and is administered by the Commonwealth Department of the Environment (DOE; formerly the Commonwealth Department of Sustainability, Environment, Water, Population and Communities). This Act provides a number of statutory and legislative controls for heritage places. Places of national heritage value and those owned or managed by the Commonwealth are located on the National Heritage List and Commonwealth Heritage List respectively. Places of known national heritage value are listed on the Australian Heritage Places Inventory (AHP). The results of a search of the AHP are included at **Section B13.2.1.2**.

##### Aboriginal and Torres Strait Islander Heritage Protection Act, 1984

The *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* provides Aboriginal people with the right to request the Federal Minister for Aboriginal Affairs to intervene through an injunction in cases where they consider that their cultural heritage is at risk. The Act does not determine significance, or limit the type and place for which protection is being sought.

##### Australian Heritage Council Act, 2003

This Act provides for the establishment of the Australian Heritage Council, which is the principal advisory group to the Australian Government on heritage matters. This Act also provides for registration of places considered of national significance on the former Register of the National Estate or the AHP. The results of a search of the AHP are included at **Section B13.2.1.2**.

Places are considered by the Minister each financial year as part of a work plan. If a nomination has been considered for two consecutive work plans but not included it becomes ineligible for consideration unless it is renominated. This is known as being ineligible for PPAL (planned priority assessment list). Cairns Wharf Precinct was previously nominated to the National Heritage List for consideration for entry, but is now ineligible for PPAL as it has been recognised on the Queensland Heritage Register (QHR).

##### Native Title Act, 1993

The *Native Title Act 1993* (together with the *Native Title Act 1993* (Qld)) formalises the common law recognition of native title (i.e. rights and interests over land and water possessed by Indigenous people in Australia under their traditional laws and customs). The Act confirms that native title has been extinguished to areas subject to certain historical exclusive tenures (such as freehold), but has not been extinguished by non-exclusive tenures (such as pastoral leases or reserves). The Act also mandates procedural requirements for the grant of any rights that may impact on native title rights and interests that exist which must be followed in order to ensure the grant is valid. Native Title is addressed in **Section B13.1.2.1**.



## Historic Shipwrecks Act, 1996

The *Historic Shipwrecks Act 1996* (HSA) applies to all Australian waters from the low tide mark to the edge of the continental shelf. The Act is administered in collaboration with the states, Northern Territory and Norfolk Island. In Queensland, the Act is administered by the DEHP. The provisions of the *Queensland Heritage Act 1992* (QHA) in conjunction with the Part II of the HSA states that all shipwreck and associated relics at least 75 years old and located in Australian waters to be historic relics and, unless otherwise determined, to be protected. It applies to all wrecks located along Queensland's open coast, bays, lakes and inland waterways including Trinity Bay and Trinity Inlet.

To assist in the administration of this Act the Australian Maritime Sites Database (AMSDB) has been established. This database is administered by the state on behalf of the Commonwealth. The results of a search of this database are detailed in **Section B13.3.1.2**.

### **B13.2.1.2 State Legislation**

#### Queensland Heritage Act 1992

The QHA and its amendment provide protection for significant non-Indigenous and post contact Indigenous cultural heritage sites and places in Queensland. The Queensland Heritage Register (QHR) records heritage places and protected areas recognised under this Act. A list of places within or in close proximity to the project area is listed in **Section B13.3.1.4**.

The Act also establishes the requirement for local heritage registers (LHR) that are integrated with local planning provisions.

The QHA outlines specific criteria for assessing the cultural significance of NICH places. Under Section 35 (1) of the Act, a place may be entered into the QHR if it satisfies one or more of the following criteria:

- If the place is important in demonstrating the evolution or pattern of Queensland's history
- If the place demonstrates rare, uncommon or endangered aspects of Queensland's cultural heritage
- If the place has potential to yield information that will contribute to an understanding of Queensland's history
- If the place is important in demonstrating the principal characteristics of a particular class of cultural places
- If the place is important because of its aesthetic significance
- If the place is important in demonstrating a high degree of creative or technical achievement at a particular period
- If the place has a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons
- If the place has a special association with the life or work of a particular person, group or organisation of importance Queensland's history.

Under section 60, a place may be considered to be an 'archaeological place' if not registered as a state heritage place and if it demonstrates 'potential to contain an archaeological artefact that is an important source of information about Queensland's history' (s. 60). Archaeological places can be entered on to the QHR if they meet those criteria. Section 89 requires a person to advise the Chief Executive Officer of the DEHP of an archaeological artefact that is an important source of information about an aspect of Queensland's history. This advice must be given as soon as practicable after the person discovers the item. Section 90 stipulates that it is an offence to interfere with an archaeological artefact once notice has been given of the artefact to the CEO of the DEHP.

The current project will involve development within the Cairns Wharf Complex (QHR ID: 601790), comprising the installation of an Intermediate Fuel Oil (IFO) pipeline and upgrade of water, sewerage and fire fighting services. It also requires upgrading of the wharves through the installation of independent dolphins to protect the heritage-listed wharves. Under the QHA a development application would be required for any development works that will be undertaken within the Cairns Wharf Complex boundary.

#### Aboriginal Cultural Heritage Act 2003

The *Aboriginal Cultural Heritage Act 2003* (ACH Act) is the paramount legislation in Queensland with regard to ICH. Under the ACH Act, ICH includes items and areas where there is no physical manifestation of human use, but that are culturally significant to Aboriginal people. It also includes places of archaeological or historical significance. ICH is defined as anything that is a significant Aboriginal area in Queensland, or a significant Aboriginal object or evidence or archaeological or historic significance pertaining to Aboriginal occupation of an area of Queensland.

The ACH Act imposes a duty of care on all persons to ensure that ICH is protected or appropriately managed. Although the ACH Act provides for a number of methods to meet this duty of care, Part 7 (section 87) provides that if an EIS is required for a project, no lease, licence, permit, approval or other authority required for the project can be granted unless a CHMP for the project area has been developed with the relevant Aboriginal Party(ies) and approved by the Chief Executive of Department of Aboriginal and Torres Strait Islander and Multicultural Affairs (DATSIMA) or the authority is given subject to conditions to ensure that no excavation, construction or other activity takes places without an approved CHMP. As such, Ports North is required to meet the duty of care through the development of CHMPs with the relevant Aboriginal Parties within the project area.

### Sustainable Planning Act 2009 (SPA) and regulations

The *Sustainable Planning Act 2009* (SPA), its amendments and regulations provide a framework to integrate planning and development assessment in the state so that development and its effects are managed in a way that is ecologically sustainable.

The current project involves works within the Cairns Wharf Complex (QHR ID: 601790). Under the SPA an Integrated Development Assessment System (IDAS) application will be required for any development works that are undertaken within the QHR Cairns Wharf Complex boundary.

#### **B13.2.1.3 Local Legislation**

##### CairnsPlan 2009

The *CairnsPlan 2009*, which incorporates the Ports North Land Use Plan, is the current planning scheme for the Cairns Regional Council (CRC) Area. It contains the Local Heritage Register (LHR) including places and precincts. Combined with requirements under the QHR and SPA, it sets out planning provisions in relation to development of these places.

QHR places are automatically included on the LHR. Development within Cairns Wharf Complex (QHR ID: 601790) will not trigger requirements under the *CairnsPlan 2009* planning provisions as the project has been declared a Significant Project.

#### **B13.2.2 Other Guidelines**

##### **B13.2.2.1 The Burra Charter**

The *Burra Charter 2013* (Australia ICOMOS Inc, 2013) is the leading guideline for heritage practitioners and provides guidance for the conservation and management of significant places. It defines cultural significance as “aesthetic, historic, scientific or social value for past, present and future generations” and goes on to state “cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects” (Australia ICOMOS Inc, 2013). It outlines a specific methodology/process for assessing sites which includes understanding the significance of the place through the gathering of information about the place (documentary, oral and physical information), an assessment of this significance and the identification of obligations arising from this significance.

The Burra Charter was initially designed for the conservation and management of historical heritage. However, after the addition of further guidelines that defined cultural significance and conservation policy, use of the charter was subsequently extended to Aboriginal studies.

##### **B13.2.2.2 DEHP Guidelines**

The QHA in conjunction with Department of Environment and Resources Management’s (now DEHP) publication: *Using the Criteria: a methodology* (2006) provides guidance for the assessment of the significance of NICH places including which level of cultural heritage significance is applicable to a place or site. It provides the following definition for local and state significance:

*A place is of local cultural heritage significance if its heritage values are of a purely localised nature and do not contribute significantly to our understanding of the wider pattern and evolution of Queensland’s history and heritage...*

*A place is of state cultural heritage significance if its heritage values contribute to our understanding of the wider pattern and evolution of Queensland’s history and heritage. This includes places that contribute significantly to our understanding of the regional pattern and development of Queensland (2006, pp. 5).*

Threshold indicators as set out in *Using the Criteria: a methodology (2006)* were used to assess the level of cultural heritage significance within each criterion. A summary of these indicators is identified in **Table 13.2.2.a**.

**Table 13.2.2.a Threshold Indicators for Determining NICH Significance**

Criterion	Threshold Indicator
a	Regional importance; earliness; representativeness; distinctiveness; exceptionality; rarity.
b	Intactness/integrity; distinctiveness; exceptionality.
c	Earliness; rarity; extensiveness; intactness.
d	Intactness/integrity; earliness; rarity/uncommonness; exceptionality.
e	Intactness; integrity; degree of deterioration; setting and location context; demonstrated representation.
f	Intactness/integrity; peer recognition/award.
g	Length of association; demonstrated extent and degree of community association; significant former association.
h	Importance of the person, group or organisation in Queensland's history; degree or extent of the association; length of association; influence of the association.

## B13.3 Existing Conditions

### B13.3.1 Statutory Searches

#### B13.3.1.1 World Heritage List

The World Heritage List (WHL) is compiled by UNESCO and is an inventory of places considered to have outstanding universal value.

No cultural heritage sites were identified on the WHL within the study area. Refer to **Chapter B2, Nature Conservation Areas** for natural heritage values.

#### B13.3.1.2 National Heritage List/Australian Maritime Sites Database

No cultural heritage sites of national significance were identified on the AHPI as being located within the study area.

**Table B13.3.1.2a** provides information on places identified on the AMSDB within the study area, as illustrated in **Figure B13.3.1.6a**. It is difficult to determine (given the accuracy of the location data) which of these wrecks are likely to be located within the vicinity of the proposed development area (physical works), however, it appears likely that the *A.P.A.* and the *Mary* may be located in the vicinity of the proposed expansion to the Crystal Swing Basin.

**Table B13.3.1.2a Shipwrecks identified on AMSDB (Location Datum: WGS84)**

Shipwreck ID	Vessel Name	Type of Vessel	General History	Year Wrecked	Location
2115	A.P.A.	Hulk	Used as coal hulk	1961	-16.933317 145.783317
2127	Adieu	Sailing vessel - cutter	Wrecked when sprang a leak off the Fairway Buoy. Cargo salvaged. Wreck founded in 10 feet of water on east side of harbour	25/4/1895	-16.9 145.78 (approx)
2142	Akaroa	Sailing vessel - ketch	Beche de mer vessel. Wrecked in cyclone and sank approximately 10 miles from land	10/3/1918	-16.8 145.9 (approx)
2654	James Merriman	Sailing vessel - barque	Employed in pearl shell industry. Dragged anchor in strong gale whilst off Double Bay. Sank about seven miles off Double Island Point	01/01/1872	-16.603 145.668
2727	Koala	Single screw steamer	Was under tow to the dredger 'Platypus'. Foundered off Cairns	5/2/1930	-16.79 145.85
2838	Mary	Sailing vessel - cutter	Cargo vessel. Sank at her moorings in Cairns Inlet	3/8/1909	-16.933317 145.783317
2881	Miro	Sailing vessel - lugger	Pearl fishing vessel. Caught fire and foundered in Trinity Inlet. Sold on condition it was removed. Unclear if this occurred	29/7/1946	-16.943 145.783
3085	Safari	Unknown	Unknown	1974	-16.916667 145.85 (location incorrect)

It is noted that three shipwrecks have not been included in the table above for the following reasons:

- Shipwreck 2802 (*Maggie Logan*) which foundered in Trinity Inlet on 12 November 1892 is not included as it was apparently successfully re-floated in early December 1892 (AMSDB 2802)
- Shipwreck 2507 (*Fitzroy*) is not included as it is stated that the database entry incorrectly located the wreck as being at 'a beach near Cairns' when historical sources place the wrecking of the steamer south of Port Stephens in New South Wales (AMSDB 2507)
- Shipwreck 2373 (*Dancing Wave*) is not included as it is said to have been wrecked between Townsville and Cairns. It was therefore considered that the likelihood of it being wrecked within the study area was remote.

