AQUIS RESORT AT THE GREAT BARRIER REEF PTY LTD ENVIRONMENTAL IMPACT STATEMENT

VOLUME 12

APPENDIX V NON INDIGENOUS CULTURAL HERITAGE

Aquis Resort at Great Barrier Reef

Non-Indigenous Cultural Heritage Technical Report Flanagan Consulting Group







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Contents

List	of Figu	resiv
List	of Tabl	esiv
Glo	ssary of	Termsv
1	Introd	luction6
	1.1	Purpose of the Study6
	1.2	Nature of Project7
	1.3	Methodology7
	1.4	Constraints to the Survey10
	1.5	Dates and Duration of the Work10
	1.6	Personnel10
2	Herita	ge Framework
	2.1	World Heritage List
	2.2	National Legislation11
	2.3	State Legislation11
	2.4	Local Legislation12
	2.5	Non-Statutory Framework12
	2.6	Guidelines and Charters13
3	Histor	y and Context15
	3.1	Results of Heritage Searches15
	3.2	Previous Studies15
	3.3	Historical Themes Overview15
	3.4	Historic Summary16
	3.5	Gaps Analysis21
4	Cultur	al Heritage Survey
	4.1	Survey Outcomes
	4.2	Site Inventory25
	4.3	Further Potential for NICH in the Project Area32
5	Signifi	cance Assessment
	5.1	Significance Assessment
	5.2	Results of Significance Assessment
6	Propo	sed Development
	6.1	Nature of the Proposed Development35
	6.2	Types of Potential Impact
	6.3	Project Impact on Identified NICH (Preliminary Assessment)
	6.4	Project Impact on Potential NICH
7	Recon	nmendations



	7.1	Recommendation One - Avoidance of Sites	.45
	7.2	Recommendation Two - Recording of Impacted Sites	.45
	7.3	Recommendation Three - Interpretation of the Site's History	.45
	7.4	Recommendation Four- NICH Management across the Project Area	.45
	7.5	Recommendation Five - Archaeologist 'On Call'	.46
Refe	erences	Cited	.47
Арр	endix		.48
	Appen	dix A – Mapping	.49
	Appen	dix B – Incidental Finds Procedure	. 50



List of Figures

Figure 1: General location of the Project Area (Google Earth 2013)	6
Figure 2: First landing at Cairns, 1876. (JOL Accession number: 81-10-5)	16
Figure 3: Chinese canecutter on Hambledon Plantation in the 1890s	17
Figure 4: Survey Plan of Smithfield, 1883– (Department of Natural Resources and Mines 2013)	18
Figure 5: People swimming in the ocean at Yorkeys Knob, ca. 1928,	19
Figure 6: Mature sugarcane fields	22
Figure 7: Thomatis Creek estuary,	23
Figure 8: Cane train tracks	23
Figure 9: Cleared land, view west	23
Figure 10: Open forest	
Figure 11: Bund wall also used for access	23
Figure 12: General view of cane barracks	25
Figure 13: Western side of barracks	25
Figure 14: Hand hewn stumps	26
Figure 15: Tank outside the barracks	26
Figure 16: Plywood sheets, bathroom ceiling	26
Figure 17: Inside the barracks	26
Figure 18: The Old Stables, view southeast	26
Figure 19: The shed and lean	27
Figure 20: Footbridge across one of the ponds	27
Figure 21: Flood gates	28
Figure 22: Fox Tail and Mango Trees	28
Figure 23: Main House	28
Figure 25: General location of orchard	29
Figure 24: Part of the orchard	29
Figure 26: Mango tree	30
Figure 27: Location of Identified and potential NICH sites and places (Converge 2014)	31
Figure 28: Aquis Concept Land Use Plan	36
Figure 29: Potential impacts for NICH sites	39
Figure 30: Lot and Plan map of the Project Area (Flanagan Consulting Group, 2013)	

List of Tables

Table 1: Relative Significance Criteria (Converge 2012)	9
Table 2: Results of Heritage Searches	15
Table 3: Historic themes identified for the project area	16
Table 4: Main type of land use across the project area	22
Table 5: NICH sites identified in project area (WGS84/UTM Zone 55 K)	24
Table 6: Summary of Site 1 – Cane barracks	25
Table 7: Summary of Site 2 – Old stables	26
Table 8: Summary of Site 3 – Old shed	27
Table 9: Summary of Site 4 – Bridge	27
Table 10: Summary of Site 5 - Flood gates	28
Table 11: Summary of Site 6 – Fox tail and Mango Trees	28
Table 12: Summary of Site 7 – Main House	28
Table 13: Summary of Site 8 – Orchard	
Table 14: Summary of Site 9 – Mango tree	29
Table 15: Summary of Site 10 – Mango and banana trees	30
Table 16: Significance Assessment for Individual Sites	33



Table 17: Likelihood of potential impact on NICH sites	37
Table 18: Consequence of potential impact on NICH sites	37
Table 19: Risk Assessment for NICH sites	38
Table 20: Preliminary Impact Assessment	40

Glossary of Terms

Term	Abbreviation	Definition
Australian Heritage Council	AHC	Council established under the ACH Act.
Australian Heritage Council Act 2003	AHC Act	Provides for the establishment of the Australian Heritage Council.
Commonwealth Heritage List	CHL	Register of places significant to the Commonwealth, under the EPBC Act.
Converge Heritage + Community	Converge	Cultural heritage consultants engaged for the heritage assessment – authors of this technical report.
Department of Environment and Heritage Protection	DEHP	State department for the management of environment and heritage.
Department of Sustainability Environment Water Population and Communities	DSEWPaC	Federal department for the management of environment and heritage.
Environment Protection and Biodiversity Conservation Act 1999	EPBC Act	Federal legislation of the management of environment and heritage.
Flanagan Consulting Group	FCG	Project Manager of the EIS project (the Client)
Ground Integrity	GI	Criteria used in archaeological assessments to indicate level of ground disturbance.
Global Positioning System	GPS	Electronic device using satellites to determine location.
Great Barrier Reef	GBR	Large reef of the coast of Queensland.
Ground Surface Visibility	GSV	Scale used in archaeological assessments to measure visibility of ground surface.
Interactive Resource Tenure Map	IRTM	Interactive online tool to search for mining leases.
Integrated Development Assessment System	IDAS	State development assessment for applications lodged under SPA.
Local Heritage Register	LHR	Register of local heritage places, managed under QHA, SPA and local planning schemes.
Non-Indigenous Cultural Heritage	NICH	Historic heritage or post contact elements.
Queensland Heritage Act 1992	QHA	State Act for the protection of cultural heritage.
Queensland Heritage Council	QHC	Council established under the QHA.
Queensland Heritage Register	QHR	State register of heritage places, under the QHA.
Register of the National Estate	RNE	Former register of nationally significant heritage places. Now a non-statutory archive.
Sustainable Planning Act 2009	SPA	Legislation for planning/development in Queensland
Terms of Reference	ToR	Terms used to guide the project.
United Nations Educational, Scientific and Cultural Organization	UNESCO	Specialised agency of the UN.
World Heritage List	WHL	Register of places of outstanding universal value.



1 Introduction

Aquis Resort at The Great Barrier Reef (the project) is a large scale, complex project that requires several levels of government assessment and approval under a variety of legislation. It is a strategically significant project for Cairns, Far North Queensland and the state of Queensland in terms of it potential benefits to the economy and the flow on benefits to the community. The project is a proposal to transform a degraded sugar cane farm into a fully master planned, integrated tourism resort over the next five year period. The development will incorporate a hotel and casino complex, nine luxury hotels, managed apartments and villas, high end retail shopping, convention and exhibition centres, reef cultural heritage centre, water park and golf course (Flanagan's Consulting Group, July 2013).

This report presents the results of an assessment of non-Indigenous cultural heritage (NICH) matters relating to the project. The project area is located at Yorkeys Knob, approximately 14km north of Cairns. The project area includes six (6) individual lots between Captain Cook Highway and Yorkeys Knob Road. Refer to Figure 1 for the general location of the project area. The relevant lot and plan details are appended to this report (refer Appendix B).



Figure 1: General location of the Project Area (Google Earth 2013)

1.1 Purpose of the Study

This report presents the results of the NICH survey and includes:

- A summary of the history and environment of the areas impacted by the proposed project.
- The results of the NICH field assessment.
- The nature of the NICH significance of places and areas affected by the proposed project and the potential impacts of the project in relation to this significance.
- Specific recommendations for the management and protection of potential NICH sites and areas.

