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Authority



Additional crossing of the Clarence River at Grafton

Preliminary Route Options Report - Part One
Volume 2

Technical paper - Aboriginal Heritage

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Main Road 83 Summerland Way-Additional Crossing of the Clarence River at Grafton

Preliminary Route Options Report

Technical Paper: Aboriginal Heritage

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<i>PROJECT</i>	Main Road 83 Summerland Way-Additional Crossing of the Clarence River, Grafton
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EXECUTIVE SUMMARY

The New South Wales Roads and Traffic Authority (RTA) is currently undertaking investigations to identify an additional crossing of the Clarence River at Grafton to address short-term and long-term transport needs.

This technical paper has been prepared to define the existing Aboriginal environment and constraints in the Grafton area that may affect an additional crossing.

Biosis Research has been commissioned by Arup, on behalf of the RTA, to undertake a preliminary Aboriginal archaeological investigation to identify potential constraints or opportunities in the area. This investigation involved detailed desktop research, heritage register search updates, preliminary Aboriginal consultation, reconnaissance field surveys and reporting of all findings.

Aboriginal community consultation is currently being undertaken in accordance with the requirements of the Office of Environment and Heritage (OEH) and the RTA *Procedure for Aboriginal Cultural Heritage Consultation and Investigation* (PACHCI). The Aboriginal cultural consultation was initiated by Graham Purcell, the RTA Northern Region Aboriginal Cultural Heritage Advisor. Consultation was undertaken with the Grafton-Ngerrie Local Aboriginal Land Council, who also participated in preliminary field work. This provided the opportunity to identify and discuss known cultural values of the Grafton and South Grafton proposal area.

The results of the desktop component of the current investigation revealed the presence of Aboriginal archaeological sites and cultural places within the immediate and surrounding vicinity of the Grafton and South Grafton proposal area. Although the region has seen moderate levels of previous ground disturbance, there is still a high likelihood for the presence of Aboriginal archaeological sites and additional ceremonial or dreaming sites/ places. Based on previous archaeological investigations, there is the potential for previously unidentified scarred trees, stone artefact sites and ceremonial and dreaming sites to be identified during the field surveys. These areas will be identified through potential mapping of the Grafton and South Grafton proposal area.

Reconnaissance field surveys involved visual inspections of a small number of accessible properties. At each property, areas of ground surface exposure, regardless of archaeological potential, were inspected. Where vegetation remained, old growth trees were closely examined for scarring or other culturally manufactured features or cultural markers relating to burials. Particular attention was paid to key sensitive landforms or features (creek banks and remnant vegetation) with a higher likelihood for the presence of Aboriginal archaeological sites.

Poor ground surface visibility and high levels of ground disturbance associated within existing urban development and landform modification resulted in an overall low level of effective survey coverage. Despite this, a total of three Aboriginal archaeological sites were identified, two scarred trees and one open camp site.

Using the findings of the desktop analysis and reconnaissance surveys, areas of Aboriginal archaeological potential were mapped, based on the definitions identified in this report. Areas of **high archaeological potential** were identified along sections of the northern and southern Clarence River banks, Susan and Elizabeth islands, undisturbed banks of Alipou Creek and some minor creek lines. Areas of **moderate archaeological potential** were identified along the northern and southern banks of Clarence River, Alipou Creek banks, other minor creeks and drainage features, foothills, remnant stands of mature vegetation. Areas of **low archaeological potential** were identified on flat, flood prone floodplain, along existing road corridors, heavily modified landforms such as levee banks and across highly disturbed urban properties.

Management recommendations

The following general management recommendations have been formulated relevant to Aboriginal cultural heritage across the Grafton and South Grafton proposal area. The following recommendations should be considered in the ongoing process to identify a preferred location for an additional crossing of the Clarence River at Grafton.

1.0 Conservation through avoidance

- 1.1 In the first instance, minimise or avoid impact to all registered Aboriginal archaeological sites and areas of high and moderate archaeological and cultural potential.
- 1.2 In the second instance, minimise or avoid impact to those registered archaeological sites considered to be of high scientific significance and areas of high archaeological potential.
- 1.3 To successfully minimise or avoid impact to identified Aboriginal sites, develop and adopt management and mitigation strategies to ensure that all archaeological sites and areas of archaeological potential are not inadvertently impacted by any future proposal.

2.0 Unavoidable impacts to known archaeological sites and areas of potential

- 2.1 All Aboriginal objects and places are protected under the auspices of the *NSW National Parks and Wildlife Act 1974* (NPW Act). An Aboriginal Heritage Impact Permit (AHIP) is required in order to impact Aboriginal objects and places if these cannot be avoided.
- 2.2 Aboriginal community consultation should be undertaken consistent with the process specified in *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW 2010) prior to any AHIP application being lodged with OEH. As this is an RTA initiated investigation the protocols laid out in RTA's *Procedure for Aboriginal Cultural Heritage Consultation & Investigation* (PACHCI) will be followed.
- 2.3 Where areas of high and moderate Aboriginal archaeological potential cannot be avoided, further archaeological investigation would be required, including test excavation and recording, to determine the presence and extent of the archaeological resource to understand the nature of these deposits across all landforms.
- 2.4 Where artefacts are recovered or require relocation, a Care and Control Agreement should be developed and implemented in consultation with registered Aboriginal stakeholders.
- 2.5 No further archaeological investigation is required within areas of low Aboriginal archaeological potential and areas of high disturbance.

3.0 Aboriginal stakeholder consultation

- 3.1 All aspects of management and mitigation should be developed and implemented in consultation with the identified Aboriginal stakeholders and a qualified Aboriginal heritage consultant.
- 3.2 Further information regarding Aboriginal ceremonial and dreaming sites, including the Clarence River Golden Eel site, Susan Island and Elizabeth Island should be sought through consultation with the Aboriginal community (respecting all cultural restrictions which may be applicable). Aboriginal community consultation needs to be conducted in accordance with the process specified in *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW 2010).
- 3.3 The comments, requests and recommendations made by the Grafton-Ngerrie Local Aboriginal Land Council should be considered when any future proposed route for an additional crossing of the Clarence River is designed.
- 3.4 If required, as per the Susan Island Plan of Management (DECCW 2009:13), additional consultation with Nyami Julgaa and other members of the local Aboriginal community, including the Grafton-Ngerrie Local Aboriginal Land Council and knowledge holders, should be undertaken to identify and manage Aboriginal cultural heritage sites, places and values of Susan Island. This would also include appropriate cultural heritage surveys and other appropriate research to identify and record Aboriginal or historic cultural sites and values across the island.

4.0 Further archaeological assessment

- 4.1 Detailed archaeological assessment of final route alignments and associated infrastructure/ facilities will need to be undertaken once a short list of options has been selected. This should include intensive archaeological survey and where applicable, subsurface investigation should also be undertaken.
- 4.2 Detailed archaeological work will enable the refinement of areas of archaeological potential.
- 4.3 Undertake a detailed scientific significance assessment of all archaeological sites within the final proposal.

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- Peter Rand, Javier Valderrama and Xiaomei Yuan – Arup.
- Amanda Leonard and Graham Purcell – Roads and Traffic Authority, Northern Regional Office.
- Wesley Fernando, David 'Bunny' Daley, Brett Duroux and Rod Duroux – Grafton-Ngerrie Local Aboriginal Land Council.
- Sharlene Freeburn, Eva Day – OEH AHIMS.
- Lisa Appo – OEH, Northern Office.
- Staff of Northern Rivers Catchment Management Authority.

Abbreviations

ACHMP	Aboriginal Cultural Heritage Management Plan
ACHA	Aboriginal Cultural Heritage Advisor
AHC	Australian Heritage Council
AHIMS	Aboriginal Heritage Information Management System
ATSIC	Aboriginal and Torres Strait Islander Commission
BP	Before Present
BoM	Bureau of Meteorology
CHL	Commonwealth Heritage List
DEH	Department of Environment and Heritage
DEC	Department of Environment and Conservation
DECCW	Department of Environment, Climate Change and Water NSW (formerly Department of Environment and Climate Change, now Office of Environment and Heritage)
OEH ICCR	Part 6 Approvals – Interim Community Consultation Requirements for Applicants
DCP	Development Control Plan
EP&A Act	Environmental Planning and Assessment Act 1979
EPBC Act	Environment Protection and Biodiversity Conservation Act 1979
ESC	Effective Survey Coverage
GSV	Ground surface visibility
ICOMOS	International Council on Monuments and Sites
LEP	Local Environmental Plan
LGA	Local Government Area
MGA	Map Grid of Australia
NNTT	National Native Title Tribunal
NPWS	National Parks and Wildlife Service (now part of OEH)
OEH	Office of Environment and Heritage, Department of Premier and Cabinet NSW
PAD	Potential Archaeological Deposit
REP	Regional Environment Plan
RNE	Register of the National Estate

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1.0 INTRODUCTION

Cultural heritage legislation protecting Aboriginal and non-Aboriginal heritage places applies in New South Wales. These places are an important part of our heritage. They are evidence of more than 40,000 years of occupation of New South Wales by Aboriginal People, and of the more recent period of interaction with non-Aboriginal settlers.

Heritage places can provide us with important information about past lifestyles and cultural change. Preserving and enhancing these important and non-renewable resources is encouraged.

It is an offence under sections of legislation to damage or destroy heritage sites without a permit or consent from the appropriate body (see Appendix 2 for a complete discussion of relevant heritage legislation and constraints).

1.1 Current proposal

The NSW Roads and Traffic Authority (RTA), is currently undertaking investigations to identify a preferred corridor for an additional crossing over the Clarence River at Grafton. Arup has been engaged by the RTA to undertake the current investigation. Biosis Research has been engaged by Arup to investigate the potential constraints posed by Aboriginal archaeological and cultural heritage. This report addresses Aboriginal heritage including listed archaeological sites and areas of archaeological potential.

The current investigations incorporate the Grafton and South Grafton area, and an area to the west and east of the existing bridge, extending between Susan Island and Elizabeth Island (Figure 1).

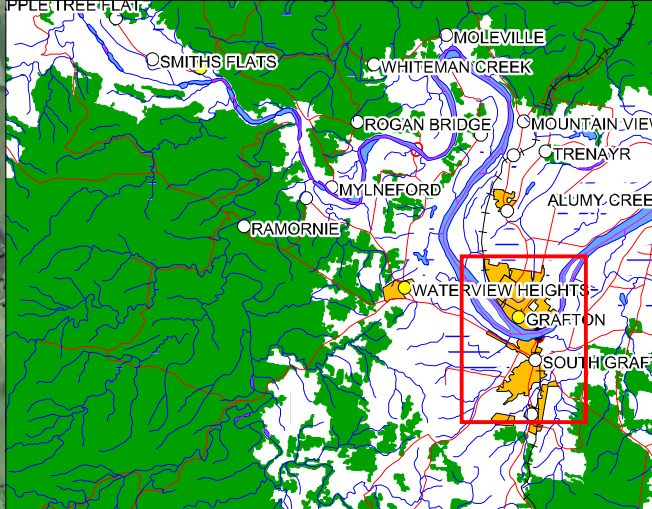


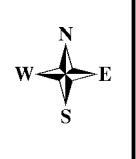
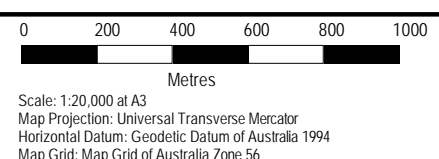
Figure 1: Overview of Grafton & South Grafton Area.

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1.2 Proposal background

The RTA is currently undertaking investigations to identify an additional crossing of the Clarence River at Grafton to address short-term and long-term transport needs.

The design for the existing bridge over the Clarence River at Grafton commenced in 1915, comprising a moveable span railway bridge with allowance for pedestrian use. Later in 1922, vehicular traffic was incorporated into the design. The bridge was opened to traffic in 1932.

Since the early 1970s there have been various discussions and studies into an additional crossing of the Clarence River near Grafton. In 1977, the NSW Department of Main Roads (DMR, now the NSW Roads and Traffic Authority) identified that a new bridge should align along Bent Street and Fitzroy Street. It was recognised at that time that the second river crossing proposal was not of immediate priority, but rather a long-term project.

Over the last 10 years, the RTA has carried out a number of studies to identify areas that would be suitable for a second crossing of the Clarence River at Grafton. The most recent comprehensive RTA study was undertaken between 2003 and 2004. It consisted of a feasibility study (February 2003) followed by an environmental overview (January 2004) and a corridor evaluation workshop (April 2004). These studies identified that the most suitable location for a new crossing of the Clarence River would be near the existing Grafton Bridge. However, a preferred route was not selected at that time and it was recognised that further investigations were needed to determine a preferred route.

Funding availability for the proposed second crossing became an issue in 2005 and as a result investigations into a second crossing of the Clarence River were placed on hold.

In 2009, in response to increasing traffic congestion in Grafton and South Grafton, and operational safety issues with the existing bridge, the RTA recommenced investigations. This consisted of a revised traffic analysis that compared previous traffic modelling with updated traffic information. This was undertaken to understand the existing transport demands and traffic patterns within Grafton and the surrounding region. The December 2009 traffic study confirmed that an additional crossing, close to the existing bridge, would cater for the traffic needs in the local area.

In February 2010 the RTA displayed four preliminary route options for community comment. These preliminary route options were developed based on traffic modelling only and were all in the vicinity of the existing bridge. This display also defined a study area for this investigation.

In December 2010 the RTA released a community update announcing a revised process for the identification and preservation of a route for a second crossing. The community update included the route options considered at the April 2004 corridor evaluation workshop, the four preliminary route options publically displayed in February 2010 and options suggested by the community following the February 2010 display.

Between December 2010 and April 2011, the RTA has sought further community input on where the route should be located. This included telephone surveys and a series of community forums.

This technical paper will be used to define the existing environment and potential constraints that relate to Aboriginal heritage in the Grafton area that may affect the identification of a preferred location for an additional crossing of the Clarence River at Grafton.

1.3 Project purpose and objectives

The project purpose is to identify an additional crossing of the Clarence River at Grafton to address short-term and long-term transport needs.

The project objectives are:

- Enhance road safety for all road users over the length of the project.
- Improve traffic efficiency between and within Grafton and South Grafton.

- Support regional and local economic development.
- Involve all stakeholders and consider their interests.
- Provide value for money.
- Minimise impact on the environment.

These objectives were published in the February 2010 display and have been subject to community feedback during the December 2010 – April 2011 consultation period.

The proposal objectives will be used to assess of the preliminary route options as well as the resulting shortlist of options.

1.4 Planning approvals

This Aboriginal archaeological and cultural heritage assessment will provide information required for the Preliminary Route Options Report and future detailed investigation. It is anticipated that this project would be assessed under Part 5 of the Environmental Planning and Assessment Act 1979. If this is the case, the RTA would be the approval authority for the proposal.

1.5 Aims of this investigation

The following is a summary of the aims for this investigation:

- Conduct heritage register searches to identify any previously recorded cultural heritage sites or places. Searches will include the:
 - Aboriginal Heritage Information Management System (AHIMS) database.
 - National Native Title Tribunal.
 - National Heritage List.
 - Commonwealth Heritage List.
 - State Heritage Register.
 - Register of the National Estate.
 - Heritage Schedules of the *Grafton Local Environmental Plan (1988)* and the *Clarence Valley Local Environmental Plan (2010)*.
 - Heritage Schedules of the *North Coast Regional Environmental Plan (15 December 2008)*.
- Conduct background research involving the review of all relevant literature in order to recognise any identifiable trends in Aboriginal archaeological site distribution and location.
- Preliminary consultation with the local Aboriginal community on the presence and significance of any sites relating to the project in accordance with the RTA PACHCI. Consultation with the Aboriginal community will be managed by the RTA. The preliminary Aboriginal archaeological investigation will involve the Grafton-Ngerrie Local Aboriginal Land Council.
- Undertake a preliminary reconnaissance field survey of the Grafton and South Grafton area to locate previously recorded sites and identifying any additional unrecorded Aboriginal archaeological sites or areas of Aboriginal archaeological potential. The survey methodology will take into account the geomorphology, landforms, previous and current land use within and adjacent to the Clarence River.
- Record and assess sites identified during the reconnaissance survey in compliance with the guidelines issued by OEH.
- Determine the archaeological/scientific significance of the above and propose measures required to fulfil legislative requirements and RTA policy.
- Incorporate confidentiality requirements.

