

# Appendix D

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Aboriginal cultural heritage due diligence  
assessment report



# **Aboriginal Cultural Heritage Due Diligence Assessment Report**

## **Barham-Koondrook Bridge Restoration Work**



# Proposed Barham-Koondrook Bridge Upgrade Aboriginal Cultural Heritage Due Diligence Assessment Report



Report Commissioned by: NGH Environmental

Name of Proponent: NSW Roads and Maritime Services

Name of Cultural Heritage Advisor: Joanne Bell

Name of Authors: Ashley Edwards & Joanne Bell

Date of Completion: 24 September 2015

Jo Bell Heritage Services Pty. Ltd.  
PO Box 248 Euroa VIC 3666  
T: +61 3 5798 1341 M: 0427 505 335  
ACN: 135 659 915 ABN: 18 135 659 915

## **EXECUTIVE SUMMARY**

This due diligence assessment has been prepared for proposed work to the Barham Bridge over the Murray River at Barham in New South Wales (NSW) and Koondrook in Victoria (Vic) (see Map 1).

The proposed work would include rehabilitating the existing timber bridge over the Murray River between Barham and Koondrook, including building new abutments on the Victorian side, replacing timber trusses and installing new piles, pile caps, piers and decking. As part of this work, a temporary bridge would also be built (see Maps 1 and 2).

The proponent carrying out the proposal is the NSW Roads and Maritime Services. The due diligence assessment has been commissioned by NGH Environmental on behalf of the proponent. The project manager is Erwin Budde, Director, NGH Environmental.

The proposal area lies within the boundary of the Moama Local Aboriginal Land Council (MLALC). As representatives of the local Aboriginal people, MLALC was contacted in relation to this assessment. There are currently no Native Title claimant applications before the Native Title Tribunal for the proposal area.

A desktop (background) study and a visual inspection were carried out as part of this due diligence assessment.

The proposal area has not been subject to previous archaeological investigation. There are no previously recorded Aboriginal sites within the impact zone of the bridge work.

No Aboriginal places or objects were identified during the visual inspection.

No areas likely to contain Aboriginal objects/places were identified during the due diligence visual inspection.

Given the results of the due diligence assessment, no further investigation, impact assessment or Aboriginal Heritage Impact Permits (AHIPs) are required.

### **Contingency Arrangements**

In the event that new Aboriginal objects are found during carrying out of the proposal, relevant contingency arrangements, as outlined in this report, must be followed. This applies to both during and after the proposal. These contingency arrangements are set out in Section 10 and include:

- Management and Notification of Aboriginal objects found during the proposal
- Notification of the discovery of skeletal remains during the carrying out of the proposal.

## TABLE OF CONTENTS

EXECUTIVE SUMMARY .....	ii
TABLE OF CONTENTS .....	iii
LIST OF MAPS .....	iv
LIST OF FIGURES.....	iv
LIST OF PLATES.....	iv
Acknowledgements .....	v
1.0 INTRODUCTION.....	1
1.1 Proposal Description and Extent of Proposal Area .....	1
1.2 Proponent.....	6
1.3 Cultural Heritage Advisor.....	6
2.0 LIKELY IMPACT OF THE PROPOSED PROPOSAL .....	6
3.0 DOCUMENTATION OF CONSULTATION .....	9
4.0 AHIMS DATABASE & LANDSCAPE FEATURES .....	10
4.1 AHIMS Database Basic Search.....	10
4.2 AHIMS Database Extensive Search .....	10
4.3 Landscape Features or Landforms Likely to Contain Aboriginal Objects in the Proposal Area .....	12
5.0 AVOIDANCE OF LANDSCAPE FEATURES .....	12
6.1 Geology, Landforms and Geomorphology .....	13
6.2 Climate and Hydrology .....	15
6.3 Vegetation .....	15
6.4 Aboriginal History .....	15
6.5 Archaeological Reports .....	18
6.6 Aboriginal Sites and Objects.....	19
6.7 Land Use History .....	19
6.8 Site Prediction Model.....	28
7.0 VISUAL INSPECTION.....	29
7.1 Methodology.....	29
7.2 Results .....	29
7.3 Summary.....	29
8.0 FURTHER INVESTIGATION & IMPACT ASSESSMENT .....	38
9.0 RECOMMENDATIONS .....	38
10.0 CONTINGENCY PLANS .....	39
10.1 Management and Notification of Aboriginal Objects found during the Proposal.....	39
10.1.1 Protocols for handling sensitive information .....	40
10.2 Notification of the Discovery of Skeletal Remains during the carrying out of the Proposal .....	40
11.0 REFERENCES.....	41
12.0 APPENDICES .....	44
Appendix 1: Qualifications of Cultural Heritage Advisor .....	45
Appendix 2: Aboriginal Stakeholder Cultural Heritage Survey Report.....	47
Appendix 3: AHIMS Basic Search .....	57
Appendix 4: AHIMS Extensive Search.....	59
Appendix 5: Glossary .....	62