This assessment and its recommendations address the project's Terms of Reference (ToR) and are intended to guide the management of NICH matters.



1.2 Nature of Project

The project proposes to include:

- 7500 hotel rooms across 8 luxury hotel brands.
- 2 international class casino.
- A 23,000m² convention and exhibition centre.
- 2 theatres totalling 5,000m².
- 10,000m² of high-end retail shopping.
- One of the world's largest aquariums.
- Rainforest, 2,500m².
- A 20ha reef lagoon.
- Back of house services totalling 350,000m² (see below for details).
- Guest and staff parking.
- Landscaping, lagoons and water features totalling 110,000m².

The aquarium and rainforest are architectural features and not stand-alone uses. The proposal does not include any permanent residential elements. The resort complex will be constructed over a basement level which will incorporate back-of-house support facilities including:

- Kitchens.
- Staff facilities.
- Stores.
- Laundry.
- Refuse collection.
- Security.
- Maintenance facilities.
- Staff and guest parking facilities.

1.3 Methodology

The following methodology was employed in order to meet the project's ToR for NICH, as well as following best practice and legislative framework.

1.3.1 Desktop Assessment

A desktop assessment was undertaken to determine the existence, extent and probable levels of significance of any places likely to be located within the project area. This assessment comprised searches of statutory and non-statutory registers and databases, and a review of existing published and unpublished reports, surveys and assessments of the project area and its immediate surroundings. The results of this desktop assessment were used to develop a targeted field survey of the project area, and informed the assessment provided in this report. Refer to Section 3, History and Context.

1.3.2 Field Survey

The survey methodology adopted for this assessment incorporated a vehicle and pedestrian survey undertaken by Converge consultants across the majority of the project area on 13 August 2013. Additional results relating to NICH were captured during the survey with the Aboriginal Party on 6, 7 & 15 February 2014. The project area is a working sugar farm that has been owned by Frank Pappalardo since the late 1940s. The survey area covered approximately 337 hectares and comprised of cane fields, mangrove and melaleuca swamps and the dams and ponds built by the landowner. It is estimated that approximately 70 – 75 % of the project area was surveyed for the current assessment (refer to Section 4.2 Constraints to the Survey).



1.3.3 Field Sampling Strategy

Sampling strategies (where to look) can be 'purposive', where specific areas are targeted, or 'probabilistic', where decisions are made to survey without any prior knowledge or predictive model of what heritage resources might exist in the landscape to be surveyed. Cultural heritage survey strategies generally involve transects across the project area chosen at random (probabilistic) to avoid possible bias in the results, or transects within particular areas (purposive) known to potentially contain places of historic significance, earmarked for development or contain places that were identified in previous research or surveys.

The surveys for this report generally relied on a purposive sampling strategy. Historical and contextual research combined with the results of previous surveys enabled an initial assessment of those areas known to be of historical interest. Noted NICH sites and areas were recorded with reference to site title, location, site integrity, ground surface visibility, condition and relevant comments including type of site and type of artefacts located at the site.

All assessment data was recorded on field recording sheets and locations of any items or places of NICH significance were captured via a hand help global positioning system (GPS) receiver, accurate to ±5 metres using datum WGS 84/UTM 55 S. This information was then used to create maps identifying the location of sites and features noted during the assessment. Where access was not possible the general location of the site in relation to the nearest road access was identified by GPS. Areas of interest were photographed using a digital camera (Canon PowerShot A650 IS) with 12.1 effective mega-pixels. Upon completion of the report, these photographs are stored in the Converge Brisbane office.

1.3.4 Site Integrity Criteria

An assessment of 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% where 0% indicates all site integrity is gone, and 100% represents excellent preservation of the original context. Therefore: **Zero - 0%; Poor - 1-25%; Moderate - 26-50 %; Fair - 51-75 %; Good - 76-85%; Excellent - 86-100%.**

1.3.5 Ground Surface Visibility Criteria

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

1.3.6 Heritage Significance Criteria

Determining the significance of a heritage place, item or site requires research to enable an understanding of its value or level of importance. Assessments of heritage significance for this assessment were based on an understanding of the place's history together with the physical analysis (field survey) and an appreciation of the comparative level of rarity or representative that the site possesses. In Queensland, heritage practitioners rely on two key documents to undertake significance assessments: *The Burra Charter of Australia International Council on Monuments and Sites* (Australia ICOMOS) and the *Queensland Heritage Act 1992* (QHA).



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

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

The criteria used for assessing places of local heritage significance under the *Cairns Plan 2009* mirrors the criteria developed under the QHA, except that a site's significance relates to the shire or locality rather than the state. Once a site has been assessed using the above-listed QHA criteria, the following thresholds (Table 1) of relative significance are applied to determine the level (i.e. local, state or national) at which the site or element is considered significant.

Table 1: Relative Significance Criteria (Converge 2012)

Definition	Threshold
Element of outstanding/ exceptional significance or heritage value - embodies national or state heritage significance in its own right and makes an irreplaceable contribution the significance/heritage value of the place as a whole.	Likely to fulfil national heritage entry criteria.
Element of high significance or heritage value - embodies state heritage significance in its own right and makes an irreplaceable contribution to the significance/heritage value of the place as a whole.	Likely to fulfil state heritage entry criteria.
Element of moderate significance or heritage value - embodies state or local heritage values in its own right and makes an irreplaceable contribution to values of the place as a whole.	Likely to fulfil state and/ or local heritage entry criteria
Element of some significance or heritage value - embodies local heritage values in its own right and makes a significant contribution to the significance/heritage value of the place as a whole.	Likely to fulfil local heritage entry criteria
Element is neutral, with little or no heritage value.	Unlikely to fulfil local heritage entry criteria. May contribute to other elements of heritage value.
Intrusive element which detracts, or has the potential to detract, from the significance of the place.	Does not have heritage value. Does not contribute to other elements of heritage value.

Section 5, Significance Assessment, presents the results of the significance assessment of the project area. The results from the significance assessment informed the impact assessment (refer to Section 6, Impact Assessment), recommendations and management strategies for management of identified and potential NICH in the project area (refer to Section 7, Recommendations).



1.4 Constraints to the Survey

Constraints to the survey are as follows:

- Mature stands of sugar restricted observations of the entire project area.
- Visibility around Thomatis Creek and various mangrove swamps were inhibited by stands of mangroves and other vegetation.

1.5 Dates and Duration of the Work

Converge was engaged by Flanagan Consulting Group (FCG) to undertake the NICH assessment for the project on 24 July 2013. Research for the desktop assessment commenced after commission and the field assessment was subsequently undertaken on 13 August 2013. Additional results relating to NICH were captured during the survey with the Aboriginal Party on 6, 7 & 15 February 2014. This NICH technical report was completed in April 2014.

1.6 Personnel

Benjamin Gall (Director) project managed the NICH assessment and provided strategic advice. Suzanne Gibson (Historian) prepared the contextual background of the project area. Dr. James (Jim) Smith (Senior Archaeologist) and Suzanne Gibson undertook the field assessment during August 2013. Additional field survey results from the February survey with the Aboriginal Party were captured by Karen Townrow (Senior Archaeologist). Samantha Syrmis (Cultural Heritage Consultant) prepared this report with technical input from the abovementioned personnel.



2 Heritage Framework

A number of national, state and local Acts and regulations are relevant to this NICH assessment. Knowledge of heritage framework is essential when assessing sites, places or items of NICH significance. Searches of relevant statutory heritage registers associated with national, state and local legislation were undertaken for this study (refer to Section 3.1 for the results). Places included on these registers possess an established level of significance. However, the absence of a place on these registers does not demonstrate that it is not significant, as the registers are not comprehensive. Values can also change and evolve and places may become significant as a result.

2.1 World Heritage List

An on-line search of the World Heritage List (WHL) was conducted to identify places and sites of NICH significance located within the project area. The WHL is compiled by UNESCO and is an inventory of places considered to have outstanding universal value.

2.2 National Legislation

2.2.1 Environment Protection and Biodiversity Conservation Act 1999

The Environment Protection and Biodiversity Conservation Act 1999 (EPBC) is the key national heritage legislation and is administered by the Commonwealth Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC). 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 (NHL) and Commonwealth Heritage List (CHL) respectively.

2.2.2 Australian Heritage Council Act 2003

The Australian Heritage Council Act 2003 (ACH Act) provides for the establishment of the Australian Heritage Council (ACH), which is the principal advisory group to the Australian Government on heritage issues. The AHC Act is also responsible for the assessment and nomination of places to the NHL and CHL.