- Identify opportunities and constraints across the Grafton and South Grafton proposal area based on the findings of this investigation.
- Make broad recommendations to minimise or mitigate impacts to Aboriginal archaeological sites.
- Formulate management recommendations in regards to the identified sites, including any further investigations required to fulfil legislative requirements.

1.6 Preliminary Aboriginal community consultation

At the preliminary assessment stage, the Grafton-Ngerrie Local Aboriginal Land Council was contacted in accordance with the requirements of OEH and the RTA PACHCI.

Brett Duroux represented the Grafton-Ngerrie Local Aboriginal Land Council and participated in the field surveys. Brett provided local and cultural knowledge of the immediate Grafton Area. A discussion of what would constitute potential direct and indirect impact to cultural values was undertaken with both Brett Duroux and Graham Purcell (RTA Northern Region Aboriginal cultural heritage advisor).

Comments from the Grafton-Ngerrie Local Aboriginal Land Council were received on 17 February 2011 (see Appendix 1). The following summarises the key comments, requests and recommendations of the Grafton-Ngerrie Local Aboriginal Land Council.

Survey Findings

- The Catholic college property is considered of high cultural significance and should be inspected prior to ground disturbance.
- The location of the Golden Eel site is a spiritual area of high significance to the Aboriginal people and must not be disturbed in any way.
- The former commercial area south of the Golden Eel site should be inspected when the concrete slabs are removed.
- At the Catherine McCauley College near the tea-tree farm there is a high likelihood, given the high cultural significance of the area, that any developments will impact Aboriginal culture and heritage significance.

Recommendations

Based on the findings of the field surveys, the Grafton-Ngerrie Local Aboriginal Land Council recommend that no development from Iolanthe Street proceeding to the Pacific Highway and heading north east from Bunnings to the Catherine McCauley College, should be planned or further pursued due to the Aboriginal culture and heritage significance of this area (see Figure 7; Appendix 1).

1.6.1 RTA procedure for Aboriginal cultural heritage consultation and investigation (PACHCI)

A program of appropriate Aboriginal cultural heritage consultation has been initiated by the RTA.

To initiate the consultation process, the RTA has commenced Stage 1 of the process. Notification letters have been sent to relevant agencies and organisations to determine the relevant knowledge holders within the Grafton and South Grafton area. As part of this process, the RTA placed public notices in local print media, including The Daily Examiner, on the 22 January 2011. The notice invited Aboriginal people who hold relevant knowledge of the region to register with the RTA by the 14 February 2011.

Following the registration of Aboriginal stakeholder(s), the RTA scheduled an Aboriginal Focus Group (AFG) meeting to commence Stage 2 of the process.

Aboriginal Focus Group meeting 10 May 2011

An Aboriginal focus group (AFG) meeting was held at the Grafton-Ngerrie Local Aboriginal Land Council offices in Grafton on Tuesday 10 May 2011 to discuss the best way to identify Aboriginal cultural constraints on the proposed route options and relevant knowledge holders.

The meeting was attended by:

- Wesley Fernando and Rod Duroux, Grafton-Ngerrie Local Aboriginal Land Council
- Graham Purcell, Chris Clark and Simon Millichamp, RTA
- Peter Rand, Arup
- Samantha Higgs, Biosis Research

AFG meeting outcomes

It was determined at the meeting that a workshop should be held at the Grafton-Ngerrie LALC office with relevant knowledge holders to investigate the extent of several Aboriginal cultural sites, particularly:

- The Golden Eel site
- Elizabeth Island
- Susan Island

Wesley Fernando would contact the OEH AHIMS registrar to obtain copies of restricted site cards relating to these sites prior to the workshop.

<i>AHIMS #</i>	<i>SITE NAME</i>	<i>SITE TYPE</i>	<i>NOTES</i>
12-6-0219	Susan Island	Ceremonial Mound / Ring	Restricted, Women's site Access to site card by permission only.
12-6-0326	Clarence River Golden Eel	Aboriginal Ceremony and Dreaming	General restriction Access to site card by permission only.
12-6-0327	Elizabeth Island Women's Place	Aboriginal Ceremony and Dreaming	Restricted, Women's site Access to site card by permission only.

Aboriginal Focus Group workshop 28 June 2011

An Aboriginal focus group workshop was held at the Grafton-Ngerrie Local Aboriginal Land Council offices in Grafton on Tuesday 28 June 2011 to further determine the location and extent of Aboriginal cultural constraints in the Grafton area.

The meeting was attended by:

- Wesley Fernando, Brett Tibbett and David "Bunny" Daley, Grafton-Ngerrie Local Aboriginal Land Council
- Graham Purcell, Chris Clark and Simon Millichamp, RTA
- Kathryn Nation, Arup
- Samantha Higgs and Paul Howard, Biosis Research

AFG workshop outcomes

Several areas were identified as culturally significant and require further consultation to determine constraints. Grafton-Ngerrie Local Aboriginal Land Council agreed to consult with community members regarding the cultural significance and constraints to route options of the following areas:

- Elizabeth Island
- Alipou Creek
- Swan Creek

Grafton-Ngerrie Local Aboriginal Land Council agreed to write a report on the cultural constraints discussed at that meeting.

It was indicated at the workshop that Elizabeth Island may be important to men as well as, or instead of, women.

Susan Island is not impacted by any of the route options and does not require further investigation.

The restricted site cards for sites 12-6-0326 and 12-6-0327 could not be obtained in time for the workshop. Access to these site cards is still being sought.

Grafton-Ngerrie Local Aboriginal Land Council Meeting 1 July 2011

A meeting was held at the Grafton-Ngerrie LALC offices in Grafton on Friday 1 July 2011 to discuss preliminary route options for the additional crossing of the Clarence River in Grafton and in particular the areas around Alipou Creek, Elizabeth Island and Great Marlow.

The meeting was attended by:

- Wesley Fernando, Brett Tibbett and David "Bunny" Daley, Grafton-Ngerrie Local Aboriginal Land Council

Grafton-Ngerrie LALC meeting outcomes

The following is a summary of the meeting outcomes as provided in a letter from Wesley Fernando, Grafton-Ngerrie LALC. A copy of the letter in full is attached in Appendix 1.

- Elizabeth Island is a sacred Aboriginal men's site with high significance to the Aboriginal community. No disturbance should occur on any part of the Island. Any of the preliminary route options that impact on Elizabeth Island should be removed from the list of options.
- Alipou Creek is the resting place of the Golden Eel which is of great significance to all of the neighbouring tribal groups. There are many scarred trees and a marriage tree in the area that can not be impacted on. The community feel strongly that Alipou not be directly impacted. The community is willing to discuss potential impacts on the area between Alipou Creek and the existing bridge once the options have been narrowed down and plans refined.
- Great Marlow is an area that Aboriginal people commonly used to travel through and that contains many areas of high significance. Any route options considered in this area will need to be assessed by Land Council Site Officers before an accurate assessment can be given.
- All development activities will impact on Aboriginal places and objects of Cultural significance, as traditional Aboriginal people were nomadic moving through their country. All country is significant, in addition to this our spirituality is entwined throughout the landscape, therefore it is impossible for a development not to impact on Aboriginal culture and heritage.

Additional correspondence from Grafton Ngerrie LALC has also been received:

Grafton-Ngerrie LALC would like to assess low impact areas such as buildings and roads if these are to be disturbed in any way, as the Aboriginal community was not afforded the chance to assess these areas when they were initially developed. Due to the high significance of the area it is highly likely sites would be present.

Grafton-Ngerrie LALC also advised:

“It is the Grafton Ngerrie Land Councils opinion that all developments will impact on Aboriginal Culture and Heritage as all country whether it has been developed or not it is of significance to Aboriginal people and we must be afforded the opportunity to be fully involved in all aspects of the development and construction of the additional crossing of the Clarence river at Grafton.”

2.0 PREVIOUS STUDIES AND INVESTIGATIONS

Over the last 10 years, the RTA has carried out a number of studies to identify areas that would be suitable for an additional crossing of the Clarence River at Grafton. The following studies have been undertaken for Aboriginal heritage.

An Aboriginal Heritage Assessment for Route Selection: Proposed Additional Crossing of the Clarence River, Grafton (NSW) January 2004.

At this time, Biosis Research (2004) completed an Aboriginal archaeology and heritage ‘route selection’ assessment of the proposed additional river crossing of the Clarence River at Grafton. The area under investigation extended between the eastern end of Susan Island and the western end of Elizabeth Island, extending north into the township of Grafton and as far south as the Pacific Highway. The results of desktop analysis and the preliminary field surveys provided known Aboriginal sites and areas of cultural heritage potential within the broad project area perimeter and considered the extent to which further assessment might be required. The most significant issue noted as part of the assessment was the likely presence of further dreaming or ceremonial sites associated with the Clarence River. In addition, both Susan and Elizabeth islands were noted as areas of high significance for the Aboriginal community. The Grafton-Ngerrie Local Aboriginal Land Council have requested that no new bridge be considered in the vicinity of Susan Island as this is a very significant site for the local Aboriginal people (RTA 2003: 32).

The recommendations outlined the need for further detailed archaeological assessment and landform testing to determine where Aboriginal archaeological sites are most likely to occur within the landscape. It also identified that an impact assessment could not be undertaken until specific impacts have been defined. Most importantly, the investigation revealed the significance of a number of places/features to the local Aboriginal stakeholders and that these values needed to be fully investigated prior to the development of specific options.

Susan Island Nature Reserve Draft Plan of Management. Report prepared by the National Parks and Wildlife Service, Part of the Department of Environment and Climate Change (NSW) April 2009.

The aim of the draft plan of management was to identify the natural and cultural heritage values of Susan Island and to develop a management strategy to protect and enhance those values.

Susan Island has been assessed as a significant place to the community, for its Aboriginal cultural values, its non-Aboriginal cultural values, and its natural values. It is a significant place to Aboriginal women, who have a close past and ongoing association with the island and its rainforest; a group of Aboriginal women, the Nyami Julgaa, are the recognised custodians of the place. The island has iconic value to the non-Aboriginal community for its history of recreational use. First dedicated as a reserve for public recreation in February 1870 and later in 1893 for the preservation of birds, it was a popular recreation place until the 1940s when interest in the place waned for a variety of reasons.

The draft plan of management also identifies ecological values that add to the Island’s significance: Susan Island supports remnant rainforest that survived resource exploitation by European settlers (although red cedar does not survive there); it is home to 7 threatened species and; provides a refuge to species such as the noisy pitta, a bird that is found here at its southernmost limit. Three species of flying fox also utilise the island as either a maternity camp or a permanent roost.

Threats to the values of Susan Island are identified and a management strategy is proposed. Management of the Aboriginal heritage values have been detailed below and taken directly, as written, in the draft plan of management document.

Current situation

Susan Island is a recorded Aboriginal site. While the significance of the site to the Aboriginal women of the Clarence Valley is primarily associated with the rainforest, the whole island has cultural value. The continued understanding and use of the native plants which occur in the reserve is also culturally important.

A group of Aboriginal women, Nyami Julgaa, are recognised and acknowledged as the cultural custodians of Susan Island. There is ongoing consultation with this group to ensure that cultural values of the reserve are protected. The members of Nyami Julgaa have indicated their desire for the nature reserve to be renamed to better reflect its importance to the Aboriginal community. They have also requested that no facilities be put in the reserve.

Desired outcomes

- *Cultural features are identified, conserved and managed in accordance with their significance.*
- *Aboriginal heritage values are recognised and protected in partnership with the local Aboriginal community.*
- *Aboriginal community continues to have access to plants for traditional purposes.*

Management response

*6.3.1 Work with Nyami Julgaa, other members of the local Aboriginal community, the Grafton-Ngerrie Local Aboriginal Land Council and knowledge holders to identify and manage Aboriginal cultural heritage sites, places and values (**Priority – High**).*

*6.3.2 Assist in the nomination of Susan Island as an Aboriginal Place to formally recognise its importance (**Priority – High**).*

*6.3.3 Work with Nyami Julgaa to identify a suitable, culturally appropriate name for the nature reserve, and seek to have the reserve renamed (**Priority – Medium**).*

*6.3.4 Undertake or encourage appropriate cultural heritage surveys and other appropriate research to identify and record Aboriginal or historic cultural sites and values within the reserve (**Priority – Medium**).*

*6.3.5 Liaise with the Nyami Julgaa and the Trust on the interpretation of the cultural values of Susan Island (**Priority – Medium**).*

3.0 METHODOLOGY

The area of investigation is centred on the existing bridge over the Clarence River at Grafton in the local government area of Clarence Valley, County of Clarence, Parish of Great Marlow. It extends across the towns of Grafton and South Grafton (Figure 2) and includes the Clarence River and Susan and Elizabeth Islands. The investigation area is not delineated by a distinct boundary, so that heritage items are not excluded by an arbitrary line. This includes Susan and Elizabeth islands.

3.1 Methodology used

3.1.1 Methodology to describe existing environment – desktop gap analysis

The methodology used to describe the existing Aboriginal archaeological environment involved desktop research. This included searches of the following databases:

- Aboriginal Heritage Information Management System (AHIMS) database at NSW Office of Environment and Heritage (OEH).
- National Native Title Tribunal.
- National Heritage List.
- Commonwealth Heritage List.
- Stage Heritage Register.
- Register of the National Estate.
- Heritage Schedules of the *Grafton Local Environmental Plan (1988)* and the *Clarence Valley Local Environmental Plan (2010)*.
- Heritage Schedules of the *North Coast Regional Environmental Plan (15 December 2008)*.

The results of the OEH AHIMS search were then used to identify all previously recorded Aboriginal sites within the region and previous archaeological studies.

Further to this, geological mapping, soils mapping and descriptions, ethnohistorical sources and flora and fauna information is collected from various sources.

All of this data is used to develop a predictive model for Aboriginal archaeological sites on a regional and local level.

3.1.2 Methodology to identify constraints

The methodology used to prepare this report included a combination of:

- Desktop research and gap analysis (methods described previously in Section 3.1.1).
- Reconnaissance field surveys of the Grafton and South Grafton proposal area.
- Preliminary consultation with the Grafton-Ngerrie Local Aboriginal Land Council.

Using the results of the desktop research, field surveys and consultation, all Aboriginal archaeological sites, cultural sites or values and archaeological potential were mapped. Each separate feature was then overlaid onto one map to indicate the areas where constraints or opportunities occur across the area.

3.1.3 Reconnaissance field surveys

The validity of any predictive model must be proven by the application of field work aimed at identifying areas of Aboriginal archaeological sites and areas of potential.

The aim of the reconnaissance field surveys was to assess known Aboriginal archaeological sites situated within the Grafton and South Grafton proposal area and determine preliminary areas of Aboriginal archaeological potential to identify potential constraints and opportunities.

The field survey focussed on:

- Re-assessment of known Aboriginal archaeological sites and areas of cultural significance.
- Identification of areas of archaeological potential based on the background research predictive model (regional site patterns overlain on the physical environment of the Grafton and South Grafton proposal area).

Targeted pedestrian survey methods were employed for the Aboriginal archaeological assessment. Based on previous archaeological assessment within the region, particular attention was paid to key sensitive landforms or features (creek banks and remnant vegetation) with a higher likelihood for the presence of Aboriginal archaeological sites. All identified areas of ground surface exposure, regardless of archaeological potential, were inspected. Where vegetation remained, old growth trees for scarring or other culturally manufactured features or cultural markers relating to burials were closely examined.

Notable features and Aboriginal archaeological sites were recorded using a GPS. A GPS 'track' was also recorded and stored showing all survey movements, effectively serving as continuous 'survey transects'. Survey conditions and variables were documented, whilst the extent of survey was determined after downloading the GPS data into a GIS database. Topographic and aerial maps and a GPS were used to navigate across the area and used to map some areas of archaeological potential. Survey data was recorded on transect data sheets for individual properties visited.

