Appendix J

Aboriginal archaeological survey report

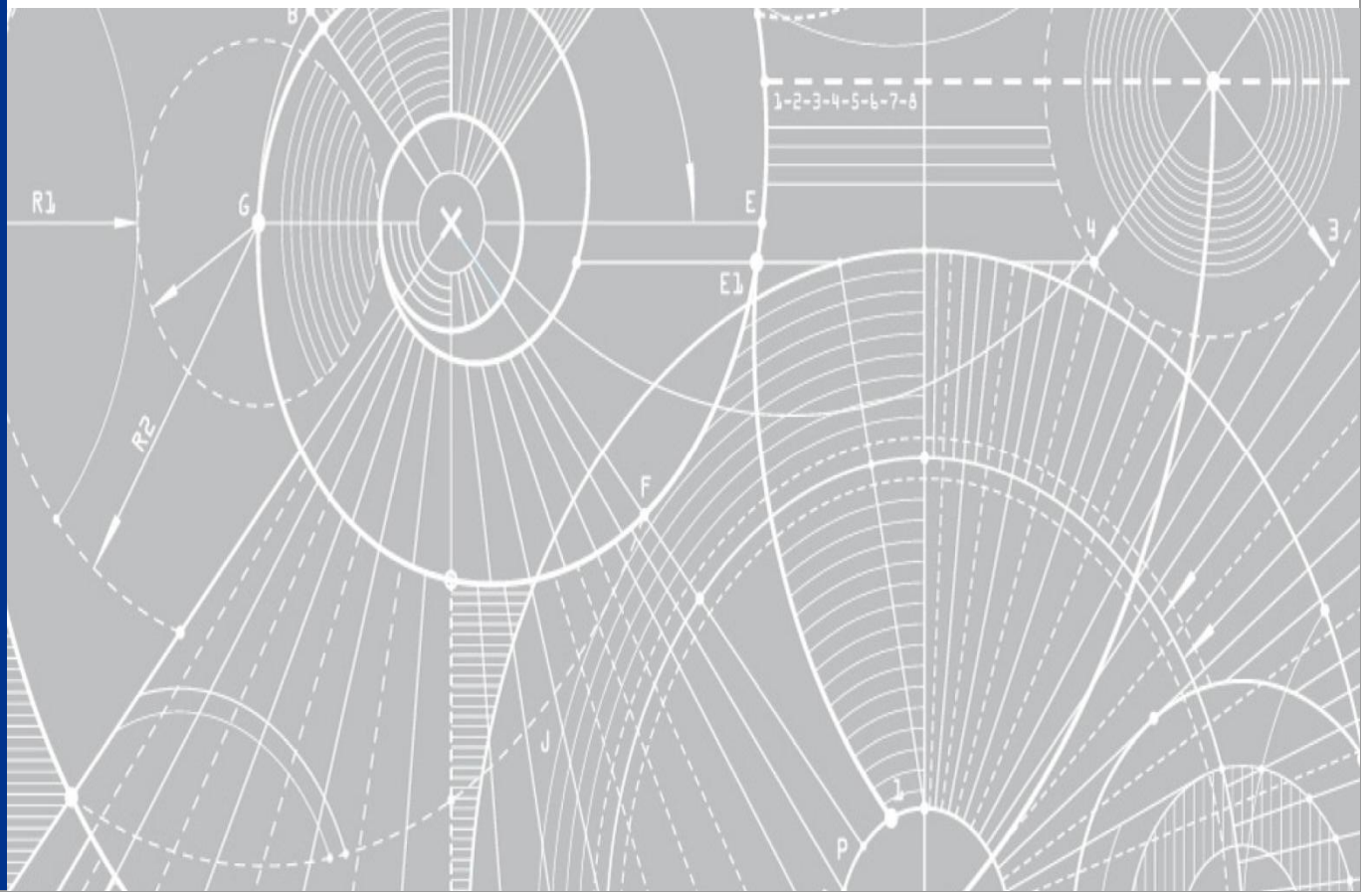
Gee Gee Bridge Replacement Project, South-West New South Wales

Aboriginal Archaeological Survey Report

Wakool Shire Council

Final

27 July 2015



Gee Gee Bridge Replacement Project

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Executive Summary

Background to project

Jacobs Pty Ltd (Jacobs) was commissioned by Wakool Shire Council (WSC) to undertake an Aboriginal archaeological survey for the Gee Gee Bridge Replacement Project (the Project).

Gee Gee Bridge is a Dare Timber Truss bridge over the Wakool River on Noorong Road. The bridge is located approximately 38 km east of Swan Hill over the Wakool River (Figure 1.1). The Project will consist of removing the existing bridge and also the approach bridge. The Project also allows for the removal of the road formation in between the two bridges. The new bridges shall comply with the change in Higher Mass Limits for the transport industry. The Project is part of the ongoing Bridges for the Bush Program.

Desktop assessment

The study region is located on the physiographic feature known as the Riverine Plain. The Riverine Plain contains five major rivers. They are the Edward, Lachlan, Murray, Murrumbidgee and Wakool Rivers. The study area is located within the *Coonambidgal Formation.* The highest and oldest terraces of the *Coonambidgal Formation* have distinctive red-brown earth soil profiles with carbonate segregation at depth.

No previously recorded Aboriginal sites were found to be located within the study area. One burial was listed approximately 10 km from the study area (AHIM # 53-2-0150). There has been no systematic archaeological survey within the study region. Predictive modelling as part of this survey suggested that the most common sites would be burials, scarred trees and middens, with mounds being the most common site type elsewhere on the Riverine Plain.

Field survey

The field survey was undertaken on Thursday 28 May 2015 by a fully qualified and experienced archaeologist and heritage consultant, Jeff Hill (Bachelor of Archaeology [Honours], 8 years of experience) and Aboriginal Site Officer from Wamba Wamba LALC – Dan Sweeney – in conjunction with Andrew Whitton (Aboriginal Cultural Heritage Advisor, South West Region, Roads and Maritime Services).

No Aboriginal sites were discovered during the field survey, nor were any areas with potential archaeological deposits (PADs) identified. A River Red Gum tree with a scar was identified outside the study area. The consensus was that this tree was a probable scarred tree, as there was some doubt regarding the scar being cultural. As the tree is outside the study area it should be safe from impact.

Dune landforms are generally considered to be sensitive for the presence of Aboriginal cultural material. Inspection of the dune did not reveal any indicators that Aboriginal cultural material was present. The dune is currently used for agricultural purposes and appears to be regularly ploughed. The interface between the dune and the floodplain landforms is also a sensitive area as both landforms can be utilised from this location. No evidence of the presence of Aboriginal cultural material was identified within the interface area.

Recommendations

Impact to the River Red Gum tree can be avoided while carrying out the works. For detailed recommendations, please refer to Section 8 of this report.

Important note about your report

The sole purpose of this report and the associated services performed by Jacobs is to complete an Aboriginal archaeological survey report for Wakool Shire Council in accordance with the scope of services set out in the contract between Jacobs and the Wakool Shire Council. That scope of services, as described in this report, was developed with Wakool Shire Council.

In preparing this report, Jacobs has relied upon, and presumed accurate, any information (or confirmation of the absence thereof) provided by the Client and/or from other sources. Except as otherwise stated in the report, Jacobs has not attempted to verify the accuracy or completeness of any such information. If the information is subsequently determined to be false, inaccurate or incomplete then it is possible that our observations and conclusions as expressed in this report may change.

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Abbreviations

AHIMS	Aboriginal heritage information management system
AHIP	Aboriginal Heritage Impact Permit
the Code	The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW
Jacobs	Jacobs Group (Australia) Pty Ltd
km	kilometres
LALC	Local Aboriginal Land Council
m	metres
mm	millimetres
NSW	New South Wales
OEH	Office of Environment and Heritage
PACHCI	Procedure for Aboriginal Cultural Heritage Consultation and Investigation
PAD	Potential Archaeological Deposit
the Project	Gee Gee Bridge Replacement Project
RMS	Roads and Maritime Services
SCS	Soil Conservation Service of NSW
WSC	Wakool Shire Council

1. Introduction

1.1 Background to project

Jacobs Pty Ltd (Jacobs) was commissioned by Wakool Shire Council (WSC) to undertake an Aboriginal archaeological survey for the Gee Gee Bridge Replacement Project (the Project).

Gee Gee Bridge is a Dare Timber Truss bridge over the Wakool River on Noorong Road. The bridge is located approximately 38 km east of Swan Hill over the Wakool River (Figure 1.1). The Project will consist of removing the existing bridge and also the approach bridge. The Project also allows for the removal of the road formation in between the two bridges. The new bridges shall comply with the change in Higher Mass Limits for the transport industry. The Project is part of the ongoing Bridges for the Bush Program. Project activities include the following:

- Site establishment on northern side upstream side open area, these sites had previously been used for maintenance projects
- Some tree removal would be required to construct the new bridges
- The proposed alignment is located downstream of the existing bridge
- The main bridge and the approach bridge along with the change in alignment would be constructed prior to the demolition of the existing bridges
- The truss bridge is a heritage listed bridge and would need to be delisted prior to the project commencing
- The works would be undertaken on the existing bridge and within 50 m downstream
- Replacement of the timber structure over the Wakool River shall be precast concrete components
- The piling configuration shall be located on the banks, as to not interfere with the summer water level and flows
- Timber may be salvaged and recycled and used on other projects
- The bridge shall be constructed to a known flood height
- The webbing in the steel pylons under the lift span would be replaced
- The site office will be located on an existing Roads and Maritime Services (RMS) compound site
- Existing WSC stockpile sites will be used to store components
- Land will need to be acquired from crowns lands department for the northern road alignment
- The existing road reserve will be will undergo re-vegetation in exchange for the land acquisition.