2.2.3 Historic Shipwrecks Act 1976

The *Historic Shipwrecks Act 1976* is federal legislation that is jointly administered by the Commonwealth and the States. The legislation provides protection for all shipwrecks and associated artefacts that are more than 75 years old. Wreck sites can be used for recreational purposes such as diving, but no artefacts can be removed from a wreck and the wreck itself cannot be removed or destroyed unless a permit has been obtained.

2.2.4 Protection of Moveable Cultural Heritage Act 1986

The Protection of Moveable Cultural Heritage Act 1986 regulates the export of Australia's significant cultural heritage objects. The Act does not restrict normal and legitimate trade in cultural property and does not affect an individual's right to own or sell within Australia.

2.3 State Legislation

Places of State heritage significance in Queensland are managed under the *Queensland Heritage Act 1992* (QHA). The Act provides for the establishment of the Queensland Heritage Council (QHC) and the Queensland Heritage Register (QHR), which lists places of cultural heritage significance to



Queensland and regulates development of registered places. Under the provisions of the Act, any development of a place listed on the QHR must be carried out in accordance with the Act. A place may be entered in the register if it satisfies one or more of the assessment criteria under Section 35 (1) of this Act.

The Act also applies to potential archaeological places:

- Under section 60, a place may be considered to be an 'archaeological place' if not registered as a State heritage place and demonstrates 'potential to contain an archaeological artefact that is an important source of information about Queensland's history' (s. 60 (b)). Archaeological places can be entered onto the QHR if they meet those criteria.
- Section 89 requires a person to advise the Chief Executive Officer of the Department of the Environment and Heritage Protection (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 Chief Executive Officer.

2.4 Local Legislation

Local heritage places are managed under Part 11 of the QHA, local planning schemes and the *Sustainable Planning Act 2009* (SPA). It is mandatory for local government to have a Local Heritage Register (LHR). The QHA provides a process for establishing and nominating places to a LHR. Specific criteria must be met to nominate a place to the LHR and these include:

- Enough information to identify the location and boundaries of the place.
- A statement about the cultural heritage significance of the place.

Following nomination to the LHR the IDAS Code (contained in the *Queensland Heritage Regulation 2003*) and any relevant planning scheme provisions apply. The project area is located within the local government area of Cairns City Council (CCC), therefore the relevant planning scheme is the *Cairns Plan 2009*.

2.5 Non-Statutory Framework

There are other sources of heritage places or historic 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 project area and often identify places that have been overlooked for entry on statutory heritage registers. This is particularly important when considering the regulations of the QHA with regard to archaeological places.

2.5.1 Register of the National Estate – Archive

The AHC manages the Register of the National Estate - Archive (RNE). The Register was frozen in 2007 and from February 2012 ceased to exist as a statutory register. The RNE remains an archive of information for more than 13,000 places across Australia, many of which are of local and state significance, and is therefore considered in this report.

2.5.2 Queensland National Trust

The register of the Queensland National Trust (QNT) was searched for the project. The QNT is the Queensland branch of the National Trust of Australia, which is a community based, non-government organisation that maintains a non-statutory register of heritage places.



The listing of a place on the QNT register, known as 'classification', has no legal force; however it is widely recognised as an authoritative statement of the cultural significance of a place.

2.5.3 Historic Mines

The Queensland Department of Mining and Safety (formerly Department of Mines and Energy) maintains the Interactive Resource Tenure Map (IRTM). The IRTM enables the user to search and display mining tenure and exploration information. In particular, it is possible to search and display historic mining leases. The information is generally limited to the last 100 years and therefore excludes mining activity in the nineteenth century. However, it provides some ability to determine the location of historic mining leases and potential mines that are located in the project area.

2.6 Guidelines and Charters

This section provides details of the relevant guidelines and charters that are applicable to heritage practice in Australia. These key documents include the *Burra Charter*, the Australian Historic Themes Framework and the Queensland Heritage Council Guidelines, and are often used to assist practitioners in determining the heritage value of a place.

2.6.1 Burra Charter

The *Burra Charter* of Australia ICOMOS 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 onto state "cultural significance is embodied in the *place* itself, its *fabric, setting, use, associations, meanings,* records, *related places* and *related objects*" (Australia ICOMOS. 1997). It outlines a specific methodology/ process for assessing sites.

2.6.2 Australian Historic Themes Framework

The Australian Historic Themes Framework was endorsed in 2000 by the Commonwealth, state and territory agencies. It provides a valuable research tool, which can be used at the national, state or local level to assist in the identification, assessment, interpretation and management of heritage places. The framework was initiated and developed by the Australian Heritage Commission with the assistance of the state and territory historic heritage agencies, consultants and heritage practitioners. It is used in the heritage assessment of places, and is essential to understand the comparative context of places of historical significance around Australia (DSEWPaC 2012).

2.6.3 Queensland Heritage Council Guidelines

The Queensland Heritage Council provides guidelines to assist in assessing which level of cultural heritage significance is applicable to a site. These guidelines provide the following definitions:

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 (2006:5).



2.6.4 Archaeological Research Potential

The heritage significance of archaeological relics within the project area was considered according to their potential ability to contribute to our understanding of the culture and history of the nation, state and local area, and the site itself. On the whole, more intact deposits and archaeological resources that can be used to address important research questions, or which can reveal information about little known aspects of history, will have the highest heritage significance. This is a matter that has been considered in an influential paper by Bickford and Sullivan (1984). They note that archaeological significance has long been accepted elsewhere in the world as being linked directly to scientific research value:

A site or resource is said to be scientifically significant when its further study may be expected to help answer questions. That is scientific significance is defined as research potential.

This is a concept that has been extended by Bickford and Sullivan in the context of Australian archaeology and refined to the following three questions which can be used as a guide for assessing the significance of an archaeological site or resource within a relative framework:

- Can the site contribute knowledge which no other resource can?
- Can the site contribute knowledge which no other site can?
- Is this knowledge relevant to general questions about human history or other substantive questions relating to Australian history, or does it contribute to other major research questions?



3 History and Context

This section provides the NICH search results and a brief history of the project area in the context of the broader development of Cairns. This section is not intended to be a complete history of Yorkey's Knob or Cairns. It is based on a review of available primary and secondary sources and is intended to provide context for the identification and assessment of NICH sites, places and features within or nearby the project area, in order to properly assess their significance and the impact of any works on them.

3.1 Results of Heritage Searches

Table 2 presents the results of the NICH searches undertaken for the project.

Heritage Register or Database	Search Results
World Heritage List	No NICH sites on the WHL were identified in the project area.
National Heritage List	No NICH sites on the NHL were identified in the project area.
Commonwealth Heritage List	No NICH sites on the CHL were identified in the project area.
Register of the National Estate	No NICH sites on the (former) RNE were identified in the project area.
Queensland Heritage Register	No NICH sites on the QHR were identified in the project area, however, the 'Innisfail Courthouse' (ID 602500) is located approximately 1.5km from the project area.
Local Heritage Register	No NICH local heritage sites were identified in the project area, however, the 'Old Smithfield Townsite' and 'Smithfield Cemetery' are located between 2.5 and 3.5km from the project area, respectively.
Queensland National Trust Register	No NICH sites on the QNT register were identified in the project area.
Interactive Resources Tenure Map	No sites on the IRTM were identified in the project area.

Table 2: Results of Heritage Searches

This assessment considers that, regardless of no heritage sites being listed within the project area, there may be unidentified NICH sites located within the project area, including places of historical heritage, landscape and/or archaeological potential, which if found, may require further assessment under the provisions of the QHA.

3.2 Previous Studies

The following studies have provided some context for the development of the historic summary.

- Converge (2011): *Due Diligence Assessment, Optus North Cairns Fire Cable, Barron River and Palm Cove*, North Cairns, far north Queensland.
- Converge (2008): *Preliminary Heritage Assessment for PNQ's Marino's Property, Kamerunga* for Natural Solutions on behalf of Pioneer North Queensland.
- Grimwade and Associates [Converge] (1991): Environmental Impact Study Cultural Resources, Rainbow Harbour Development Site, Yorkey's Knob, Cairns.

3.3 Historical Themes Overview

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).



Applying the thematic framework developed by Blake in conjunction with Queensland DEHP heritage staff in 2005, which drew upon the Australian Historic Theme Framework developed by the Australian Heritage Commission in 2001, the following themes are identified as relevant to the project area (Table 3).