3.1.4 Preliminary consultation

Consultation was undertaken with members of the Grafton-Ngerrie Local Aboriginal Land Council. The consultation was initiated by Graham Purcell, RTA Northern Region Aboriginal Liaison Officer. The consultation involved arranging field officers for the reconnaissance surveys and preliminary information gathering on the cultural values of known cultural places around Grafton. A preliminary report on the cultural values of the proposal area was requested and received from the Grafton-Ngerrie Local Aboriginal Land Council (Appendix 1).

3.2 Limitations of methodology used

3.2.1 Desktop research

Background research was limited by the amount of data available. Some site cards and reports from OEH were not available, limiting our knowledge of these sites and studies. Based on the OEH AHIMS records, the locality of all archaeological sites is known, however, the extent of culturally significant sites or places cannot as yet be determined. This will limit the ability for avoidance of such sites or places for the next stage of the proposal. More detailed consultation with the local Aboriginal community will help in determining the location, extent and significance of these places.

Access to information on the following sites is restricted due to their high cultural significance to the local Aboriginal people.

- Susan Island – restricted Women's site.
- Clarence River Golden Eel – restricted – general.
- Elizabeth Island Women's Place – restricted – Women's site.

These sites are likely to have well defined cultural restrictions regarding who within the Aboriginal community can speak about each site, and who they may speak to about the sites. Such cultural restrictions would be respected and managed through a consultation protocol designed in conjunction with the Aboriginal community.

In cases where site location and extent was unclear, the broadest extent possible has been assumed. Such assumptions will be refined once access to information contained in site cards has been obtained and through on-going consultation with the local Aboriginal community.

3.2.2 Reconnaissance field surveys

With any archaeological survey there are several factors that influence the effectiveness or the likelihood of finding sites. The factors that contribute most to how detectable archaeological sites may be are identified as *visibility*, *disturbance* and *exposure*. For example, low levels of exposure limit the visible ground surface, limiting the identification of archaeological material at the surface.

Access to some properties in the Grafton and South Grafton proposal area was not possible nor expected at this preliminary stage of the process. While many properties were surveyed, a number of other properties were not accessed. Therefore, only a preliminary assessment of archaeological potential could be determined for these properties. Potential can be refined following detailed field survey.

3.2.3 Aboriginal consultation

The Aboriginal Cultural Heritage component of this report has been undertaken as a preliminary assessment only. Consultation with the local Aboriginal community is required and will be incorporated into subsequent reports, as completed by the RTA. Preliminary consultation completed as of July 2011 is documented in section 1.6.1.

3.2.4 Identification of constraints

The boundaries defined for areas of archaeological potential are broadly based on the desktop analysis, the findings of previous archaeological work, landform modelling, previous land use disturbances and the findings of the reconnaissance field surveys. These areas are not absolute and will be further refined following detailed archaeological field survey and additional archaeological work, such as test excavations.

4.0 EXISTING ENVIRONMENT AND CONSTRAINTS

The existing environment and constraints have been identified through background research and reconnaissance field survey in the Grafton and South Grafton proposal area.

The following sections present the results of the heritage register searches, environmental background of the region, previous archaeological studies and known archaeological sites, a predictive model for Aboriginal archaeological sites, and the findings of the reconnaissance field surveys.

Combined, this information provides context to the location, preservation and significance of Aboriginal archaeological sites and areas of potential within the region, and within the Grafton and South Grafton proposal area. It also provides insight into the cultural values and attachments people have to a place.

4.1 Heritage status and planning documents

The results of heritage register searches are summarised below.

4.1.1 National Heritage List

The *Commonwealth Australian Heritage Commission Act* was recently repealed and in its place amendments were made to the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Under the EPBC Act Amendments (No 88, 2003) two mechanisms have been created for protection of heritage places of National or Commonwealth significance. The National Heritage List provides protection to places of cultural significance to the nation of Australia. The Commonwealth Heritage List comprises natural, Aboriginal and historical heritage places owned and controlled by the Commonwealth and therefore mostly include places associated with defence, communications, customs and other government activities.

Nominations to these two lists are assessed by the Australian Heritage Council, who also administers the Register of the National Estate, a list of places identified as having national estate values. There are no management constraints associated with listing on the Register of the National Estate unless the listed place is owned by a commonwealth agency.

A search of the National Heritage List and Commonwealth Heritage List was conducted. The Grafton and South Grafton proposal area contains no listed Aboriginal items or places.

4.1.2 Register of the National Estate

The Register of the National Estate (RNE) is a list of places identified as having national estate values. The list is now static, having been superseded by the National and Commonwealth Heritage Lists. There are no management constraints associated with listing on the RNE unless the listed place is owned by a commonwealth agency.

A search of the Register of the National Estate was conducted. The Grafton and South Grafton proposal area contains no listed Aboriginal Places.

4.1.3 State Heritage Register

The State Heritage Register (SHR), managed by the Heritage Branch, Department of Planning, contains items that are of State Significance to New South Wales. Items that appear on the SHR have undergone a rigorous assessment process and are protected by the Heritage Act 1977. Changes made to SHR listed items can only be made with approval from the Heritage Council; demolition is not permitted except in certain circumstances.

A search of the State Heritage Register was conducted. The Grafton and South Grafton proposal area contains no listed Aboriginal items or places.

4.1.4 National Native Title Register

The Commonwealth *Native Title Act* 1993 establishes the principles and mechanisms for the preservation of Native Title for Aboriginal people.

Under Subdivision P of the Act, *Right to negotiate*, Native Title claimants can negotiate about some proposed developments over land and waters (known as 'Future Acts'), if they have the right to negotiate. Claimants gain the right to negotiate if their native title claimant application satisfies the registration test conditions.

The right to negotiate applies over some proposed developments or activities that may affect native title. Native title claimants only have the right to negotiate over certain types of future acts. The right to negotiate is not a right to stop projects going ahead — it is a right to have a say about how the development takes place. In some situations, the right to negotiate does not apply. In these circumstances, claimants may have the right to be notified, to be consulted, to object and to be heard by an independent umpire.

The other key purpose of searching the register is to identify any Traditional Owner groups will current registered claims close to the Grafton and South Grafton proposal area that may identify themselves as relevant stakeholders with traditional knowledge or experience.

A search of the National Native Title Register, the Register of Native Title Claims and the Register of Aboriginal Land Use Agreements in the Clarence local government area was completed for the Grafton and South Grafton area.

National Native Title Register	Nil
Register of Native Title Claims	Nil
Unregistered Claimant applications	Nil
Register of Aboriginal Land Use Agreements	Nil

There are no lands determined to have native title, and no registered native title claims or Aboriginal land use agreements within the immediate vicinity of the Grafton and South Grafton proposal area.

4.1.5 NSW Nationals Parks and Wildlife Act Register

The NSW Office of Environment and Heritage (OEH) maintains a database of Aboriginal sites within NSW under the auspices of the NSW *National Parks and Wildlife Act 1974* (NPW Act). Aboriginal objects and places in NSW are legally required to be registered on the Aboriginal Heritage Information Management System (AHIMS) register.

The area searched on the AHIMS database included a greater area than the township of Grafton, as Aboriginal sites recorded within the wider area will provide a regional perspective on the types of sites that may be expected to be found just within Grafton. The AHIMS database does not contain a comprehensive list of Aboriginal sites in NSW, as it includes only information that has been provided to OEH.

A search of the AHIMS Database identified **13** previously recorded Aboriginal sites within a 6 x 6 km search area surrounding the township of Grafton (see Section 4.2.1.11).

4.1.6 Environmental Planning and Assessment Act Registers

The *Environmental Planning and Assessment Act 1979* (EP&A) includes provisions for local government authorities to consider environmental impacts in land-use planning and decision making. Such impacts are generally considered in relation to the planning provisions contained in the local environment plan or State Environmental Planning Policies (SEPP).

LOCAL ENVIRONMENTAL PLANS

Each local government authority is required to create and maintain a local environmental plan that includes Aboriginal and historic heritage items. Local Councils identify heritage items that are of significance within their local government area, and these items are listed on heritage schedules in the local environmental plan and are protected under the *EP&A Act 1979* and *Heritage Act 1977*.

The DRAFT *Clarence Valley Local Environmental Plan 2010* does not list any Aboriginal heritage items or places.

REGIONAL ENVIRONMENTAL PLANS / STATE ENVIRONMENTAL PLANNING POLICIES

Under the *EP&A Act 1979*, SEPPs have been developed to address issues that affect the people and places of New South Wales. Regional Environmental Plans (REPs) are gradually being replaced by SEPPs.

The *North Coast Regional Environmental Plan* applies to the Grafton and South Grafton proposal area.

The *North Coast REP* does not list any Aboriginal heritage items or places.

4.1.7 The National Trust of Australia (NSW)

The National Trust of Australia (NSW) is a community-based conservation organisation. The Trust maintains a Register of heritage items and places. Although the Register has no legal foundation or statutory power, it is recognised as an authoritative statement on the significance to the community of particular items, and is held in high esteem by the public. The National Trust lists items or places that have heritage or cultural value to the community and, as such, the Trust encourages and promotes the public appreciation, knowledge, and enjoyment of heritage items for future and present generations.

A search of the National Trust in the Grafton local government area was completed and no Aboriginal items were listed.

4.2 Environmental Context

A description of the environmental background of the Grafton and South Grafton proposal area is provided in order to give context to the Aboriginal archaeological assessment.

The landscapes of NSW were mapped at a broad scale (1: 250,000) using land systems, geology, geomorphology and elevation data (DECCW 2003). The proposal area lies within the Clarence-Moreton Basin and has been identified to have two landscape types present:

4.2.1 Geology

Grafton lies at the south-eastern end of the geological feature known as the Clarence-Moreton Sedimentary Basin, which covers 16,000 km² of north-eastern New South Wales. Across this basin there has been widespread fluvial and lacustrine to paludal deposition. This deposition is recorded in the grey siltstone, thick banded coal horizons and fine to medium grained lithic sandstone. Although the sediments are non-marine in origin, the quartz dominated sandstone of the Clarence-Moreton Basin is similar to the Sydney Basin sandstones, which have numerous outcrops and overhang formations present (DPI Website).

In the south-east of the Clarence-Moreton Basin (where Grafton lies), an overlying layer of the erodible Grafton Formation remains creating an undulating land surface. The Grafton Formation is a fluvial to lacustrine claystone and sandstone unit. This formation overlies the coarser Kangaroo Creek Sandstones which are comprised of sandstone, siltstone, claystone and conglomerate. Both the Grafton and Kangaroo Creek geological units are Mesozoic sediments comprised largely of sandstone and sandstone derivatives (NPWS 2006) (Figure 2).

The geological processes that have contributed to the formation of the Grafton area have been largely the weathering of materials flowing down the Clarence River and deposited following flooding events to create the Clarence-Richmond alluvial floodplains. The alluvium in the Clarence River at Grafton is estimated to be about 40m thick (DPI 1970).

4.2.2 Soils

Clarence - Richmond alluvial plains

Wide valleys, channels, floodplains, terraces and estuaries of the Clarence and Richmond Rivers and other coastal streams on Quaternary alluvium, which have a general elevation of 0m to 50m Australian Height Datum (AHD), with a local relief 15m. The alluvium in the Clarence River at Grafton is estimated to be about 40m thick (Department of Primary Industries 1970). These alluvial soils (structure loams) are characterised as being deep brown earths and structured brown clays on floodplains. These soils are fertile having a high organic content and are generally not considered to have high erosion potential.

Soils within the Grafton and South Grafton area have been substantially disturbed through sub-urban, agricultural and industrial land uses. Severe floods in the 1940s and 1950s prompted the development of an extensive levee and drainage network to mitigate the effects of major flooding events. The levee system was completed in the 1970s with levees present on both sides of the bank of the Clarence River and extending across the floodplains in South Grafton.

Less disturbed portions of the Grafton and South Grafton area where topsoils remain at least partially intact include isolated patches of native vegetation that is typical floodplain vegetation of the lower Clarence.

Grafton-Whiporie Basin Soils Landscape

This landscape is characterised by extensive low undulating hills and large drainage basins on sub-horizontal upper Jurassic interbedded quartz sandstone, lithic sandstone, clayey siltstone and coal measures. Ironstone concretions in the weathering profile are often exhibited. The general elevation ranges from 50 to 150m, with local relief of 50m. Yellow and brown texture-contrast soils on slopes and dark grey clays along valley floor streamlines (DECCW 2003). The Grafton-Whiporie Basin landscape type occurs approximately 1km to the south of the Clarence River.

Within the wider region, the geology includes sandstone overhangs which may be suitable for occupation and outcropping bedrock formations which may be used for sharpening tools or as art panels. The lithic resources available in the area include siltstone, claystone, quartz and conglomerates, which can be modified into stone tools. Soils in proximity to the Clarence River are deep alluvial soil profiles which are likely to have been subject to extensive reworking.



Legend

Geology Landscapes

- Qa: Quaternary Stream Alluvial Deposits, sandy to silty with minor gravels
- Jgs: Jurrassic-Cretaceous Grafton Formation, sandstone, siltstone, claystone and minor coal

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 Acknowledgements:
 Aerial Imagery - Courtesy of RTA
 This product incorporates Data which is
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Figure 2: Geology Landscapes within the Grafton & South Grafton Area.

Date: 12 May 2011 Drawn by: ANP/JMS

File number: 12594 Checked by: SG

Location: - P:\12500s\12594\Mapping\ Report Figures\12594 F2_Geology_120511.WOR

0 200 400 600 800 1000
 Metres

Scale: 1:20,000 at A3
 Map Projection: Universal Transverse Mercator
 Horizontal Datum: Geodetic Datum of Australia 1994
 Map Grid: Map Grid of Australia Zone 56



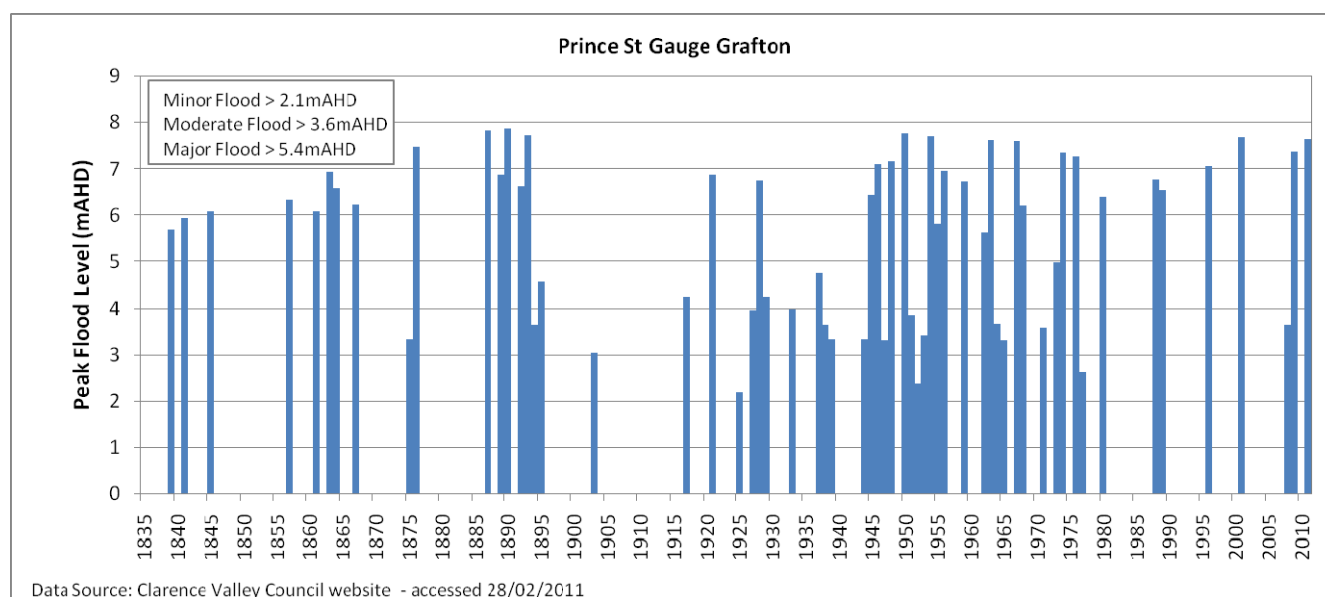
4.2.3 Hydrology

The Clarence River catchment, covering an area of 22,700km is located in the Northern Rivers region of New South Wales (DEC 2005.2, Northern Rivers CMA Website). Draining east from the Great Dividing Range to the river entrance adjacent to the townships of Yamba and Iluka, the catchment extends from the New South Wales/Queensland border and Richmond Range in the north to the Doughboy Range/Dorrigo Plateau in the south. The catchment is characterised by upper tableland areas which fall away to a relatively large, flat coastal floodplain. Grafton and South Grafton are located within the upper reaches of the floodplain.