## LIST OF MAPS

Map 1: Location of the Proposal Area (LGA: Wakool Shire) .....	2
Map 2: Overview of the Proposal Area .....	3
Map 3: AHIMS Extensive Search Area (5km radius of the Proposal Area) .....	11

## LIST OF FIGURES

Figure 1: Concept Plan (source: Roads and Maritime) .....	4
Figure 2: Further Options for Temporary Bridge (source: Peter Stewart Consulting 2014).....	5
Figure 3: Crane Set up Plan (source: Peter Stewart Consulting 2014) .....	8
Figure 4: Geology of the Activiy Area (source: Offenberg 1969).....	14
Figure 5: Aboriginal Language Areas (source: Clark 2005) .....	16
Figure 6: Parish of Barham, County of Wakool 1893 (source: NSW Department of Lands).....	21
Figure 8: 1945 Aerial Photograph (source: Land Victoria) .....	23
Figure 9: 1967 Aerial Photograph (source: Land Victoria) .....	24
Figure 10: Bridge over the Murray River at Barham.....	25
(source: Barham-Koondrook Historical Society 2004) .....	25
Figure 11: Punt over the Murray River at Barham .....	25
(source: Barham Historical Research Group 1993) .....	25
Figure 12: Construction of the Barham-Koondrook Bridge, 1903.....	26
(source: Barham-Koondrook Historical Society 2004) .....	26
Figure 13: Construction of the Barham-Koondrook Bridge, 1904.....	27
(source: Barham-Koondrook Historical Society 2004) .....	27
Figure 14: Construction of the Barham-Koondrook Bridge, 1904.....	28
(source: Barham-Koondrook Historical Society 2004) .....	28

## LIST OF PLATES

Plate 1: Along the river, near the bowling club, facing 124° .....	31
(Photo: B. Grinter 12/12/2014) .....	31
Plate 2: Good ground surface visibility on riverbank (Photo: B. Grinter 12/12/2014)	31
Plate 3: Drain near the riverbank, west of the bridge, facing 110° (Photo: B. Grinter 12/12/2014).....	32
Plate 4: Riverbank east of the Barham Bridge, facing 90° (Photo: B. Grinter 12/12/2014).....	32
Plate 5: Disturbance east of the Barham Bridge, facing 280° .....	33
(Photo: B. Grinter 12/12/2014) .....	33
Plate 6: Pier east of the Barham Bridge, facing 128° .....	33
(Photo: B. Grinter 12/12/2014) .....	33
Plate 7: Retaining walls east of the Barham Bridge, facing 125° .....	34
(Photo: B. Grinter 12/12/2014) .....	34
Plate 8: Drain disturbance, facing 340° (Photo: B. Grinter 12/12/2014) .....	34
Plate 9: Old punt crossing, facing 190° (Photo: B. Grinter 12/12/2014) .....	35

Plate 10: Caravan park, facing 78° (Photo: B. Grinter 12/12/2014).....	35
Plate 11: Old school site on Thule Road, facing 0° (Photo: B. Grinter 12/12/2014)..	36
Plate 12: Vacant lot on corner of Thule & Gonn Streets, facing 140° .....	36
(Photo: B. Grinter 12/12/2014) .....	36
Plate 13: Leased area on Parkman Avenue, facing 345° (Photo: B. Grinter 12/12/2014).....	37

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James Bamblett	Cultural Heritage Officer, MLALC
Andrew Whitton	Aboriginal Community Heritage Advisor, Roads and Maritime
Gemma Barber	Senior Environmental Consultant, NGH Environmental
Erwin Budde	Director, NGH Environmental