Theme	Sub-theme	Description
22.0Exploiting, utilising and transforming the land2.4Agricultural activities		Exploiting, utilising and transforming the land
		Agricultural activities
	2.5	Managing water
6	6.0	Building settlements, towns, cities and dwellings
	6.1	Establishing settlements
	6.3	Developing urban services and amenities

Table 3: Historic themes identified for the project area

3.4 Historic Summary

Land surrounding the project area is part of a Registered Native Title Claim of the Yirrganydji (Irukandji) people. This report does not include an assessment of the Indigenous Cultural Heritage of the project area (Converge, 2011).

Cairns was first settled in 1876, however the area had been visited by beche-de-mer fishermen at least a decade earlier (Jones, 1976, pp. 12-13). One of these fishermen, Yorkshireman George Lawson, nicknamed 'Yorker' would later take up 160 acres of land around and including a prominent headland north of the Barron River (Williams, n.d., p. 1). This is the accepted account of the origins of the suburb's unusual name, which was in use by 1939 (Collinson quoted in (Grimwade and Associates, 1991, p. 15).



Figure 2: First landing at Cairns, 1876. (JOL Accession number: 81-10-5)

The discovery of gold on the Hodgkinson, over the Great Dividing Range from Trinity Inlet, provided the impetus for the establishment of the Port of Cairns in 1876, however a satellite township sprang up and was gazetted five weeks later, on the northern reaches of the Barron River (Jones, 1976, p. 97).



The new town of Smithfield was a preferred base for miners and packers seeking access to the goldfields, as it was close to the start of the first pack routes over the range, Smith's and Douglas Tracks, established in 1876. Both these tracks were based on existing Aboriginal pathways (Grimwade and Associates, 1991, p. 14). It was also easier to reach via the Barron, than struggling through the swamps and dunes of the floodplain. The township proved short lived. In 1877 it was described as practically deserted and finally abandoned two years later after severe flooding (Jones, 1976, p. 124). The former Smithfield town site lies to the west of the project area.

Despite early floods and cyclones, the seemingly fertile coastal plains of the Barron River were the site of early farming selections in the Cairns area. Chinese market gardens and banana plantations were established along the river by the 1880s. The river itself was a ready transport corridor to the port and the shipment of bananas to Sydney and Melbourne, in particular. Unnaturalised Chinese could not select land, so typically they leased uncleared land cheaply from European selectors, for a five year period, after which the lease was renegotiated at a higher rate (Jones 1976: 246-254). In this way Chinese gardening may well have occurred within the project area, in the early settlement period, without any official recognition of their presence in land documents. Indeed an archaeological survey for a previous project within the current project area found evidence of an early Chinese presence (Resource Consulting Services Pty Ltd 1991: 30).



Figure 3: Chinese canecutter on Hambledon Plantation in the 1890s (JOL Accession number: 84-3-17)





Figure 4: Survey Plan of Smithfield, 1883– (Department of Natural Resources and Mines 2013)

The early selectors in the area include Carl Richter, who selected land at the 'headwaters' of Richter's Creek in 1878 (Jones quoted in Resource Consulting Services Pty Ltd 1991: 14). Richter's Creek forms the south east boundary of the project area. Dr David Thomatis selected 1000 acres in the Freshwater area near old Smithfield in the late 1880s and initially planted bananas and sugar cane, before experimenting with cotton. It was here that he produced the Caravonica strain of cotton that was ultimately grown internationally (Jones 1976: 254, 357).

His original property is west of the project area, although in 1907, the original 160 acre selection of the ephonymous Yorkie, including 'the Knob' was transferred to the wife of Dr Thomatis by Burns Phillip Ltd (Williams n.d: 16). Thomatis Creek, which bears his name, meets the Barron River to the immediate south west of the project area and flows into Richter's Creek.

The first leasehold granted within the project area dates to 1883, less than a decade after the founding of Cairns (Figure 3). Despite Dr Thomatis' experimentation with cotton, the area was already regarded as a cane growing area by 1886, when the Griffith Government first sought to ban the use of South Sea Islander labour in the northern cane fields. Griffith proposed a system of co-operative Central Mills designed to support small farmers in the industry, and when his envoy travelled north assessing sites for possible mills, he earnt the ire of the 'Smithfield' growers by not visiting their area.



In a protest letter to the Colonial Secretary, Dr Thomatis argued that the Smithfield lands could produce 600 acres of cane entirely with white labour, and within a two mile radius of a proposed site 'dozens of homesteads', as well as many conditional selections covered an area of over 3000 acres (Jones 1976: 357). The Smithfield cane farmers continued to agitate for a local mill right through to 1910, when members of the Provisional Committee of the Freshwater Mill gave evidence to the Royal Commission (Jones 1976: 396). Members of the committee included E.C. Earl and W.W. Mason, both leaseholders within the project area. When the Royal Commission recommended mills south of Cairns, the Smithfield growers gave up the fight, with their cane going first to the Mulgrave Mill and then to Hambledon (Jones, 1976, p. 397).



Figure 5: People swimming in the ocean at Yorkeys Knob, ca. 1928, (JOL Accession number: 82-2-5)

In 1920, the original Yorkie's land, east of the project area, was transferred to Lulcie Marcella Varley, who began to subdivide the land into beachfront allotments. A hotel was established there in 1927, while the allotments were sold off to local business people, initially as weekend retreats (Williams n.d.: 35-6). A Progress Association had been established by the 1930s, with Ray Bonassi and Luis Casselari as members (Williams n.d.: 47). During this era, there were two tracks into the beach blocks, one from the north another from the south.

According to Williams, the northern track came through Chin Wong's garden, opposite which were two homes and a cane-plant farm leased to Mr Jeffries (Williams n.d.: 41). It is not clear if these are within the project area. The southern route cut through Mason's farm, 'where Jack Mason built his barracks for cane cutters with collapsible walls which were lowered for a dance during the cane season' (Williams n.d.:41). These barracks are still extant in the project area.

The barracks were modified, probably after 1952, when union regulations required fixed internal walls (Resource Consulting Services Pty Ltd 1991: 15). The fixed plywood internal walls are still *in situ*. Williams argues that these two tracks 'began a slow drift together' and ultimately there was one track into the beachfront allotments (Williams n.d.: 41).



This road dissects the project area. In the 1930s an attempt was made to upgrade the track, as part of a Depression era relief project that had started constructing a highway from the northern beaches of Cairns to Mossman, using unemployed men as labour. The Yorkey's component was stalled by the outbreak of war (Williams n.d.: 40).

During the war years the Yorkey's hotel served as an American Nursing Home for wounded and convalescent servicemen and was visited by Eleanor Roosevelt, prompting the installation of a septic tank and relevant plumbing, that served the hotel well for years to come (Williams n.d.: 48-50). Grimwade's 1991 survey within the project area also found remnants of American WW2 training manoeuvres on the site, including foxholes (Grimwade and Associates, 1991, p. 30). This survey has not established whether these sites are still evident within the project area. The Yorkey's hotel was re-opened in 1959 but burnt down at a later date, possibly the late 60s (Williams n.d.: 56-58). A swimming enclosure and kiosk were also added to the beachfront post-war.

In 1942 the leasehold farmland in the project area was upgraded to freehold title, and from the 50s the project area was extensively drained by the current owner. Situated on the floodplain of the Barron River, the project area would have been innundated by many flood events. Key historical floods include the cyclones and floods of 1878 and 1879, which reputedly swept the township of Smithfield out to sea (Converge heritage + Community 2008: 34). In the 1911 cyclone, locals recount how they could get into a boat at Redlynch and go straight out into the Pacific Ocean (Tenni, 1978). In 1927, flooding along the Barron and Freshwater flats reportedly rose 'well above the tops of the cane plants' (Tenni, 1978). Williams graphically recounts the damage caused by a heavy wet season in 1975, when the then Yorkey's access road dissapeared under a 'surging frothing mass of water that broke the banks of the Barron River in several places'. This flood provided the impetus for the current elevated road (Williams n.d.: 64).

In the project area, the design of the main farmmhouse and the siting of key sheds and barracks on stumps or mounds, indicates that the farm has been managed with a recognition of flood events. The managment of water on the project area may have been compunded by a natural event in 1932, when a permanent connection was made between the Barron River and Thomatis Creek, which flows into Richter's Creek. This event created a new channel off the Barron and has resulted in permanently increased flows and sediment down Richter's Creek. Prior to this event, Richter's Creek had been a small, tidal creek unconnnected to the Barron River (Grimwade and Associates, 1991, p. 9). According to the present owner, when he first purchased the property in the 1950s, high tides would reach almost to the farmhouse (Pappalardo, pers. comm., 2013).