The Grafton and South Grafton area has a history of both droughts and floods. Since 1839 the Clarence River has experienced 74 moderate to major floods (shown in Graph 1), the most recent flood events being in 2001, 2009 and 2011, when the river reached levels of 7.70mAHd, 7.37mAHd and 7.64mAHd respectively at the Prince Street gauge in North Grafton.

Flooding of the Clarence Valley coastal floodplain typically occurs from low intensity rainfall events that last several days or even weeks. Seasonally, flooding within coastal floodplain predominantly occurs in both late summer and early winter months. This seasonal distribution reflects the fact that the Clarence Valley is predominantly affected by tropical cyclones and winter depressions (PWD, 1980).

The current flood behaviour in Grafton and South Grafton is dominated by a series of levees alongside the Clarence River. Following a number of major floods in the 1940s and 1950s, the significant economic effects of flooding aroused public interest in structural measures aimed at reducing flood risk within the Clarence Valley floodplain. Responsible for the floodplain management, the Clarence River County Council (now the Clarence Valley Council) was formed in 1959. As a measure to increase the level of flood protection to Grafton and South Grafton, construction of numerous linked levees was completed in the 1970's, along both banks of the Clarence River. Since the 1970's additional upgrades to the levees adjacent to South Grafton were completed in 1997, further increasing the flood protection for South Grafton. Since the 1970's additional upgrades to the levees adjacent to South Grafton and some minor raising of low points within the Grafton levee were completed in 1997, further increasing the level of flood protection. Since the subsequent upgrade, overtopping of the Grafton urban levees has not occurred.



Graph 1: Grafton Flood History Summary

Cyclical flooding events have the potential to impact on the survival of Aboriginal archaeological features. Strong floodwater movement can either scour the river banks and terraces, effectively removing stone artefacts from in situ. This movement, can however, result in the deposition of flood sediments, burying and preserving archaeological material.

4.2.4 Climate

In general terms the climate in the Grafton region has two major seasonal influences. The first is the sub tropical high-pressure belt which occurs in winter and spring and the second is the monsoonal cyclones and trade winds of summer and autumn. Bureau of Meteorology weather station records (Station 058130 – collected from Grafton Swimming Pool) show that more rainfall is experienced during the summer and autumn months. This has an impact on the availability of freshwater which would have influenced the occupation patterns of the Aboriginal inhabitants. The drier winter and spring seasons see only small freshwater inflow into waterways while the cyclones bring large intermittent short lived fresh water events.

4.2.5 Flora and Fauna

The land immediately surrounding Grafton is now considered an urban landscape, surrounded by rural and prime agricultural lands as the native vegetations have since been extensively cleared and/or modified.

All early historical accounts of the Clarence support an understanding that the current vegetation patterns do not reflect pre-contact vegetation types. While the margins of the Clarence are now largely cleared urban or agricultural lands, cedar getters were some of the earliest non-Aboriginal people along the Clarence River. An account by Capt James Butcher noted that the banks of the river were 'thickly covered with timber' (Stubbs 2007: 9). The alluvial plains were thick with brush when an influx of settlers arrived following the passing of the *Land Acts* in 1861 (Sabine 1970:1: 8). The density of brush was synonymous with soil fertility, and essentially ensured that such areas were the first selected and cleared to allow the commencement of agriculture. Historical records of the vegetation present along the Clarence River before European settlement indicate riparian vegetation and open woodlands existed within 1 km of the riverbank (Sabine 1970).

The *Mitchell Landscapes of NSW* (DECCW 2003) outline a list of dominant flora species expected to have occurred on the Clarence-Richmond alluvial floodplains - inferring that the now extensively cleared valley floor was likely to have supported forests of cabbage gum (*Eucalyptus amplifolia*), forest red gum (*Eucalyptus tereticornis*), broad-leaved apple (*Angophora subvelutina*), river oak (*Casuarina cunninghamiana*), silky oak (*Grevillea robusta*), rough-barked apple (*Angophora floribunda*), native teak (*Flindersia australis*), coastal grey box (*Eucalyptus bosistoana*), pink bloodwood (*Corymbia intermedia*), spotted gum (*Corymbia maculata*), grey ironbark (*Eucalyptus paniculata*), broad-leaved paperbark (*Melaleuca quinquenervia*), blackwood (*Acacia melanoxylon*) and black she-oak (*Casuarina littoralis*).

This vegetation community would have supported a range of fauna. Terrestrial mammals would presumably have been an abundant and reliable food source in the woodlands for Aboriginal people. Land mammals such as kangaroos and arboreal mammals such as possums would have been important prey species within these vegetation communities. Birds, reptiles and fish would also have been important resources. The Clarence River would have supported an abundance of aquatic species, including estuarine species that occur in the Clarence River with salinity variations based on seasonal freshwater flows and tidal movements.

4.2.6 Resource Availability

The geology of the immediate Grafton and South Grafton area does not suggest the likelihood of readily available raw material sources. Some stone types suitable for tool manufacture are available in the local area as river bed outcrops or river pebbles.

The Clarence River is an important natural feature for Aboriginal people as it supported an abundance of resources integral to their lifestyles and cultural practices. The river is also the subject of several dreaming stories, the ones publicly available relate to the creation of the river. The river has mythological values and this aspect of significance may have no additional tangible

features beyond physical presence. Aboriginal community consultation is required to refine cultural associations and connections to the river.

It should also be considered that the river may have cultural significance in the demarcation of space and place. The river creates a tangible barrier to accessing the opposite bank and the river islands, and this demarcation may have significance in the social organisation and cultural practices of local Aboriginal populations. Both Susan and Elizabeth islands (respectively west and east of the existing Grafton Bridge) are of significance to local Aboriginal women and are listed as Aboriginal Women's places.

The pre-contact vegetation communities supported numerous plant species utilised by Aboriginal people for a wide range of purposes. Certain plants provided important food sources (yams and roots) and/ or medicines, while others provided toxins which might be used to stupefy fish in waterholes. Sabine (1970: II: 21) notes that plant derived poisons used in fishing include Duboisine from the Corkwood Tree, a poison extracted from an unspecified weed and a poison made from pounding the leaves of a tree called "Cutiga".

Plants were used to manufacture a wide range of items including personal decorations, clothing, tools, art (pigment fixatives), watercraft, traps and shelter. Certain plants also featured in local mythologies, and some were considered sacred and/or had ritual uses.

Wood, bark, fibres, and resin are all examples of useful materials derived from plants. For example: wood could be used to manufacture items such as boomerangs, clubs, digging sticks, weapons, shields or containers; bark could also be used to manufacture clothing, canoes, or dishes; fibres could be used to manufacture string, fishing nets, baskets, traps, or mats; and resin could be used as an adhesive in tool manufacture and decoration, or to seal leaks in canoes (Sabine 1970).

The plant species discussed previously would have supported a range of fauna also used by local Aboriginal inhabitants. Animals were not only used for food, but also contributed to several cultural aspects of Aboriginal life; they provided materials for tool technologies, played a role in local mythologies, and some were considered sacred or had ritual significance.

Reptiles, mammals, birds, insects, fish, molluscs, and amphibians would have all been exploited for food. The Clarence River and its floodplain would have supported the major food sources exploited by Aboriginal people, including; a variety of fish, molluscs, tortoises, turtles, eels, and crayfish. Waterbirds flocking on the floodplains such as ibis, geese, ducks, swans, shags, darters and cormorants were harvested by the Aboriginals for meat, eggs and feathers (Sabine 1970). Macropods, possums and emu also found in the area were used for meat and skins.

Aboriginal technologies also made use of materials sourced from animals. Skins could be used as clothing, such as macropod and possum skin cloaks; bone points (awls) and sinews were used for sewing; animal teeth, bones, and sinews were used in tool manufacture; and animal products, such as feathers and teeth were used as personal decoration (Sabine 1970).

4.2.7 Land Use Impacts

The land within and surrounding the Grafton and South Grafton area has undergone extensive modification. From the beginning of non-Aboriginal settlement in the 1830s clearing of vegetation was rapidly undertaken. This was followed by pastoral land activity and the steady growth of the urban environment.

The northern side of the Clarence River is mostly urban streets, housing and some parkland. To the south, developed urban areas also occur to the west of the existing bridge. However, on the south east side the bridge, open farm lands with associated houses and roads dominate the landscape. Most of these areas comprise alluvial flood plain. The alluvial nature of the floodplain soils to the south and the impact of agriculture and the urban development have reduced the likelihood of some types of evidence of Aboriginal occupation remaining intact.

4.2.8 Ethnohistory

Our knowledge of the social organisation of Aboriginal people prior to European contact is, to a large extent, reliant on documents written by early European arrivals recording their impressions. By the time colonial diarists, missionaries and proto-anthropologists began making detailed records of Aboriginal people in the late 19th Century; pre-European Aboriginal groups had been broken up and reconfigured by European settlement activity. The inherent bias of the class and cultures of these authors necessarily affect such documents. They were also often describing a culture that they did not fully understand – a culture that was in a heightened state of disruption given the arrival of settlers and disease. Early written records and images can, however, be used in conjunction with archaeological information in order to gain a picture of Aboriginal life in the region. Oral histories from members of the Aboriginal community also provide valuable information. The following information relating to Aboriginal people of the Grafton region is based on such early detailed records.

The following information has been reproduced from the initial Biosis Research (2004) as no new ethno-historical sources have been found and this information has not altered since.

4.2.9 Aboriginal History

At the time of non-Aboriginal arrival in Grafton the area to the north of the Clarence River were Bundjalung lands. The Yaegl tribe occupied lands on the coast. The Clarence River and Grafton are within the area previously inhabited by the Gumbainggir people. These people also inhabited the steep terrain of the escarpment zone, located south of Grafton, where other sites and evidence of occupation have been found (Witter 2000).

The first interaction between the Aboriginal inhabitants of the Grafton region and the incoming European settlers came in 1825 in the form of an escaped convict, Richard Craig. Conflict between the Aboriginal population and the incoming settlers followed soon after initial European settlement. Killings were carried out by both communities and stock was speared to drive them off land.

One man, Coutts, a squatter, was tried for poisoning Aboriginal people with arsenic laced flour. He was acquitted (NSW Heritage Office 1996). Violence, displacement and disease reduced the numbers of Aboriginal people in the area. By 1891 it was reported that the police had brought 'peace'. Nine reserves had been created to house the remaining Aboriginal population and many Aboriginal people were employed in European industry as stockmen, cane strippers and fishermen (NSW Heritage Office 1996).

A community of Aboriginal people remain in Grafton to this day, many of them with strong spiritual links to the original inhabitants and important knowledge of their past ways of life.

4.2.10 Known Aboriginal Cultural Heritage

Aboriginal sites can be generally divided into two broad categories. The first includes sites with tangible evidence of past Aboriginal occupation: these include occupation sites (containing material such as stone artefacts, charcoal or shell); modified trees; grinding grooves; burial sites and art sites. The second category is those sites relating to less tangible cultural elements such as ceremonial or dreaming sites. Some ceremonial sites, such as bora rings, may have tangible elements but many are natural landscape features which take on cultural significance through ceremonial or religious association.

A search was undertaken of the OEH AHIMS database of a 6 x 6km area surrounding Grafton. Thirteen registered Aboriginal sites were identified within the search area and are described in Table 1 following.

It should be noted that the AHIMS database reflects Aboriginal sites that have been officially provided to OEH. Large areas of NSW have not been subject to systematic, archaeological survey; hence AHIMS listings may reflect previous survey patterns and should not be considered a complete list of Aboriginal sites within a given area. The absence of registered sites within an area cannot be taken to mean an absence of archaeological material or cultural sites.

Table 1: AHIMS search results for a 6km x 6km search area centred on the Grafton Township (completed 28/02/2011)

AHIMS #	SITE LOCALITY	SITE TYPE	NOTES
12-5-0005	Swan Creek	Burial	
12-6-0086	Grafton	Modified Tree	
12-6-0115	South Grafton	Ceremonial Mound / Ring	
12-6-0158	CH-G-48	Artefact	
12-6-0216	Grafton	Modified Tree	
12-6-0219	Susan Island	Ceremonial Mound / Ring	Restricted. Access to site card by permission only.
12-6-0326	Clarence River Golden Eel	Aboriginal Ceremony and Dreaming	General restriction Access to site card by permission only.
12-6-0327	Elizabeth Island	Aboriginal Ceremony and Dreaming	Restricted. Access to site card by permission only.
12-6-0338	Carr's Creek Camp	Habitation Structure	
12-6-0340	South Grafton	Habitation Structure	
12-6-0345	Grafton	Modified Tree	Site card not available from AHIMS
12-6-0349	South Grafton	Ceremonial Mound / Ring	Site card not available from AHIMS
12-6-0352	South Grafton	Habitation Structure	

4.2.11 Registered Site Details

Site cards 12-6-0345 and 12-6-0349 are not available from the OEH AHIMS. A request has been lodged with the regional OEH office but the site cards were not available at the time of writing the current report.

Ceremonial rings

Two ceremonial rings (earth or mound) are located within the Grafton area. These sites have been registered as separate sites (12-6-0115 and 12-6-0349) but may be part of the same ceremonial complex. Site card 12-6-0115 notes that the rings had almost vanished at the time of recording, that the northern ring (12-6-0115) was barely visible as an egg shaped earthen ring and the southern ring (12-6-0349) was not visible at all, but known through oral tradition. Site card 12-6-0349 was not available from AHIMS, but presumably contains additional information about the condition of the southern ring. An additional ceremonial ring is registered, but the site card for this site is restricted and was not viewed for the preparation of this report.

Burial site

A burial site has been recorded within the Grafton area. The burial ground is believed to extend at least 70m.

Modified tree

Two modified trees (12-6-0216 and 12-6-0345) are located within the Grafton area. An earlier assessment of the project area conducted in 2004 by Biosis Research does include some detail of site 12-6-0345. Within that report the scarred tree is described as being associated with a non-Aboriginal constructed dam, as, subsequent to non-Aboriginal settlement, Aboriginal people used this area for camping.

Marriage trees

Marriage trees (12-6-0086) are registered within the Grafton area. The 12-6-0086 site card notes that there are four trees, between 150-300 years of age, which have been ring-barked and are now dead. According to tradition, the trees were used to dissolve relationships rather than create them; According to Day (2005: 2), "young children were committed to future partners by tribal custom. If this arrangement was to be broken at a later stage, a challenge to climb the marriage tree and remove branches would be set". A survey was conducted by Biosis Research in 2004. While the report does not mention the marriage trees specifically, it does note that there is some potential for [archaeological] sites to exist in the area as it is likely to have been a resource rich area (2004: 18).

Stone artefact site

The only site identified (on the basis of available information) that included artefacts is 12-6-0158 (GH-G-48). This comprises an open occupation site of 6 artefacts. Although the site was assessed as likely to be larger than identified, it was considered to have low potential for in situ preservation of archaeological materials. The artefacts were made from metamorphic chert, medium grained volcanics and quartz.