1.2 Study area

The study area for the Project is located at the existing Gee Gee Bridge over the Wakool River on Noorong Road (Figure 1.2). The proposed alignment for the new bridge is located downstream (within 50 m) of the existing bridge. Site establishment will be located on the northern side of Gee Gee Bridge.

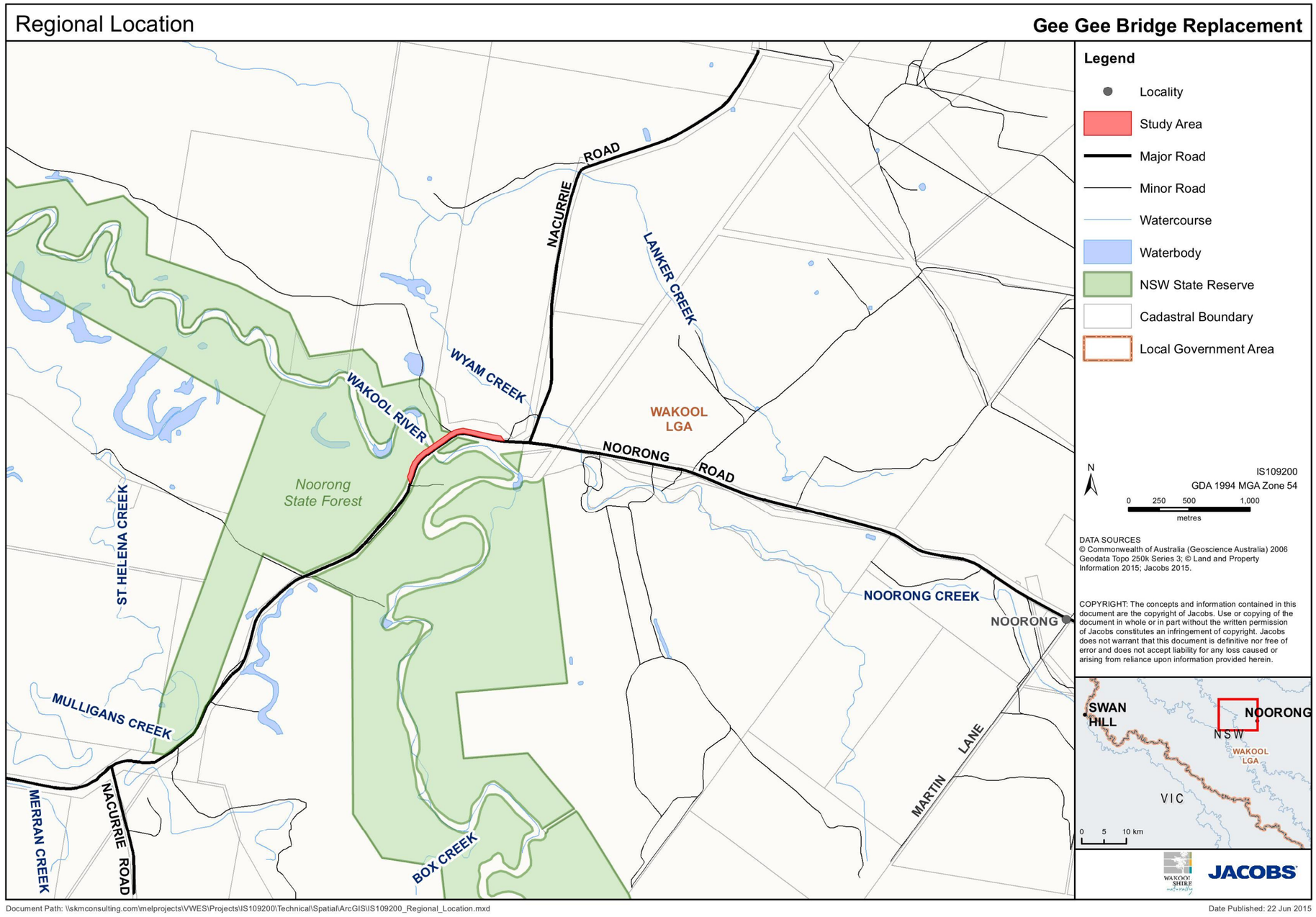

Figure 1.1 : Location of the study area with the region

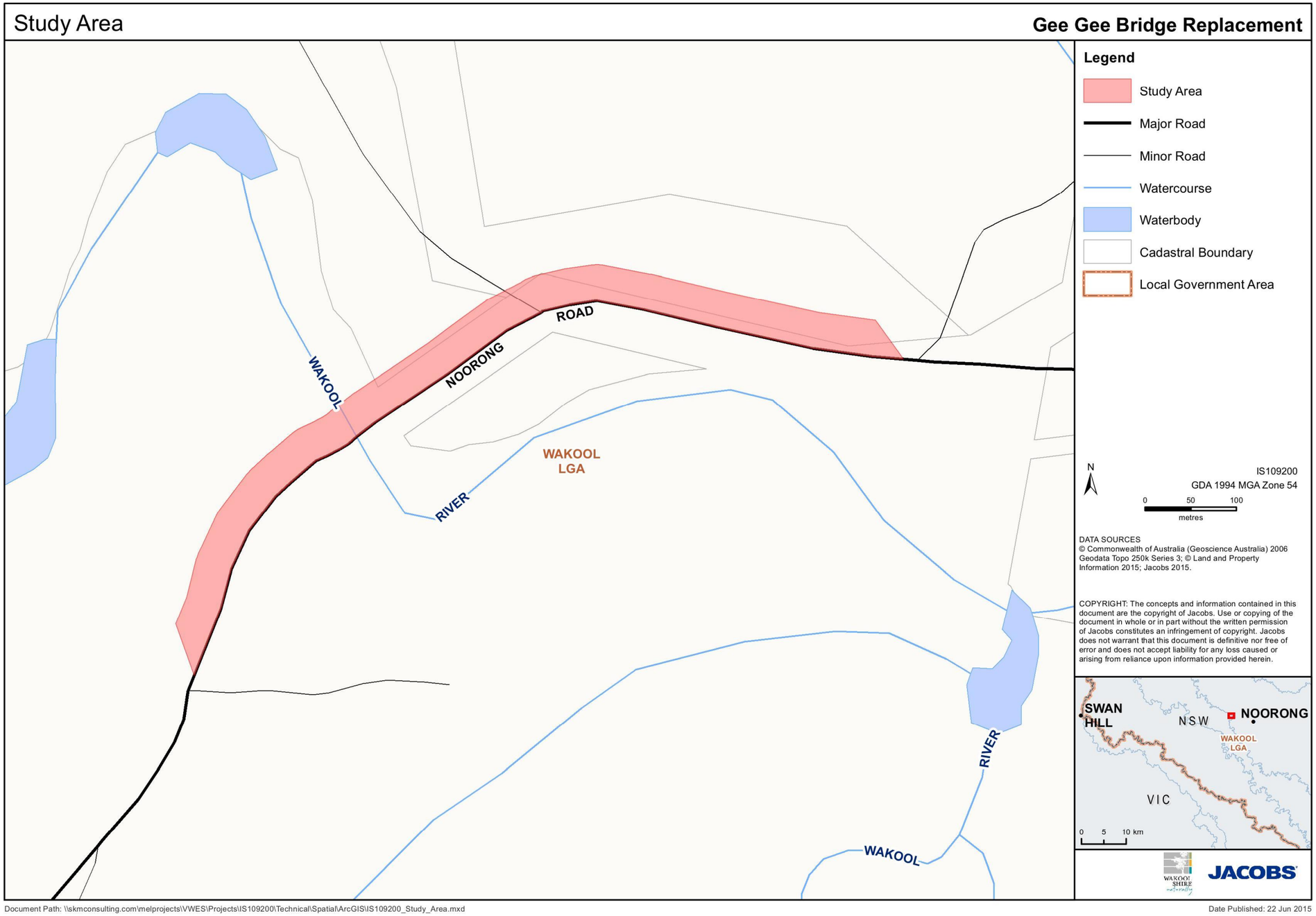

Figure 1.2 : Study area

2. Aboriginal heritage legislation

Legislation and guidelines relevant to this project are summarised in Table 2.1.