His extensive water management program included levelling and compacting the land with the aid of a deisel roller, and installing a system of tidal floodgates to prevent salt water entering the property (Resource Consulting Services Pty Ltd 1991, 15; (Pappalardo, pers. comm., 2013). These remain *in situ* and according to the owner are now manged by the Queensland Department of Environment (Pappalardo, pers. comm., 2013). The deisel roller was also used to compact the farm's internal access tracks to virtual all-weather standard (Resource Consulting Services Pty Ltd 1991: 15). A system of freshwater retention ponds and/or dams were dug on the property, ostensibly for irrigation, although they were never used for this purpose and instead have become wetland habitats (Pappalardo, pers. Comm. 2013).

The compacting and drainage work undertaken in the 1950s and 1960s also faciltated mechanical harvesting, which was introduced into the Cairns area from the early 1960s. This marked the end of manual cane cutting and the facilities associated with their employment, such as cane barracks. On many farms, including the project area farm, the cane barracks are now used for storage.



The project area is still an operating cane farm, although now under lease from the owner. In 2013 cane north of the Barron River is sent to the Mossman Mill, and the cane train infrastructure is still operating on the site.

3.5 Gaps Analysis

This historical survey does not provide the fine grained research required to understand the operations across time of the cane farm located on the site and how their particular operations are reflected in the built heritage that remains on site. Research at this level would include examining the spatial relationships between the onsite infrastructure and the seasonal operations of the farm itself, as well as detailed investigations and recording of individual buildings.

As a farm that has had one owner since the early 1950s, who is still on site, the project area presents a strong opportunity to provide this level of detailed, site specific research should this be found to be necessary. This could be achieved primarily through oral history recording, with the present owner as a focus. Additionally, archival research could also reveal whether indentured labour was used on site, further details of Chinese farming activities in the area and details of World War Two activities. Detailed site inspections would enable proper recording of the construction methods of key buildings, including the cane barracks.

For the purposes of the current assessment, it is deemed that such a level of research is not required, however advice is provided within Section 6 & 7 regarding relevant opportunities where such initiatives become relevant (post EIS).



4 Cultural Heritage Survey

This chapter provides an overview of the methodology, constraints and overall results of the field survey. Fieldwork undertaken by Converge staff is based on widely understood and accepted forms of assessment that occur in a series of clearly defined steps including sampling, surveying, site evaluation, recording, impact assessment, and management recommendations.

The project area consists of six (6) parcels, held in Freehold Title. The current *Cairns Plan* 2009 Planning Scheme shows the land included in the Rural 1 Planning Area. The total area of the site is approximately 282 ha with 212 ha located east of Yorkeys Knob Road, 43 ha west of Yorkeys Knob Road and north of Dunne Road and 27ha south of Dunne Road. Reserve land borders the site to the north-west, north-east of Yorkeys Knob and along the eastern boundary of the site to the ocean. The southern boundary is Richters/Thomatis Creeks. This is a large rural holding, much of which has been used for sugar cane farming. The farm house and outbuildings are located towards the southern end of the eastern parcels. The site is generally cleared with bands of vegetation bordering the outer boundaries of the eastern parcels, containing riparian vegetation and buffers to the creeks and coastal systems to the east, south-east and south. The western parcels, also predominantly cleared, are used for rural purposes with no improvements on them. The site is generally low lying falling from west to east.

4.1 Survey Outcomes

Using the results of the historical research, heritage searches and from previous knowledge of the project area, it was determined that a comprehensive field assessment was not required. A brief assessment was undertaken on 13 August 2012. Further NICH results were also captured during the survey undertaken with the Aboriginal Party on 6, 7 & 15 February 2014. This section sets out the results of the brief field assessment for the project area. Archaeologically, the potential for significant finds to exist depends on the likelihood for significant material to be present, combined with an assessment of the GI and GSV (refer to Section 1.3, Methodology for the criteria relating to GI and GSV).

4.1.1 Main Types of Land Zones in Project Area

The project area generally comprised areas of sugar cane fields, roads and tram tracks and water courses as described as in Table 4.

Land Zone	Current usage	Description of integrity and visibility (GI & GSV)	Indicative Images
Sugar Cane Fields	Sugar cane farming	Integrity: in use (GI - Good >75%) Visibility: Primarily cane and grass (GSV Poor - <25%)	Figure 6: Mature sugarcane fields

Table 4: Main type of land use across the project area



Land Zone	Current usage	Description of integrity and visibility (GI & GSV)	Indicative Images
Water courses and swamps	Creeks, drainage channels and swampland	Integrity: N/A Visibility: Poor (<25%) to Excellent (86-100%), depending on water and vegetation cover	Figure 7: Thomatis Creek estuary,
Internal tracks and roads	Vehicular and cane train traffic	Integrity: In use (GI Good - >75%) Visibility: Excellent (86- 100%)	Figure 8: Cane train tracks
Pastures and cleared land	Agricultural	Integrity: Highly disturbed (GI Poor – <25%) Visibility: Primarily grass and other vegetation (GSV Poor - <25%)	Figure Q: Cleared land view weet
Forested areas	Vegetation buffer	Integrity: N/A Visibility: Poor (<25%) to Excellent (86-100%), depending on vegetation cover	Figure 9: Cleared land, view west
Bunding	Part of land reclamation to enable sugar cane farming. Parts also used as access track.	Integrity: In use (GI Good - >75%) Visibility: Variable (50- 100%)	Figure 11: Bund wall also used for access



4.1.2 Identified NICH in Project Area

Ten (10) NICH sites were identified during the survey. The locations of these sites are identified in Figure 26 and itemised in Table 5.

Site #	Site Name	Easting	Northing	Brief Description
1	Cane barracks	363926	8138558	Corrugated iron building. c. 14m x 16m. Contains 6
				sleeping quarters, kitchen, bathroom, dining.
2	Old stables	363987	8138604	Corrugated iron building in state of disrepair.
3	Old shed	362962	8138045	Old shed with chamferboard cladding.
4	Bridge	363581	8138154	Steel footbridge with concrete footings.
5	Flood gates	-	-	Concrete structure with steel gates.
6	Exotic planting	-	-	Row of fox tail palms and mango trees.
7	Main house	-	-	Main house c.1960s of masonry construction.
8	Orchard	363343	8137857	Orchard planted in pocket of mangroves comprising
				Rambutan, star fruit, mango and banana trees
9	Mango tree	364732	8139459	Single mature mango tree.
10	Mango and	363884	8139903	Mature mango and banana trees on edge of Yorkeys
	Mango /	363870	8139826	Creek.
	banana trees			

Table 5: NICH sites identified in project area (WGS84/UTM Zone 55 K)

4.1.3 Analysis of Survey Results

As discussed in Section 3, the predominant use of the project area since European settlement has been agricultural, specifically for the production of sugarcane which remains current. Ten (10) sites of interest were identified in the project area and assessed for their NICH potential.

The construction of the Cane Barracks (Site 1) predates Mr Pappalardo's ownership and is likely associated with the development of the cane farm in the early Twentieth Century. Anecdotal evidence suggests the barracks were used by cutting crews into the early 1970s. Graffiti on the inside of the kitchen's external door indicates that the barracks were still being used in 1968. As an aside, another piece of graffiti states "6 months hard labour". While the original structure is still largely intact some additions to the comfort of the crew were made through time.

At some point, at least one of the rooms had some insulation placed on the walls while another has had an air conditioner installed. Similarly, the bathroom contains a clothes dryer with an Energy Star label, while the kitchen has a relatively new electric stove and screen door. These may indicate that the barracks still served crews on a day to day basis until the recent past, but not as a place of residence (refer to Table 6 for more details about the Cane Barracks). The main house is of masonry construction and appears to date from the 1960s, built by Mr Pappalardo.

Apart from barracks there are two other structures on the property interest. The first of these the building referred to as the "Old Stables" (Site 2) while the second is a farm shed (Site 3). While there are many other buildings located on the property none are considered to have any substantive historical or cultural significance. Overall the project area has undergone many transformations since settlement and particularly since Mr Pappalardo took over ownership. Most notable are the dams and ponds, the flood mitigation gates (Site 5) the main house (Site 8) and the groves and avenues of fox tail palms and mangoes (Site 6).

Additionally there is a small bridge crossing to an island in one of the ponds that was constructed by Mr Pappalardo "just because he could" (Site 4).



No evidence or previously identified Chinese & European Hut Site c.1880-1930 (RH15, Grimwade 1991) in the vicinity of Richter's Creek was found, however this does not confirm it does not remain.