Historic camp sites

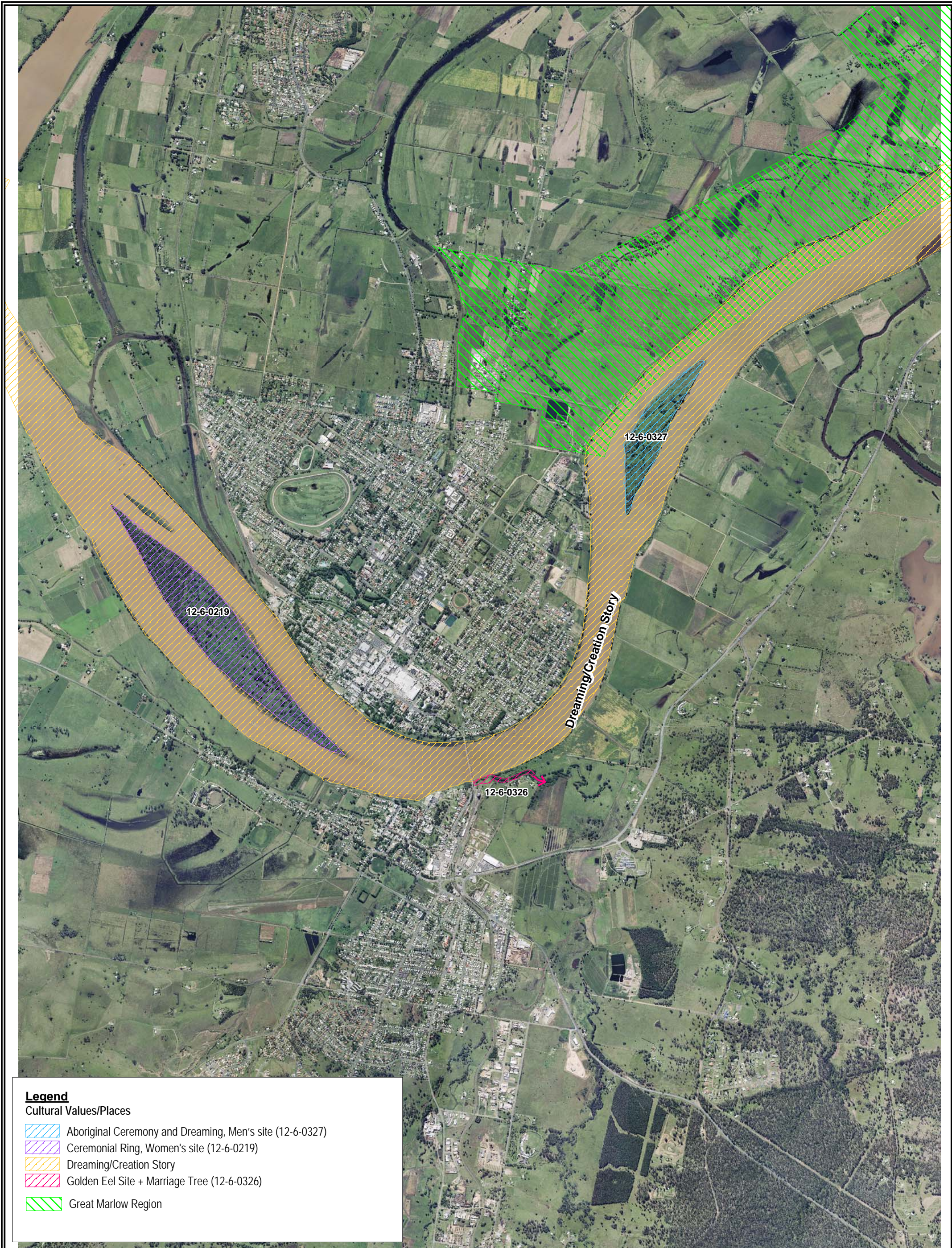
In addition, three historic camp sites (12-6-0338, 12-6-0342 and 12-6-0352) have been registered. These sites are associated with the historic period and reflect 'fringe' camps for Aboriginal people located on the then margins of Grafton.

Susan and Elizabeth Islands

Particular Aboriginal sites may have access restrictions in order to ensure that cultural knowledge is maintained in a culturally appropriate way. Such restrictions are often in place if the site is especially significant, such as with Dreamtime places, or women's business or men's business places. Permission to access such site cards may be granted by a nominated knowledge holder within the Aboriginal community and protocols for culturally appropriate management of cultural information contained in the cards may be required before permission is granted. Sites 12-6-0219 (Susan Island) and 12-6-0327 (Elizabeth Island Women's Place) are both culturally significant women's sites with access restrictions to the site card. Site co-ordinates have not been provided for both these sites and access to the site card is pending identification of a knowledge holder and granting of permission. For the purposes of mapping the whole of each island has been identified as an Aboriginal site.

Golden Eel site

Site 12-6-0326 (Clarence River Golden Eel) is also a culturally significant site, with a general restriction applying to access to the site card. Co-ordinates for this site have been provided by OEH however the extent of the site has not been specified. For the purposes of mapping the entirety of the Clarence River has been identified as an Aboriginal site, with the registered location of the site identified. The registered location of the site is located on the southern bank of the river to the east of the existing bridge. Mapping will be refined following access to the site card. As with the other culturally sensitive sites, a request has been made to identify an appropriate knowledge holder within the Aboriginal community.



Legend

Cultural Values/Places

- Aboriginal Ceremony and Dreaming, Men's site (12-6-0327)
- Ceremonial Ring, Women's site (12-6-0219)
- Dreaming/Creation Story
- Golden Eel Site + Marriage Tree (12-6-0326)
- Great Marlow Region

Figure 3: Known Aboriginal cultural values/places within the Grafton & South Grafton Area.

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Horizontal Datum: Geodetic Datum of Australia 1994					
Map Grid: Map Grid of Australia Zone 56					



4.2.12 Regional Archaeological Context

Isabel McBryde conducted a substantial amount of work in the Northern Rivers and New England regions in the 1970s (McBryde 1974). She emphasised wide-ranging population movements on a seasonal basis suggesting that annual migration occurred between the coast and the tableland foothills, predicting a range of seasonal sites across resource zones. Other models for similar resource zones suggest a more sedentary based pattern focused on coastal areas. This would be demonstrated in the archaeological record by large repeated use sites in resource rich areas. Associated with this settlement pattern would be smaller transitory groups transecting more marginal resource areas such as ridge lines and watercourses. This movement would depend, to some extent, on the topography and would be characterised by small briefly inhabited sites (Hall and Lomax 1993). To date much work remains to be done to test these occupation models.

The oldest dated site in the region is a Rock Shelter site located within 10kms of Grafton. The sites relatively deep stratified deposit was excavated with occupation dating from 6400BP to 300BP, making it the oldest site in the region (Byrne 1981). The earliest levels of the rock shelter contained typical early core and flake type artefacts. A sequence of transition is also recorded within the shelter with ground edge axes and smaller artefacts such as backed blades appearing later in the assemblage (Haglund 1983).

The sandstone geology above the riverbanks provides rock overhangs suitable for locating shelter sites. Grinding grooves have also been recorded along the Clarence River in granite outcrops, beyond the immediate vicinity of the Grafton and South Grafton area.

4.2.12.1 Localised archaeological record

A small amount of archaeological work has been undertaken within the Clarence Valley region, with most consisting of development driven survey assessments being undertaken within and immediately surrounding Grafton (Byrne 1981; Haglund 1985; Navin and Officer 1990; Piper 1994a, 1994b).

The findings from this work can contribute an understanding of Aboriginal cultural heritage within the current project area by understanding sites within a similar context in the wider Clarence River Valley. Those most relevant to the Grafton and South Grafton proposal area have been summarised below.

Byrne, D. (1981)

Byrne (1981) undertook an Aboriginal archaeological survey of a proposed 330kV electricity line between Grafton and Lismore. The study resulted in the identification of three stone artefact sites. While not located within the proposed electricity line, the Parrotsnest Hill mythological site was discussed with the local Aboriginal community to ensure that the proposed works would not in any way affect the cultural values of the site, as such sites extend throughout the surrounding landscape and not restricted to a single point or feature.

Haglund, L. (1985)

Haglund (1985) was commissioned to undertake a desktop assessment of archaeological potential of proposed transmission lines between Coffs Harbour and Grafton. The study identified landforms which have the greatest potential for Aboriginal sites to be present, and was based on previous studies in the area. Over half of the sites identified were considered to be mythological or dreaming sites. Broad scale predictive models produced for this report suggest that various site types were likely to be present within the study area, including rockshelters with art, artefact sites and grinding grooves. The possibility of additional mythological sites was also mentioned.

Navin and Officer (1990)

Navin and Officer were engaged by the Electricity Commission of NSW to undertake an archaeological assessment of proposed 330kV transmission lines between Coffs Harbour and Koolkhan. During the survey for the project 50 sites were identified, including artefact sites, scarred trees, rock shelter sites and quarry sites. Sites were located along ridgelines, knolls and spurs,

as well as being associated with creeks. Areas of potential archaeological deposits were also identified. It is noted that several of these sites have been subject to s.90 Permits, with some of these completely destroyed (Navin and Officer 1990).

With the exception of rock shelter sites, Navin and Officer (1990) identified stream flats and areas of elevated ground adjacent to wetlands or flood plains as having highest archaeological potential. Flat areas on the crests of ridgelines and spurs were also found to be sensitive, but sites in these localities were likely to be of lower significance and greatly disturbed.

Piper (1994a) completed an archaeological survey for the Waterview Seelands Water Supply, approximately 6 km west of the Grafton and South Grafton area. The proposed underground pipeline runs from the junction of the Gwyder Hwy and Old Glen Innes Road, south for 7km. Ground surface visibility varied along the entire alignment. The pipeline route crosses flat, spur line crests where archaeological potential is considered to be highest. Despite the presence of sensitive landforms, only one Scarred Tree was recorded, 22m from the alignment.

Piper (1994b) undertook an archaeological survey at the Northern Hardwood Holdings property at Koolkhan, near Bunyip Creek, on the eastern margins of the current project area. Ground surface visibility across the study area was considered good. The general area comprised of flat grassed paddocks, some distance from a permanent water source. Based on this and the findings of the field survey, the area was identified as having only low archaeological potential.

4.2.13 Site definitions and predictive model

The archaeological predictive model has been formulated based on the results of the landform analysis, location and type of Aboriginal sites previously recorded within the regional area and information from previous archaeological work completed throughout the region. This information has been broken down into patterns that have been compared to the character of the region to allow for an understanding of Aboriginal archaeological potential.

In addition to tangible sites associated with habitation, a number of ceremony and dreaming sites have been recorded in the region. The nature of these sites will not specifically be discussed within this report. The location of known sites will be reported and the potential for further sites to be present will be discussed along with any specific management requirements for sites of this type.

Based on this information, the following predictive model has been developed, indicating the site types most likely to be encountered during the field survey within the Grafton and South Grafton area. The definition of each site type is described firstly, followed by the predicted likelihood of this site type occurring within the area.

Open campsites, artefact scatters, isolated finds and raw material sources/quarries

Open campsites and artefact scatter sites can range from high-density concentrations of artefacts to sparse, low-density 'background' scatters. These represent a diversity of everyday activities, settlement, hunting and gathering and tool manufacture. Isolated stone artefact occurrences can be located anywhere in the landscape. They can represent discard or loss during transitory movement, or an eroded larger subsurface site.

Based on the known distribution of Aboriginal sites within the region, there is some potential that artefact sites may be identified within the region as either surface sites (either single artefact occurrences or open campsites) and/or buried sites (archaeological deposits). The identification of these sites depends greatly on GSV resulting in the boundaries of a site being defined by the visible extent of the artefacts on the surface. With high levels of previous disturbance, vegetation cover and cyclical flooding of the Clarence River, it is unlikely that this site type will be identified on the surface, but rather, it is highly likely that these areas will contain sub-surface archaeological deposits.

Potential Archaeological deposits

Potential archaeological deposits generally comprise stable deposits or landforms that are highly likely to contain intact sub-surface archaeological evidence of use or occupation. Areas of potential archaeological deposits generally have very minimal impact (natural and historic), comprise a stable landform, consist of predictable occupation locations and contain in situ archaeological material. There is some potential for archaeological deposits to occur where previous disturbance has been minimal.

Scarred and carved trees

Scarred trees exhibit scars caused by the removal of bark used in the manufacture of shields, canoes, containers or shelters. These occur on older trees, generally of a size from which a suitable piece of bark can be removed. The survival of scarred trees is generally influenced by the clearance of vegetation land use history of an area.

Carved trees exhibit intricate geometric designs or figures by cutting the bark itself or by removing an area of bark and then cutting the underlying hardwood. Carved trees can be associated with burial places or ceremonial/initiation ground. The survival of carved trees (dendroglyphs) is an extremely rare occurrence in Australia and is generally limited to south-east Queensland and north-eastern New South Wales (Attenbrow 2002:144). Carved trees can be associated with both burial places and initiation grounds. Etheridge (1918) describes those trees associated with burial places as taphoglyphs, and those indicative of initiation grounds as teleglyphs. Both types of carved trees exhibit intricate geometric designs or figures carved either on the bark or by removing an area of bark and then cutting designs or figures into the hardwood.

Four modified trees have been identified within the Grafton and South Grafton area, illustrating the potential for modified or scarred trees to exist in areas with old growth trees. Based on the environmental research completed during this investigation, including viewing aerial mapping of the area, there is some potential for scarred trees to occur where older trees survive.

Axe grinding grooves

Axe grinding grooves are often found on large open and relatively flat areas of sandstone shelving and outcrops. Individual grooves are elongated, narrow depressions often found in sedimentary rock, such as sandstone, in association with water sources, including creeks and swamps.

The geology of the immediate region does not indicate that suitable horizontal sandstone rock outcrops will occur. Therefore there is very low potential for axe grinding grooves to occur.

Burials

Aboriginal burial sites are generally situated within deep, soft sediments, caves or hollow trees. The locations of burials can be indicated by carved trees, or become exposed in eroding or shifting sand or soft sediment deposits. Such sites hold great significance for Aboriginal people and the disturbance of burials or burial places is a very sensitive issue. A number of burials have been registered or identified in ethnographical accounts within the region.

Soft alluvial sediments associated with the Clarence River and several permanent creeks around Grafton suggest that there is a moderate chance of burials to occur, where disturbance has been minimal.

Rock shelters with art and / or deposit

Rock shelter sites include rock overhangs, shelters or caves, and generally occur on, or next to, moderate to steeply sloping ground characterised by cliff lines and escarpments. These naturally formed features may contain rock art, stone artefacts or midden deposits and may also be associated with grinding grooves. The sites will only occur where suitable sandstone exposures or overhangs possessing sufficient sheltered space exist. There are no topographical features suitable for the formation of rock shelters or overhangs within the immediate Grafton and South Grafton area. It is therefore unlikely that rock shelters with art and/or deposit will be present.

Aboriginal ceremony and dreaming / mythological sites

Sites associated with past Dreamtime stories and beliefs about the creation of the landscape are usually only known from ethnographic recordings or the continuation of past stories to the current generation of Aboriginal inhabitants.

Mythological / dreaming sites: such sites may comprise tangible and/or intangible features. Mythological and dreaming sites are often of high significance to the Aboriginal community. Detailed information regarding these sites is often held in trust by members of the Aboriginal community, and such sites are likely only to be identified through consultation with the Aboriginal community. One such site is known and registered, and there is potential that additional unregistered sites may exist.

Ceremonial sites (including ceremonial rings, marriage trees etc.): such sites are associated with cultural practices and may comprise tangible and/or intangible features. As with mythological and dreaming sites, ceremonial sites can be of high cultural

significance and might only be identified through consultation with the Aboriginal community. Several cultural and ceremonial sites are registered in the Grafton and South Grafton area and there is potential for additional sites to be present.

In Grafton a number of stories have been recorded and there are people who still retain traditional knowledge of the ceremonial aspect of the local culture. In the majority of cases it is only possible for the Aboriginal community themselves to comment on these 'less tangible' sites. In all cases the cultural significance can only be determined by the appropriate Aboriginal community representatives.

Post-contact sites

These are sites relating to the shared history of Aboriginal and non-Aboriginal people of an area. Many of these sites can hold special significance for Aboriginal people and may include places such as missions, massacre sites, post-contact camp sites and buildings associated with post-contact Aboriginal use. This site type is usually known from historical records or knowledge preserved within the local community.