This database also holds records of aircraft crashes. **Table B13.3.1.2b** provides details from the database of aircraft crashes located within the study area. This location is illustrated in **Figure B13.3.1.6a**. As with the shipwreck data, location information often requires verification, however, this location is not in the vicinity of the proposed development area.

**Table B13.3.1.2b Aircraft crashes recorded on AMSDB (Location Datum: WGS84)**

Aircraft ID	Aircraft Name	General History	Year Lost	Location
8053	Consolidated B-24 Liberator.	Crashed into sea near Yorkeys Knob.	16/8/1942	-16.804 145.739

### B13.3.1.3 DATSIMA Register

A search of the DATSIMA Cultural Heritage database and register was conducted on 2 October 2013 over an area slightly larger than the study area. The results of this search identified 95 Aboriginal cultural heritage sites. All sites were land based and are not located within the vicinity of any proposed development area. Site types are summarised in **Table B13.3.1.3a**. The specific location data for the sites has not been included here for reasons of cultural sensitivity.

**Table B13.3.1.3a Aboriginal Cultural Heritage Sites Types**

Site Type	Number
Painting, Shell Midden	5
Painting	2
Artefact Scatter	12
Artefact Scatter, Shell Midden	3
Artefact Scatter, Hearth Oven	2
Artefact Scatter, Painting	1
Shell Midden	43
Hearth Oven, Shell Midden	1
Story Place	5
Scarred/Carved Tree	4
Landscape Feature, Story Place	2
Pathway	1
Well	1
Burial, Stone Arrangement	1
Burial	2
Weir/Fish Trap	1
Not identified	9

DATSIMA further notes that:

*... it is not possible to conclusively guarantee the accuracy of these recordings (in particular, the longitude and latitude location description for each site) and extra diligence is required when operating in these locations (DATSIMA email 2 October 2013).*

### B13.3.1.4 Queensland Heritage Register

Five places are located within or close to the study area. The location of the QHR places in relation to the study area is identified in **Table B13.3.1.4a**. It is noted that only the Cairns Wharf Complex is likely to be directly impacted by the project.

**Table B13.3.1.4a Places identified on the QHR**

QHR No.	Site name	Address
601790	Cairns Wharf Complex.	Wharf St, Cairns.
600975	False Cape Second World War Defence Facility.	Yarrabah Road, Trinity Beach.
601608	Barrier Reef Hotel.	Abbott St, Cairns.
601610	Jack and Newell Building (former).	29 Wharf St, Cairns.
600377	Cairns Custom House (former).	6A – 8A Abbott St.



### B13.3.1.5 Local Heritage Register

No sites in addition to those located on the QHR are identified in the CRC LHR.

### B13.3.1.6 Non-Statutory Searches

There are other sources of heritage places or cultural heritage sites that are not listed on statutory registers. These places are not afforded legislative protection. Nonetheless, places identified during these searches contribute to a better understanding of the study area and often identify places that have been overlooked for entry on statutory heritage registers. Further they provide an indication of the potential cultural heritage values of currently unassessed areas within the study area. This is particularly important when considering the regulations of the QHA with regard to archaeological places, which requires protection of archaeological resources which are generally unknown or not listed at the time they are discovered.

#### Register of the National Estate (Former) (RNE)

The RNE is a list of natural, Indigenous and non-Indigenous heritage places throughout Australia. Following amendments to the *Australian Heritage Commission Act 1975*, the former RNE was frozen on 19 February 2007. This meant that no new places could be added to or removed from the RNE. From February 2012, all references to the former RNE were removed from the EPBC Act. The former RNE is now maintained as a non-statutory register and publicly available archive. Detailed location information is often unavailable for these listings.

Three cultural heritage places are located within or in the near vicinity of the study area. These places are recognised on the QHR (see **Section B13.2.1.2** for location of QHR places).

**Table B13.3.1.6a Places Listed on The RNE**

Place ID	Place	Location
18444	Barrier Reef Hotel	Wharf St, Cairns
100650	Cairns Wharves	Wharf St, Cairns
14695	Customs House	6A – 8A Abbott St, Cairns

#### Queensland National Trust

The National Trust is a community based, non-government organisation. The Queensland Branch of the National Trust of Australia maintains a register of cultural heritage places. The listing of a place on the Queensland National Trust register, known as 'classification', has no legal force; however, it is widely recognised as an authoritative statement of the cultural significance of a place.

Two places listed by the Queensland National Trust are located within or are contiguous with the study area. Both places are recognised on the QHR (see **Table B13.3.1.6b** for location of QHR places).

**Table B13.3.1.6b Queensland National Trust listed places**

Place ID	Present Name	Former Name	Location
CNS 1/34	Cairns Wharves	-	Wharf St, Cairns
CNS2/2	False Cape Second World War defence facility.	Leper Bay	Yarrabah Road Trinity

### EPA Listed Sites

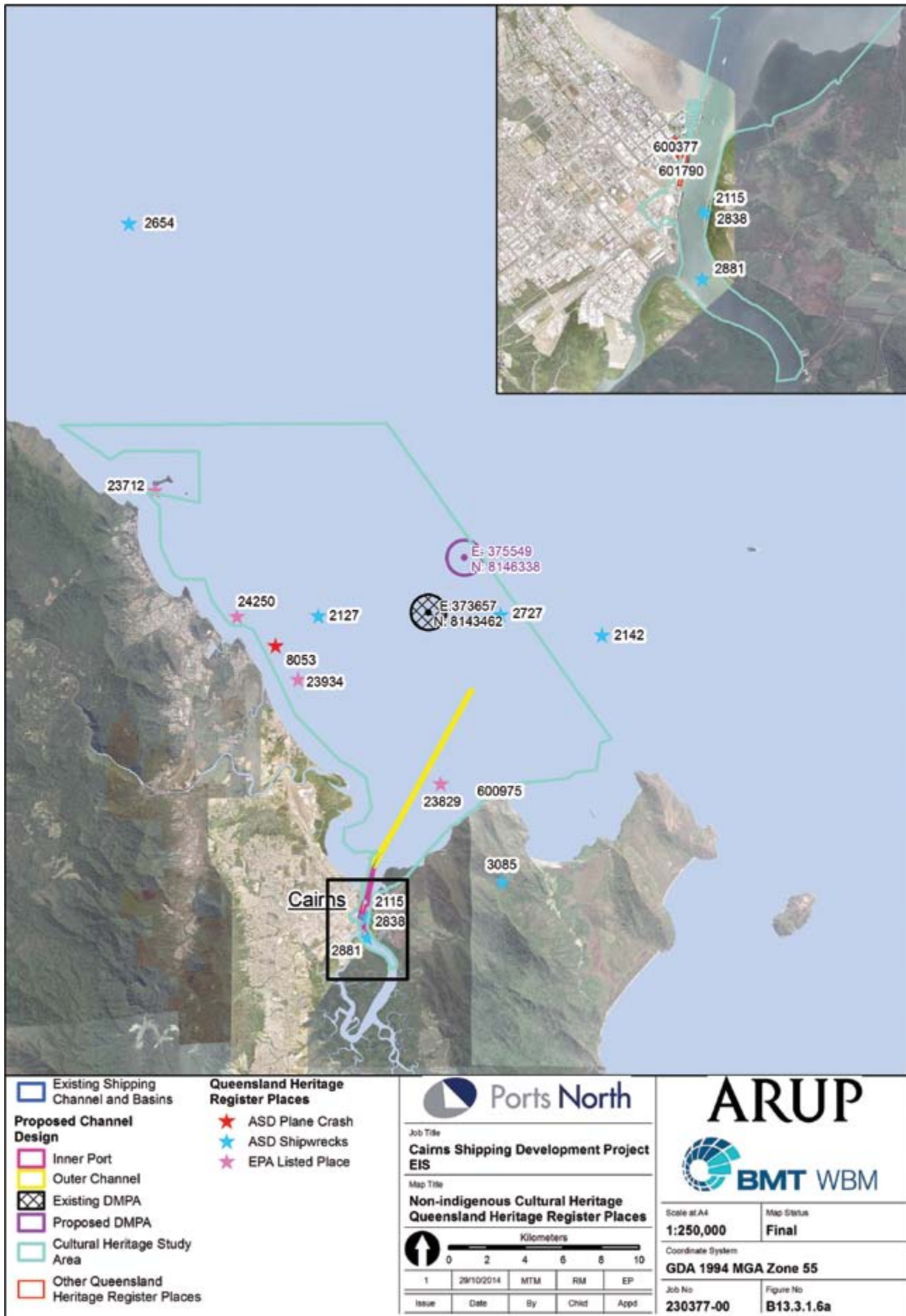
A list of ICH and NICH reported places was compiled in 2006 by the then Department of Environment Protection Agency (now DEHP). Locations were provided but these were not verified and no descriptive information was included with the list. Some of these places were later revisited and listed on the QHR. The remainder have no statutory status or legal protection.

Four places, listed in **Table B13.3.1.6c**, are identified as being located within the study area. These are identified in **Figure B13.3.1.6a**. One, 23829, is located approximately one km from the channel dredging area and 11km from the proposed DMPA.

**Table B13.3.1.6c EPA listed places (Location Datum: WGD84)**

Place ID	Present Name	Location
23712	C185 Amphibian plane crash/wreck.	-16.73 / 145.68
24250	Liberator B24 plane crash/wreck.	-16.79 / 145.72
23934	Dakota plane crash/wreck.	-16.82 / 145.75
23829	Catalina plane crash/wreck.	-16.87 / 145.82

Figure B13.3.1.6a Non-indigenous cultural heritage located on registers and databases which is located within the study area.



## B13.3.2 Cultural Heritage Context

The following discussion is not intended to be a complete history of the study area. It is based on library research of secondary sources and is intended to provide a contextual background for understanding of ICH and NICH cultural heritage sites, places and features relevant to the project.

Although much of the study area is located over water, an understanding of what occurred on the land adjacent to these waters assists in understanding the overall development of the area.

### B13.3.2.1 Environmental Values

A number of anthropological and archaeological studies have been conducted in the vicinity of the project as part of assessments for proposed projects. This material provides some indication of the importance of the study area to Aboriginal people (see **Table B13.3.1.3a**).

The nature and distribution of many forms of cultural heritage in a landscape is in part associated with environmental factors such as geology, climate and landforms which affect the availability of plants, animals and water, the location of suitable camping places, surfaces upon which rock art could be performed, and procurement places for suitable stone for artefactual use. Such environmental factors also affect the degree to which cultural remains have survived natural and human-induced processes. In addition, land-use practices often disturb or destroy cultural heritage. The extent of vegetation and the nature of erosion and deposition regimes also affect the visibility of cultural remains and hence the chances of their detection during ground surveys. Likewise, land-use practices can disturb cultural heritage, potentially moving it from its original context of deposition.

The study area comprises the enclosed waters of Trinity Inlet and part of the waters of Trinity Bay. The estuarine area of Trinity Inlet "is dominated by a system of cheniers and beach ridges extending across the inlet and what is now the city of Cairns" (Cribb & Long, 1995, p. 6).

These beach ridges have a continuous base of sand between successive ridges. Cheniers are long narrow ridges layered with intertidal and supratidal sandy mud. Two lines of cheniers formed on the south of Admiralty Island and the mainland about 5,000 years ago. Further cheniers ridges developed on the seaward side of these at a later date. All are located directly on mangrove mud. These formations have been intersected and on occasion obliterated by mangrove creeks draining into the inlet. Undisturbed foreshore areas comprise mud flats which are subject to tidal inundation (Cribb & Long, 1995).

The original vegetation on the banks of the inlet largely comprises mangrove communities. These survive on the eastern shore of the inlet and Admiralty Island. Some introduced species such as coconut palms and garden species were noted in association with the Catalina slipway on Admiralty Island. In addition the cheniers on Admiralty Island support a variety of salt tolerant shrubs and several stands of *Melaleucas*.

This environment supports a diverse range of fauna. The waters are a rich source of marine species including fish, crustaceans, molluscs and reptiles which was used by Aboriginal people. The land and intertidal zone also support a wide range of bird, reptile and crustacean species which were extensively used by Aboriginal people.

### B13.3.2.2 Anthropological Context

Aboriginal people consciously aimed to manage their impact on the environment, and this connection to the land paralleled their spiritual life; it was the foundation to it. Every aspect of the land: its landforms, geology, plants, animals, seasonal cycles, and even its weather, was explicable and taken into consideration at all times. This resulted in careful, sustainable exploitation and management of resources.