The following JBHS staff participated in the completion of the project:

Jo Bell	Archaeologist & Director - Background, Fieldwork, Meetings
Bridget Grinter	Archaeologist - Background, Fieldwork
Ashley Edwards	Archaeologist - Reporting, Mapping

### Abbreviations in above text

JBHS	Jo Bell Heritage Services
MLALC	Moama Local Aboriginal Land Council
Roads and Maritime	Roads and Maritime Services

## 1.0 INTRODUCTION

### 1.1 Proposal Description and Extent of Proposal Area

This due diligence assessment has been prepared for proposed work to the Barham Bridge over the Murray River between Barham in the Southern Riverina of New South Wales (NSW) and Koondrook in Victoria (Vic) (see Maps 1 and 2).

The proposed work would include rehabilitating the existing timber bridge over the Murray River at Barham, including construction of new abutments on the Victorian side, replacing timber trusses and installing new piles, pile caps, piers and decking (see Figure 1). As part of this work, a temporary bridge would also be constructed (see Map 2 and Figure 2 for further options).

The proposed proposal area is located in the Local Government Area of the Wakool Shire. The proposed proposal area is located within the following planning zones: Zone RE1 (Public Recreation), Zone RE2 (Private Recreation), Zone R1 (General Residential) and Zone IN1 (General Industrial). The proposed proposal area is located within the Parish of Barham in the County of Wakool in New South Wales. The proposed proposal area is located within road reserve and a number of lots including:

#### Murray River Bank

- Part Lot 42 DP802896
- Lot 3 DP818990
- Part Lot 4 DP818990
- Part Lot 1 DP818990
- Lot 153 DP820138
- Lot 2 DP818990
- Part Lot 7014 DP1025053
- Part Lot 107 DP756508
- Part Lot 159 DP1049554
- Lot 2 Section 26 DP758053
- Lot 7012 DP1002566
- Part Lot 1 DP1032760
- Noorong Street Road Reserve
- Murray St Road Reserve
- Thule St Road Reserve.