Aboriginal representatives will be consulted regarding their knowledge of such events.

Aboriginal places

Aboriginal *places* may not contain any "archaeological" indicators of a site, but are nonetheless important to Aboriginal people. They may be places of cultural, spiritual or historic significance. Often they are places tied to community history and may include natural features (such as swimming and fishing holes), places where Aboriginal political events commenced or particular buildings. Often these places are significant in the living memory of a community. There are currently no registered Aboriginal places within the Grafton and South Grafton area.

The likelihood of Aboriginal *places* occurring will be identified through consultation with the local Aboriginal community and registered Aboriginal stakeholders.

Aboriginal resource and gathering sites

Aboriginal Resource and Gathering Sites are sites where there is ethnographic, oral, or other evidence to suggest that natural resources have been collected and utilised by Aboriginal people. These natural resources have a cultural significance and connection for the Aboriginal community, such as ochre outcrops that were used for art or ceremonial purposes. These sites are still considered important places today. There are no such known sites identified within the region; however the likelihood of these sites occurring will be explored through a separate Aboriginal cultural assessment involving consultation with the local Aboriginal community.

4.2.14 Aboriginal archaeological potential

It is considered possible that stone artefact sites will remain undetected in many parts of the Grafton and South Grafton area, particularly along the banks of the Clarence River and its tributaries, Alipou Creek, Alamy Creek, Christopher Creek, Cowmans Creek and Musk Valley Creek. The location of these artefact sites are likely to conform to the landscape modelling characteristics described previously. Site preservation and integrity will be subject to the levels of previous disturbances within the Grafton and South Grafton area.

To determine the locations of these sites, an assessment of archaeological potential has been developed, based on those definitions applied by other heritage practitioners that have completed archaeological studies in the Grafton region (McBryde 1974; Hall and Lomax 1993; Navin and Officer 1990; Piper 1994a, 1994b)

Specifically, the assessment is based upon previous studies in similar landscapes, known sites within the region, the predictive statement made in Section 4.2.2, knowledge of recent land uses and the results of the field survey. The assessment of archaeological potential and the assessment of scientific significance for recorded Aboriginal sites rely on similar criteria, i.e. knowledge of disturbance from land use and site type distribution in the wider Clarence Valley region.

Defined levels of archaeological *potential* are not a reflection of the presence of Aboriginal archaeological material, rather an indicator of the likelihood of 'intact' archaeological material within the region, usually on a particular landform.

An archaeological potential map has been developed and various 'levels' (low, medium and high) have been identified on mapping (Figure 7) and defined as:

Low potential: Low likelihood for intact Aboriginal archaeological remains - Areas that have been identified as having specific locations where there has been a high degree of disturbance since the arrival of non-Aboriginal people, where the impact has been to the extent where no intact deposits are believed to be present. Areas may also include steep slopes or plains away from water sources. Artefacts found in this area are likely to be isolated, representative of 'background scatter' and in a highly disturbed context.

Moderate potential: Moderate likelihood for intact Aboriginal archaeological remains – Areas where minor post contact disturbance has occurred; the area is located along creeks and waterways where short term campsites may have been present. Artefact scatters are likely to vary in density, but are concentrated in small areas.

High potential: High likelihood for intact Aboriginal archaeological remains – Areas associated with major creek lines, raised flat landforms such as ridges and hills, or where there has been minimal disturbance to the specific area and it is believed that an intact sensitive landscape exists. Artefacts that remain within these areas are likely to be high density and large in size.

4.3 Reconnaissance survey results

4.3.1 Survey team

The survey was conducted on:

- Tuesday 10 to Thursday 12 August 2010

The field survey was undertaken by Melanie Thomson (Biosis Research) and Brett Duroux (Grafton-Ngerrie local Aboriginal land council).

4.3.2 Existing conditions

The reconnaissance survey area included a number of properties along the Clarence River, including open floodplain and a number of minor creek lines and drainage features (see Figure 4). The survey also focussed on vegetation and open areas amongst the urban development of Grafton and South Grafton. Most of the areas accessed and surveyed consisted of thick grass cover or were heavily modified (Plate 1).



Plate 1: Heavily grassed banks of Christopher's Creek that has been partially channelised.



Plate 2: Heber Street levee bank representing a highly modified landscape

Alluvial soils occur along the Clarence River, its tributaries and several creeks in the Grafton and South Grafton proposal area. These features have been subject to cyclical flood events, resulting in the movement and deposition of flood deposits.

Disturbances throughout the Grafton and South Grafton proposal area include the original land clearance and pastoral use (including tilling and grazing), urban development, construction of the existing bridge, levee banks (Plate 2), and scouring processes along water courses.

Exposures in these areas have occurred as a result of these disturbances and account for the exposure and visibility in the area (Plate 3 and Plate 4). Where natural exposures occurred, more detailed inspection was undertaken.



Plate 3: Exposure along a cut drainage channel



Plate 4: Exposure at the base of trees from stock movement, facing north east

Elsewhere survey exposure and visibility was low as pasture grasses obscure much of the ground surface (Plate 5 and Plate 6). Overall exposure and visibility throughout the Grafton and South Grafton proposal area was considered low.



Plate 5: Thick pasture grasses situated along the creek banks



Plate 6: Heavily grassed northern banks of the Clarence River, close to the existing bridge



Legend

Survey Effort

— Survey transects

□ Cadastral

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Figure 4: Reconnaissance survey transects completed within the Grafton and South Grafton Area.

Date: 12 May 2011 Drawn by: ANP/JMS

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Scale: 1:20,000 at A3
 Map Projection: Universal Transverse Mercator
 Horizontal Datum: Geodetic Datum of Australia 1994
 Map Grid: Map Grid of Australia Zone 56



4.3.3 Effective survey coverage

The survey was constrained by poor ground surface visibility, urban development, severe landforms modification and access to some properties. In such areas, pedestrian survey was reduced, targeted or not undertaken. This is not to suggest that these areas do not contain Aboriginal objects or places, only that the likelihood of detecting such objects or places by means of ground survey was greatly reduced.

The effectiveness of the survey was based on the:

- Visibility – a percentage of the total visible ground surface within the surveyed area.
- Exposure – a percentage estimate of the surveyed area that has been exposed through natural or human agencies to potentially reveal (buried) archaeological material.

The effective survey coverage calculation is defined by NPWS (NSW NPWS 1997: Appendix 4).

Based on this information, the overall effective survey coverage is considered to be low. This can be attributed to pasture grasses, the existing urban development and roads.

4.3.4 Aboriginal archaeological sites

The following Aboriginal archaeological sites were assessed as part of the reconnaissance survey.

Golden Eel site (12-6-0326) ceremonial and dreaming

The Clarence River Golden Eel site (Plate 7) is a culturally significant site, with a general restriction applying to access to the site card.

	
<p>Plate 7: Looking across the Clarence River, to the southern banks near Alipou Creek, where part of the Golden Eel site story is linked</p>	<p>Plate 8: The Clarence River, identified as being created during The Dreamtime</p>

Co-ordinates for this site have been provided by OEH however the extent of the site has not been specified. For the purposes of mapping the entirety of the Clarence River has been identified as an Aboriginal site, with the registered location of the site identified. At this stage, information on this site is limited.

There is no defined area for such Dreamtime stories but it is known that the Golden Eel site and the formation of the Clarence River (Plate 8) are considered to be of high cultural significance to the local Aboriginal people.

12-6-0345 modified tree

Although the site card containing the details of the location of the tree was not available from the OEH AHIMS register, it is easily accessible and the location known to the Grafton-Ngerrie local Aboriginal land council.

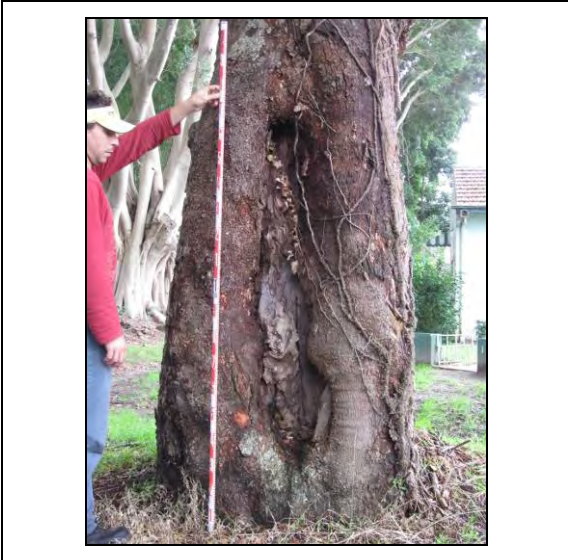


Plate 9: Large uneven scar on the north eastern face of the tree

The tree species is a Jacaranda. The age of the tree is unknown and advice from an arborist should be sought with regards to the age of the tree and the authenticity of the scar (Plate 9).

12-6-0216 modified tree

Although this site card was not available from the OEH AHIMS register, the location however is known to the Grafton-Ngerrie local Aboriginal land council and easily accessible. The tree was originally recorded in 1996. At this time, the tree was inspected for its authenticity. The site card notes at the time that 'the tree itself has been burnt out through the middle making identification slightly difficult as the majority of the scar has been burnt. The main factor that... [that it is considered] ...an Aboriginal scar is that the top of the scar comes to a broad point uniform to other scarred trees in the district' (Plate 10).



Plate 10: View of large open scar, facing south east

SCT 1 (12-6-0401) scarred tree

This scarred tree is situated south of the Clarence River and Alipou Creek.

The tree species is *Eucalyptus tereticornis* (River Red Gum) is alive and has a girth measuring 4.2m. The tree contains two separate scars, one facing north and one facing north east.



Plate 11: North facing scar on a medium sized *Eucalyptus tereticornis* (River Red Gum)

North facing scar: The scar itself measures 1.6m in length, 0.20m in width and has regrowth measuring approximately 0.30m (Plate 11). The scar does not exhibit any axe marks and the tree contains no toe holds.

North east facing scar: The scar itself measures 1.9m in length, 0.30m in width and has regrowth measuring approximately 0.40m. The scar does not exhibit any axe marks and the tree contains no toe holds.

SCT 2 (12-6-0402) scarred tree

This scarred tree is situated south of the Clarence River, and west of Alipou Creek. The tree species is *Eucalyptus tereticornis* (river red gum) is dead and has a girth measuring 3.15m. The tree contains one scar facing east.

The scar itself measures 2.25m in length, 0.35m in width and has regrowth measuring approximately 0.40m – although this is difficult to determine as the dry face is no longer present (Plate 16). The scar does not exhibit any axe marks and the tree contains no toe holds.



Plate 12: Distinct scar in dead *Eucalyptus tereticornis* (River Red Gum). The top half of the tree has broken off.

OC 1 (12-6-0400) open campsite

The site is situated on the bank of a creek and has been exposed by an eroded drainage channel. The ground surface visibility was high in this section of the drain and the artefacts were identified eroding out of the banks of the drainage feature. The site extended along the length of the drainage feature, covering an area approximately 50 x 15 m.



Plate 13: Chert core was identified amongst the stone artefacts at this site

A total of 10 stone artefacts were recorded at the site and the details are as follows:

- 1 x quartz complete flake with 25% cortex (measures 26x12x7mm).
- 1 x yellow mudstone complete flake with smooth pebble cortex of 25% (measures 62x42x12 mm).
- 1 x chert complete flake with 60% cortex (measures 36x39x7mm).
- 1 x quartz broken flake (measures 22mm).

- 1 x quartz complete flake with 25% cortex (maximum 15mm).
- 1 x quartz multi-facial core (measures 17x15x7mm).
- 1 x quartz angular fragment (maximum 20mm).
- 1 x quartz medial flake (maximum 14mm).
- 1 x silcrete broken flake (maximum 27mm).
- 1 x chert multi-facial core (measures 28x27x19mm) (Plate 18).

It is evident that the site has been partially disturbed through the construction of the cut drainage feature. Following this, erosion has caused further exposure of the site within the feature. The areas adjacent to the identified site are likely to contain further archaeological material, although this has been partially impacted by the planted tea-trees.

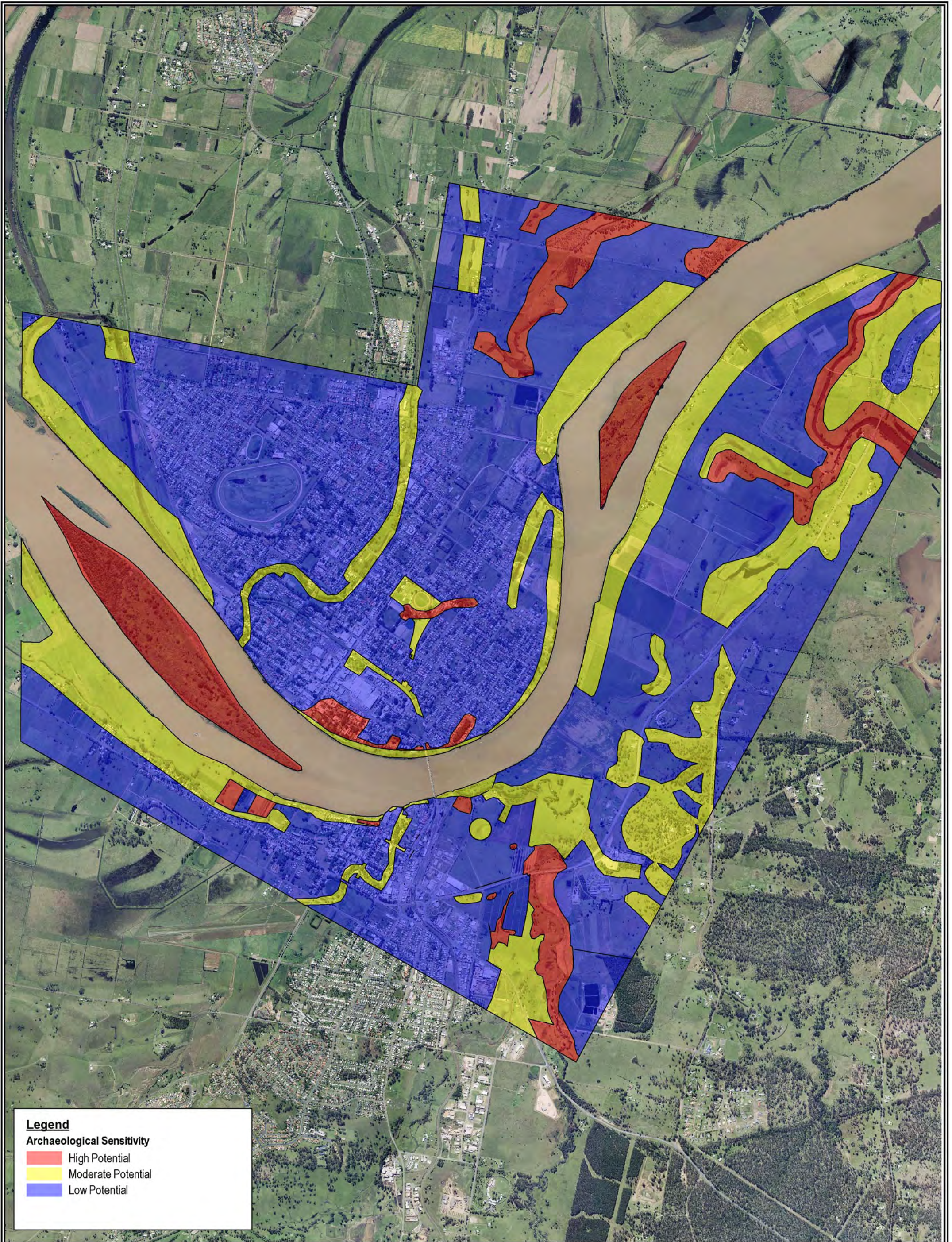
4.3.5 Aboriginal archaeological potential

During the reconnaissance field surveys, an assessment for Aboriginal archaeology potential was undertaken for landforms. Areas of high, moderate and low archaeological potential were identified (see Figure 7 following). These areas are indicated on potential mapping and outlined in Table 2 below.