To underscore its importance, the landscape was also mapped in terms of superhuman involvement; intertwined throughout creation stories and legends. In this spiritual world, creeks, rock outcrops, waterholes, mountains and other natural features maintained significance beyond their physical attributes and became places of power, or the central location from which particular stories and myths arose (Bell, 1986). The final link within this rich and complex matrix of meaning was the people themselves, regarded also as part of the landscape. All things, animal, vegetable and mineral that existed within or as part of the landscape, were part of the same picture and all played a valuable role in that landscape.

Reports from surveys conducted in the Cairns southern corridor region have all noted the importance of the landscape as a whole to the Aboriginal people they consulted. This particularly applied to the network of creeks and rivers in the area. Burke et al (2000), referring to a previous Trinity Inlet crossing proposal, notes:

*All of the Aboriginal people consulted during this project expressed concern that the various options for the road (proposed Trinity Inlet crossing) are designed to pass through the numerous creeks feeding into the Trinity Inlet. Many story cycles are linked to these waterways, both as part of events occurring at specific sites and as part of larger overall story cycles connected to the Inlet and Admiralty Island areas in general. These story cycles possess great meaning within the Aboriginal community and, because of the complex interconnections between the stories and the many physical locations which fix these stories to the landscape, the general feeling is that the instigation of construction activities in any one area will inevitably have detrimental effects on the values of other areas, even if they are not directly in the path of development” (Burke et al, 2000, p.42).*

Specific mention is made of the importance of Trinity Inlet as a sacred site and birthing place. Admiralty Island in particular is associated with a number of women’s stories and noted as a sacred and significant place. The foot of the hills in the vicinity of Hills Creek (located on the eastern side of Trinity Inlet) is also noted. Further, the importance of the area as a food resource in both pre-contact and historic periods is emphasised (Fourmile & Mundraby, 1995).

The anthropological record for this area highlights the water skills of groups in the contact period and notes that canoes were used to exploit the resources of the beach, shallows and reefs in addition to being used to access rivers and creek systems (Burke et al, 2000).

Previous cultural heritage studies make some comment on the clan/tribe boundaries, their current lack of definition and that traditional boundaries are being contested. However the Djabugay, Mandingabay Yidindji, Gimuy Walubara, Yirrganydji, Majay Wanyurr and Gunggandji Peoples are generally identified as having occupied the different parts of the broader Cairns, Trinity Inlet and Cape Grafton area. These matters are yet to be resolved amongst the groups and are beyond the scope of this report.

The pattern of settlement in the area was probably similar along the coastal strip with semi-permanent ‘base camps’ or ‘villages’ sites on high ground in proximity to permanent water and in a clearing. Early colonial settlers such as Christie Palmerston describe circular pockets in the rainforest of about a quarter of an acre in size with several gunyahs (Aboriginal shelters/homes) around the margins (Loos, 1982). The homes comprised well thatched dome shaped structures with an area to store possessions such as woven fish traps, fish nets, baskets and bags of various sizes used for leaching, gathering and carrying the large rainforest swords and shields owned by each adult male (Burke et al, 2000).

### **B13.3.2.3 Archaeological Context**

Previous studies have identified various archaeological sites in the Trinity Bay and inlet area. It is possible that not all of these sites are identified in the DATSIMA search results (see **Table B13.3.1.3a**). Studies, including (Cribb, R. & D. Lee Long, 1995), relating to a proposed East Trinity development of 1995 note Aboriginal sites were located:

- On the sand ridges in East Trinity; Pandanus Resources site, deposit of shell fragments and stone flakes and an isolated flake
- In the West Trinity area; a modern shell scatter, two contemporary fishing and crabbing sites
- On Admiralty Island (two possible sites on a chenier)
- Along the Bund Wall (five shell scatters of possible recent origin).

Taylor’s report (1995) identified traditional, historical and contemporary associations in the inlet region particularly in the East Trinity/Bessie Pt area, and Fourmile and Mundraby refer to 64 sites located as part of David’s study in 1994 between Stafford Point and False Cape (Fourmile & Mundraby, 1995).

A desktop study of the cultural heritage regarding the transport corridor in the Trinity Inlet catchment was carried out by Hatte in 1999. It cites the predictive model of archaeological site occurrence developed by Cribb and Lee Long which has applicability in the current survey:

“Least likely: Coastal mangroves; Inland mangroves; Salt pan; Urban/developed areas.

Most likely: Sand ridges; Melaleuca open forest” (Hatte, 1995, p.3)

It was further noted that although cultivated areas were unlikely to retain surface archaeological material, except in a very disturbed state, that subsurface deposits below 60cm may survive (Hatte, 1995).



A cultural heritage assessment in the Southern Access Corridor was conducted by Burke et al in 2000. The study area extended from the eastern banks of the inlet south along proposed routing options for the redevelopment of the Bruce Highway to the west of Edmonton. The assessment identified 11 sites within the categories of creation or story time sites, the 'Old Days': traditional lifestyle and land-use, contact sites and contemporary land-use sites. These included midden sites, camp sites, contemporary resource sites and fighting grounds in addition to a number of areas of concern. The report further suggests that cane farmers regularly unearthed stone axes in the Trinity Inlet area during ploughing activities (Burke et al 2000).

#### B13.3.2.4 Historical Themes

An understanding of historical themes is central to understanding the heritage significance of both landscapes and the built environment. It is also critical to determining whether a place should be included in a heritage register (using the criteria identified in the QHA).

A thematic framework is an approach that focuses on the historical and cultural processes that have shaped the built environment. It has a particular use in the assessment of heritage places as it enables practitioners to identify, assess and interpret a wide spectrum of human activities that may be crucial to understanding the value, physical fabric and historic meaning of any site. It also assists heritage managers place a site within the broader historic process that have shaped the growth and development of any given community.

This summary of the post contact history of the study area, therefore, whilst presented in a chronological manner, applies the thematic framework developed by Blake in conjunction with Queensland Department of Environment and Resource Management (now DEHP) heritage staff in 2005. This framework drew upon the Australian Historic Theme Framework developed by the Australian Heritage Commission in 2001. The following main themes have been identified as being of particular relevance to the study area:

**Table B13.3.2.4a Historic Themes relevant to the study area (DEHP, 2005)**

Theme	Sub-theme
1. Peopling Places	1. Migration from outside and within
3. Developing secondary and tertiary industries	3.12 Catering for tourists
5. Moving foods, people and information	5.4 Using shipping
7. Maintaining order	7.6 Defending the country

#### B13.3.2.5 Thematic History

Captain Cook passed the area on his return voyage from Tahiti in June 1770. As he sailed past the area he named the Frankland Group, Fitzroy Island, Cape Grafton, Green Island and Trinity Bay. He was followed in 1819 by Phillip Parker King on his second surveying voyage on the *Mermaid*. This was followed in 1845 by Stanley, accompanied by MacGillivray and crew in the *Rattlesnake*. On 26 June 1845 they undertook an investigation of the Trinity Bay opening. Their views were not favourable; it was considered to be '... a useless creek' (Jones, 1976, p.9).

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, was among them (Jones, 1976).

The discovery of gold brought people to the north in greater numbers. 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 Goldfield. 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).

On 13 January, 1877, Cairns was gazetted as a warehousing port for dutiable goods. The first survey of the town was undertaken in 1878 and on the resulting map, the depth soundings of the harbour are recorded and an inset is provided showing a plan of the town of Cairns and the wharves. These wharves were very rough and basic, “consisting of timber jetties with piles built out across the mangroves and mud”. The early wharves were located at the end of Abbott Street. Most of the wharves consisted of jetties with an attached shed (Converge Heritage + Community, 2009). Cargo was shipped to these wharves, landed at Smith’s Landing near the mouth of Smith’s Creek, or transhipped into lighters from vessels anchored near a Fairway Buoy in the bay (Jones, 1976).

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 (Grimwade & Townrow, 1996a). Many early farmers in the Cairns area practised mixed agriculture, growing cane, maize and rice with some grazing cattle (Converge Heritage + Community, 2008). Chinese market gardeners established gardens near Freshwater, around Cairns and in East Trinity, cultivating not only fresh vegetables but rice and fruit, particularly bananas (May, 1996). A tramline was constructed at this time to facilitate the transportation of bananas to the harbour (N. Horsfall pers. comm.).

The selection of Cairns as the railhead for the Cairns to Kuranda railway to service the hinterland’s mine fields and the construction of the line between 1886 and 1891 secured its future. The rail line brought many benefits to the region including an assured link to the hinterland’s mining fields and the opening up of agricultural and pastoral lands on the Atherton Tableland.

The early history of the Cairns region is peppered with stories of conflict with Aboriginal people. In the Trinity Inlet area beche-de mer fisherman, Phil Garland, was attacked at Smith’s Creek in 1870 at a location which later became known as Battle Camp (Jones, 1976). Timber-getters started exploiting the area for its red cedar from early 1870 in areas such as Wright’s Creek and Green Hill. “The highly sought after cedar did not last long and in 1878 attention turned to the selection of land” (Burke et al, 2000). Miners also started to make their way into the region with the discovery of gold on the Mulgrave River and patches of alluvial gold on the Russell and Johnstone Rivers. This led to conflict with the local Aboriginal people. Initially this led to an increased presence by the Native Police stationed at Cairns and the Mulgrave River. This did not prove successful as the Native Police had great difficulty in controlling the activities of the Aborigines within rainforest areas. As the land became more settled and the demand for ordinary policing increased Police Commissioner Seymour was forced to rationalise his force and native trackers began to replace native troopers.

In the Cairns region the role of the Native Police and the establishment of blanket and food distribution centres were replaced in 1892 by the founding of the Yarrabah Aboriginal Mission. Large numbers of local groups eventually settled, or were removed to, Yarrabah or other missions such as Palm Island, Mona Mona or Cherbourg. Others came to occupy fringe camps around the outskirts of towns and in later years Town Reserves.

The inlet and its surrounds remained an important source of ‘bush tucker’ for these town dwellers to supplement store bought food. They regularly sought fish, crabs, prawns and mussels along the western fringes of the inlet and the melaleucas on the sandy ridges were sources of ‘sugar bag’ (Skeene 1995, Bukal Consultancy Services 1996) in Burke et al, 2000, p. 24).

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 offload goods and passengers from steamers at the Fairway Buoy. However, the amount of exports from the town did not convince the government. Eventually the *Platypus* began dredging operations in December 1887. A number of ships were wrecked or stuck in the mud of Trinity Inlet during this time including *You Yangs* and *Victoria* but both appear to have been refloated (Jones, 1976).

People’s health in the town was described by Jones (1996, p. 218) as “chancy”. Fevers were endemic and malaria dominated. In 1889 a Malay leper was discovered in Cairns. The police were ordered to take charge and as there were now several lepers they were towed in a dinghy to temporary quarters on the southwest side of False Cape. Temporary quarters became a permanent station and the bay became known as Lepers Bay. It remained for decades (Jones, 1976). When abandoned the name of the beach was changed to Sunny Bay (DEHP, 1996, citation 600975).

In the 1890s a creek ran from Lake Street to the inlet (probably Lily Creek) and there the Chinese fishing group kept their boats and lived in houses on stilts built over the water. “*They erected fish traps all round the inlet until for some reason or another there was a hue and cry about the traps and they were forbidden in the mid-nineties*” (Jones, 1976, p. 213). A second creek, Alligator Creek, was located on the south side of this creek.

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). A provisional Harbour Board was established in 1899. The Cairns Harbour Board (CHB) was granted full status by an Act of Parliament in 1906 and one of the first tasks undertaken was the purchase of existing private wharves. With control of formerly privately-owned jetties, the CHB was able to instigate plans to redesign the harbour, wharves and foreshore. These plans included continuous concrete wharves and a sea wall. The mudflats to the rear of the seawall were to be filled-in with silt and sand from harbour dredging (Converge Heritage + Community, 2011). Work on the improvements began in 1911. By the end of 1925 the majority of the wharf improvement scheme had been completed. Despite ongoing discussion regarding the need for a slipway, it appears that nothing had been constructed in Trinity Inlet prior to World War II (Converge Heritage + Community, 2011).