The presence of the Orchard, Mango trees and bananas (Sites 8-10) relate to possible earlier agricultural uses, with some potential one or more of these could potentially date from the period when Chinese or European occupation of the area.

4.2 Site Inventory

Tables 6 – 15 provide information about the five sites that have been identified as being of interest for the NICH assessment. Significance assessments for these sites are provided in Section 5.

Table 6: Summary of Site 1 – Cane barracks

	to nonthrough and managing on 14m
to northwest and 16m southwest to north quarters/rooms, a kitchen, bathroom and a c thus, the barracks could house a crew of 1 storage. Structurally, it appears the barrack construction. This corrugated iron clad buildin hand 'adzed' stumps still support the structur support has replaced the original. Similarly, columns appear to be original and hand hewn been replaced by their metal counterparts. In quarters are lined with three ply, which appear resembles the ply used for the construction of place by battens. The kitchen, dining room, and bathroom are a with the dining room being located in between	heast and contains six individual sleeping dining area. Each room could sleep two men .2 cutters. Today the barracks are used for as have undergone little change since their ing is raised off the ground and the original are except in one instance where a concrete the majority of the verandah/roof support b, however it should be noted that some have ternally, the walls and ceilings of the sleeping opears to be original and in some respects f tea chests. The majority of the ply is held in all located on the eastern side of the barracks,
Internally the barracks have suffered from time ply cladding is peeling from the walls and cei installed. Notable exceptions to the structure corrugated iron roof with Colourbond roof ar northern side. However, it should be noted t	lings, has been completely lost or was never e's originality include the replacement of the nd the addition of a carport on the buildings hat the new roofing sheets still appear to be
Figure 12: General view of cane barracks	Figure 13: Western side of barracks
	 quarters/rooms, a kitchen, bathroom and a construction. This corrugated iron clad build hand 'adzed' stumps still support the structur support has replaced the original. Similarly, columns appear to be original and hand hewen been replaced by their metal counterparts. In quarters are lined with three ply, which appears the barrack for the construction or place by battens. The kitchen, dining room, and bathroom are an with the dining room being located in betwee ground level and have concrete floors. Internally the barracks have suffered from time ply cladding is peeling from the walls and ceil installed. Notable exceptions to the structure corrugated iron roof with Colourbond roof at northern side. However, it should be noted the supported by the original roof battens and true.



Site Inventory for Site 1 – Cane barracks



Table 7: Summary of Site 2 – Old stables

Site Inventory	for Site 2 – Old stables
Description	The stables are of a similar construction to the cane barracks, i.e. a corrugated iron building and likely dates the same period as the barracks. The current use of the building is to store irrigation pipe.
Condition	This building is in a considerably worse state of disrepair than the barracks; louvre windows have been broken and sections of the cladding are missing, particularly under the northern gable.
Images	Figure 18: The Old Stables, view southeast



Table 8: Summary of Site 3 – Old shed

Site Inventory	for Site 3 – Old shed
Description	The shed has a semi- open design being fully enclosed on two sides. The north facing front is completely open while the eastern side is only partially enclosed. Hard against the western wall is a small lean-to. The main supports for the roof are hand work or 'adzed' logs, while the cladding is chamfer board.
Condition	The shed appears to be in fair condition for a structure of type and age
Images	Figure 19: The shed and lean

Table 9: Summary of Site 4 – Bridge

Site Inventory	for Site 4 – Bridge	
Description	A small bridge crossing to an island in one of the ponds - made of steel and concrete.	
Condition	Structural condition not assessed. From a basic visual assessment, it seems the bridge is ir fair condition.	
Images	Figure 20: Footbridge across one of the ponds	



Table 10: Summary of Site 5 - Flood gates

Description	Flood gates constructed of concrete with steel gates.
Condition	Unknown. Appears to be in working order
Images	Figure 21: Flood gates

Table 11: Summary of Site 6 – Fox tail and Mango Trees

Description	Alternate plantings of fox tail and mango trees.	
Condition	Good	
Images	Figu	ure 22: Fox Tail and Mango Trees

Table 12: Summary of Site 7 – Main House

	or Site 7 – Main house	
Description	Main House of masonry construction, located in proximity to Yorkeys Knob Road.	
Condition	Good (not inspected in detail)	
Images	Figure 23: Main House	



Table 13: Summary of Site 8 – Orchard

Description	for Site 8– Orchard A remnant orchard is located at the southern side of the aquaculture ponds adjacent to th
	creek which defines the southern boundary of the project area. Its western side is adjacen
	to the cane train tracks. It is located in a pocket within the mangrove corridor which ha
	been raised above the floodplain with earthern fill. The orchard is roughly 'J" shaped with
	maximum length of approximately 210 metres and a maximum width of approximately 10
	metres. Mature plants include Rambutan, star fruit (five corner fruit) and mango tree
	planted in three rows. A row of mature mango trees line the creek bank in addition to som
Condition	remnant banana trees. Whilst the orchard does not appear to have retained all its plantings, those that remain
Condition	appear in good condition.
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	and the second sec
	and the second
	Figure 24: Part of the orchard
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	A Real and A
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	and the second s
	300 m
	Figure 25: General location of orchard identified by yellow polygon with project boundarie

Site inventory	for Site 9 – Mango tree
Description	A mature single mango tree is located in the northeast corner of the project area adjacent to an internal bush track which provides access to the mouth of Thomatis Creek. This may be associated with earlier phases of occupation of the area. No associated structures of artefacts were located in the area of the tree however there was no ground surface visibility at the time of the survey and it is considered that the immediate vicinity of the tree may have some archaeological potential.
Condition	The tree is in fair condition. The condition of any archaeological material which may be associated with this tree is currently unknown.

Table 14: Summary of Site 9 – Mango tree



Site Inventory for Site 9 – Mango tree

Images



Figure 26: Mango tree

Table 15: Summary of Site 10 – Mango and banana trees

Site Inventory for Site 10 – Mango and banana trees		
Description	Two mature mango tree and banana trees are located on the western side of Yorkey's Creek. The mango trees are approximately 80 metres apart on the banks of the creek. The banana trees are associated with the northern mango tree. These may be associated with earlier phase(s) of occupation of the area. No associated structures or artefacts were located in the area of the trees however there was no ground surface visibility at the time of the survey and it is considered that the immediate vicinity of the trees may have some archaeological potential.	
Condition	The plants are in fair condition. The condition of any archaeological material which may be associated with this tree is currently unknown.	





Figure 27: Location of Identified and potential NICH sites and places (Converge 2014)



4.3 Further Potential for NICH in the Project Area

Grimwade previously identified a number of sites related to the former Rainbow Harbour Project (1991). Of particular interest is the Chinese & European Hut Site c.1880-1930 (RH15). Although evidence of the site was not located during the survey, it is possible that artefactual remains still exist in this vicinity (see Figure 26). Mr Pappalardo indicated that he did not know of any buildings that had been on the farm in areas other than where they exist today.

The presence of agricultural sites which potentially pre-date the sugar cane, such as the orchards, mango trees (Site 8-10) may identify areas of potential early Chinese and European occupation.

Archaeological potential across the site for NICH is therefore considered to be low, apart from the formerly identified Chinese site (RH15) and the vicinity of Sites 8-10, in which this area would promote a moderate level of potential.



5 Significance Assessment

The section assesses the NICH significance for individual sites and places within the project area, including an analysis of archaeological potential where applicable.

5.1 Significance Assessment

Cultural heritage significance relates to people's perspective of place and sense of value within the context of history, environment, aesthetics and social organisation.

Within the project area, ten sites of interest were assessed for their inherent heritage value. These sites have been attributed an individual cultural heritage significance rating (refer to Table 16). These sites are assessed against the significance assessment criteria outlined in Section 1.3.6, taking into account the contextual historical information available for the project area, results of register searches and previous heritage studies.