Table 2.1 : Relevant legislative framework for Aboriginal cultural heritage

Legislation / Guideline	Detail
National Parks and Wildlife Act 1974	• Administered by the Office of Environment and Heritage (OEH) • Serves to protect Aboriginal objects and Aboriginal places in NSW • Under the terms of the *National Parks and Wildlife Act 1974*, any person who harms an Aboriginal object is guilty of an offence • An Aboriginal object (s5) is defined as: 'any deposit, object or material evidence (not being a handicraft for sale) relating to Aboriginal and non-European habitation of the area that comprises NSW, being habitation both prior to and concurrent with the occupation of that area by persons of European extraction, and includes Aboriginal remains • An Aboriginal place is an area that has been declared by the Minister as a place of special significance for Aboriginal culture. It may or may not contain physical Aboriginal objects • Aboriginal Heritage Information Management System (AHIMS) – Register for identified Aboriginal objects or places • An Aboriginal Heritage Impact Permit (AHIP) is required to undertake a number of activities, relevant to development are those issued under section 90 of the Act • AHIP applications must be submitted and approved by the OEH • Procedures that accompany the *National Parks and Wildlife Amendment Act 2010* include, the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* 2010, the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* 2010, and the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* 2010.
*Environmental Planning and Assessment Act 1979 (*EP&A Act*)*	• Provides a framework for environmental planning and assessment in NSW. The Act requires the proponent to examine and take into account the impact or likely impact of its projects on the environment – including Aboriginal cultural heritage • Part 4 of the Act applies to the undertaking of development that is not State significant development or infrastructure. This type of development requires the consent of a consent authority. Usually, 'roads' projects requiring Part 4 consent will fall within the "crown development" provisions of Division 4 of Part 4 • Part 5 of the Act defines activities for which an Environmental Impact Statement should be undertaken and defines what is considered state significant infrastructure.
Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales, 2010	• The Code sets out the detailed requirements for archaeological investigations of Aboriginal objects in NSW for activities that require assessment under Part 4 or 5 of the EP&A Act. An AHIP to undertake test excavation is not required if complying with this Code, as test excavations complying with this Code are excluded from the definition of harm to an Aboriginal object (though some exclusions to this rule apply) • The Code sets out in detail: – Minimum qualifications for anyone undertaking archaeological investigation under the Code in NSW. – Assessment steps required to be undertaken for all archaeological investigation. – Assessment steps that may be required to be undertaken to adequately characterise the Aboriginal objects being investigated. • The Code must be used for investigation that is likely to result in an AHIP application.
The Procedure for Aboriginal Cultural Heritage Consultation and Investigation	• This procedure applies to all development and activities concerning roads, road infrastructure and road related assets undertaken by Roads and Maritime Services. • It outlines the four stages of consultation and investigation that assess known or potential impacts to Aboriginal cultural heritage. Projects that can avoid impacts to Aboriginal cultural heritage may only be required to complete some stages of the procedure. However, projects that would harm Aboriginal objects or places are required to complete all stages.

3. Desktop assessment

3.1 Environmental background

It should be noted that all interpretation relating to landforms, geology and soils, climate and vegetation are made from an archaeological perspective and may not necessarily correspond to scientific reports on these subjects. The desktop assessment presented here is not comprehensive, and presented to provide an understanding of the likely site types that may be present within the study area.

Throughout this report, the terms 'study area' and 'study region' are used. In this report, they are used to mean the following:

- Study area is the area (s) where project activities will be undertaken (see Figure 1.2)
- Study region is a looser term referring to the region surrounding the study area, with no fixed boundary, but generally refers to the region within approximately 10 km of the study area

3.1.1 Climate

The climate of the study region is semi-arid with hot, dry summers and cool, mild winters. Winter rainfall exceeds evapotranspiration but there is high evaporation in summer. The climate may have implications for the movement of Aboriginal populations in the study region. During the hot, dry summer months campsites would have been restricted to permanent water sources such as waterholes in rivers and billabongs. The cooler, wetter months allowed clans to become more mobile ranging further out into the plains away from the rivers to hunt and camp (Edmonds 1998).

3.1.2 Geology and soils

The study region is located on transitional riverine plain at the western margins of the physiographic feature known as the Riverine Plain. This alluvial plain is a geological feature consisting of an extensive series of low relief floodplains and associated rivers, tributaries, lake systems, ephemeral channels, palaeochannels and prior streams (Pels 1971). Geomorphologically, this transitional riverine plain comprises fine-textured Quaternary alluvium, often overlain with recent aeolian material and areas of parallel dunes, remnant lakes and terminal drainage basins.

The Riverine Plain contains five major rivers. They are the Edward, Lachlan, Murray, Murrumbidgee and Wakool Rivers. The largest of these rivers is the Murray and its valley also forms part of the Riverine Plain. Twenty-five thousand years ago the Deniliquin district experienced dramatic tectonic movement along the Cadell Tilt which resulted in the uplift of a section of the Riverine Plain, the Cadell Block, between Deniliquin and Echuca (Bowler 1986). As a result of this uplift the paths of Murray and Goulbourn Rivers were impeded and a large lake, Lake Kanyapella formed. This geological event led to the bifurcation of the Murray River south of Deniliquin resulting in the southerly flow of the Murray through Echuca around 8,000 years ago and the northerly flow of the Edward River through Deniliquin then west to rejoin the Murray at Wakool (Bowler 1986). During present day floods, most waters flow through the Edward-Wakool river system rather than following the narrow, winding course of the Murray through Echuca (Edmonds 1997).

The Riverine Plain is an elevated alluvial plain. This geological feature consists of an extensive series of low relief floodplains and associated rivers, tributaries, lake systems, ephemeral channels, palaeo-channels and prior streams (Pels 1971). The alluvial plains were laid down in the Quaternary period (Land Conservation Council [LCC] 1978, p 34). The surface sediments of the Riverine Plain comprise the Plio-Pleistocene *Shepparton Formation*. These alluvial sands, silts and clays represent the most recent phase of infilling of the Tertiary Murray Basin. Faint traces of the distributary channels that built the Riverine Plain are preserved upon the surface of the *Shepparton Formation*. These are leveed or prior streams that bear little resemblance to the modern drainage system (Stone 2006, p 772).

The meander belts of the modern Murray River system are incised into the older prior stream topography. These contain terraced *Coonambidgal Formation* sediments. Terraces of the Murray River upstream of

Tocumwal and downstream of the Wakool Junction record three phases of incision and aggradation (Pels 1971). The highest and oldest terraces of the *Coonambidgal Formation* have distinctive red-brown earth soil profiles with carbonate segregation at depth. The soils of the younger terraces are weakly developed with no textural contrast (Stone 2006, p 772). The study area is located within the *Coonambidgal Formation* (Figure 3.1).

The soils are a mosaic of grey cracking clays, brown and red texture contrast soils and solonized brown soils supporting belah, yarran, rosewood and bluebush. The dunes are comprised of loamy brown soils and deep brownish sands supporting dense mallee, narrow leaf hopbush, grasses, burrs and forbs.

3.1.3 Vegetation

Vegetation generally consists of River Red Gums (*Eucalyptus camaldulensis*) along the banks of rivers and creeklines and Black Box (*Eucalyptus largiflorens*) with a lignum (*Muehlenbeckia cunninghamii*) understorey on surrounding floodplains (Edmonds 1998).

3.1.4 Land use

Irrigated and dry cropping along with sheep and cattle grazing is the predominant land use of the study region. Crops include rice, winter cereals, annual and perennial pastures. The study region landscape has been radically altered by tree clearing, contour irrigation and laser levelling of land for agricultural purposes.

The above type of land use will have resulted in the removal of many of the surface and subsurface archaeological features in the study region but it is expected that scarred trees may still be found in remnant stands of black box on the floodplain and adjacent to depressions.

Proposed construction works in the study area occur on land, which has been disturbed by previous infrastructure development (construction of the existing Gee Gee Bridge). The area to be used for the proposed alignment of the new bridge will be located in a disturbed area to the east of the existing bridge. Consequently, there is low to moderate potential for the preservation of Aboriginal or historic cultural heritage sites, particularly individual objects, surface sites and sub-surface deposits within the construction zone.

3.2 Cultural heritage context

Clans were the basic units of pre-European Aboriginal society. Clans were patrilineal descent groups with territories defined by ritual and economic responsibilities. Clusters of neighbouring clans, which shared a common dialect and political and economic interests, distinguished themselves from other clusters by the use of a language name (Barwick 1984).

Language groups along the Murray River often identified themselves with a name which consisted of their word for 'no' repeated. For example, *Wemba Wemba*, *Latji Latji* and *Wadi Wadi*. The study area appears to be located on the border between *Wemba Wemba* tribal territory. The tribal territory spans the Murray River and includes territory in both western NSW and Victoria (Clark 1990).

The abundant and reliable food and water resources of the Murray River and its associated floodplains supported some of the densest Aboriginal populations in Australia (Butlin 1983). The importance of the river to Aboriginal subsistence was substantial with fish, crayfish and shellfish providing reliable sources of protein. The latter were dived for while fish were caught by a number of methods including the construction of weirs and dams and the use of nets and spears. Other sources of protein available on the floodplain and backplains included possums, kangaroos, emus, reptiles and waterfowl and their eggs (Edmonds 1998).

Plant foods formed another component of the diet. In recounting a neighbouring tribe, the *Dadi Dadi* or *TatiTati* at Euston, Morey (Morey 1921) writes:

To give their fish diet a relish, the natives ate with it much pigface, which grew abundantly on every (flood) plain until it was eaten out by sheep.

Nardoo is also mentioned as an important food source. The seeds of the nardoo plant, which grows on the floodplain, were ground up to form a paste with water in a long wooden trough called a karrakie (Morey 1921). This dough was then cooked in special unexcavated ovens. Lumps of well kneaded clay were heated in a fire then levelled to form a single layer. A damp layer of grass was then placed over the clay heat retainers followed by a layer of nardoo. Alternating layers of damp grass and nardoo formed a pyramid.

Cooking methods were simple. All animal foods, including shellfish, were roasted in shallow dug open ovens lined with stone, or more often clay, heat retainers. Morey (1921), gives this recipe for fish from the Euston tribe:

The native oven was a round shallow hole made in the ground. A fire was kindled in it, and flat round stones were laid on the top. When sufficiently heated through, a thin layer of young gum branches was placed on the stones, and the cleaned fish was carefully laid upon them. On the top of all this was a thick layer of gum branches.