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.). Cairns was designated "Fortress Cairns" and coastal and anti-aircraft defences were established. HMAS Kuranda was established as a Royal Australian Naval Base at the western mouth of the inlet, a United States Navy Base (144) was established at the northern mouth of Smith's Creek, the US 411th boat building assembly plant was constructed to the south of the wharf complex, a Royal Australian Air Force (RAAF) flying boat base with moorings was established off the wharf area, and a slipway on the north side of Wharf 1, a slipway near Wharf 10, a RAAF workshop, a slipway on Admiralty Island and a floating dock at the mouth of Smiths Creek which could accommodate a corvette (Ryle, 2006; Broughton 1981, Converge, 2011; S. Fowler pers. comm.), were also established.

It is unclear, but possible, that the area in the vicinity of Alligator Creek which drained into Trinity Inlet in the vicinity of Bunda Street was reclaimed at this time. Naval craft crowded the wharves and a new, albeit wooden, wharf was constructed (Wharf No. 6).

A submarine boom net was constructed across the inlet. Parts of the inlet opposite the wharves were mined and piles driven to one side of the channel in Trinity Bay so small ships could be moored and sunk to block the channel if necessary (Broughton, 1981). Its construction is described by Bert Simmons:

*It was constructed of high-tensile tube using an 'A' frame fabrication. It was assembled on the barge and fastened together with special clamps, then lowered into position and secured to the previously laid frame...a high-tensile net was secured over the 'A' frame on the seaward side to prevent ships being torpedoed in the harbour. The boom stretched across the inlet from approximately Bessies Point and secured to a concrete post just off The Esplanade between Minnie and Upward streets. The ship' channel area was equipped with a torpedo net supported by buoys. This was mechanically operated when the ships passed to and fro (quoted in Bradley, 2003, pp.337-8).*

**Figure B13.3.2.5a Slipway at Admiralty Island, 1945 (Source CHS)**



**Figure B13.3.2.5b Western side of submarine boom net. Reproduced in Ryle, 2006, p. 98 (source CHS)**



Catalinas flew approximately 3000 missions from the port against the Japanese (S. Fowler pers. comm.). A number of bombs and other explosives were lost in the harbour as a result of transferring equipment to Catalinas in the inlet in bad weather. This included at least one bomb near No. 1 Wharf and two mines on the eastern side of the inlet (Ryle, 2006).

Other activities undertaken in close proximity to the study area included the construction of a gun emplacement at False Cape. Double Island and Haycock Island were used for target practice for bombardment (Rowney, Grimwade & Skeene, 2006) and Trinity Bay, including Taylors Point, was used extensively for landing craft military training with headquarters for the 42nd Landing Craft Company established at Taylors Point (Grimwade & Townrow, 1996). Military use of the Cairns airstrip, despite the shortness of the runway, was undertaken by both Australian and US armed forces. This, in addition to the establishment of the flying boat base, resulted in a number of crashes, some of which occurred within the study area (Bradley, 2003). In all, approximately 22 crashes are recorded in the Cairns area in Dunn's ozatwar website, of which one is listed on the AMSDB and four (including the "Liberator" listed on the AMSDB) are listed on the EPA listed sites. This includes the RAAF Hudson which crashed into the sea about 366m (400 yards) out from Machans Beach just north of the Barron River. Eleven men were killed including Major General George Alan Vasey (Dunn).

After World War II the CHB began negotiations to resume ownership of the wharf area and infrastructure installed by the armed forces (Cairns Post, 12 September 1946). This included the No. 10 slipway and the RAAF slipway located to the immediate north of Wharf 1 (Cairns Post, 12 February 1947). Unstated improvements to the slipways were undertaken in 1952 and both large and small slipways remained a boon to the harbour and town through the early 1950s. However, by 1956 the large No.10 slipway was in such poor condition that it was condemned (CHB, 1956).

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.

Between 1971 and 1975, 700ha of the estuarine wetland area at East Trinity was drained by the construction of a bund wall and floodgates at Hill and Firewood creeks in order to grow sugar cane on the resultant land. Crops were planted between 1981 and 1988 but the area suffered from high salinity and acid sulphate soils (ASS) and the exercise was not considered successful. The land was sold for further development in the late 1980s and then held by receivers until the Queensland Government purchased it in 2000 for the purposes of remediation (Hicks, Fitzpatrick & Bowman, 2003).

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.

A derelict ship survey of the inlet in 2005 identified over 20 ships and/or wreck material which was either floating in derelict condition, grounded on the banks of Admiralty Island or wrecked on the banks of the inlet. Of this material, two areas were associated with World War II remains while the remainder represented what were considered to be relatively recent wrecking or abandonments (Ballantyne, 2005).

In 2010 Ports North began implementation of several phases of port revitalisation within the QHR Cairns Wharf Complex. This included the removal of Trinity Wharf and the revitalisation of No. 3 Wharf Shed which became the award-winning Cairns Cruise Liner Terminal (CCLT). In late 2010, the revitalisation of No. 2 Wharf Shed and the upgrading of services to these sheds also occurred, including re-landscaping of the grounds to the western sides of the wharf area to integrate and link the wharf complex with the Pier and Cairns Esplanade areas.

### **B13.3.3 Non-Indigenous Cultural Heritage Field Assessment**

Targeted field work was undertaken in order to locate and assess land-based places of NICH in addition to those located on the various cultural heritage registers. The methodology used for this assessment and the definitions of site integrity and ground surface visibility are set out in **Sections B13.1.3**.

#### **B13.3.3.1 Site Integrity**

With the exception of the East Trinity Bund Wall (CSD02), places within the assessed area demonstrated poor site integrity. Sites comprised remnant foundations, artefact scatters and shipwrecks. Further, there has been significant ground disturbance and deposition of material, particularly at the Catalina Slipway (site CSD03) since it was abandoned at the end of World War II. This has compounded the harsh environmental conditions associated with a marine environment to which the sites have been exposed.

#### **B13.3.3.2 Ground Surface Visibility**

Ground surface visibility (GSV) was partly dependant on the relative state of the tide. Those sites, notably the beached shipwrecks, in the intertidal zone are generally partially submerged in mud with only the upper superstructure exposed. In addition, the submarine boom net foundations are completely obscured by marine growths. The bund wall (CSD02) and the Catalina Slipway (CSD03) had good GSV although the Catalina Slipway was obscured by an accumulation of modern items.

#### **B13.3.3.3 Field Assessment Outcomes**

Seven NICH places were located during the assessment (refer **Figure 13.3.3.3a**). These are in addition to those places identified on various cultural heritage registers (see **Section B13.3.1**). A summary description of these places is provided in **Table B13.3.3.3a** with site details at **Section B13.8**.



**Table B13.3.3.3a Summary of additional NICH places (not currently on any heritage registers) located within the study area within Trinity Inlet**

Site No.	Site Name	Location	Description
CSD01	Submarine boom net foundations	Polygon bounded by the co-ordinates: -16.913115/145.789523 -16.914352/145.790907 -16.914603/145.790844 -16.913466/145.789480	At least eight piles of wire rope and other material thickly covered in oysters located on intertidal mud flats on eastern bank of Trinity Inlet approximately 350m downstream (NNE) of mouth of Hills Creek.
CSD02	Bund wall	Polygon bounded by the approximate co-ordinates:- -16.949445//145.812083 -16.948091/145.798115 -16.945742/145.795550 -16.941712/145.788481 -16.936052/145.786544 -16.924245/145.790058 -16.923000/145.793750 -16.919866/145.793401 -16.917247/145.799207 -16.914171/145.802019 -16.914639/145.803001 -16.912494/145.805588 -16.913181/145.810934	Earthen wall raised above mangrove tidal fringe of the coastal perimeter. Creek banks are reinforced with concrete and fitted water flow control gates slotting into concrete culverts at Firewood Creek and Hills Creek.
CSD03	Catalina Slipway	Polygon bounded by the co-ordinates: -16.944966/145.781380 -16.945077/145.781476 -16.945631/145.780567 -16.945170/145.780275	Located on the east side of Admiralty Island. Concrete slipway comprising reinforced concrete slabs extending at least 26m down sand beach into Trinity Inlet. Remnant evidence of slipway shed and associated infrastructure at back of beach. These features and other possible WWII elements are much obscured by layers of modern material.
CSD04	Barges/Pontoons	-16.945981 / 145.782095	Remains of at least two barges which have been beached on Admiralty Island to the south of the Catalina slipway.
CSD05	Converted barge	-16.955673 / 145.794022	Wrecked iron converted barge with several engines and winches stored on the deck. Partly submerged in the intertidal zone on the west side of Trinity Inlet off Admiralty Island. Length approximately 20m+.
CSD06	Trawler <i>"Communicator"</i>	-16.955782 / 145.797388	Wrecked iron trawler beached on east side of Trinity Inlet, north of Coconut Slipway. Length 22m, beam 6m.
CSD07	Tramway	Within the polygon: -16.929675/145.788374 -16.929846/145.788350 -16.928419/145.785543 -16.928369/145.785002 -16.928126/145.785047 -16.928215/145.785622	The tramway remains as a raised earthen bank and cutting through the mangroves on the eastern bank of Trinity Inlet. East of the bund wall it comprises a dirt road. Its western extent is obscured by mangrove regrowth at the inlet but its orientation is apparent for approximately 330m.

Two places are related to World War II activities and the classification of the Port of Cairns as a “Defended Port”. These places comprised the submarine boom net foundations (CSD01) and the Catalina slipway (CSD03). The submarine boom net foundations are extremely remnant and only partly exposed at low tide. It is difficult to determine what materials comprise the foundations as they are thickly covered with marine growths. However, some segments of wire rope extend from the various ‘piles’ of material which are generally spaced approximately 10m apart extending into Trinity Inlet. It is unclear if any component of the site extends beyond the shallower parts of the inlet.

No remains were apparent on the mangrove foreshore. The Catalina slipway is now best evidenced by the remnant reinforced concrete slab ramp that extends from the top of the tidal zone on Admiralty Island for at least 26m into the intertidal zone. Evidence of infrastructure associated with this ramp is remnant and much obscured by various more recent phases of occupation and/or later use of this part of the island. More recent remains include a remnant wooden ship, an area of burnt metal materials and a thick scatter of plastic, cloth, metal and wood material.

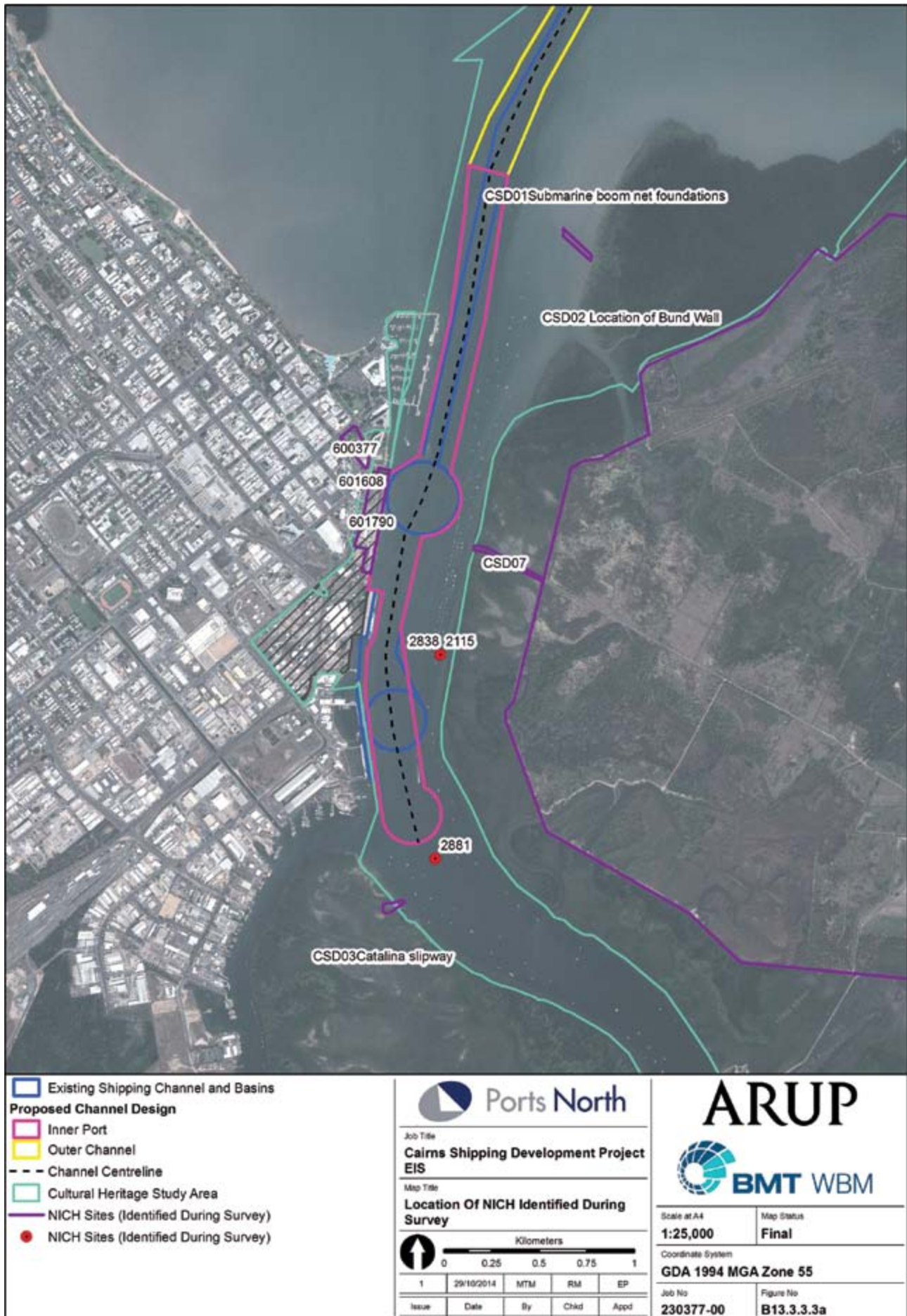
The bund wall on the east side of Trinity Inlet is a 1970s feature. It is located in close proximity to the study area. It comprises an earthen bank raised above the tidal zone with control gates fitted at Hills and Firewood Creeks. Originally these gates prevented ingress from the Trinity Inlet side but they have since been adapted to control ingress and egress of water flow. This wall extends for approximately 7.2km around the mangrove tidal zone.