Site #	Site Name	Significance	Justification
1	Cane Barracks	Local	The cane barracks survive as a direct connection with the cane farming history, from the early to late twentieth century. The cane barracks remain relatively intact and directly demonstrate the use and changing function of cane harvesting, accommodation and labour requirements during this period. Cane barracks from this period are becoming rare, based upon comparison of currently known examples entered on heritage registers and databases.
2	Old Stables	Does not meet threshold for local significance	N/A
3	Old Shed	Does not meet threshold for local significance	N/A
4	Bridge	Does not meet threshold for local significance	N/A
5	Flood Gates	Does not meet threshold for local significance	N/A
6	Fox tail and mango trees	Does not meet threshold for local significance	N/A
7	Main House	Does not meet threshold for local significance	N/A
8	Orchard	Does not meet threshold for local significance	N/A
9	Mango tree	Does not meet threshold for local significance	N/A
10	Mango and banana trees	Does not meet threshold for local significance	N/A

Table 16: Significance Assessment for Individual Sites



5.2 Results of Significance Assessment

Located on coastal/tidal land, the construction of the farm required the excavation of extensive drainage canals, dams and flood gates. While not a new approach to building on such lands, the result has ultimately transformed the landscape. The clearing and draining of the area is recognised as critical to the development and use of the farmland.

Further research, including consultation and a comparative analysis of broad scale developments on coastal/tidal land, would most likely reveal that these activities promote a gesture of creative or technical achievement for their time. It is considered unlikely however that these values would threshold for entry at a local level of heritage significance currently.

No individual sites were assessed within the project area as having state heritage value. This assessment has found however that Site 1 (Cane Barracks) is significant at a local level within this context and would satisfy entry as a Local Heritage Place within the *Cairns Plan* – Local Heritage Register, should an application be made. The remaining sites did not meet the threshold for local or state heritage significance in their own right, however, they remain sites of interest and have potential to provide further insight into the project areas history.

One previously reported archaeological site was unable to be located during the survey (Chinese & European Hut Site [RH15] – c.1880-1930), of which a moderate potential for archaeological remains in this vicinity. Remnant orchard, mango and banana trees (Sites 8-10) potentially demonstrate areas which could relate to these remains also.

A low potential for further archaeological finds exists otherwise across the project area generally apart from these areas.


6 Proposed Development

6.1 Nature of the Proposed Development

Aquis Resort at The Great Barrier Reef is a fully integrated master planned resort and tourist facility which has the opportunity to set a new benchmark for tourism development in Northern Queensland. The project will transform the existing open rural land into a \$8.15 billion tourist destination comprising hotels, apartments, a casino, an aquarium, retail outlets, theatres, a sports stadium, a golf course and cultural heritage centre.

The Aquis Resort includes the following key features, distributed over three precincts:

- **Resort Complex** precinct (73 ha including 33 ha lake).
- Sports and Recreation precinct (155 ha).
- Environment Conservation and Management precinct (113 ha).

The project proposes to include:

- 7500 hotel rooms across 8 luxury hotel brands.
- 2 international class casino.
- A 23,000m² convention and exhibition centre.
- 2 theatres totalling 5,000m².
- 10,000m² of high-end retail shopping.
- One of the world's largest aquariums.
- Rainforest, 2,500m².
- A 20ha reef lagoon.
- Back of house services totalling 350,000m² (see below for details).
- Guest and staff parking.
- Landscaping, lagoons and water features totalling 110,000m².

The aquarium and rainforest are architectural features and not stand-alone uses. The proposal does not include any permanent residential elements. The resort complex will be constructed over a basement level which will incorporate back-of-house support facilities including:

- Kitchens.
- Staff facilities.
- Stores.
- Laundry.
- Refuse collection.
- Security.
- Maintenance facilities.
- Staff and guest parking facilities.

Refer to Figure 28 for the Project Layout (Concept Plan).





Figure 28: Aquis Local Plan Concept Master Plan ALP-2



6.2 Types of Potential Impact

The preliminary field survey undertaken for this report identified ten NICH sites. The proposed development will directly impact all of sites identified in this report. The impact on recognised and potential cultural heritage sites by the project will generally be in the nature of removal of the ground surface and sub-surface, vegetation clearance related to the construction of the resort and its components, and the consequent destruction and/or removal of the sites that form the NICH within the project area.

6.3 **Project Impact on Identified NICH (Preliminary Assessment)**

Impacts have been determined using frameworks specifically developed for projects of this nature.

Descriptor	Description
Almost certain	Will occur, or is of a continuous nature, or the likelihood is unknown. There is likely to be an event at least once a year or greater (up to 10 times per year. It often occurs in similar environments). The event is expected to occur in most circumstances.
Likely	There is likely to be an event on average every one to five years. Likely to have been a similar incident occurring in similar environments. The event will probably occur in most circumstances.
Possible	The event could occur but is not expected. May have heard it discussed as a possibility but an extremely unusual one. A rare occurrence.
Remote	The event may occur only in exceptional circumstances. Very rare occurrence. Unlikely that it has occurred elsewhere; and, if it has occurred, it is regarded as extremely unique.

Table 17: Likelihood of potential impact on NICH sites

Table 18: Consequence of potential impact on NICH sites

Consequence	Description
Critical	The impact is considered critical to the decision-making process. Impacts tend to be permanent or irreversible or otherwise long term. Very high sensitivity of cultural heritage receptors to impact (e.g. national heritage significance – loss or removal of significant historic place/item, with the potential to adversely impact on heritage status under the EPBC Act).
Major	The impact is considered likely to be important to decision-making process. Impacts tend to be permanent or irreversible or otherwise long to medium term. High to moderate sensitivity of cultural heritage receptors to impact (e.g. state heritage significance – partial loss of significant heritage place/item under the QHA).
Moderate	The effects of the impact are relevant to decision-making including the development of mitigation measures. Impacts range from long term to short term in duration and are significant at the local scale. Moderate sensitivity of cultural heritage receptors to impact (e.g. removal or significant reduction of the place's local heritage values under the relevant town/regional planning schemes).
Minor	 Impacts are recognisable/detectable but acceptable. These impacts are unlikely to be of importance in the decision making process. Nevertheless, they are relevant in the consideration of standard mitigation measures. Impacts tend to be short term or temporary and/or occur at local scale (e.g. a minor reduction in the extent of site's local heritage values under the relevant town/regional planning schemes).
Negligible	Minimal change to the existing situation (e.g. short term changes to an historic place that does not meet the threshold for local heritage under the relevant town/regional planning schemes).



Table 19: Risk Assessment for NICH sites

Conconuonco	Likelihood								
Consequence	Almost certain	Likely	Possible	Unlikely	Remote				
Critical	High	Medium	Low	Low	Very Low				
Major	High	High	Medium	Low	Very Low				
Moderate	Medium	Medium	Low	Very Low	Very Low				
Minor	Medium	Low	Very Low	Very Low	Very Low				
Negligible	Low	Very Low	Very Low	Very Low	Very Low				

The following assessment outlines the likely impacts generated by the Project, based upon the current Project Concept Land Use Plan (Figure 27).





Figure 29: Potential impacts for NICH sites



Table 20: Preliminary Impact Assessment

	INITIAL IMPA	CT ASSESSMENT	RESIDUAL IMPACT ASSESSMENT						
Site	Significance	Impact Description	Likelihood	Consequence	Risk Rating	Proposed Mitigation	Likelihood	Consequence	Risk Rating
Site 1 – Cane Barracks	Local		Likely Moderate	Medium	 Avoid if possible. Archival recording and consultation should be undertaken as part of further assessment and is sufficient if avoidance is not possible. 	Likely	Minor	Low	
						 An Interpretation Strategy should be developed by the project to consider the possible re-use or relocation of the building within the proposed development if possible. 			
Site 2 – Old Stables	Does not meet threshold for local significance	The old stables will be directly impacted by the construction of the serviced apartments.	Likely	Minor	Low	 Avoid if possible. Recording undertaken as part of assessment sufficient if avoidance not possible. No further mitigation required. 	Likely	Negligible	Very Low



	INITIAL IMPA	CT ASSESSMENT			RESIDUAL IMPACT ASSESS	SMENT			
Site	Significance	Impact Description	Likelihood	Consequence	Risk Rating	Proposed Mitigation	Likelihood	Consequence	Risk Rating
Site 3 – Old Shed	Does not meet threshold for local significance	The old shed will be directly impacted by the construction of the sports stadium.	Likely	Minor	Low	 Avoid if possible. Recording undertaken as part of assessment sufficient if avoidance not possible. No further mitigation required. 	Likely	Negligible	Very Low
Site 4 - Bridge	Does not meet threshold for local significance	The bridge will be directly impacted by the restoration of the vegetated area.	Likely	Minor	Low	 Avoid if possible. Recording undertaken as part of assessment sufficient if avoidance not possible. No further mitigation required. 	Likely	Negligible	Very Low
Site 5 – Flood Gates	Does not meet threshold for local significance	The flood gates will be directly impacted by the restoration of the vegetated area.	Likely	Minor	Low	 Avoid if possible. Recording undertaken as part of assessment sufficient if avoidance not possible. No further mitigation required. 	Likely	Negligible	Very Low
Site 6 – Fox tail and mango trees	Does not meet threshold for local significance	The fox tail and mango trees will be directly impacted by the construction of the lake.	Likely	Minor	Low	 Avoid if possible. Recording undertaken as part of assessment sufficient if avoidance not possible. No further mitigation required. 	Likely	Negligible	Very Low