Table 2: Areas of Aboriginal archaeological potential within the Grafton and South Grafton proposal area.

<i>DEFINED AREA OF ABORIGINAL ARCHAEOLOGICAL POTENTIAL</i>	<i>LOCATION OF AREAS OF POTENTIAL</i>
<p>Low Aboriginal archaeological potential - Areas that have been identified as having specific locations where there has been a high degree of disturbance since the arrival of non-Aboriginal people, where the impact has been to the extent where no intact deposits are believed to be present. Areas may also include steep slopes or plains away from water sources. Artefacts found in this area are likely to be isolated, representative of ‘background scatter’, or in a highly disturbed context.</p>	<p>Existing roads, urban development, highly disturbed section of Clarence River bank, residential properties, and low-lying flood prone flood plain subject to annual inundation.</p>
<p>Moderate Aboriginal archaeological potential - Moderate likelihood for intact Aboriginal archaeological remains – Areas where minor post contact disturbance has occurred; the area is located along creeks and waterways where short term campsites may have been present. Artefact scatters are likely to vary in density, but are concentrated in small areas.</p>	<p>Northern and southern banks of Clarence River, Apliou Creek banks, other minor creeks and drainage features, foothills, remnant stands of mature vegetation.</p>
<p>High Aboriginal archaeological potential - High likelihood for intact Aboriginal archaeological remains – Areas associated with major creek lines, raised flat landforms such as ridges and hills, or where there has been minimal disturbance to the specific area and it is believed that an intact sensitive landscape exists. Artefacts that remain within these areas are likely to be high density and large in size.</p>	<p>Sections of the northern and southern banks of Clarence River, undisturbed banks of Alipou Creek and some minor creek lines, Susan and Elizabeth islands.</p>

For the purposes of this investigation, archaeological potential reflects not only the archaeological potential of different landforms, but also the levels of previous disturbance, as this affects the integrity of archaeological deposits. The degrees of archaeological potential outlined above are not a reflection of the presence or absence of cultural material.



Legend

Archaeological Sensitivity

- High Potential
- Moderate Potential
- Low Potential

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 Aerial Imagery - Courtesy of RTA
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Figure 5: Areas of Aboriginal archaeological potential defined during the field surveys.

Date: 12 May 2011	Drawn by: ANP
File number: 12594	Checked by: SH

Location: ...P:\12500s\12594\Mapping\Report\Figures\12594 F5_Pub_Archaeological Potential_120511.WOR

0 275 550 825 1100 1375
 Metres



Scale: 1:27,500 at A3
 Map Projection: Universal Transverse Mercator
 Horizontal Datum: Geodetic Datum of Australia 1994
 Map Grid: Map Grid of Australia Zone 56

4.4 Discussion of results – identification of constraints

Overall, the results of the reconnaissance field survey reflects the regional predictive modelling for the Clarence River Valley region; that the most likely site types to occur are open lithic scatters and scarred or modified trees. However, due to previous land use practices, urban development and limited ground surface visibility, only a small number of lithic sites were identified. Ceremonial and dreaming sites are already known to occur, and while no additional sites were identified during the preliminary consultation with the Grafton-Ngerrie local Aboriginal land council, some information on the extent of known cultural places was recovered.

The location of the archaeological evidence is indicative of Aboriginal settlement and exploitation of the Clarence River, its tributaries and other local water sources on the surrounding floodplain. The location of open campsites appears to correspond to proximity to water, although this is based on limited previous archaeological work. All of the scarred tree sites were situated on the open floodplain where remnant native vegetation has survived.

The raw materials identified at OC 1 comprised quartz, chert, silcrete and mudstone. Two cores and a number of flakes were recorded, suggesting that stone manufacture was being carried out here. No formal tools or flakes with retouch were present.

Some information was provided by the Aboriginal representative during the survey on the registered Aboriginal ceremonial and dreaming site, known as the Golden Eel site (12-6-0326). It was recommended that more detail, including the boundaries of the sites, could be determined through consultation with identified Aboriginal elders within the wider community. Elizabeth and Susan islands are also culturally significant places. In broad terms, the Grafton and South Grafton area contain places of significance to Aboriginal people.

Previous land use practices have reduced the likelihood of locating intact archaeological cultural deposits, with no areas of potential archaeological deposits being identified in association with recorded sites or sensitive landforms. Areas of Aboriginal archaeological potential were identified, with varying degrees of likelihood for intact sub-surface archaeological deposits. Where deposits are deeper and not impacted by shallow surface disturbances, subsurface cultural material will remain *in situ*.

Overall, the effective survey coverage is considered to be low, primarily due to pasture grass cover and urban development. Areas of high ground surface visibility were limited to areas of disturbance. Despite this, the effective survey coverage was considered to be adequate for determining the archaeological potential and values across the Grafton and South Grafton proposal area. In general, where ground surface visibility was high, cultural material was present.

Areas of low, moderate and high Aboriginal archaeological potential have been identified across the Grafton and South Grafton proposal area. These were defined based on levels of disturbance, sensitive landforms, survey results and the likelihood for intact archaeological deposits. Overall, a small number of high and moderate areas of potential were identified, mainly on crests, creek spurs, and on flat ground near the confluence of creeks and around swamps.

While no definitive interpretation of the archaeology can be made, the identification and nature of known Aboriginal archaeological sites will aid in further refining the overall archaeological modelling for the Clarence River Valley.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

The Grafton and South Grafton proposal area contains a number of known Aboriginal archaeological sites and a number of known Aboriginal cultural sites.

Although ground surface visibility was limited during the reconnaissance field surveys, areas of Aboriginal archaeological potential have been developed, that denote where Aboriginal archaeological material may occur, with varying degrees of integrity and likelihood.

Preliminary consultation with the Grafton-Ngerrie Local Aboriginal Land Council (GNLALC) resulted in some additional information about cultural places, although community representatives recommended that further consultation be undertaken with the appropriate knowledge holders and elders in the wider Aboriginal community.

Further archaeological investigation is required to determine the presence and extent of archaeological material within areas of potential.

5.2 Recommendations

Ideally, heritage management involves conservation of sites through the preservation and conservation of fabric and context within a framework of “*doing as much as necessary, as little as possible*” (Marquis-Kyle and Walker 1994: 13). In cases where conservation is not practical, several options for management are available. For sites, management often involves the salvage of features or artefacts, retrieval of information through excavation or collection (especially where impact cannot be avoided) and interpretation.

Avoidance of impact to archaeological and cultural heritage sites through design of the development is the primary mitigation and management strategy, and should be implemented where practicable.

The following general management recommendations have been formulated.

1.0 Conservation through avoidance

- 1.1 In the first instance, minimise or avoid impact to registered Aboriginal archaeological sites and areas of high and moderate archaeological and cultural potential.
- 1.2 In the second instance, minimise or avoid impact to those registered archaeological sites considered to be of high scientific significance and areas of high archaeological potential.
- 1.3 To successfully minimise or avoid impact to identified Aboriginal sites, develop and adopt management and mitigation strategies to ensure that archaeological sites and areas of archaeological potential are not inadvertently impacted by any future proposal.

2.0 Unavoidable impacts to known archaeological sites and areas of potential

- 2.1 All Aboriginal objects and places are protected under the auspices of the NSW *National Parks and Wildlife Act 1974* (NPW Act). An Aboriginal Heritage Impact Permit (AHIP) is required in order to impact Aboriginal objects and places if these cannot be avoided.
- 2.2 Aboriginal community consultation should be undertaken consistent with the process specified in *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW 2010) prior to any required AHIP application being lodged with OEH. As this is an RTA initiated investigation the protocols laid out in RTA’s *Procedure for Aboriginal Cultural Heritage Consultation & Investigation* (PACHCI) will be followed.
- 2.3 Where areas of high and moderate Aboriginal archaeological potential cannot be avoided, further archaeological investigation would be required, including test excavation and recording where appropriate, to determine the presence and extent of the archaeological resource and to understand the nature of these deposits across all landforms.
- 2.4 Where artefacts are recovered or require relocation, a Care and Control Agreement should be developed and implemented in consultation with registered Aboriginal stakeholders.

- 2.5 No further archaeological investigation is required within areas of low Aboriginal archaeological potential and areas of high disturbance, although Grafton-Ngerrie LALC have requested the opportunity to assess these areas.

3.0 Aboriginal stakeholder consultation

- 3.1 All aspects of management and mitigation should be developed and implemented in consultation with the identified Aboriginal stakeholders and a qualified Aboriginal heritage consultant.
- 3.2 Further information regarding Aboriginal ceremonial and dreaming sites, including the Clarence River Golden Eel site, Susan Island and Elizabeth Island should be sought through consultation with the Aboriginal community (respecting all cultural restrictions which may be applicable). Aboriginal community consultation needs to be conducted in accordance with the process specified in *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW 2010).
- 3.3 The comments requests and recommendations made by the Grafton-Ngerrie Local Aboriginal Land Council should be considered when any future proposed route for a second crossing of the Clarence River is designed.

4.0 Further archaeological assessment

- 4.1 Detailed archaeological assessment of options and associated infrastructure/ facilities will need to be undertaken once route options have been selected. This should include intensive archaeological survey and where applicable, subsurface investigation should also be undertaken.
- 4.2 Detailed archaeological work will enable the refinement of areas of archaeological potential.
- 4.3 Undertake a detailed scientific significance assessment of all archaeological sites within the preferred route for the additional crossing.

REFERENCES

Bureau of Meteorology Website

http://www.bom.gov.au/climate/averages/tables/cw_058130.shtml

Accessed 28/02/2011

Biosis Research, 2003 *A Non-Aboriginal Heritage Assessment for Route Selection: Proposed Additional Crossing of the Clarence River, Grafton, New South Wales* (December).

Biosis Research, 2004 *An Aboriginal Heritage Assessment for Route Selection: Proposed Additional Crossing of Clarence River, Grafton, New South Wales* (January).

Clarence Valley Council, *Clarence Valley Local Environmental Plan 2010 (Draft)*

Clarence Valley Council – NSW Heritage Office, 2010, *Clarence Valley Council: Grafton City (Former) Community-Based Heritage Study* (revised February).

Clarence Valley Council Website (accessed 28/02/2011)

http://www.clarence.nsw.gov.au/content/uploads/Historic_Flood_peak_heights.pdf, Clarence Valley Council

Department of Primary Industries Website

<http://www.dpi.nsw.gov.au/minerals/geological/overview/regional/sedimentary-basins/clarenceBasin>

Accessed 28/02/2011

Department of Primary Industries (1970) Grafton- Maclean 1:250,000 Metallogenic Map. Geology Survey of NSW.

Day, Bill (2005) "Aboriginal Sites within the Clarence Valley". Clarence River Tourist Association.

DEC (2005) Washpool Creek, Washpool National Park: Wild River Assessment. Parks and Wildlife Division, Department of Environment and Conservation, Sydney.

DECCW (2003) Mitchell Landscapes of NSW - Version 2.

DECCW 2010, *Aboriginal cultural heritage consultation requirements for proponents 2010*.

Elders of the Yaegl Tribe (1996) *The Life Stories of the Aboriginal Elders of the Yaegl Tribe as told by Dr. Lyn Gow-Laurie* Aboriginal Research Unit, University of New South Wales.

Grafton City Council, *Grafton Local Environmental Plan 1988*.

Haglund, L. 1983, *Archaeological Survey for Gosford Regional Sewerage: The Gosford Connection (Narrara Creek to the Kincumber Tunnel)*, A report to the Public Works Department,

Haglund, L. 1985, *Preliminary Assessment of Archaeological Potential of Proposed Transmission Line Routes between Coffs Harbour and Grafton, NSW*,

Hall, R. & Lomax, K. 1993, *An Archaeological Assessment of the Grafton Management Area*. An unpublished report to the Forestry Commission of New South Wales.

Haglund, L. 1985, *Preliminary Assessment of archaeological potential of proposed transmission line routes between Coffs Harbour and Grafton, NSW*. Report for Lonworth and McKenzie Pty. Ltd. on behalf of the Electricity Commission of NSW.

Heritage Council (NSW), 2001 *New South Wales Historical Themes: Table showing correlation of national, state and local themes, with annotations and examples*

Marquis-Kyle, P. & Walker, M. 1992, *The Illustrated Burra Charter: Making Good Decisions about the Care of Important Places*, Australia ICOMOS, Brisbane.

McBryde, I. 1974, *Aboriginal Prehistory in New England*, Sydney University Press, Sydney.

- Navin, K. and Officer, K. 1990, Archaeological survey of proposed 330kV transmission line from Coffs Harbour to Koolkahn (Grafton), NSW. Report to the Electricity Commission of NSW.
- NPWS 2009a, Sherwood Nature Reserve Plan of Management, Department of Environment and Climate Change.
- NPWS 2009b, Susan Island Nature Reserve Draft Plan of Management, Department of Environment and Climate Change.
- Nigel Sabine (1970) An Ethnohistory of the Clarence Valley – Honours Thesis, University of New England.
- Northern River Catchment Action Plan 2006, Northern River Catchment Management Authority, Grafton.
- NSW Heritage Office 1996, *Regional Histories of New South Wales*, NSW Heritage Office and Department of Urban Affairs and Planning, Sydney.
- Piper, A. 1994a, *An Archaeological Survey for the Waterview Seelands Water Supply Grafton, N.S.W.* A report to Sinclair Knight Merz.
- Piper, A. 1994b, *An Archaeological survey at the Northern Hardwood Holdings, Sawmill, Koolkhan, Grafton NSW.* An unpublished report for Northern Hardwood Holdings, Grafton, NSW.
- PWD (1980) *“New South Wales Coastal Rivers, Flood Plain Management Studies: Clarence Valley”* PWD, December 1980, prepared by Soros-Longworth & McKenzie in association with Cameron McNamara Consultants
- RTA 2003 Additional Crossing of the Clarence River. Feasibility Study Report. February 2003.
- Sabine, N. 1970, An Ethnohistory of the Clarence Valley – Honours Thesis, University of New England.
- Stubbs B, 2007, *A Thematic History of the City of Grafton*, Clarence Valley Council – NSW Heritage Office.
- Witter, D. 2000, *Survey of a Fibre Optic Cable Line for a Satellite Dish Platform Consent, Dalmorton State Forest, West of Grafton*, An Archaeological Study for the NDC Newton-Boyd U S O Satellite Dish and Fibre Optic Cable Construction Project, Report for Network Design and Construction Corporation, Ltd.

APPENDIX 1 - COMMENTS RECEIVED FROM GRAFTON-NGERRIE LOCAL ABORIGINAL LAND COUNCIL



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50 WHARF ST
SOUTH GRAFTON
PO BOX 314
SOUTH GRAFTON,
NSW 2460

17 February 2011

ABORIGINAL CULTURAL SIGNIFICANCE ASSESSMENT

RE: PROPOSED GRAFTON SECOND CROSSING OF THE CLARENCE RIVER.

TO WHOM IT MAY CONCERN:

I AM WRITING IN REGARDS TO THE SITE INSPECTION THAT TOOK PLACE ON THE ABOVE MENTIONED PROPERTIES.

PURPOSE OF THIS ASSESMENT:

IS TO DETERMINE WHETHER ANY FEATURES OF ABORIGINAL CULTURAL SIGNIFICANCE OCCURRED IN THE STUDY AREA FOR THE PROJECT YOU PROPOSE AND WHETHER THE SIGNIFICANCE WOULD BE AFFECTED BY THE PROPOSED PROJECT/DEVELOPMENT.

PROJECT DETAILS:

SITE OFFIDER BRETT DUROUX UNDERTOOK THE SITE ASSESSMENT BY FOOT.

LOCATION OF STUDY AREA:

IOLANTHE STREET SOUTH GRAFTON - PROCEEDING TO THE PACIFIC HWY HEADING NORTH/ EAST FROM BUNNINGS- CATHERINE MCAULEY COLLEGE

NAME OF ABORIGINAL SITE OFFICER COMPLETEING THE ASSESMENT & UNDERTAKING THE SITE SURVEY:

BRETT DUROUX

NAME OF ABORIGINAL ORGANISATION REPRESENTED BY THIS STUDY:

GRAFTON NGERRIE LALC

INFORMATION ON THE SITE SURVEY:

Commenced 9am 10th August 2010, left land council surveyed from Wharf Street to Ryan Street back to the riverbank on the south side, surrounding areas no artefacts or modified trees in surrounding area because of previous developments in prior years.