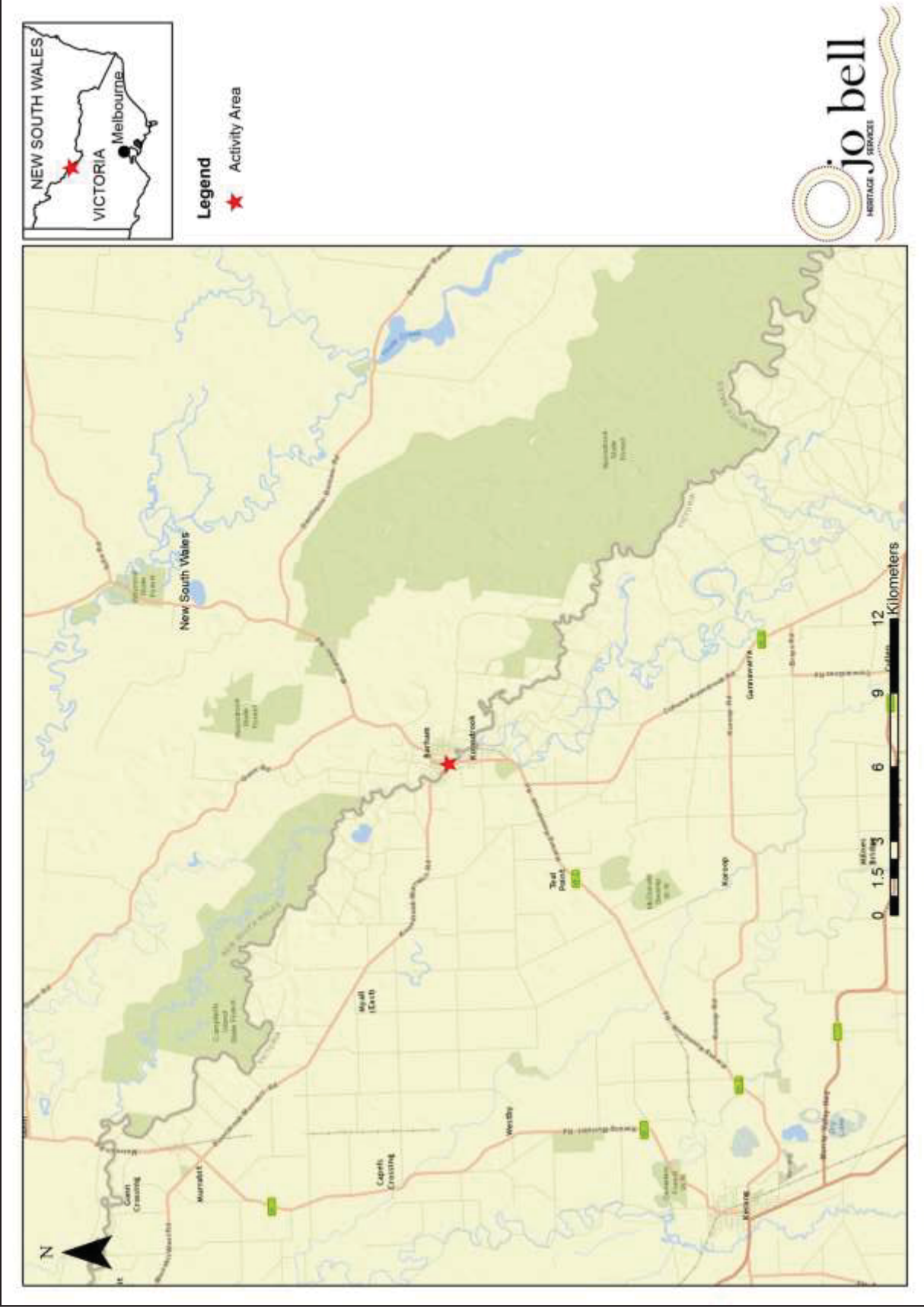
#### Truss and Deck Assembly Areas

- Lot 3 Section 16 DP758053
- Lot 4 Section 16 DP758053
- Lot 1 DP253137
- Lot 10 Section 23 DP758053
- Lot 1 DP582616.