In spring and summer, when water was scarce, Aborigines occupied semi-permanent settlements focussed near the river and abundant food resources. During late autumn and winter when food resources were less reliable but rainfall more frequent, it is likely that Aborigines ranged further inland to hunt on the plains and in the mallee. The study area falls within the broadly defined mallee vegetation region (Bowler *et al.* 1970).

3.3 Aboriginal archaeological assessment

Aboriginal heritage data used to help inform the archaeological sensitivity of the study area was obtained from the OEH AHIMS search results and from relevant reports and published works about Aboriginal cultural heritage in the region.

3.3.1 Aboriginal cultural heritage search

An extensive AHIMS search was conducted by Alistair Carr (Project Archaeologist, Jacobs) for this project and the results reported on the 20 May 2015. No previously recorded Aboriginal sites were found to be located within the study area. One burial was listed approximately 10 km away from the study area (AHIMS # 53-2-0150). See Appendix A for a copy of the AHIMS extensive search results.

Table 3.1 : List of Aboriginal sites within 10 km of the study area

AHIMS ID	Site name	Information	Landform
53-2-0150	Glen Esk #1	Burial	Floodplain

3.3.2 Review of previous archaeological work

There has been no systematic archaeological survey within the study region. During the 1970's and early 1980's archaeological research in the Murray Valley tended to concentrate on burials and mounds. Mounds are by far the most commonly occurring site type found during surveys located in the Murray Valley between Deniliquin and Swan Hill. Mounds usually account for nearly half or often more of all site types recorded during these surveys (Edmonds 1997).

Johnston (1992) undertook a survey of the Edward River margin and floodplain approximately 15 km north of the study area for a proposed golf course. He located and recorded over 100 scarred trees, Red Gum and Black Box, as well as a sparse scatter of mussel along the margins of the Edward River.

Edmonds (1997) conducted an archaeological survey for a proposed gypsum mine on North Berambong Station, approximately 35 km north of the study area. Four Aboriginal sites were located during the survey and comprise a midden and scarred tree, an isolated scarred tree and two extensive campsites containing scattered stone artefacts and burnt clay heat retainers (Edmonds 1997). Predictive modelling suggested that mounds are a common site type on the Riverine Plain in the study region. They vary in size and contents but are normally located adjacent to permanent and ephemeral sources of water. Burials can be found in mounds, lunettes or sandy features near water. Stone artefacts are generally rare but can consist of quartz, quartzite, silcrete and

metamorphic raw stone materials when present. Hearths are most commonly found on clay pan features. Scarred trees will be restricted to the occurrence of suitable trees in the region. Evidence from excavations reveals that Aboriginal occupation of the study region is likely to date from around 5,000 years ago (Edmonds 1997).

Edmonds (1998) conducted an archaeological survey on behalf of Murray Irrigation for a proposed upgrade to the Niemur Drain, one of three main drains servicing the Niemur Drainage Basin. The Niemur Drainage Basin, part of the Wakool Irrigation District, is located between the Niemur River in the west and the towns of Burraboi and Wakool in the east, south-western NSW, approximately 20 km north east of the study area. A total of three Aboriginal sites, all scarred trees, were located. Predictive modelling as part of this survey suggested that the most common sites would be burials, scarred trees and middens, with mounds being the most common site type elsewhere on the Riverine Plain. Stone artefacts will be rare due to the scarcity of suitable stone in the Southern Riverina for artefact manufacture (Edmonds 1998).

3.4 Predictive statements

A predictive model based on a search of AHIMS and a review of previous local archaeological assessment reports, including prior and existing land use activities indicates the most commonly expected site types will be scarred trees, followed by earth mounds, shell middens, open campsites/surface scatters, and burials.

The following paragraphs provide a summary description of the expected site types for the study area landscape.

Scarred trees generally consist of river red gums or Black Box trees and are usually found on low lying floodplain less than 500 m from a water source. The minimum age range for scarred River Red Gums will vary between 100 and around 300 years Before Present. Culturally derived scars are distinguished from naturally occurring scars by their oval or symmetrical shape and occasional presence of stone or steel axe marks on the scar's surface. Size and shape of the scar will depend on the use for which the bark was intended. Bark was used for a variety of purposes, including the manufacture of dishes, containers, canoes and the construction of huts. Other types of scarring include toeholds cut in the trunks or branches of trees for climbing purposes and removal of bark to indicate the presence of burials in the area. River Red Gums are confined to wetlands of the present floodplain while black box are distributed across the low lying floodplain and higher box plains.

Hearths are also known as oven mounds or fireplaces and are roughly circular features mainly comprising of lumps of burnt/baked clay, calcrete or termite nest, sometimes in an ash and charcoal matrix. Occasionally food remains, such as burnt and unburnt fish, mammal and bird bone and shell can be found associated with the hearths indicating that these features were used as ovens for cooking food. Often isolated or small numbers of stone artefacts can be found associated with hearths. Hearths often form part of a midden or campsite but they are also found as isolated occurrences on the floodplain, or in groups forming hearth complexes.

Isolated artefacts comprise isolated occurrences of flaked/ground stone artefacts

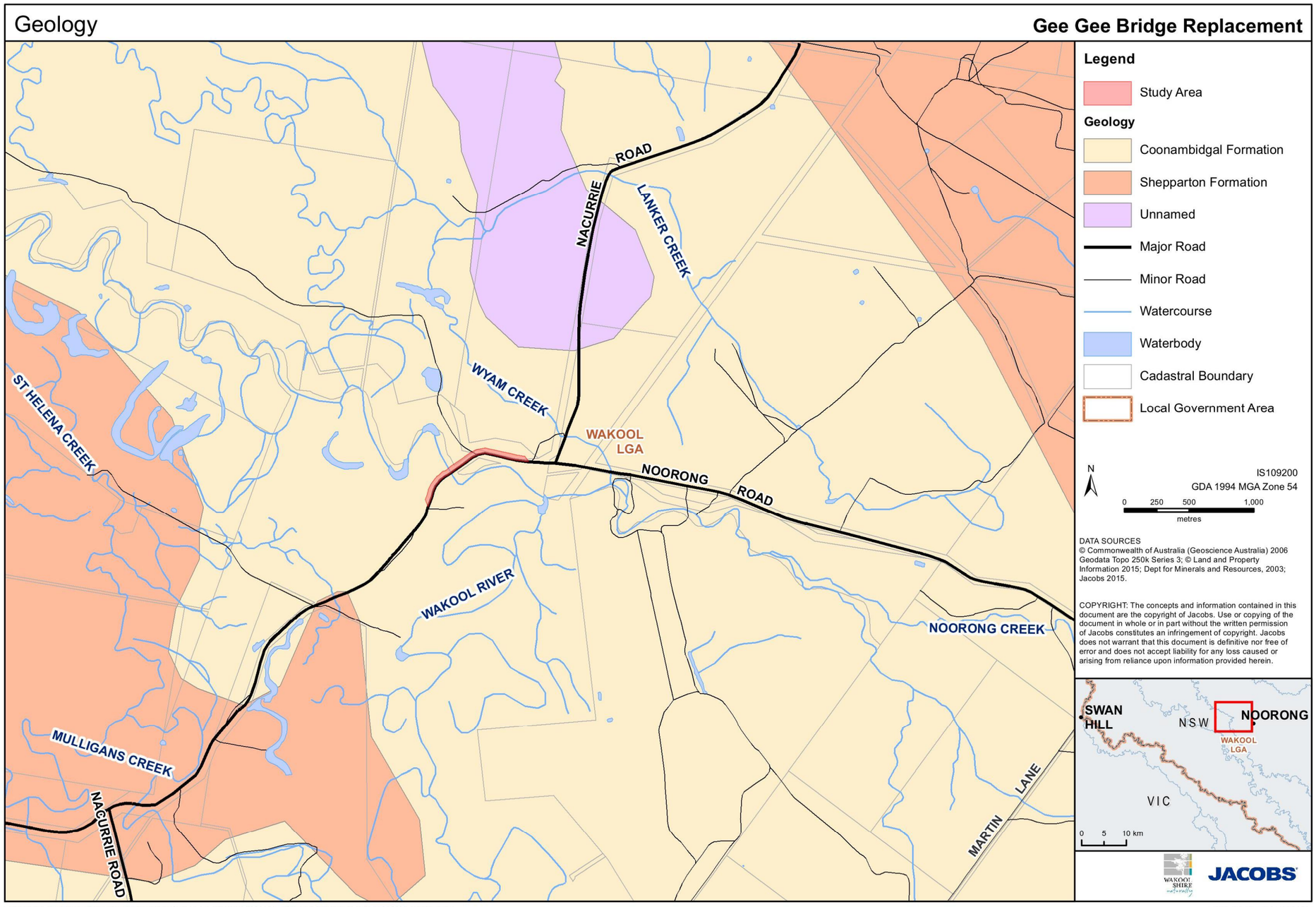

Figure 3.1 : Geology and landforms within the study area and the surrounding region

4. Consultation

4.1 Aboriginal community consultation

Consultation and participation with the relevant Local Area Land Council (LALC) is required as part of an archaeological survey for Stage 2 of PACHCI. As such, Dan Sweeney representing Wamba Wamba LALC took part in the survey. Consultation was undertaken with Dan Sweeney as part of field survey. No further consultation was undertaken as part of the archaeological survey, as is consistent with Stage 2 of PACHCI. Wamba Wamba LALC provided a survey report at the conclusion of the field assessment (Appendix B).