From Wharf Street along Ryan Street covered surrounding areas no artefacts or modified trees in surrounding area because of previous developments in prior years.

Proceeded north across the current bridge to the old catholic college property, inspected banks and surrounding areas no artefacts or modified trees in surrounding area because of previous developments in prior years. Although in our opinion this area is of high cultural significance and if this was the selected route we **(MUST)** inspect the property again before ground is disturbed.

After lunch we proceeded back over to south of Grafton along Iolanthe Street, found several European artefacts all the way down to the river bank. Day 1 completed 4:30pm

11th August 2010 commenced at 9am, Met at McDonalds south Grafton, met with the railway officer and inspected the railway area, more European artefacts found.

Inspected area of the Golden Eel site and ceremonial tree (**which cannot be located further investigation is required as to the possible desecration of this ceremonial tree**), found no physical artefacts although this is a spiritual area of high significance to the Aboriginal people and must not be disturbed in any way.

Proceeded Iolanthe Street, on the left hand side of the road heading north, we surveyed the area and noticed a large concrete slab exposed in the area and are concerned that possible artefact scatters may be present, if this was the preferred route we **(MUST)** inspect upon removal of concrete and or top soil.

Proceeded to property behind Bunning's warehouse, at the rear of the Bunning's building found (1) scarred tree close to the pacific hwy on northern side of levee, 250 metres heading north on the edge of the property boundary was a double scarred modified tree, recorded, took photos, GPS data, measurements.

Proceeded north to Catherine McCauley College near tee tree farm property and there is a high likely hood given the significance in the area that any developments will impact Aboriginal Culture and Heritage significance.

SURVEY RESULTS:

OUR SITE OFFICERS INSPECTED THE PROPERTY AND HAVE INFORMED US THAT IT IS LIKELY THAT ANY DEVELOPMENTS IN THE ABOVE MENTIONED AREA WOULD AFFECT THE ABORIGINAL CULTURAL SIGNIFICANCE EITHER KNOWN OR POTENTIAL.

THEREFORE IN OUR OPINION WE RECOMENED THAT NO DEVELOPMENT FROM IOLANTHE STREET PROCCEDING TO THE PACIFIC HWY HEADING NORTH/ EAST FROM BUNNINGS- CATHERINE MCAULEY COLLEGE BE PLANNED OR FURTHER PURSUED DUE TO THE FINDINGS OF OUR ASSESMENT AS STATED ABOVE.

THIS ASSESMENT HAS BEEN COMPLETED BY:

BRETT DUROUX

POSITION: ABORIGINAL SITES OFFICER

YOURS SINCERELY

BRETT DUROUX,
ABORIGINAL SITE OFFICER

SIGNED ON BEHALF,

A handwritten signature in black ink, appearing to read 'Wesley Fernando', is written over a light-colored rectangular background.

WESLEY FERNANDO
CHIEF EXECUTIVE OFFICER



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SOUTH GRAFTON
PO BOX 314
SOUTH GRAFTON,
NSW 2460Graham Purcell,
Simon Millichamp, Chris Clark.
Roads and Traffic Authority
31 Victoria Street
GRAFTON NSW 2460

Wednesday, 27 July 2011

Dear Graham, Simon & Chris,

I am writing in regards a meeting from 1st July 2011, at our Land Council Office, involving yourself Brett Tibbett, David Daley and I to discuss the options that have been set out by the wider community for the additional crossing of the Clarence River at Grafton and in particular the areas around (Alipou Creek) Elizabeth Island and Great Marlow.

From this meeting the following was determined:

Elizabeth Island:

Is a Sacred Aboriginal Men's site, with high significance much the same as Susan Island, it is the Aboriginal communities determination that NO disturbance can occur on any part of the island.

Therefore we recommend that any routes proposed on Elizabeth island must be removed from your scope and not considered for any developments such as the additional crossing of the Clarence river.

Alipou Creek:

As discussed many times with Rta staff, Alipou Creek is the resting place of the Golden Eel which is of great significance to all of the neighbouring tribal groups.

There are many scarred trees and a marriage tree in this area that cannot be impacted upon.

The community feel strongly that Alipou Creek cannot be directly impacted upon

There was talk to "threading the needle" beside the bridge, we feel this still may be a possibility and we would like to discuss further when options have been narrowed down, we would need to assess and look at any plans that may be in this area alongside the bridge.

Great Marlow:

This area was a common place for Aboriginal people to travel through and there are many areas of high significance throughout Great Marlow, any options considered would need to be assessed by Land Council Site Officers as would any options that were being targeted in your scope before we could give an accurate assessment of the areas.

It should be noted that all development activities will impact on Aboriginal places and objects of Cultural significance, as traditional Aboriginal people were nomadic moving through their country. All country is significant, in addition to this our spirituality is entwined throughout the landscape, therefore it is impossible for a development not to impact on Aboriginal culture and heritage.

Under the Aboriginal Land Rights act it is our duty to ensure our Culture and Heritage is protected and maintained.

As the primary centre for the Aboriginal community in Grafton we look forward to meeting with you to discuss this project in more detail once options are narrowed down.

If you require any more information please contact me on the numbers provided.

Thank you for your time.

Yours sincerely,



Wesley Fernando

Chief Executive Officer

Grafton **Ngerrie Local Aboriginal Land Council**

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APPENDIX 2 - RELEVANT LEGISLATION

COMMONWEALTH LEGISLATION

ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999

In January 2004 the Commonwealth *Australian Heritage Commission Act 1975* was repealed and in its place amendments to the EPBC Act were made. The amendments were contained in three new pieces of Commonwealth Heritage Legislation. The three new Acts are the:

1. Environment and Heritage Legislation Amendment Act (No. 1) 2003 which:
 - (a) amends the Environment Protection and Biodiversity Conservation Act 1999 to include 'national heritage' as a new matter of National Environmental Significance and protects listed places to the fullest extent under the Constitution
 - (b) establishes the National Heritage List
 - (c) establishes the Commonwealth Heritage List
2. Australian Heritage Council Act 2003 which establishes a new heritage advisory body to the Minister for the Environment and Heritage, the Australian Heritage Council, and retains the Register of the National Estate.
3. Australian Heritage Council (Consequential and Transitional Provisions) Act 2003 which repeals the Australian Heritage Commission Act, amends various Acts as a consequence of this repeal and allows for the transition to the new heritage system.

Any place that has been nominated and assessed as having cultural heritage significance at a national level can be added to the National Heritage List.

Under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) an action requires approval from the Federal Environment Minister if the action will, or is likely to, have a significant impact on a matter of national environmental significance. Matters of national environmental significance relating to cultural heritage are:

- World Heritage Places, and
- National Heritage Places.

An action includes a project, development, undertaking, activity, or series of activities.

Actions that are likely to have a significant impact on the environment of Commonwealth land (even if taken outside Commonwealth land), and actions taken by the Commonwealth that are likely to have a significant impact on the environment anywhere in the world, may also require approval under the EPBC Act.

NATIVE TITLE ACT 1993

The Commonwealth Native Title Act establishes the principles and mechanisms for the preservation of Native Title for Aboriginal people.

Under Subdivision P of the Act, *Right to negotiate*, native title claimants can negotiate about some proposed developments over land and waters (known as 'Future Acts') if they have the right to negotiate. Claimants gain the right to negotiate if their native title claimant application satisfies the registration test conditions.

The right to negotiate applies over some proposed developments or activities that may affect native title. These are known as future acts under the Native Title Act 1993. Native title claimants only have the right to negotiate over certain types of future acts, such as mining. Activities such as exploration and prospecting on the land do not usually attract the right to negotiate.

The right to negotiate is not a right to stop projects going ahead — it is a right to have a say about how the development takes place. In some situations, the right to negotiate does not apply. In these circumstances, claimants may have the right to be notified, to be consulted, to object and to be heard by an independent umpire.

The right to negotiate is triggered when a government issues a notice to say that it intends to allow certain things to happen on land, such as granting a mining lease. This notice is called a 'section 29 notice'.

People who claim to hold native title in the area, but have not yet made a native title claimant application, have three months from the date given in the section 29 notice to file a claim if they want to have a say about the proposed development. To get the right to negotiate, the claim must be registered within a month after that.

If the right to negotiate applies, the government, the developer and the registered native title parties must negotiate 'in good faith' about the effect of the proposed development on the registered native title rights and interests of the claimants.

The parties can ask the National Native Title Tribunal to mediate during the negotiations.

If the negotiations do not result in an agreement the parties can ask the Tribunal (no sooner than six months after the notification date) to decide whether or not the future act should go ahead, or on what conditions it should go ahead.

The National Native Title Tribunal administers the future act processes under the Commonwealth legislation. The Tribunal's role includes mediating between parties, conducting inquiries and making decisions (called 'future act determinations') where parties can't reach agreements.

When the Tribunal receives a future act determination application, it must conduct an inquiry (arbitration) in order to determine whether the future act can be done and if so whether any conditions should be imposed.

A member of the Tribunal (or a panel of three members) will be appointed to conduct the inquiry, and will initially hold a preliminary conference and set directions for the parties to provide submissions and evidence. Members who have mediated a particular matter are not usually appointed as inquiry members. Inquiry members conduct hearings, receive submissions and evidence from the parties and take into account matters set out in section 39 of the Native Title Act such as:

- the effect of the future act on the enjoyment by the native title party of their registered native title rights and interests; their way of life, culture and traditions; the development of their social, cultural and economic structures; their freedom of access to the land and freedom to conduct ceremonies and other cultural activities; and the effect of the future act on any area or site of particular (special) significance to the native title party;
- the interests, proposals, opinions or wishes of the native title party;
- the economic or other significance of the future act;
- the public interest; and
- the presence of any existing non-native title rights and interests and use of the land by other persons (for instance, pastoralists).

ABORIGINAL AND TORRES STRAIT ISLANDER HERITAGE PROTECTION ACT 1984

The Commonwealth *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* provides protection for Aboriginal cultural property. Whereas the State Act provides legal protection for all the physical evidence of past Aboriginal occupation, the Commonwealth Act deals with Aboriginal cultural property in a wider sense. Such cultural property includes any places, objects

and folklore that 'are of particular significance to Aboriginals in accordance with Aboriginal tradition'. There is no cut-off date and the Act may apply to contemporary Aboriginal cultural property as well as ancient sites.

PROTECTION OF MOVABLE CULTURAL HERITAGE ACT 1986

Australia's movable cultural heritage is protected at both Commonwealth and State levels. This web site only provides information on the Commonwealth laws.

In 1970 the United Nations Educational, Scientific and Cultural Organisation (UNESCO) adopted the UNESCO Convention on the Means of Prohibiting the Illicit Import, Export and Transfer of Ownership of Cultural Property. Australia ratified the convention by passing the *Protection of Movable Cultural Heritage Act 1986* (the Act), giving the 1970 Convention force in Australian law.

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

It implements a system of export permits for certain heritage objects defined by the Act as 'Australian protected objects'. Australian protected objects are objects which form part of the movable cultural heritage of Australia and which meet the criteria established under the National Cultural Heritage Control List. The Control List is located in the Regulations to the Act, and divides Australian protected objects into two classes:

- Class A objects which may not be exported
- Class B objects which may be exported if granted a permit under the Act.

A person wishing to export a Class B object is required to apply for a permit in writing. Applications are processed in accordance with the legislative process established under section 10 of the Act.

Certificates of Exemption, granted under section 12 of the Act, allow Australian protected objects that are currently overseas to be imported into Australia and subsequently re-exported. This includes Class A objects.

The Act also includes provisions that allow Australia to respond to an official request by a foreign government to return movable cultural heritage objects that have been illegally exported from their country of origin.

The *Protection of Movable Cultural Heritage Act 1986* is administered by the Minister for the Environment and Heritage. This responsibility was transferred from the Minister for Communication, Information Technology and the Arts in November 2001.

The Movable Cultural Heritage Unit in the Department of the Environment and Heritage provides the Secretariat to the National Cultural Heritage Committee

STATE LEGISLATION

NATIONAL PARKS AND WILDLIFE AMENDMENT ACT 2010

The *National Parks and Wildlife Amendment Act 2010* amends the *National Parks and Wildlife Act 1974* (NPW Act), administered by the Office of Environment and Heritage NSW (OEH), is the primary legislation for the protection of *some* aspects of Aboriginal cultural heritage in New South Wales.

One of the objects of the NPW Act is:

'the conservation of objects, places or features (including biological diversity) of cultural value within the landscape, including but not limited to (i) places, objects and features of significance to Aboriginal people ...' (s.2A(1)(b)).

Specifically, s.85 of the NPW Act states that the Director-General (DG) is responsible for the protection of Aboriginal objects and

Aboriginal places in NSW, particularly those on land reserved under the Act. Part 6 of the NPW Act provides specific protection for Aboriginal objects and declared Aboriginal places by establishing offences of harm.

Section 86 of the NPW Act identifies that it is an offence to knowingly harm or desecrate an Aboriginal object or Aboriginal places. This section of the Act clearly describes penalties should an offence occur. There are a number of defences and exemptions to the offence of harming an Aboriginal object or Aboriginal place. These defences are defined under s.87 of the Act. These include:

1. the harm is carried out under an Aboriginal Heritage Impact Permit (AHIP). AHIPs are required for impacts to Aboriginal objects and places, issued under s.90 of the NPW Act;
2. reasonable due diligence has been exercised to determine whether the proposed activity would harm an Aboriginal object or Aboriginal place;
3. reasonable due diligence has been exercised in accordance with a code of practice adopted or prescribed by the regulations (a code of practice might include the DECCW 2010 or NSW Minerals Council 2010 Codes of Practice); and,
4. the proposed activity is specified in the regulations as a low impact activity (as defined under s.80B of the regulations);

Aboriginal places (areas of cultural significance to the Aboriginal Community declared by the Minister) are protected under Section 84 of the Act.

Section 90 of the Act outlines the process and requirements for obtaining an AHIP from OEH. Specifically,

An Aboriginal heritage impact permit may be issued in relation to a specified Aboriginal object, Aboriginal place, land, activity or person or specified types or classes of Aboriginal objects, Aboriginal places, land, activities or persons. (P6.D2 (s.90 (3))).

Section 89A of the Act requires the mandatory reporting of the discovery of Aboriginal objects. Identified Aboriginal objects and sites are registered with the NSW Office of Environment and Heritage (OEH) on the Aboriginal Heritage Information Management System (AHIMS). OEH administers *the National Parks and Wildlife Act 1974*.

ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

The *NSW Environmental Planning and Assessment Act* will have relevance for all development projects because it requires that environmental impacts are considered in land-use planning and decision making. The definition of 'environment impacts' includes impacts on the cultural heritage of the Study Area. The Act has three relevant parts: Part III, which governs the preparation of planning instruments; Part IV, which relates to development where consent is required under an environmental planning instrument (EPI); and Part V, which relates to activity where development consent is not required but some other government approval assessments are needed.

Under the Act, local government authorities and The Department of Infrastructure, Planning and Natural Resources (formerly Planning NSW) prepare local and regional environmental planning instruments (LEPs and REPs) to give statutory force to planning controls. These may incorporate specific provisions for conserving and managing archaeological sites.

Integrated Development Assessment (IDA) was introduced under the *Environmental Planning and Assessment Act* so that all matters affecting a development application would be considered by the consent authority in an integrated way.

Integrated Development is one which requires development consent as well as one or more approvals from different government agencies. Such agencies may include NSW DEC or the NSW Heritage Council. If a development is likely to impact a heritage item, the consent authority must refer it, to NSW DEC (for Aboriginal objects) or the NSW Heritage Council (for sites listed on the State Heritage Register) prior to approval determination.

The Local Government Act 1993

Under the State Local Government Act, councils can prepare local approvals policies that set out specific matters for consideration in relation to applications to demolish, build or undertake works. Archaeological sites could be considerations under such policies.