Evidence of the tramway said to be constructed by Chinese to transport bananas to the harbour was remnant with few associated artefacts apparent. It mainly comprises a low earthen bank which stands above the surrounding mangrove tidal flats and as a cutting through the mangroves.

The remaining sites comprise three shipwrecks located in the intertidal zone. These have been recorded previously in 2005 by Ballantyne. The wrecks were not considered in terms of their relative cultural heritage significance at this time. All comprised iron shipwrecks which are likely to have been run aground and abandoned. Two of these wrecks were considered to be relatively recent (CSD05 and CSD06) and the third is reputedly of c. 1960s era (CSD04).

At least nine additional vessels are abandoned in the intertidal zone of Admiralty Island. All are small recreational vessels of recent origin. These vessels were not considered to have any cultural heritage significance and were therefore not recorded.

Figure B13.3.3.3a Location of NICH places identified during survey



### B13.3.3.4 Acoustic Mapping

Initial acoustic mapping has been undertaken over the study area by BMT WBM (see **Chapter B5, Marine Water Quality**). This survey was most concentrated along the existing channel and included a number of passes in the broader study area. No hard readings of stone, metals or other hard substances were encountered.

However, the survey was not conducted with a view to identifying cultural heritage sites or places and should be considered as preliminary (C. Jones pers. comm).

## B13.4 NICH Cultural Heritage Significance Summary

Twenty-four [24] NICH places have been identified through a search of cultural register searches and field assessment as being located within the study area. The cultural heritage significance of the QHR places has already been defined. The LHR does not include any places in addition to the QHR places. **Table B13.4a** summarises the cultural heritage significance of the places identified on the statutory and non-statutory registers and as a result of field assessment. Most of these sites, whilst located in the study area, are not located in the proposed areas for development; that is the expanded channels, swing basins and wharf upgrade. Those which are located within or on the periphery of the project development area are highlighted in bold.

Together these sites and places demonstrate the development of the town of Cairns and the central importance of the port area to this development.

**Table B13.4a Summary of NICH places**

Site No	Site Name	Significance
601790	Cairns Wharf Complex.	State
600975	False Cape Second World War Defence Facility.	State
601608	Barrier Reef Hotel.	State
601610	Jack and Newell Building (former).	State
600377	Cairns Custom House (former).	State
23712	C185 Amphibian plane crash/wreck.	Unassessed
23934	Dakota plane crash/wreck.	Unassessed
23829	Catalina plane crash/wreck.	Unassessed
2115	A.P.A.	Unassessed
2127	Adieu	Protected under HSA
2142	Akaroa	Protected under HSA
2654	James Merriman	Protected under HSA
2727	Koala	Protected under HSA
2838	Mary	Protected under HSA
2881	Miro	Unassessed
8053/24250	Consolidated B-24 Liberator	Unassessed
3085	Safari	Unassessed
CSD01	Submarine Boom Net Foundations	Local
CSD02	Bund Wall	Local
CSD03	Catalina Slipway	Local
CSD04	Barges/pontoon	Not significant
CSD05	Converted barge	Not significant
CSD06	Communicator	Not significant
CSD07	Tramway	Possibly Local

## B13.5 Potential Impacts

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. These areas are illustrated in **Chapter A4, Project Description**. Indirect impacts on cultural heritage of the marine environment may also potentially be associated with adverse water quality from sediment plumes resulting from the disposal of dredged material. These include matters of cultural significance such as impacts to 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.

This impact assessment therefore, only considers those sites which are likely to be directly impacted by the project.

### B13.5.1 Impact Definitions

This section assesses the potential impact of the project on the cultural heritage places within the study area.

As impact on cultural heritage is, by and large, permanent and irreversible, consideration of the duration of impact did not comprise a component of this impact assessment.

In order to assess the significance of potential direct impacts resulting from the project on the ICH and NICH places and values development area the following definitions were used.



**Table B13.5.1a Definition of impact significance criteria in relation to cultural heritage places**

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.</p> <p>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.</p> <p>Mitigation measures can be applied to reduce the significance of impact.</p> <p>Possible prosecution under the ACH Act, the QHA or the HSA.</p> <p>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.</p> <p>Moderate level of public concern.</p>
Minor	<p>Impacts on ICH will occur, but are acceptable under the terms of the CHMPs.</p> <p>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.</p> <p>Little public concern.</p>
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 B13.5.1b 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

Table B13.5.1c Risk Rating Legend

<b>Extreme Risk</b>	An issue requiring change in project scope; almost certain to result in a 'significant' impact on a Matter of National or State Environmental Significance
<b>High Risk</b>	An issue requiring further detailed investigation and planning to manage and reduce risk; likely to result in a 'significant' impact on a Matter of National or State Environmental Significance
<b>Medium Risk</b>	An issue requiring project specific controls and procedures to manage
<b>Low Risk</b>	Manageable by standard mitigation and similar operating procedures
<b>Negligible Risk</b>	No additional management required

## B13.5.2 Aboriginal Cultural Heritage

Known Indigenous (Aboriginal) cultural heritage sites located on the DATSIMA database are all located close to, or on land. These places are protected under the ACH Act. Whilst the significance of this cultural heritage is very high, it is highly unlikely that they will be directly impacted by the project, as all sites located on the DATSIMA database were land based and are not located within the vicinity of any proposed development area. The impact risk rating of any impact is therefore considered medium without mitigation. Residual risks (once mitigations measures are applied) are detailed in **Section B13.6.6**.

It is possible that further significant Aboriginal areas relating to either Aboriginal tradition or Aboriginal history under the meaning given in the ACH Act may be directly impacted by the project. Consultation with aboriginal parties (refer to **Table B13.1.2.1a**) 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 very high; therefore the risk rating of this impact would be high without mitigation being put in place.

### B13.5.3 Cairns Wharf Complex and Associated Areas

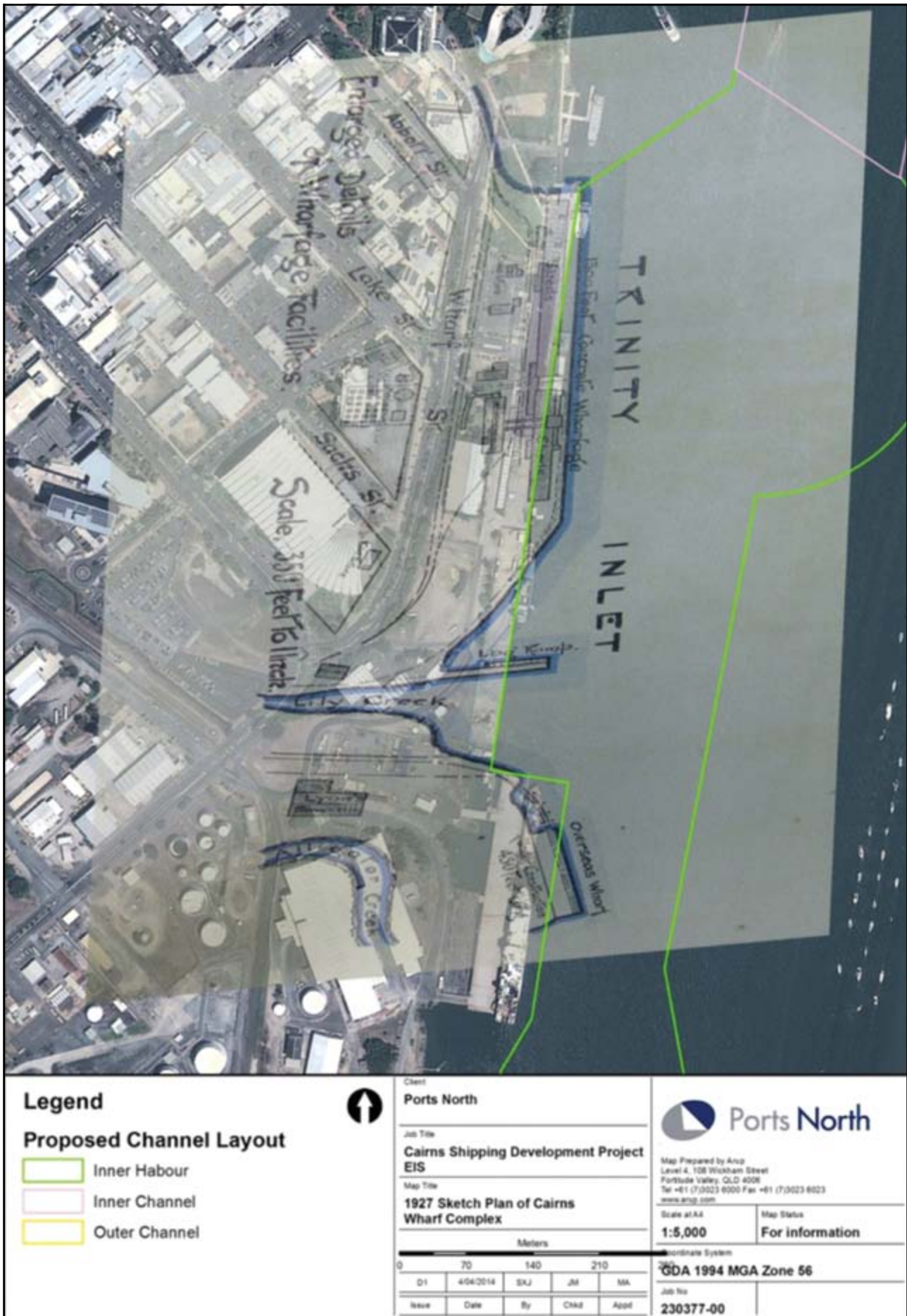
Cairns Wharf Complex is listed on QHR and its cultural heritage value as a place of state significance is established. This affords the complex statutory protection under the QHA and will necessitate an IDAS development application approval for works within the complex. Two successful adaptive reuse programs have been undertaken in recent years which have seen the revitalisation of the aspects of the concrete wharf (Wharf 1), the wharf sheds (Sheds 2 and 3) and the public spaces associated with the area, extending from White's Shed to the grounds of the Hilton hotel. This work included the upgrading of various services to the wharves on the western side of the wharf sheds. Condition reports undertaken following these works have not identified an impact to the heritage value of the listing. It is anticipated that further service installation will minimally impact the cultural heritage significance and values of the place and will be limited to the installation of a storage and pump station on the western side of Shed 2. These works are unlikely to include additional trenching and/or ground disturbance. The significance of this impact is therefore considered to be minor. The impact risk rating for this aspect of the development is therefore considered to be low.

It is unlikely that vibration levels during the construction phases of the development could impact on the structural integrity of the wharves and associated buildings. Previous works of a similar nature (including fender piling) have not caused deterioration in the condition of the wharf. This is likely due to a combination of soft marine sediments and the timber framing of heritage buildings. If an impact does occur, it is likely to be readily restored (see **Chapter B10, Noise and Vibration**). The consequence of this impact on the cultural heritage values of the Cairns Wharf Complex is moderate. The impact risk rating is consequently medium without the application of management measures.