5. Field survey

5.1 Aims

The aim of the field survey was to undertake an archaeological survey of the study area, consult with and work alongside Aboriginal Site Officers from the Wamba Wamba LALC.

5.2 Field survey

5.2.1 Methodology

The field survey was undertaken on Thursday 28 May 2015 by a fully qualified and experienced archaeologist and heritage consultant, Jeff Hill (Bachelor of Archaeology [Honours], 8 years of experience) and Aboriginal Site Officer from Wamba Wamba LALC – Dan Sweeney – in conjunction with Andrew Whitton (Aboriginal Cultural Heritage Advisor, South West Region, Roads and Maritime Services).

The entire study area was surveyed on foot by the survey team spaced approximately 10 m apart walking along the study area; all areas of higher visibility or sub-surface exposure were inspected. In addition to surveying the construction area for the bridge, a site compound area was also surveyed.

All survey information (including landform, soil type, land surface and survey coverage) was recorded and features photographed and their locations plotted by GPS.

5.2.2 Constraints

The weather was overcast with occasional showers occurring during the survey; however this did not constraints the survey in any way. No constraints were met.

5.2.3 Visibility, exposure and coverage

The detection of Aboriginal Places and cultural material is dependent upon ground surface visibility. Ground surface visibility is also affected by erosional processes and surface vegetation (see Table 5.1). Effective survey coverage calculations attempt to quantify the efficacy of the survey. The following formula for quantifying effective survey coverage (Witter 1990) was used to calculate effective coverage for the activity area:

EC = (a) x (e) x (v) x (b), where:

- EC = effective coverage
- a = area surveyed in square metres
- e = erosion
- v = visibility
- b = background effect

Table 5.1 : Effective coverage rating definitions

Erosion rating (the index of sedimentation)	Visibility rating (estimation of the percentage of bare ground)	Background effect (measure of the occurrence of materials that impedes the detection of cultural deposits)
e	**v**	**b**
0.1 = aggrading surface 0.5 = stable surface 1.0 = degrading surface	0.1 = negligible visibility 0.2 = (1-25%) 0.3 = (26-50%) 0.4 = (51-75%) 0.5 = (76-99%) 1.0 = 100%	0.1 = high 0.5 = medium 1.0 = low

One hundred per cent of the study area was assessed (excluding the Wakool River course). Ground surface visibility was fair (average of 25 per cent) across the study area with recent autumn grasses obscuring the ground surface predominantly on the dune landform. Leaf litter obscured the ground surface visibility in the heavily treed riparian fringe (approximately 150 m in length) on the east side of the Wakool River (see Figure 5.1 - Figure 5.9 for examples of study area visibility). The site compound area had high visibility, but a low background rating due to the introduction of road base, as it had previously been used as a site compound area. The total effective survey coverage across the study area was calculated at 13.27 per cent (Table 5.2), which is considered to be good.

Table 5.2 : Total effective survey coverage within the study area

Area and landform	Surveyed area m²	Erosion rating (e)	Visibility rating (v)	Background rating (b)	Effective survey coverage (m²)	Effective survey coverage (%)
West side of bridge (new bridge and approach) Floodplain	3,785	0.5	0.3	0.5	283.87	7.5
West side of bridge (site compound) Floodplain	2,138	0.5	0.4	0.1	42.76	2
East side of bridge (new bridge and approach) Floodplain	17,542	0.5	0.3	1.0	2,631.3	15
East side of bridge (new bridge and approach) Dune field	8,443	0.5	0.3	1.0	1,266.45	15
Total	**31,818**				**4,224.38**	**13.27**

Figure 5.1 : Existing Gee Gee Bridge. The new bridge is proposed to be adjacent to this bridge (within 50 m), on the same side (north) as this photograph was taken (view south, photograph taken by Jeff Hill, 28 May 2015)

Figure 5.2 : Area used previously as a site compound on the northwest side of the bridge, background rating was high due to road base used to stabilise the area (view northwest, photograph taken by Jeff Hill, 28 May 2015)

Figure 5.3 : Proposed area for the Wakool River crossing for the new bridge (view east, photograph taken by Jeff Hill, 28 May 2015)

Figure 5.4 : Floodplain landform with low grass cover, beyond the riparian fringe surrounding the Wakool River on the northeast side of current bridge (view east, photograph taken by Jeff Hill, 28 May 2015)

Figure 5.5 : Final section of floodplain south northeast of the current bridge with low vegetation cover (view southwest, photograph taken by Jeff Hill, 28 May 2015)

Figure 5.6 : Dune landform northeast of the current bridge showing light autumn grass cover (view northeast, photograph taken by Jeff Hill, 28 May 2015)

5.3 Results

No Aboriginal sites were discovered during the field survey, nor were any areas with potential archaeological deposits (PADs) identified. A large number of Black Box trees (>10) were inspected during the field survey for cultural scarring as they had scarring, either single or multiple scars, of some kind on them; particularly a dense area of Black Box woodland on the northeast side of the current bridge. None of the Black Box trees inspected were positively identified as having cultural scars. A large number of these trees were too young, or appeared to have suffered scar damage from contact with machinery (eg Figure 5.8). Closer inspection of a number of these trees also indicated that borer insects may have also played a part in the scarring, as piles of sawdust were observed at the bases of most of these trees. A River Red Gum tree with a scar was identified outside the study area (Figure 5.9). The consensus was that this tree was a probable scarred tree, as there was some doubt regarding the scar being cultural. As the tree is outside the study area it should be safe from impact (see Figure 5.10).

The banks of the Wakool River were inspected for signs of shell middens and oven mounds. No indicators of these site types were observed. The banks have undergone some erosion, therefore if present shell or oven mound material (burnt clay) should have been observed. Dune landforms are generally considered to be sensitive for the presence of Aboriginal cultural material. Inspection of the dune did not reveal any indicators that Aboriginal cultural material was present. The dune is currently used for agricultural purposes and appears to be regularly ploughed. The interface between the dune and the floodplain landforms is a sensitive area as both landforms can be utilised from this location. No evidence of the presence of Aboriginal cultural material was identified within the interface area.

Figure 5.7 : Heavily treed area where a number of Black Box trees with scars were discovered (view north, photograph taken by Jeff Hill, 28 May 2015)

Figure 5.8 : Black Box tree facing Noorong Road and determined that the scar was most likely caused by machinery impact (view northeast, photograph taken by Jeff Hill, 28 May 2015)

Figure 5.9 : River Red Gum with a scar that was determined to be ‘probable’ cultural scarring (view southwest, photograph taken by Jeff Hill, 28 May 2015)

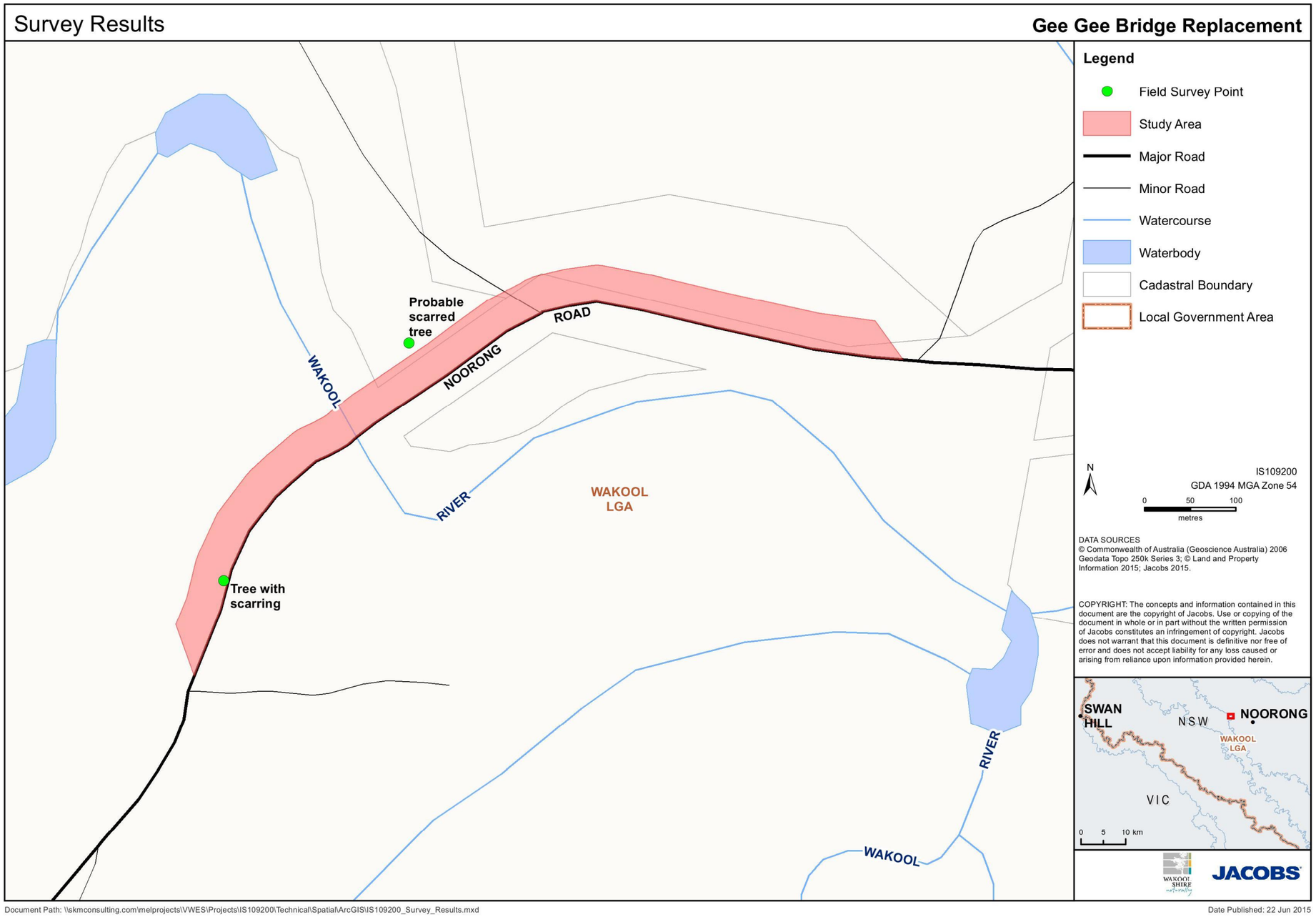

Figure 5.10 : Survey results map with river Red Gum shown as ‘Probable scarred tree’ and the tree with machinery damage (Figure 5.8) identified on the map as ‘Tree with scarring’

6. Significance assessment

6.1 Assessment and discussion of significance

All Aboriginal cultural heritage sites identified near or within the study area will be assessed against the significance criteria outlined below.