	INITIAL IMPAG	CT ASSESSMENT			RESIDUAL IMPACT ASSESS	MENT		Risk Rating Very Low		
Site	Significance	Impact Description	Likelihood	Consequence	Risk Rating	Proposed Mitigation	Likelihood	Consequence	Risk Rating	
Site 7 - Main House	Does not meet threshold for local significance	The house will be directly impacted by the construction of the lake and aquatic park.	Likely	Minor	Low	 Avoid if possible. Consider retention within vegetation areas. If avoidance is not possible, removal of the site would be acceptable from a heritage perspective with no further assessment required. 	Likely	Negligible	Very Low	
Site 8 - Orchard	Does not meet threshold for local significance	The orchard will be potentially impacted by the Project. Potential exists for the site to be retained within the natural and vegetation buffer areas.	Likely	Minor	Low	 Avoid if possible. Consider retention within vegetation areas. If not possible to avoid: Undertake basic recording. Archaeological monitoring at time of initial ground disturbance. 	Possible	Negligible	Very Low	



	INITIAL IMPACT ASSESSMENT					RESIDUAL IMPACT ASSESSMENT				
Site	Significance	Impact Description	Likelihood	Consequence	Risk Rating	Proposed Mitigation	Likelihood	Consequence	Risk Rating	
Site 9 - Mango tree	Does not meet threshold for local significance	The Mango tree will be potentially impacted by the Project. Potential exists for the site to be retained within the natural and vegetation buffer areas.	Likely	Minor	Low	 Avoid if possible. Consider retention within vegetation areas. If not possible to avoid: Undertake basic recording. Archaeological monitoring at time of initial ground disturbance. 	Possible	Negligible	Very Low	
Site 10- Mango and banana trees	Does not meet threshold for local significance	The mango and banana trees will be potentially impacted by the Project. Potential exists for the site to be retained within the natural and vegetation buffer areas.	Likely	Minor	Low	 Avoid if possible. If not possible to avoid: Undertake basic recording. Archaeological monitoring at time of initial ground disturbance. 	Possible	Negligible	Very Low	
Potential site [RH15]	Unknown (potential archaeologic al place)	The potential site [RH15] is likely to be impacted by the construction of the walking track and viewing platform.	Likely	Minor	Low	 Avoid if possible. If not possible to avoid: Undertake basic recording. Archaeological monitoring at time of initial ground disturbance. 	Likely	Negligible	Very Low	



6.4 Project Impact on Potential NICH

With the exception of RH15 and the vicinity of Sites 8-10, it is concluded that there is low potential for further historic and archaeological places/items to exist within the project area. If extant within the project area, potential NICH sites and places are likely to relate to early settlement and agricultural activities such as blazed (survey) trees, dumps and remnant boundary fence lines.

Recommendations and mitigation measures to manage project impact on unexpected finds are provided in Table 20 and Section 7.



7 Recommendations

As stated in Section 6, it is assumed that Sites 1-7 are expected to be removed by the project's development. There is potential to avoid the removal of Sites 8-10 and have them retained within the vegetation areas and buffers, however should avoidance not be possible their removal should also be expected.

Furthermore, while the potential is low, it should be noted that potential sites of NICH significance may be extant within the project area – these could be subsurface (i.e. archaeological sites) or other currently unidentified sites.

This section provides site specific recommendations in relation to identified NICH sites, as well as general recommendations to manage potential impacts on unknown/unexpected NICH sites that may be extant within the project area. Assuming the management measures below are suitably implemented, this assessment concludes that the nature and level of impact on NICH by the project is manageable.

7.1 Recommendation One - Avoidance of Sites

The best form of cultural heritage management is to avoid impact on sites and places of significance. It is recommended that the design of the project area take into account each of the NICH sites discussed in this report, and, where possible, avoids impacting on these sites, or if this is not possible, implements the relevant mitigation measures as recommended herein.

7.2 Recommendation Two - Recording of Impacted Sites

Heritage recording, compliant with the Draft EPA Guidelines for Archival Recording (including historical research, consultation, photography, site plans and related drawings where relevant), should be undertaken for significant NICH sites directly impacted by the development. Depending on the nature of the site (i.e. level of significance), either brief or detailed recording may be required prior to development in the area. Such initiative is recommended for Site 1 - Cane Barracks at minimum. Consideration should be given for a brief recording of the farming complex as a whole, which takes advantage of the oral history and physical collection of agricultural history surviving on the site, prior to their removal.

7.3 Recommendation Three - Interpretation of the Site's History

In association with the abovementioned recommendation, an interpretation strategy should be completed to capture the history of the site relating to its current agricultural use and consider ways in which this history can be interpreted into the new development. There may be opportunities to re-use or relocate key elements within the site. It is therefore recommended that an interpretation strategy be developed in relation to this site. This could take a number of forms such as web pages or through a display in the proposed cultural centre. Development of this interpretation strategy should be undertaken by a qualified professional.

7.4 Recommendation Four- NICH Management across the Project Area

The NICH management recommendations should be implemented and incorporated into the project's Environmental Management Plan (EMP) to mitigate project impacts on both identified NICH sites and unidentified NICH material/sites found during the development of the project.

This should be applied across the entire project area and should provide information and processes to enable identification and protection of NICH sites, both known and unknown.



The policies and procedures for management of NICH sites or archaeological material uncovered during the project, as outlined in Appendix B (Incidental Finds Procedure), should be implemented. Additionally, it is recommended that diligence be practiced during works conducted within the project area, particularly during any clearing or construction phases associated with initial preparation of the area. To facilitate this diligence, it is recommended that a NICH Induction Booklet be developed once all approvals for the project are in place but prior to ground disturbing activities, which can be incorporated into the General Site Induction. The NICH Induction Booklet should be prepared by a qualified heritage specialist and include the following:

- 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 process for the collection, transport and storage of any NICH items.

7.5 Recommendation Five - Archaeologist 'On Call'

In addition to the potential archaeological sites (Sites 8-10) and (RH15) in the vicinity of Richter's Creek, some (low) archaeological potential remains in other areas due to the nature of the farm's construction. It is therefore recommended that a historical archaeologist be appointed 'on call' during construction phases of the project, so that a call-out can be made should unexpected archaeological material be located.



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Appendix



Appendix A – Mapping



Appendix B – Incidental Finds Procedure

STOP WORK	d during works: stop work, mark and protect the
site. Work can continue elsewhere if it will not	
¥	
INITIAL CONTACT	
Contact the Site Manager immediately and not	tify them of the item description and location.
₩	
NOTIFICATION TO PROJECT ARCHAEOLOGIST	
	aeologist, including details of the nature of the
item.	
•	
Assess Significance	
_	n as possible to assess significance of item and
	iclude: i) protect and avoid; ii) excavate, record
	r no action if the item is deemed to have no
	i) will require preparation of a work method Heritage Branch prior to any action commencing.
statement in consultation with DEHP Cultural	
Yes Ψ	ered Significant? No 🖤
EPORT FIND TO DEHP CULTURAL HERITAGE BRANCH	
eporting of archaeological find to DEHP	Items deemed to have no significance will requi
Cultural Heritage Branch is required by law.	recording as evidence. A photograph of the iter
pepending on the nature of the find, the	including a description of why it is not
roject Archaeologist and DEHP will	significance, should be completed by the Proje
egotiate requirements of find.	Archaeologist and forwarded to the Proje
	Manager.
	V
OMPLETE RECORDING/FIELD WORK	Advice
omplete the archaeological or remedial	Advise Site Manager when assessment
vorks in accordance with the consent permit	complete. Confirm advice with DEHP Cultu
r agreed course of action. Advise Site	Heritage Branch if required.
Nanager when assessment is complete.	
· · · · · · · · · · · · · · · · · · ·	•
WORK RECOMMENCES	
Site Manager to advise when works can re-cor	nmence in the original or changed form. A Work
	suitable management is in place by the project
(if required).	
↓	
SUBMIT FINAL REPORT	
Archaeologist completes reporting in acco	rdance with the appropriate guidelines and
Archaeologist completes reporting in acco	
	relevant Government Authorities and Project