The upgrade of the wharves, largely comprising the installation of independent dolphins, will almost certainly impact the cultural heritage views and vistas, particularly from the seaward side. Whilst some of these impacts, during construction, will be temporary, there will be a permanent change to these views and vistas which will be of moderate significance. Thus the impact risk rating of this part of the development will be high. As, however, this upgrade will have the effect of reducing wear and tear on the heritage listed wharves, there are also beneficial impacts which need to be considered.

The QHR Cairns Wharf Complex south to the fuel depot has been at the forefront of the development of the Port of Cairns. As outlined in **Section B13.3.2.5** a creek which was probably Lily Creek was used in the 1880s by a group of Chinese fishermen who kept their boats and lived in houses on stilts built over the water. This creek was filled and reclaimed and has become part of the wharf complex (see **Section B13.3.2.5**). In addition, Alligator Creek drained into the inlet near the end of Bunda Street. Both the early use of the creeks and the fill material used to reclaim the area may have resulted in the deposition of a significant archaeological record of the history of the area. These and other changes are illustrated below in **Figure B13.5.3a**. It is proposed that the fuel pipe trenching will transect part of this area. This may impact an archaeological deposit as defined under the QHA at section 60. The likelihood of this impact is considered to be possible and the significance of the impact moderate with a risk impact rating of medium.

Figure B13.5.3a 1927 sketch plan of Cairns Wharf Complex Overlaid the Current Study Area (courtesy Ports North)



### B13.5.4 Marine Historic Sites

At least two historic shipwrecks, one of which is protected under the HSA, are possibly partly located within the proposed Crystal Swing Basin. It has also been stated (Ryle, 2006) the loading of Catalina's during World War II resulted in some armaments being accidentally dropped into Trinity Inlet. As noted in **Section B13.1.4.2**, the veracity of the data and the likely dispersal of material as a result of tidal action on the shipwrecks through time suggests 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. Therefore it is considered that it is possible that known marine historic sites may be impacted by the project. The consequence of impact on this type of site is considered to be high and thus the impact risk rating is high.

### B13.5.5 World War II sites

The submarine boom net foundations (CSD01) and the Catalina slipway (CSD03) are both material evidence of Cairns "Defended Port" status during World War II. Evidence of this phase of Cairns' history, particularly in the Trinity Inlet area, is now uncommon. In addition the impact of this phase of history on the development of Cairns was profound. Therefore the cultural heritage significance of these places is potentially high at a local level. However the integrity of these places is now low and the Catalina slipway, in particular, has also been impacted by later phases of use of the place. Thus there is a reduced ability for the material evidence at these places to demonstrate this cultural heritage significance. Nevertheless it is still possible to partially appreciate the form and nature of the places and they are considered to be of sufficient cultural heritage significance to warrant consideration for nomination to the local heritage register. Both sites are not located within the proposed development area and it is unlikely they will be impacted by day to day activities (indirect impact) during the construction phase of the development. However, the expansion of the swing basins may increase the amount of activity by larger vessels close to these places. It is therefore considered that there is an unlikely, minor impact over time with an impact risk rating of low.

### B13.5.6 Other sites

The sites (CSD4-6) comprise some of the abandoned vessels located within Trinity Inlet. In addition to these vessels at least nine more recreational abandoned vessels beached on Admiralty Island and two in the intertidal zone on the East Trinity banks in the vicinity of the fore and aft pole moorings. Those vessels which have been included in the NICH assessment comprise the earlier abandoned vessels located within the study area. All three are considered not to have cultural heritage significance of any substantial level, and are highly unlikely to be impacted by the project. As such any impact would be negligible. The impact risk rating for these sites is therefore considered to be low.

Site CSD7 is the remnant tramway said to relate to the 1880s and Chinese market gardening in the East Trinity area. Despite its remnant integrity it is still possible to partially appreciate the form and nature of the place. This site may have sufficient cultural heritage significance to warrant consideration for nomination to the local heritage register. However, the tramway is not located within the proposed development area and it is highly unlikely to be impacted by the project. Nevertheless the consequence of any indirect project impact is considered to be moderate. The risk rating for this site is therefore considered to be low.

### B13.5.7 Potential for Further Sites and Places

It is considered that there is some potential for further historic places and items to exist within the marine parts of the study area which may be impacted by the expansion of the dredged channel, particularly as the veracity of the AMSDB does not allow for a comprehensive understanding of the NICH resource. The site types which may be located within the development area include shipwrecks, and materials lost overboard in the harbour. Although it is unlikely that material will be located, the consequence of impacting such material is considered to be high. Therefore the impact risk rating is considered to be medium. In addition, further cultural heritage sites and areas are known to exist in the vicinity of the study area. Information located during the course of this assessment relates to them has been stored by Ports North for use when and if it becomes relevant.



## B13.6 Mitigation Measures and Residual Impact

### B13.6.1 Proposed ICH Mitigation Measures

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.

Cultural awareness training will be a crucial element of management, with the intention of training people involved in the project in avoidance and protection of known cultural heritage sites, what cultural heritage may reasonably be in the landscape, and what to do in the event of a find of cultural heritage not previously defined during cultural heritage surveys.

It is anticipated that three CHMPs may be developed. One CHMP will be between Ports North and the Gimuy Walubara Yidinji People whose NTDA is partly located within the Trinity Inlet. Another CHMP will be developed between Ports North and those Aboriginal Parties identified through a public notification process over that part of the Trinity Bay and Trinity Inlet waters that will be directly affected by the project. In the case of any land placement of dredged material there could be a need for a third CHMP with endorsed respondent parties.

The implementation of these CHMPs will reduce the significance of potential impact on ICH within the project development to minor, the likelihood to unlikely and the impact risk rating to low.

### B13.6.2 Proposed Mitigation Measures for Cairns Wharf Complex Area

Development within the QHR listed Cairns Wharf Complex under the QHA requires the preparation of an IDAS development application. Ports North will ensure the requirements set out in the QHA are met. Ports North will also undertake to ensure that any conditions of the approval of this application are met in a timely manner. Previous works to upgrade heritage-listed facilities at Sheds 3 and 2 have been undertaken. The management measures were successful in retaining the heritage values of these buildings.

In order to reduce the impacts to the views and vistas within the QHR Cairns Wharf Complex, Ports North will ensure they obtain heritage advice from a suitably qualified and experienced person regarding design options. These options will be included in the development application. A predevelopment archival recording of wharves will also be undertaken. These measures ensure that it is unlikely that impacts to the NICH will occur as a result and that if they do, the significance of these impacts will be minor. Therefore the overall impact risk rating will be reduced to low.

Once the final construction methodology has been selected, additional testing will be undertaken to calibrate and confirm the expected vibration levels that have been modelled (refer to **Chapter B10, Noise and Vibration**). Vibration monitoring will also be undertaken at the time of dolphin pile driving. A recognised maximum vibration standard for development within heritage places is 3mm/sec (see **Chapter B10, Noise and Vibration**). In order to remain below the criterion of 3 mm/s for heritage structures as recommended for the heritage wharf, the hammer energy used to pile will be controlled. This will be achievable by limiting the drop height relative to the hammer mass and monitoring vibration on the first day of piling to confirm predictions. A condition survey of the heritage wharf will also be undertaken prior to the commencement of construction works should previous condition reports not be sufficient to enable the contractor to monitor works.. Further monitoring on subsequent days will be undertaken, if required to confirm predictions. This framework reduces the significance of any residual impact to minor, the likelihood to unlikely, and the impact risk rating to low (see also **Chapter B10, Noise and Vibration**).

Construction staff will be provided with cultural heritage awareness training to assist with recognising any unrecorded archaeological material when excavating in previously undisturbed areas on land (unlikely, as much of works will take place in heavily disturbed areas). The significance of any residual impacts from the project in this area will consequently be reduced to minor, the likelihood to unlikely and the impact risk rating to low.

### **B13.6.3 Proposed Mitigation for Marine Historic Sites**

In order to ensure that Ports North meets its obligations under the HSA and to ensure that any potential NICH within the dredged areas is managed in appropriate way, Ports North will undertake a magnetometer (or similar) survey of the proposed new dredged areas prior to work commencing. This survey will be undertaken by a suitably qualified person experienced in recognising the existence and location of historic marine material from the results of the magnetometer (or similar) survey. Reporting on the results of this survey will provide recommendations for the management of any cultural heritage material that may be found. The significance of any residual impact will thereby be reduced to minor, the likelihood to unlikely and the impact risk rating to low.

### **B13.6.4 Proposed Mitigation for World War II and other sites**

To ensure that there is no unintended or cumulative indirect impact at the Submarine Boom Net Foundations (CSD01), Catalina Slipway (CSD03) and Tramway (CSD07), these places will be considered “no go” areas. In the unlikely event there are indirect impacts on these places post project construction the following mitigation measures will be undertaken:

- Limited additional research of primary and secondary source material to attempt to confirm the provenance and associations of the places and establish details about their history
- Recording of the sites in detail by a qualified cultural heritage professional and in line with the DEHP Guidelines for Archival Recording. This will comprise a statement of significance, a site sketch map, description and photographic record
- The archival report will be provided to Ports North, the Cairns Historical Society and Cairns Regional Council library.

These measures will ensure that the residual significance of any impact to these places will be reduced to negligible, the likelihood to highly unlikely and the impact risk rating to low.

### **B13.6.5 Proposed Mitigation for Cultural Heritage Management of Unknown Sites**

Ports North will ensure that diligence is practiced whilst undertaking works within the study area, particularly during any dredging or construction phases associated with initial preparation of the area. To facilitate this diligence, ICH and NICH induction material will be developed, once all approvals for the project are in place but prior to ground disturbing and dredging activities. This material will be incorporated into the General Site Induction.

The cultural heritage induction material will be prepared by a qualified heritage professional and include the following:

- A specific instruction for crews regarding their obligations to look for and avoid impacting on NICH material until it has been properly assessed
- Presentation of familiarisation material for work crews so that they are aware of what constitutes a NICH find
- Provision of educational material to personnel informing them what archaeological material may look like, and provide clear instructions on what to do should any such material be found
- A stop work procedure for new and incidental finds
- A process for the collection, transport and storage of any NICH items.

In the event that suspected cultural heritage is found, Ports North will establish a minimum of a 10 metre buffer zone around the outer extent of the find and all project activities will cease within this buffer zone.

The potential cultural heritage will not be removed or disturbed any further (barriers or temporary fences will be erected as a buffer around the find if required). Work will continue elsewhere within the study area as long as these activities do not affect the potential cultural heritage. Ports North will contact an appropriately qualified person with expertise in identifying cultural heritage, such as an archaeologist or cultural heritage specialist and/or the relevant Aboriginal party, who can assess the potential cultural heritage and provide advice on the way forward. This will ensure compliance with the ACH Act and with s.88-91 of the QHA maintained within the Construction Environmental Management Plan for works.

Implementation of these mitigation measures will ensure that any residual impacts will be unlikely, will have minor significance with an impact risk rating of low.

### B13.6.6 Summary

The chapter identifies the known ICH and NICH located within the study area. It also identifies the likelihood of other, currently unknown places of cultural heritage significance to exist within the study area. It then assesses the significance and likelihood of any impacts that will occur to this cultural heritage within the project development area and provides for processes for the management of these impacts in order. These measures are summarised in **Table 13.6.6a** below.