6.1.1 Basis for assessment

A significance assessment is made up of several significance criteria that attempt to define why a site is important. Such assessment recognises that sites may be important for different reasons to different people, and even at different times. The assessment of Aboriginal cultural heritage in this assessment is based upon the four values of the *Australia ICOMOS Burra Charter* (ICOMOS 1999).

- Social values
- Historical values
- Scientific values
- Aesthetic values

Each of these values is assessed below, and an overall significance is assigned based on an average across the values. This is inherently a reductive process, and oversimplifies what is important for different reasons to a range of different stakeholders, but is a necessary process in being able to create comparative values between sites. The significance of each site ultimately informs Roads and Maritime on the management of sites and places.

6.1.2 Social significance

The significance of a site does not relate only to its scientific or research value. Aboriginal people's views on the significance of archaeological sites are usually related to traditional, cultural and educational values, although some Aboriginal people also value any scientific information a site may be able to provide.

Aboriginal cultural significance was assessed from consultation with the nominated Aboriginal site officers and other members of the RAPs, including Elders, both during and following field assessments. It should be noted that Aboriginal significance assessed in this manner may not reflect the views of all members of the community.

6.1.3 Historic significance

The historic value of a site is determined through its association with historically important people, events or activities.

6.1.4 Scientific significance

Research potential or scientific significance of an Aboriginal archaeological site can be assessed by utilising the criteria set out below. Each criteria is rated as low, moderate or high.

- **Site integrity –** The integrity of a site refers to its state of preservation, or condition. A site can be disturbed through a number of factors including natural erosion processes, destructive land use practices or repeated use of a site in the past by both humans and animals.
- **Site structure –** Structure refers to a site's physical dimensions, that is, size and stratigraphy. A large site or a site with stratified deposits has more research potential than small sites and/or surface scatters. Sometimes however, specific research questions may be aimed at smaller sites in which case they would be rated at a higher significance than normal. Site structure cannot be assessed for scarred trees or isolated artefacts.

- **Site contents –** This category refers to the range and type of occupation debris found in a site. Generally, complex art sites, extensive quarries with associated debris and surface sites that contain a large and varied amount of organic and non-organic materials are considered to have greater research potential than those sites with small, uniform artefacts, single motif art sites and small quarries with little or no debris. For scarred trees, contents may refer to the size and type of scar and/or how many scars there are on the one tree.
- **Representativeness and rarity –** Representativeness refers to how much variability exists between the subject site and others inside or outside the subject area. It also considers the types of sites already conserved in the area and how much connectivity between sites exists. Rarity considers how often a particular site type occurs in an area. Assessment of representativeness and rarity requires some knowledge of the background archaeology of the area or region in which a Project is being undertaken. Rarity also relates to whether the subject site or area is important in demonstrating a distinctive way of life, custom, process, land use, function or design which is no longer practiced (OEH 2011:10).

6.1.5 Aesthetic significance

This refers to the 'sensory' value of a place, and can include aspects such as form, texture, and colour, and can also include the smell and sound elements associated with use or experience of a site (ICOMOS 1999). Aesthetic significance can be closely linked to the social value of a site.

6.1.6 Scale of significance

Significance of sites and places is assigned to different geographic scales, such as local, regional, State and National, appropriate to the scale of importance. For example, Uluru is significant at a National (and World) scale, whereas a local historic building may only be significant on a local scale. This is reflected in the variety of heritage lists held by local councils, up to State and Federal government. In scale of significance, the criteria presented above as well as educational or research potential, representativeness and rarity (Australian ICOMOS 1999) have been considered in determinations of significance.

Each site has been assessed and its scale of significance has been identified as being of importance at the State, regional or local level. Each site has also been given a grading of its significance overall based on the grading of each of the individual values. The gradings of low, moderate and high have been assigned comparatively across the sites investigated in the region.

6.2 Statement of significance

There are no recorded Aboriginal cultural heritage sites for the Project; therefore significance statements are not applicable for the assessment.

7. Impact assessment

There are no known impacts to Aboriginal cultural heritage.

8. Management recommendations

No Aboriginal cultural heritage sites were encountered during the field survey. The following recommendations are to be considered during construction works to ensure that WSC does that violate the *National Parks and Wildlife Act*, 1974 as Aboriginal cultural heritage in NSW are protected by provisions of this act.

8.1 Site avoidance

The River Red Gum tree identified as a probable scarred tree should be avoided during the construction works. As the tree is outside the construction footprint this should occur in any event. In order to ensure that impact does not occur to this tree, the following is recommended:

- Prior to works commencing a temporary fence (eg high-visibility para-webbing) is to be established buffering the tree from harm. The buffering should cover a minimum 15 m radius around the tree
- Fencing must be removed following completion of the works.

8.2 Procedure for unexpected finds

As for all Roads and Maritime projects, the procedure for unexpected finds must be followed should any unexpected heritage item be made during any works. This procedure applies to the discovery of any unexpected heritage item (usually during construction), where Roads and Maritime does not have approval to disturb the item (eg AHIP, or investigations under the Code of Practice) or where safeguards for managing the disturbance (apart from this procedure) are not contained in the environmental impact assessment.

The below procedure is consistent with the *Standard Management Procedure: Unexpected Heritage Items*, (Roads and Maritime 2015), but summarises several details – the full document should be consulted in the instance of an unexpected find.

If Aboriginal cultural heritage is found during construction activities, the following steps would be followed:

- Stop work in the immediate area of the find and notify the project manager
- The project manager should arrange for a number of photographs that capture the general context and specific details of the find to be taken, and establish a ‘no-go zone’ to protect the find with appropriate high-visibility fencing – no further interference must occur with the find or within the protected area. Only construction that is required to comply with occupational and environmental health and safety standards and/or to protect the cultural heritage would occur. Inform all site personnel of this protected area
- The project manager should inform the relevant Roads and Maritime regional environment staff, Senior Environmental Specialist (Heritage), and the Aboriginal Cultural Heritage Advisor (South West Region).
- If the find is reasonably suspected to be human remains, proceed directly to notifying local police
- A suitably qualified and experienced archaeologist should be engaged to inspect the find, conduct a preliminary assessment and prepare an archaeological management plan.
- The Aboriginal Cultural Heritage Advisor (South West Region) or the archaeologist will also make contact with the registered Aboriginal parties to notify them of the find and invite them to take part in the site inspection and assessment of the finds, as well as taking part in preparing any management strategies and plans for any objects discovered.
- Subject to the archaeologist’s assessment, work can recommence at a set distance from the find, determined by the archaeologist. This is to protect any other archaeological material that may exist in the vicinity, which has not yet been uncovered – existing protective fencing may need to be adjusted to reflect the newly assessed protected area. No works are to take place within this area until further written notice from the archaeologist/project manager.
- The archaeologist must prepare and archaeological management plan in accordance with the *Standard Management Procedure: Unexpected Heritage Items* (Roads and Maritime 2015) shortly after the site inspection.

  - In preparing the management plan, the archaeologist with the assistance of Roads and Maritime regional environment staff must review the Construction Environmental Management Plan, any heritage sub-plans, and any heritage assessment documentation (eg this report). Discussions should occur with design engineers to consider if re-design options exist and are appropriate.
  - The management plan must be submitted to the project manager as a letter, brief report, or email within two working days.
  - Notify OEH to inform them of any find (eg submit an AHIMS site card), including the archaeological management plan.
- Review the archaeological management plan and clarify regulator expectations around written authorisation to commence project work. This may relate to situations where human remains are found or when they request to review preliminary archaeological excavation reports or heritage assessments prior to the resumption of Roads and Maritime project work. Where this is not explicit in heritage approval conditions, expectations should be clarified directly with the regulator. Update the archaeological management plan, including mapping where necessary
- Implement the archaeological management plan
- Ensure all archaeological work has been completed prior to Roads and Maritime project work resuming – written clearance to resume work from the archaeologist, Roads and Maritime regional environment staff, and if necessary OEH.