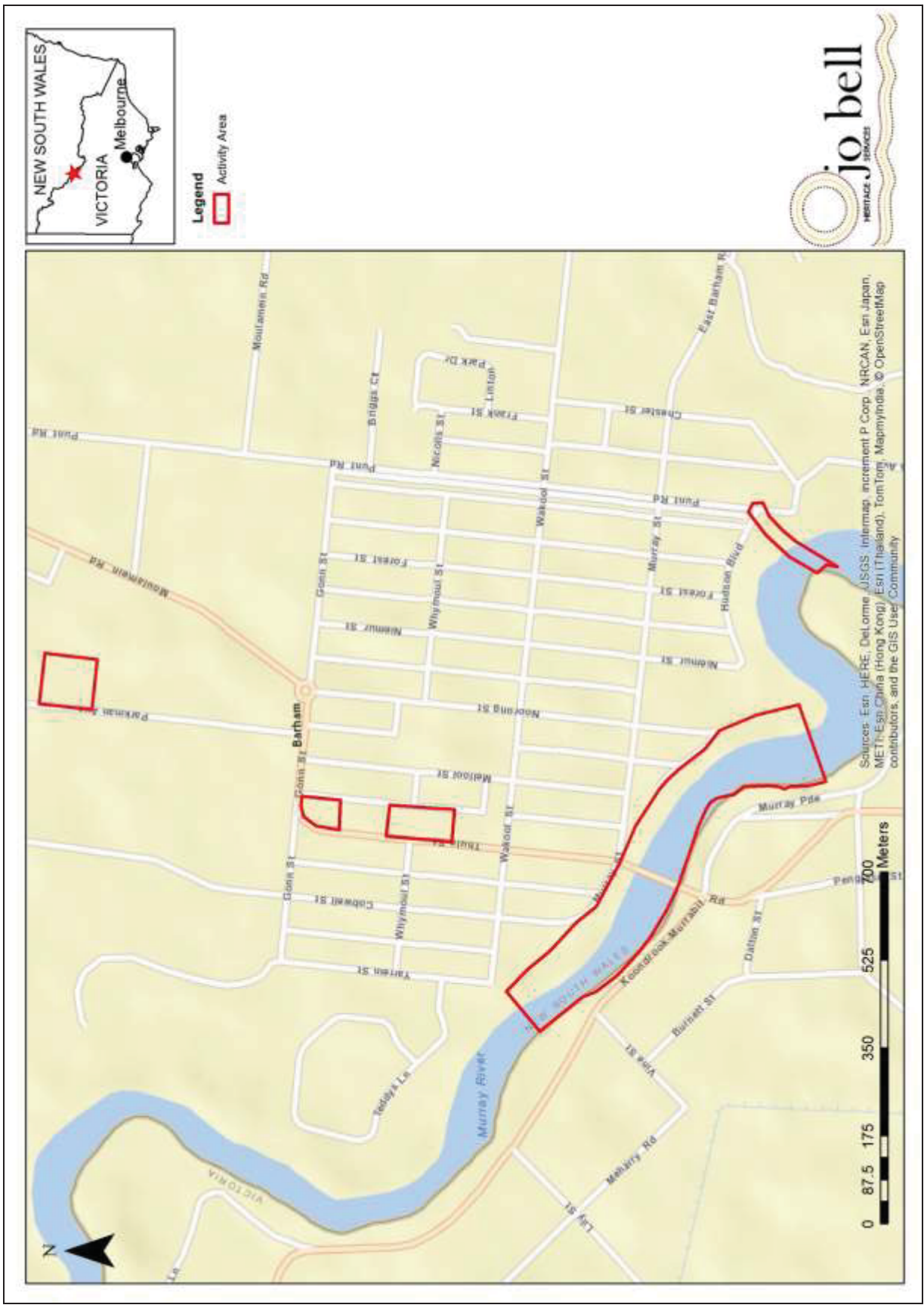
#### Storage Block Compound

- Lot 47 DP756508
- Lot 94 DP756508
- Lot 115 DP756508.





Map 1: Location of the Proposal Area (LGA: Wakool Shire)