**Table 13.6.6a Impact Assessment – Cultural Heritage**

Impact Assessment – Cultural Heritage									
Activity	Potential Impact	Significance	Likelihood	Risk Rating	Mitigation	Significance	Likelihood	Residual Risk rating	
<b>Construction Phase</b>									
Dredging of extended channel and swing basins	Impact on HSA protected site.	High	Possible	High	Magnetometer survey prior to dredging activities.	Minor	Unlikely	Low	
	Impact on currently unknown significant marine historic sites.	High	Unlikely	High	Magnetometer survey prior to dredging activities.	Negligible	Highly unlikely	Low	
	Impact on sites assessed by field assessment as of local cultural heritage significance.	Moderate	Highly unlikely	Low	Ensure no activity in area.	Negligible	Highly unlikely	Low	
	Impact on currently unknown significant Aboriginal areas.	Moderate	Possible	Medium	Development of CHMP.	Minor	Unlikely	Low	
	Impact on Aboriginal cultural heritage sites on boundaries of the study area.	High	Highly unlikely	Medium	Development of CHMP.	Minor	Highly unlikely	Low	
Development within a QHR Place	Impact to heritage values of Cairns Wharf Complex	Moderate	Likely	Medium	Heritage advice during design phase and suitable options development. Heritage Impact Assessment and IDAS Development Application.	Minor	Unlikely	Low	
	Construction of storage and fuel hut with associated services.	Minor	Unlikely	Low	IDAS Development Application.	Minor	Unlikely	Low	

Impact Assessment – Cultural Heritage									
Activity	Potential Impact	Significance	Likelihood	Risk Rating	Mitigation	Significance	Likelihood	Residual Risk rating	
<b>Construction Phase</b>									
	Construction of wharf dolphins resulting in vibration impacts to structural integrity of QHR places.	Moderate	Likely	Medium	Hammer energy used to undertake piling will be controlled to limit vibration impacts to QHR places. Once the final construction methodology has been selected, calibration testing will be undertaken to confirm the expected vibration levels. Vibration monitoring will be undertaken on the first day of piling (and on subsequent days, if required) to confirm predictions within <b>Chapter B10, Noise and Vibration</b> . A review of the existing dilapidation survey of the heritage wharf will also be undertaken prior to the commencement of construction to confirm pre-construction condition.	Minor	Unlikely	Low	
	Changes to views and vistas of wharves impact on heritage values	Moderate	Almost certain	High	Heritage Advice during design phase and suitable options development. Heritage Impact Assessment. Preconstruction archival recording.	Minor	Unlikely	Low	
	Removes wear and tear on QHR wharves.	Beneficial	Almost certain	Beneficial	-	-	-	-	
Construction of fuel line south of wharves.	Damage to potentially state significant archaeological deposit.	Moderate	Possible	Medium	Cultural Awareness Training for construction staff.	Minor	Unlikely	Low	

## B13.7 Bibliography

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## B13.8 NICH Field Assessment Site Details

Site No.	CSD01
Type/Name	Submarine boom net foundations
Location (Datum GDA94)	<p>Polygon bounded by the co-ordinates:</p> <p>-16.929675/145.788374</p> <p>-16.929846/145.788350</p> <p>-16.928419/145.785543</p> <p>-16.928369/145.785002</p> <p>-16.928126/145.785047</p> <p>-16.928215/145.785622</p>
Description	At least eight piles of wire rope and other material thickly covered in oysters located on intertidal mud flats. Series of piles extend at least 180m from eastern bank of Trinity Inlet approximately 350m downstream (NNE) of mouth of Hills Creek. Piles are spaced about 10m apart and are exposed on low tide.
Provenance	April 1944 (Bradley, 2003, p. 337)
Historic Theme	7.6 Defending the country
Condition/Integrity	Remnant >20 percent
GSV	Partly exposed on low tide
Potential Impact	Unlikely to be impacted
Archaeological Potential	Low-moderate
Individual Site Significance	Local significance (category a, b, g)
Site Management Recommendation	<p>Avoid if possible with at least 10 m buffer.</p> <p>If it is not possible to avoid, conduct further research and record the site in detail to an archival standard by a qualified cultural heritage professional prior to impact.</p>

Figure B13.8a Location of Submarine Boom Net foundations



Figure B13.8b-d Example of Boom net foundation





Site No.	CSD02																											
Type/Name	Bund Wall																											
Location (Datum GDA94)	Polygon bounded by the approximate co-ordinates: <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">-16.949445//145.812083</td> <td style="width: 50%;">-16.923000/145.793750</td> </tr> <tr> <td>-16.948091/145.798115</td> <td>-16.919866/145.793401</td> </tr> <tr> <td>-16.945742/145.795550</td> <td>-16.917247/145.799207</td> </tr> <tr> <td>-16.941712/145.788481</td> <td>-16.914171/145.802019</td> </tr> <tr> <td>-16.936052/145.786544</td> <td>-16.914639/145.803001</td> </tr> <tr> <td>-16.924245/145.790058</td> <td>-16.912494/145.805588</td> </tr> <tr> <td></td> <td>-16.913181/145.810934</td> </tr> </table>				-16.949445//145.812083	-16.923000/145.793750	-16.948091/145.798115	-16.919866/145.793401	-16.945742/145.795550	-16.917247/145.799207	-16.941712/145.788481	-16.914171/145.802019	-16.936052/145.786544	-16.914639/145.803001	-16.924245/145.790058	-16.912494/145.805588		-16.913181/145.810934										
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-16.924245/145.790058	-16.912494/145.805588																											
	-16.913181/145.810934																											
Description	Earthen wall raised above mangrove tidal fringe of the coastal perimeter. Height of the bund wall varies but is up to approximately 1.8m above the plain. Average width of 4.5m. Dirt vehicular track formed at top of bank. Creek banks are reinforced with concrete and fitted water flow control gates slotting into concrete culverts at Firewood Creek and Hills Creek. Recent fixtures have been added at George Creek and Magazine Creek. Structures within bund wall at creeks include: <table border="1" style="width: 100%; margin-top: 10px;"> <thead> <tr style="background-color: #92d050;"> <th>Structure</th> <th>Location</th> <th>Description</th> <th>Construction</th> </tr> </thead> <tbody> <tr> <td>1</td> <td rowspan="2">Firewood Creek</td> <td>Low Flow Structure (Southern)</td> <td>Concrete headwalls on either side of bund. Flows conveyed through single – 1200mm diameter pipe with invert at RL-1.93mAHD.</td> </tr> <tr> <td>2</td> <td>Main Structure (Middle)</td> <td>Concrete T – section wall. Steel bridge spans the crest to link either side of embankment. Flows conveyed through 2 by c.2000mm square orifices with invert RL-1.08mAHD.</td> </tr> <tr> <td>3</td> <td rowspan="4">Hills Creek</td> <td>Overflow Structure (Northern)</td> <td>Concrete box culvert with concrete headwalls and base slab. Flows conveyed through single c. 1500mm square culvert, invert RL -0.33mAHD.</td> </tr> <tr> <td>4</td> <td>Low Flow Structure (Southern)</td> <td>Concrete headwalls (with counterforts) on either side of bund. Flows conveyed through 5 by c, 1200mm diameter pipes with invert at RK -1.62m AHD.</td> </tr> <tr> <td>5</td> <td>Main Structure (Middle)</td> <td>Concrete T-section walls (with counterforts). Steel bridge spans the crest to link either side of embankment. Flows conveyed through 6 by c.2000mm square orifices with invert RL -1.04 to -1.09 AHD.</td> </tr> <tr> <td>6</td> <td>Overflow Structure (Northern)</td> <td>Concrete box culverts with concrete headwalls and base slab. Flows conveyed through 5 by c.1500mm square culvert with invert RL -0.33m AHD.</td> </tr> </tbody> </table>				Structure	Location	Description	Construction	1	Firewood Creek	Low Flow Structure (Southern)	Concrete headwalls on either side of bund. Flows conveyed through single – 1200mm diameter pipe with invert at RL-1.93mAHD.	2	Main Structure (Middle)	Concrete T – section wall. Steel bridge spans the crest to link either side of embankment. Flows conveyed through 2 by c.2000mm square orifices with invert RL-1.08mAHD.	3	Hills Creek	Overflow Structure (Northern)	Concrete box culvert with concrete headwalls and base slab. Flows conveyed through single c. 1500mm square culvert, invert RL -0.33mAHD.	4	Low Flow Structure (Southern)	Concrete headwalls (with counterforts) on either side of bund. Flows conveyed through 5 by c, 1200mm diameter pipes with invert at RK -1.62m AHD.	5	Main Structure (Middle)	Concrete T-section walls (with counterforts). Steel bridge spans the crest to link either side of embankment. Flows conveyed through 6 by c.2000mm square orifices with invert RL -1.04 to -1.09 AHD.	6	Overflow Structure (Northern)	Concrete box culverts with concrete headwalls and base slab. Flows conveyed through 5 by c.1500mm square culvert with invert RL -0.33m AHD.
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	(Arup)																											



Site No.	CSD02
Provenance	Early 1970s.
Historic Theme	2.4 Agricultural activities. 2.8 Protecting and conserving the environment.
Condition/ Integrity	90 percent.
GSV	90 percent.
Potential Impact	Unlikely to be impacted.
Archaeological Potential	Low.
Individual Site Significance	May be of local significance (category a).
Site Management Recommendation	Avoid if possible with at least 10 m buffer. If it is not possible to avoid, conduct further research and record the site in detail to an archival standard by a qualified cultural heritage professional prior to impact.

Figure B13.8e Location of Bund Wall

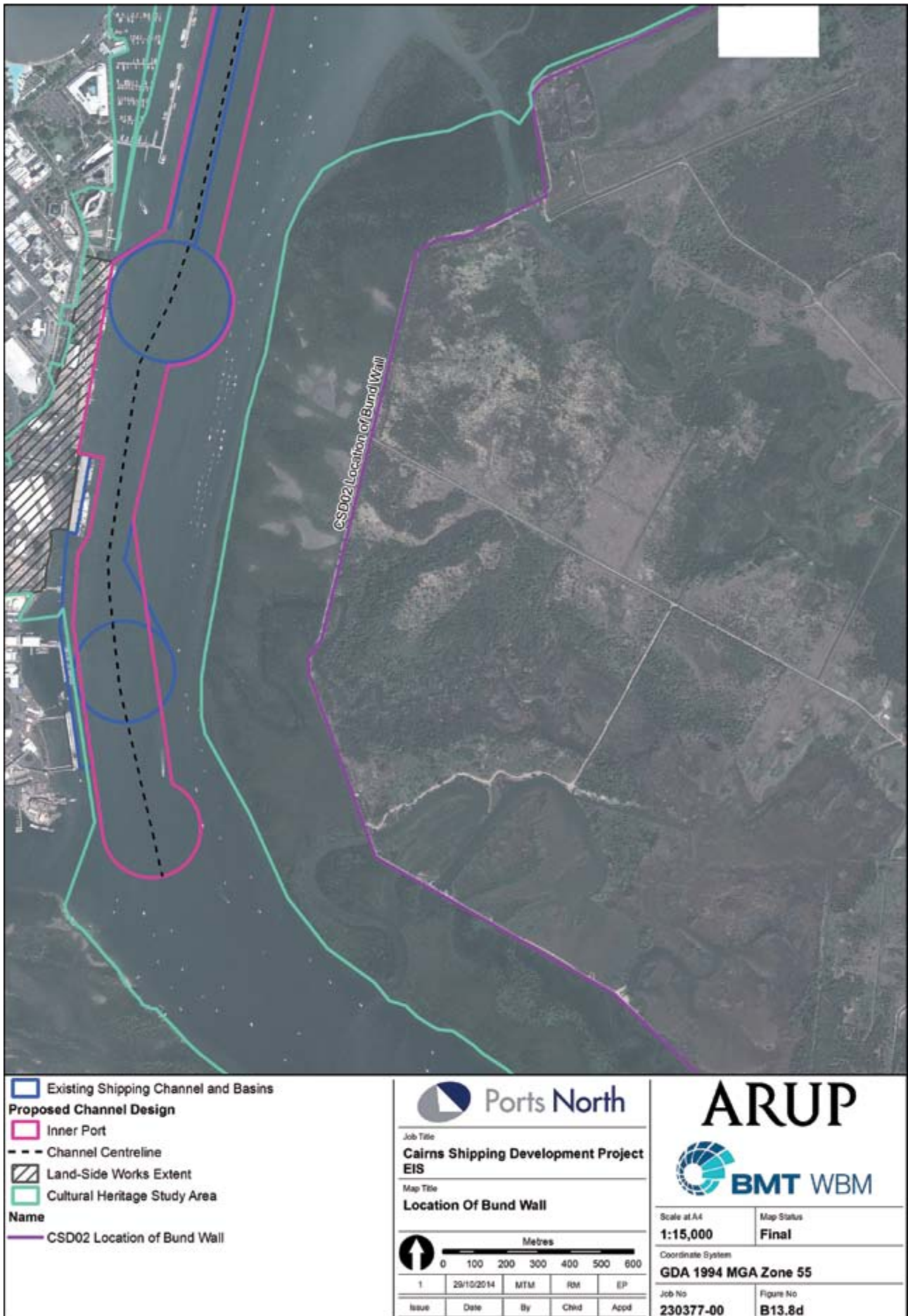


Figure B13.8f-h Bund Wall at Hills Creek with flow gates. View to ENE



Site No.	CSD02
Type/Name	Catalina Slipway
Location (Datum GDA94)	Polygon bounded by the co-ordinates: -16.944966/145.781380 -16.945077/145.781476 -16.945631/145.780567 -16.945170/145.780275
Description	Located on the east side of Admiralty Island. Concrete slipway comprising reinforced concrete slabs approximately 10m wide and 0.75m long extending at least 26m down sand beach into Trinity Inlet. Remnant evidence of slipway shed and associated infrastructure comprising wood foundation beam on south side, concrete winch block, metal covered path. These features and other possible WWII elements are much obscured by layers of modern material comprising a burnt pile of leaf springs and other metal objects, lengths of wire rope, sails, plastic products, ropes, small vessels, buoys and domestic products, etc. Remains of keel, stem and ribs of wooden vessel lies in the tidal zone on the south side of slipway. Coconut palms at back of beach may have been associated with the slipway.
Provenance	April 1943.
Historic Theme	7.6 Defending the country.
Condition/ Integrity	>20 percent
GSV	Partly exposed on low tide, back of beach – 70 percent.
Potential Impact	Unlikely to be impacted.
Archaeological Potential	Moderate.
Individual Site Significance	Local significance (category a, b, g).
Site Management Recommendation	Avoid if possible with at least 10 m buffer. If it is not possible to avoid, conduct further research and record the site in detail to an archival standard by a qualified cultural heritage professional prior to impact.