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LEGISLATION

National Parks and Wildlife Act 1974

Environmental Planning and Assessment Act 1979

Appendix A. AHIMS extensive search results

Office of Environment & Heritage
NSW GOVERNMENT

AHIMS Web Services (AWS)

Extensive search - Site list report

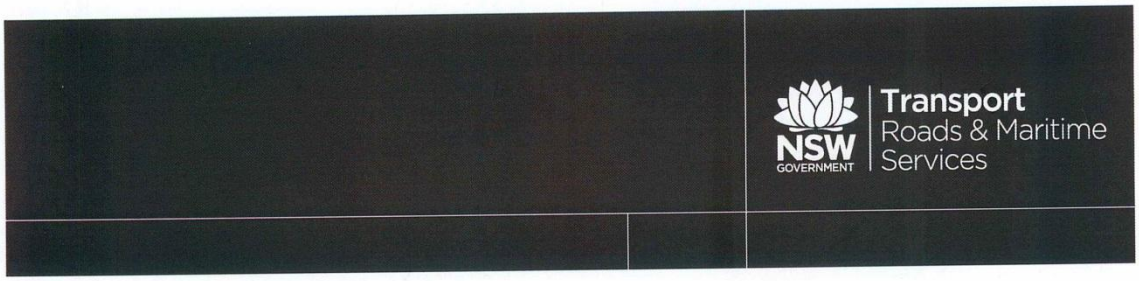
Purchase Order/Reference : Gee Gee Bridge replacemen
Client Service ID : 173793

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
53-2-0150	Glen Esk #1;	AGD	54	763820	6082340	Open site	Valid	Burial : -	Burial/s	

Contact	Recorders	Harvey Johnston	Permits

Report generated by AHIMS Web Service on 20/05/2015 for Alistair Carr for the following area at Lat, Long From : -35.3675, 143.8879 - Lat, Long To : -35.2954, 144.0022 with a Buffer of 50 meters. Additional Info : Reporting for project. Number of Aboriginal sites and Aboriginal objects found is 1

Appendix B. Wamba Wamba LALC survey report



GEE GEE BRIDGE (REPLACEMENT)

Aboriginal stakeholder cultural heritage survey report

STAGE 2 – ROADS AND MARITIME SERVICES PROCEDURE FOR ABORIGINAL CULTURAL HERITAGE CONSULTATION AND INVESTIGATION (RESOURCE 7)

MAY 2015

Aboriginal stakeholder cultural heritage survey report

1. Purpose of this assessment

This assessment forms part of the Stage 2 assessment of the Roads and Maritime Services (RMS) *Procedure for Aboriginal Cultural Heritage Consultation and Investigation*. Its purpose is to determine whether any features of Aboriginal cultural significance occur within the study area for this project, and whether they would be affected by the project. This assessment will be used to assist the RMS in determining whether further assessment and consultation is required for this project.

2. Project details: (provide the following information)

a) Project title: Gee Gee Bridge replacement

b) Location of study area: Gee Gee Bridge replacement project study area

c) Name of Aboriginal site officer(s) completing this assessment:

Dan Sweeney

d) Name of Aboriginal organisation(s) represented by this survey:

Wamba Wamba LALC

e) Name of site officer(s) who undertook site survey:

Dan Sweeney

f) Date of survey: Thursday, 28 May 2105

2

(If additional space is required, please attach sheets)

3. Methodology:

a) Approximately how much of the total project area was surveyed (eg 10%-100%) and why? (Eg Certain areas were heavily disturbed, properties were inaccessible, ground visibility was poor, difficult weather conditions, etc.)

100% of the project study area was surveyed by foot. Ground visibility varied
from poor to very good. A lot of the project study area has been heavily
disturbed previously, particularly close to the existing bridge. Access tracks &
roads in situ and the area would have been heavily disturbed during the
construction of the existing bridge.
The weather was adequate for the foot survey. A little rain but did not hamper
the survey.

b) How was the survey undertaken? (Eg On foot, by car, individually, in groups, other? If other people were involved in the survey, please provide their names and name of their organisation, if relevant)

The survey was completed on foot. Those attending were:
Dan Sweeney (Wamba Wamba LALC cultural officer)
Jeff Hill (Archaeologist, Jacobs)
Andrew Whitton (RMS Wagga)

3

(If additional space is required, please attach sheets)

4. Results:

a) Please provide a description of the area surveyed. Include a description of the total area covered, landforms, built areas, etc. Where appropriate, survey areas should be identified on a map/plan.

Roads & Maritime Services provided an aerial photo showing the proposed alignment.
The proposed project crosses the Wakool River, and deviates from the existing road alignment, venturing thru neighbours property, that has been actively disturbed by various farming/agricultural activities, including cropping.

4

(If additional space is required, please attach sheets)

b) Were any of the following features identified during the survey? (Please tick as required)

- ☐ stone tools or flakes
- ☐ hearths
- ☐ shell middens
- ☐ scarred trees
- ☐ shelters
- ☐ art sites
- ☐ bora circles
- ☐ significant spiritual or social areas
- ☐ totems
- ☐ significant cultural landscape features
- ☐ other – please state:

If any of the above items were ticked, please provide a description including the location, quantity, size, condition and significance of the feature, if known. Where considered appropriate, this information should be identified on a map/plan).

No. No Aboriginal objects, features or places where identified during the survey.

5

(If additional space is required, please attach sheets)

c) Is it likely that any of the above features may be present in the study area, despite not being positively identified during the survey?
No. Yes. (If yes, where are they considered likely to occur?)

Yes. It was possible some of the above mentioned features may have been present in the study area. However, the proposed project area has been heavily disturbed by previous road & bridge building activities, as well as farming/agricultural activities and the likelihood of these sites/objects remaining in situ is considered unlikely.

d) If known, please provide a description of the natural resources used by Aboriginal people that are, or would have been, available within the study area. Please describe the significance of these resources to past and present Aboriginal communities.

Various natural resources would have been used by Aboriginal people in and around the project study area. Some of these resources uses include: Food, water, medicinal, tools and weapons, clothing, shelter.

6

(If additional space is required, please attach sheets)

e) Please provide a description of past disturbances to the study area, if known, and how this may have affected Aboriginal cultural heritage features.

The project study area has been heavily disturbed during the construction &
maintenance of the existing bridge. The proposed realignment of the road
will see the road being constructed on ground that has been heavily disturbed
by various farming and agricultural activities.

7

(If additional space is required, please attach sheets)

5. **Conclusion:**

Is the project likely to affect any significant known or potential Aboriginal cultural heritage features as identified by the survey?

☐ No.

☐ Yes. (If yes, please describe the features and how they would be affected).

No

8

(If additional space is required, please attach sheets)

This assessment has been completed by:

Name: ~~DAN~~ Sweeney (Provide name) (Provide signature)

Position title: SITE OFFICER (Provide title)

Organisation name: Wamba Wamba LALC (Provide name of Aboriginal organisation)

On the following date: 3/6/15 (Insert date)

9

(If additional space is required, please attach sheets)

Appendix C. Project brief

Gee Gee Bridge Replacement

Aboriginal archaeological survey – standard brief

STAGE 2 – ROADS AND MARITIME SERVICES PROCEDURE FOR ABORIGINAL CULTURAL HERITAGE CONSULTATION AND INVESTIGATION (RESOURCE 09)

MARCH 2015

Contents

1 Introduction

1.1 Purpose

Roads and Maritime Services (RMS) proposes to undertake the following activity:

Gee Gee Bridge is a Dare Timber Truss bridge over the Wakool River on Noorong Road. The bridge is located between the towns of Barham (NSW) and Swria). The project will consist of removing the existing bridge and also the approach bridge. The proposal would also allow for the removal of the road formation in between the two bridges the new bridges shall comply with the change in Higher Mass Limits for the transport industry. This project is part of the ongoing Bridges for the Bush Program. Project details are as follows:

- Site establishment on northern side upstream side open area, these sites had previously been used for maintenance projects
- Some tree removal would be required to construct the new bridges
- The proposed alignment is located downstream of the existing bridge
- The main bridge and the approach bridge along with the change in alignment would be constructed prior to the demolition of the existing bridges
- The truss bridge is a heritage listed bridge and would need to be delisted prior to the project commencing
- The works would be undertaken on the existing bridge and within 50m down stream
- Replacement of the timber structure over the Wakool river shall be precast concrete components
- The piling configuration shall be located on the banks, as to not interfere with the summer water level and flows
- Site map attached
- Timber may be salvaged and recycled and used on other projects
- The bridge shall be constructed to a known flood height
- The webbing in the steel pylons under the lift span would be replaced

- The site office will be located on an existing RMS compound site.

- Existing Wakool Shire council stockpile sites will be used to store components.

- Land will need to be acquired from crowns lands department for the northern road alignment.

- The existing road reserve will be will undergo revegetation in exchange for the land acquisition.

The RMS requires a consultant with extensive experience in Aboriginal archaeological heritage assessment to prepare an Aboriginal archaeological survey report. This specialist input is required to inform the, review of environmental factors (REF) for this project, and to determine whether any objects or places as defined by the *National Parks and Wildlife Act 1974* would be affected by the project.

1.2 Background

Background cultural heritage information relevant to the activity that would assist you in the response to this brief and the preparation of the Aboriginal archaeological survey report includes the following.