Map 2: Overview of the Proposal Area



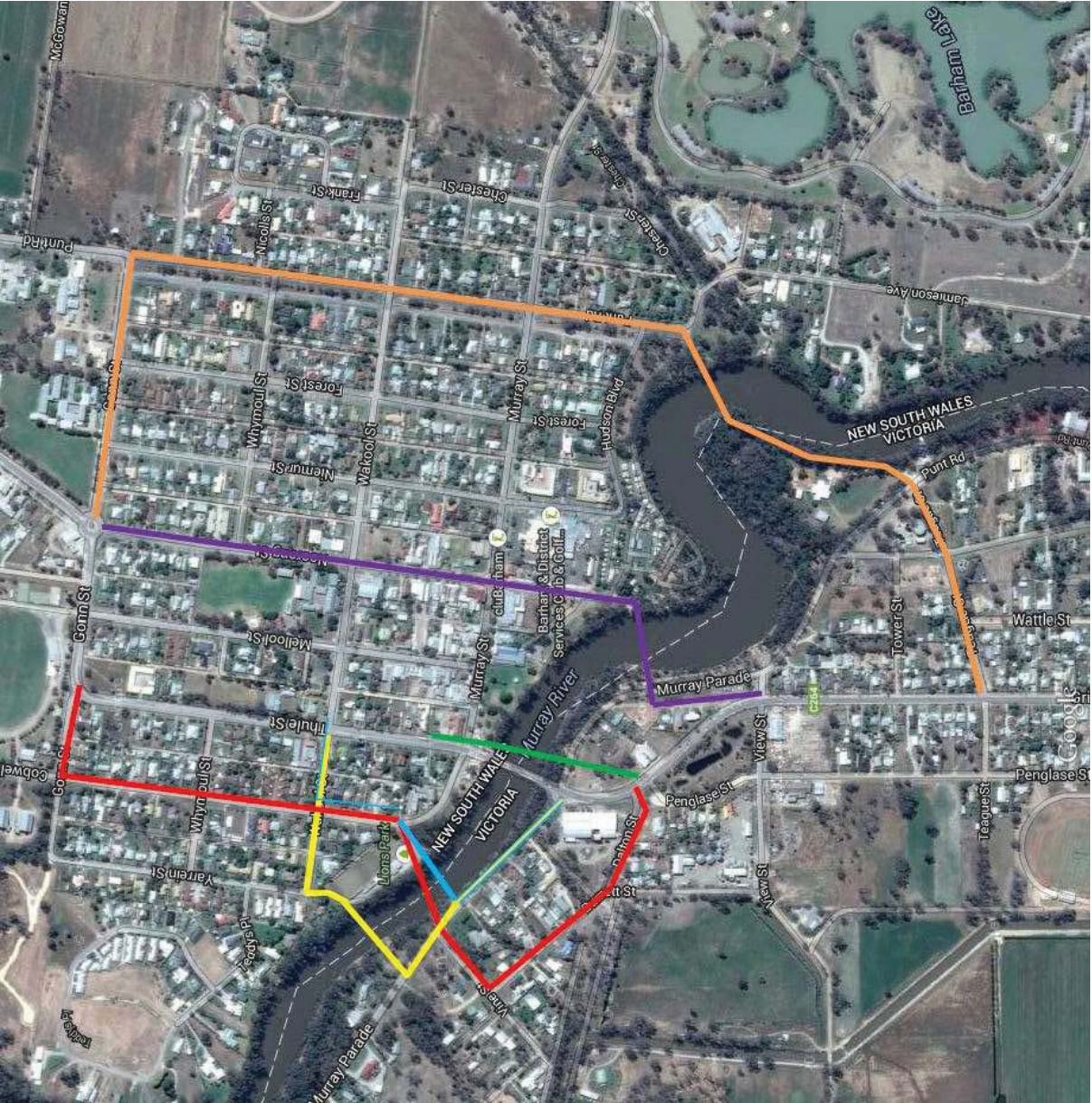


Figure 2: Further Options for Temporary Bridge (source: Peter Stewart Consulting)

## 1.2 Proponent

The proponent undertaking the proposal is NSW Roads and Maritime Services. The due diligence assessment has been commissioned by NGH Environmental on behalf of the proponent. The project manager is Erwin Budde, Director, NGH Environmental.

## 1.3 Cultural Heritage Advisor

The cultural heritage advisor commissioned to undertake this due diligence is Joanne Bell, Director, Jo Bell Heritage Services Pty. Ltd. The author of this report is Ashley Edwards. Jo Bell and Bridget Grinter carried out the site inspection. Jo has a BA (Hons) in Archaeology and over fifteen years professional experience in the cultural heritage industry, including the preparation of cultural heritage management plans. Ashley has a BArch (Hons), an MA in Archaeology and over nine years experience in the cultural heritage industry. Bridget has a BA (Hons) Archaeology and over six years of experience in the cultural heritage industry (see Appendix 1).

## 2.0 LIKELY IMPACT OF THE PROPOSED PROPOSAL

Step 1 of the Due Diligence process (DECCW 2010:11) is to consider 'will the proposal disturb the ground surface or any culturally modified trees?' If a proposal will disturb the ground surface there is a higher likelihood that Aboriginal objects would be harmed.

As identified in Section 1.1, the proposed proposal would include:

- The storage of materials and plant at the leased storage block compound on Parkman Ave. This is unlikely to cause any ground disturbance since it is an existing gravelled storage yard
- The former school site on Thule Street and the corner lot of Gonn & Thule Streets were both surveyed as options for truss and deck assembly areas. No natural ground surface exists at either property and the assembly work would not disturb the ground surface. If these sites were to be used the impact on potential Aboriginal cultural heritage would be nil.
- A temporary Mabey bridge is proposed while work on the main bridge is undertaken. The location of this temporary bridge would be based on the location of any Aboriginal cultural heritage values identified and through consultation with the local community. The impact of constructing the temporary bridge is minimal but may include a concrete pad on both banks
- Bridge maintenance would include the following:
  - Repair corroded sections of pier bracing on two central piers
  - Rehabilitate and strengthen the existing truss spans
  - Replace existing cross girders
  - Install new steel traffic barrier railing
  - Install new pedestrian walkway
  - Install new decking
  - Install new steel/concrete approach span on the Victorian side
  - Install new channel scour protection on the Victorian side

- Rock beaching on both banks
  - Removal of existing timber abutment on Victorian side and replacement with new concrete abutment.
- While the majority of the work would be to the bridge itself and so would have no impact to the ground surface and hence, to any Aboriginal cultural heritage, there would be some impact to the riverbanks. These include:
    - Ground clearance, excavation and levelling for the pouring of concrete pads from which to build the Mabey bridge
    - Removal of trees affected by the work would have a variable impact on the ground surface and sub-surface deposits associated with the banks depending on the size of the trees to be removed
    - Locations for cranes used during work (Figure 3).