Figure B13.8i Location of Catalina Slipway

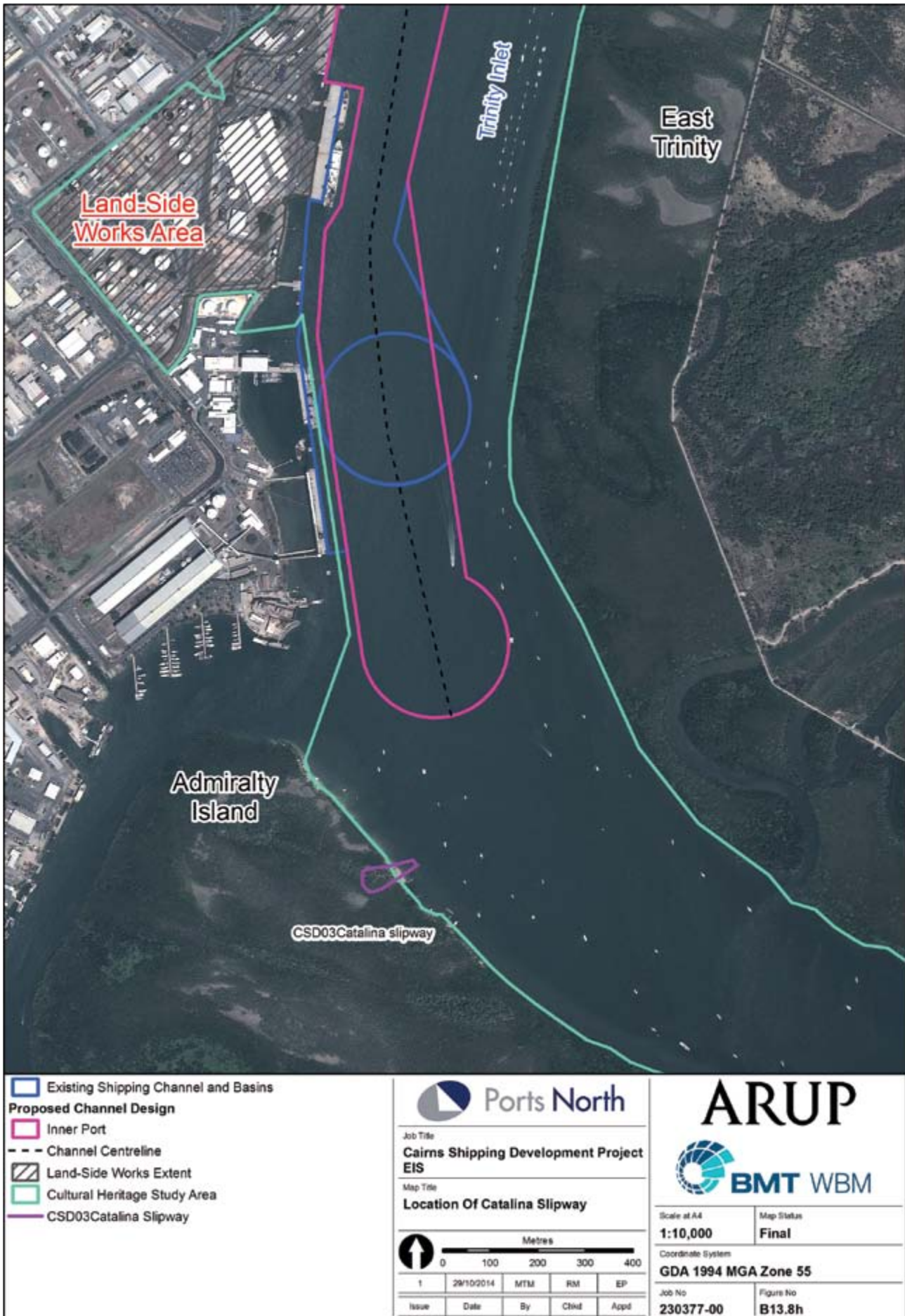




Figure B13.8j-l Concrete winch post



Site No.	CSD02
Type/Name	Barges/Pontoons
Location (Datum GDA94)	-16.945981/145.782095
Description	Remains of at least two barges which have been beached on Admiralty Island to the south of the Catalina slipway. Barges constructed using iron box framing and clad with iron sheets.
Provenance	1960s (A. Heard pers. comm.)
Historic Theme	5.4 using shipping.
Condition/ Integrity	Remnant >20 percent.
GSV	80 percent partly colonised by mangroves.
Potential Impact	Unlikely to be impacted.
Archaeological Potential	Nil.
Individual Site Significance	Not significant.
Site Management Recommendation	No mitigation required.

**Figure B13.8m Barges/Pontoons located to immediate south of Catalina slipway. View to SE**





Site No.	CSD02
Type/Name	Converted Barge
Location (Datum GDA94)	-16.955673/145.794022
Description	Wrecked iron converted barge with several engines and winches stored on the deck. Partly submerged in the intertidal zone on the west side of Trinity Inlet off Admiralty Island. Length approximately 20m+.
Provenance	Said to have been abandoned c. 2000 (Ballantyne, 2005, p. np)
Historic Theme	5.4 using shipping.
Condition/ Integrity	Remnant >20 percent.
GSV	80 percent partly colonised by mangroves.
Potential Impact	Unlikely to be impacted.
Archaeological Potential	Nil.
Individual Site Significance	Not significant.
Site Management Recommendation	No mitigation required.

**Figure B13.8n** Unnamed vessel located on west side of Trinity Inlet approximately opposite Coconut Slipway



Site No.	CSD02
Type/Name	"Communicator" Trawler
Location (Datum GDA94)	-16.955782/145.797388
Description	Wrecked iron trawler beached on east side of Trinity Inlet, north of Coconut Slipway. Length 22m, beam 6m.
Provenance	Said to have been abandoned c. 2000 (Ballantyne, 2005, p. np).
Historic Theme	5.4 using shipping.
Condition/ Integrity	Remnant >20 percent
GSV	80 percent partly colonised by mangroves
Potential Impact	Unlikely to be impacted.
Archaeological Potential	Nil.
Individual Site Significance	Not significant.
Site Management Recommendation	No mitigation required.

**Figure B13.8o** The Communicator on the eastern bank of Trinity Inlet



Site No.	CSD02
Type/Name	Tramway
Location (Datum GDA94)	<p>Within the polygon:</p> <p>-16.929676/145.788416</p> <p>-16.929854/145.788348</p> <p>-16.928317/145.785543</p> <p>-16.928222/145.785623</p>
Description	The tramway remains as a raised earthen bank and cutting through the mangroves approximately 0.75m wide and up to 0.1m above the intertidal mangrove flats on the eastern bank of Trinity Inlet approximately opposite wharves 4 and 5. Occasional very remnant wooden sleeper is exposed on either side of the bank. The bund wall has been laid over the top of it. East of the bund wall it comprises a dirt road. Its western extent is obscured by mangrove regrowth at the inlet but its orientation is apparent for approximately 330metres.
Provenance	Said to relate to Chinese market gardening c. 1880s.
Historic Theme	5.3 using rail.
Condition/ Integrity	Remnant >20 percent.
GSV	80 percent.
Potential Impact	Unlikely to be impacted.
Archaeological Potential	Low.
Individual Site Significance	Possible local significance.
Site Management Recommendation	<p>Avoid if possible with at least 10 m buffer.</p> <p>If it is not possible to avoid, conduct further research and record the site in detail to an archival standard by a qualified cultural heritage professional prior to impact.</p>



Figure B13.8p Location of Tramway in relation to Cairns Wharf Complex and Bund Wall

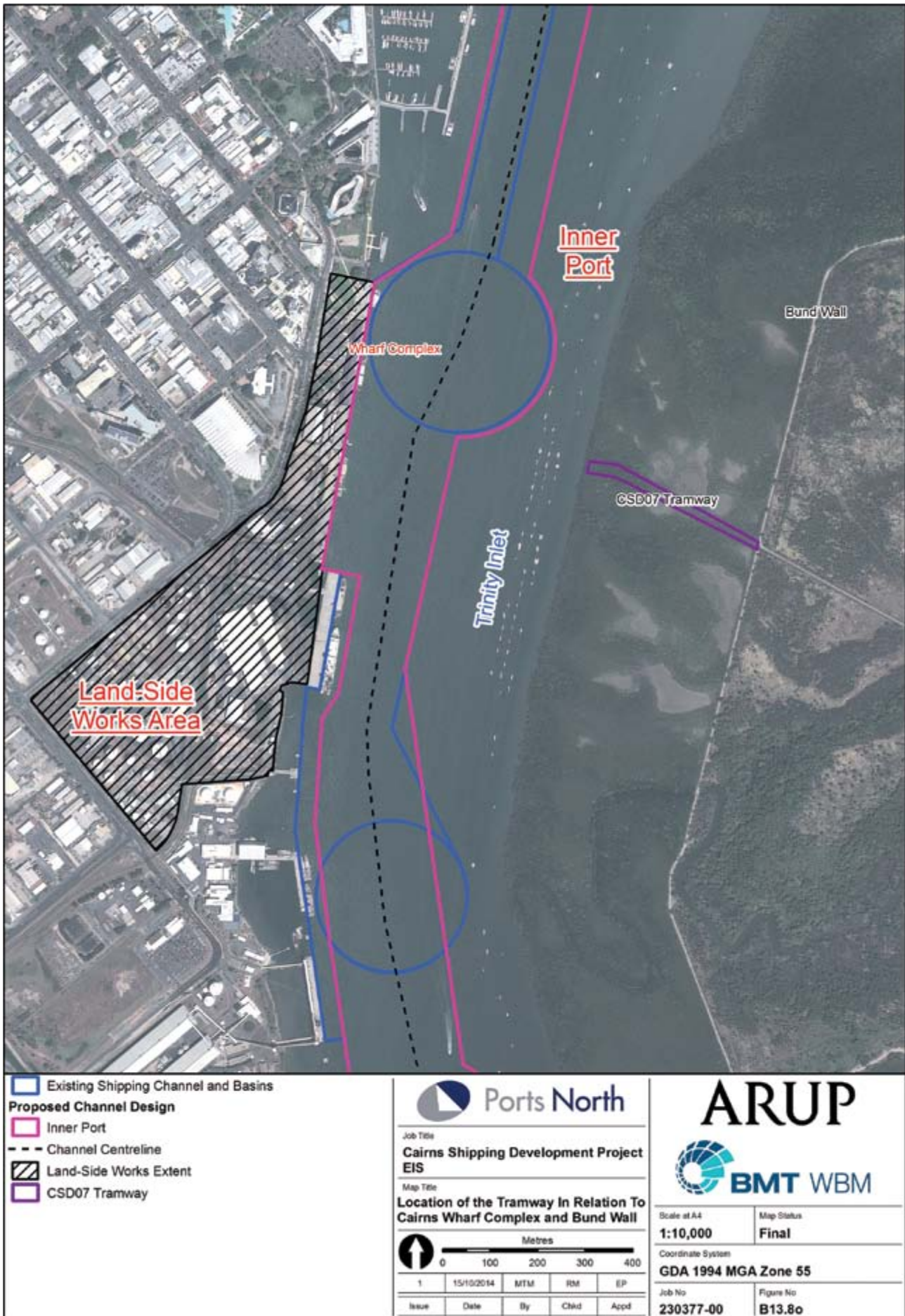




Figure B13.8q-s Tramway. View to west from bund wall.