The lower Edward-Wakool floodplain is located within a region that had one of the largest Aboriginal populations in Australia and still contains one of the richest and most diverse suites of archaeological sites known. The
Aboriginal occupants of the floodplain were essentially riverine people whose resources were largely derived from the well-watered parts of the landscape such as rivers, creeks and wetlands (Hughes and Berryman 1985).
The National Parks and Wildlife Register records 176 Aboriginal sites in the broad riverine area between Swan Hill and the Wakool Junction. These sites have been listed mainly from random assessments. There have been few systematic archaeological research projects undertaken in the region (NPWSpers. comm). The most commonly occurring types of Aboriginal sites found on the Edward-Wakool floodplain include:

- Mounds Earthen mounds, roughly circular in shape, that accumulated from earth and burnt clay used during cooking in oven pits. Mounds range in size from 15cms to 120cms in height. Found on river and creek floodplains, around the margins of large wetlands and adjacent to inlet channels of lakes and swamps.
- Scarred trees: These result from the removal of bark from trunks for use as canoes, containers, shields and shelter. Scars can be up to three metres long and one metre wide. These are the most common type of site in the riverine forests. Found on River Red Gum and Black Box trees on river and creek banks and generally over the floodplain.
- Burials: These sites can consist of a single burial, isolated individuals in an area or cemeteries. Usually found in sandy deposits, such as dunes adjacent to rivers and creeks, lunettes, but are also located in mounds.
- Shell: middens: These are deposits of freshwater mussel shells. Middens can vary in size from small camps comprising a few shells to large deposits more than one metre thick. Middens can contain stone artefacts, animal bones and remains of hearths. Found along river and creek banks.
- Open campsites: These consist of open scatters of stone artefacts and hearths. Found around lakes and swamps particularly where the land is slightly elevated.

1.3 Project information available

The following project information is available to assist in your response to this brief and the preparation of the *Aboriginal Archaeological Survey Report* for the proposed activity.

Land to be acquired from crown lands department for road realignment

The proposed alignment of the new bridge shall be located in the disturbed area in the above photo.

2 Scope and methodology

All works carried out under this brief must adhere to the following guidelines and procedures:

- RMS' *Procedure for Aboriginal cultural heritage consultation and investigation 2010*
- OEH's *Aboriginal cultural heritage consultation requirements for proponents 2010*
- OEH's *Supporting information requirements for AHIP applications 2009*
- OEH's *Code of practice for archaeological investigations in NSW*
- For state significant developments (SSD) or state significant infrastructure (SSI), meet the Director General of the Department of Planning.

The successful consultant will be required to undertake and document the following tasks.

- Undertake Stage 2 of the *RMS Procedure for Aboriginal cultural heritage consultation and investigation 2010*. Consultation must be undertaken in liaison Andrew Whitton RMS Aboriginal Cultural Heritage Officer Wagga Wagga Mobile 0418 486 685 and Craig Maffescioni Wakool Shire Council Mobile 0429 853 837.

- Undertake Requirements 1 to 13 of OEH's *Code of practice for archaeological investigations in NSW*, including a site survey and the preparation of an archaeological survey report.

- Where the archaeological survey report concludes that further archaeological investigation is required, the consultant must prepare a method for archaeological testing in accordance with (a), (b) or (c) below.

  (a) Testing in accordance with the *Code of practice for archaeological investigation of Aboriginal Objects in NSW*
  For Part 4 or 5 projects that can follow the *Code of practice for archaeological investigation of Aboriginal Objects in NSW*, the consultant must prepare a sampling methodology consistent with Section 3 of the code. The methodology must also state how many Aboriginal site officers would be required to undertake the testing, if any.

  (b) Testing under an AHIP
  For Part 4 or 5 projects that cannot follow the *Code of practice for archaeological investigation of Aboriginal Objects in NSW,* the consultant must prepare an appropriate methodology and an AHIP application. The methodology must also state how many Aboriginal site officers would be required to undertake the testing, if any.

  (c) Testing for SSD or SSI
  For SSD or SSI projects, the consultant must prepare an appropriate methodology to address the Director General of the Department of Planning and Infrastructure's requirements. The methodology must also state how many Aboriginal site officers would be required to undertake the testing, if any.

OR

  Where the archaeological survey report concludes that Aboriginal objects and/or places would be impacted by the implementation of the project, but further testing is not required, then the consultant must prepare a methodology for these impacts. This methodology may include scope for salvage. The methodology must also state how many Aboriginal site officers would be required to undertake the salvage, if any.

- A copy of the draft report (including the proposed methodology and AHIP application, if required) must be provided to the RMS contact person for review and comment.

3 Report presentation

The consultant is to prepare the report in accordance with the following requirements:

- The report must be consistent with requirements 1 to 13 of OEH's *Code of practice for archaeological investigations in NSW.*

4 Project supervision, schedule, outputs and fees

4.1 Project supervision

The WSC contact person for the project is as follows.

Craig Maffescioni (your title, address, phone and email)Tender submissions close 4.00pm 17/04/2015. Submissions can be emailed to Gee Gee bridge replacement stage 2 surveys.

mail@wakool.nsw.gov.au

Any questions relating to the proposed activity should be directed to this person.

4.2 Project schedule

Preparation of the Aboriginal archaeological (survey) report would commence upon receipt of a letter of acceptance. The timeframes for preparation and finalisation of the Aboriginal archaeological survey report are as follows.

The successful Tenderer shall be notified via email on the 27/04/2015, with a formal acceptance letter to be drafted and sent by the 30/04/2015.
A site meeting can be arranged by contacting Craig Maffescioni on
Mobile 0429853837
craig.maffescioni@wakool.nsw.gov.au
The final report shall be due 31/05/2015. Two (2) copies of the final report shall be submitted one being a hard copy and the other in electronic format.

4.3 Deliverables

The outputs required for this project include the following:

a) A draft Aboriginal archaeological survey report that meets the standard of OEH's *Code of practice for the archaeological investigation of Aboriginal objects in NSW 2010*.

b) A finalised Aboriginal archaeological survey report that addresses comments received by the RMS.

c) Where impacts to Aboriginal objects and/or places are anticipated, prepare a draft archaeological methodology. The methodology may allow for archaeological testing, salvage or impact without salvage.

d) A revised archaeological methodology that addresses comments received by the RMS.

e) Prepare an AHIP application for Part 4 or 5 projects that are unable to undertake archaeological testing in accordance with the *Code of practice for the archaeological investigation of Aboriginal objects in NSW 2010*, or for Part 4 or 5 projects that will harm Aboriginal objects and/or places.

f) If any new Aboriginal archaeological objects are identified as a result of the site survey, the consultant must notify OEH within 21 days of finding the object.

POOR QUALITY DOCUMENTS WILL NOT BE CONSIDERED TO BE A DELIVERABLE IN ACCORDANCE WITH THIS BRIEF.

4.4 Project fees and payment

You are required to prepare a fixed price cost estimate for the works. A budget is to be included for each work element showing total hours, hourly rates, disbursements and price for you and any sub-consultants.

Note: Aboriginal site officer roles will be contracted by the WSC/RMS through a corporate entity such as an Aboriginal Land Council, 'skill hire' or similar organisation. Costs for Aboriginal site officers will be met by the project directly.

Payment will be made by the method described below. No additional work outside the agreed cost estimate is to be undertaken without prior written approval of the RMS's contact person as described above in Section 4.1.

The method of payment shall be in the form of a lump sum payment. The payment shall be entered into Wakool Shire Council pay period following the report lodgement date.

5 Response to brief

Your response to this brief should be submitted to the RMS contact person described above in Section 4.1.

The response to this Brief must adopt the following headings in the order shown:

a) Proposed methodology – detail the methodology that you propose to use to satisfy the scope detailed in Section 2.
b) Report contents – address the requirements described in Section 3.
c) Technical skills – detail your company's technical skills and the nominated project team including CVs and the proposed time that they will spend on the project. Any variation to the nominated project team should be discussed with the RMS prior to changes.
d) Recent experience – detail your recent relevant experience and lists relevant projects undertaken by the nominated project team.
e) Estimated costs – address the requirements in Section 4.4.
f) Robustness of estimated costs – demonstrate that the estimate costs are adequate and realistic to achieve the purpose of the brief.
g) Time performance – include a detailed program of works and due dates.

6 Contract information

The following information will be required to be provided for the contract. If you intend to submit a tender for this project, please ensure that you have the following.

a) NSW Workers Compensation Insurance in accordance with the *Workers Compensation Act 1987* (or personal accident insurance).
b) Public Liability Insurance with the following:

i) Limit of Liability – not less than $10M;
ii) Inclusion of the RMS as an additional named insured (if possible); and
iii) Include Cross Liability and Waiver of Subrogation clauses (if possible).

c) Professional Indemnity Insurance with a limit of liability not less than $1M.
d) Motor Vehicle Insurance including the following:
i) If motor vehicles will be used in the study, contractor must have comprehensive or third party property damage motor vehicle insurance.

If you require any further information, please contact the RMS contact person.

7 Work health and safety

The safety of field workers is paramount. All personnel involved in the field work must read and sign an appropriate and relevant Safe Work Method Statement (SWMS) prior to the commencement of any field work. A signed copy of the SWMS is to be provided to the RMS prior to accessing the site. If the site is classified as a construction site and has its own SWMS, personnel involved in the field work will need to abide by the SWMS and may need to be inducted onto the site.

The wearing of a high visibility safety vest is mandatory during the field surveys.

8 Privacy

All information provided by the RMS to you in relation to this project is confidential. You must ensure that you keep such information confidential at all times (including after completion of the services) and must not disclose it to any other person without the prior written consent of the RMS, unless required by law.