According to the NSW *Due Diligence Code of Practice* (DECCW 2010:11), if the proposal will disturb the ground surface then Step 2a of the Due Diligence process is required.

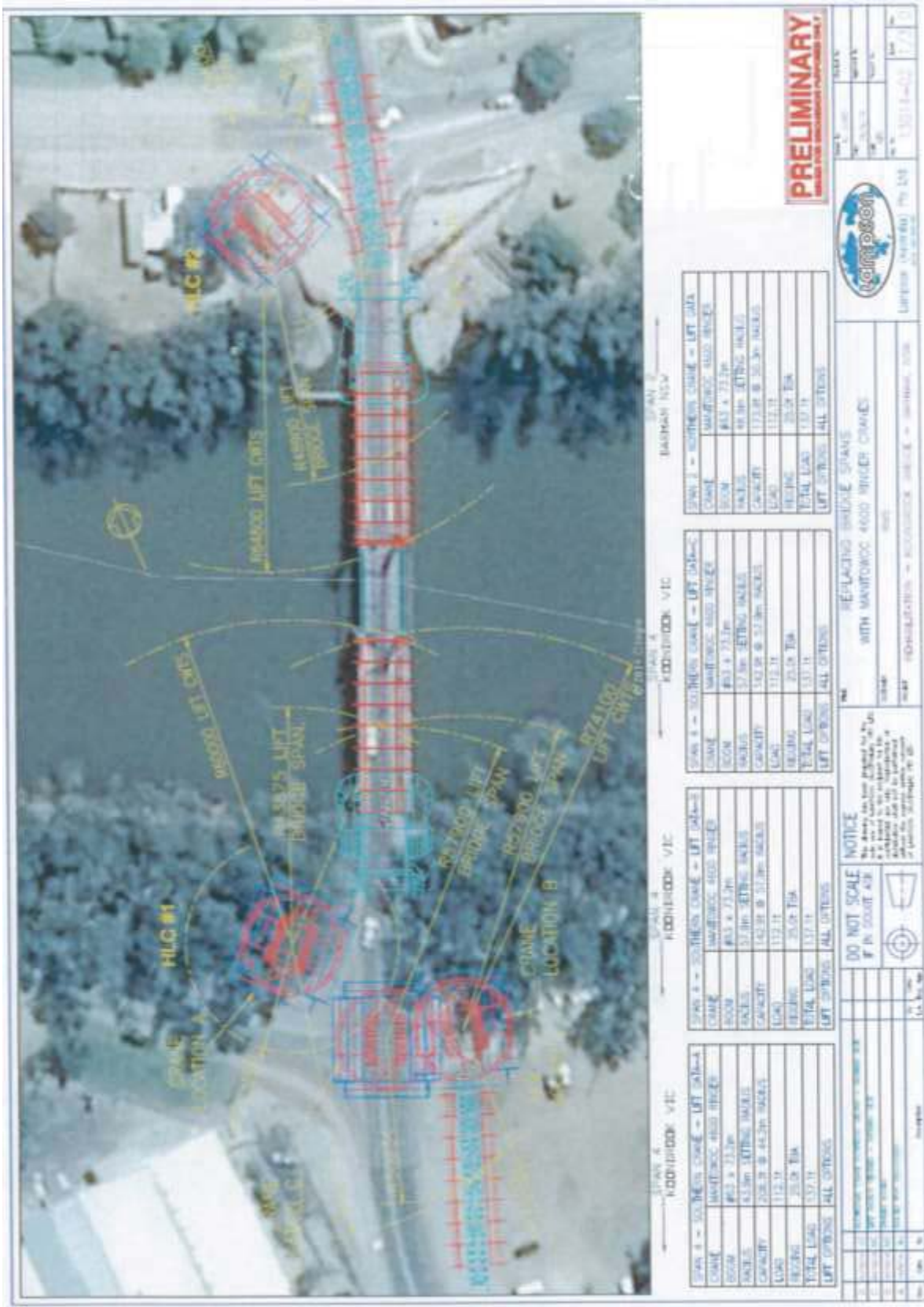


Figure 3: Crane Set up Plan (source: Peter Stewart Consulting 2014)

### **3.0 DOCUMENTATION OF CONSULTATION**

Consultation with the Aboriginal community is not a formal requirement of the Office of Environment and Heritage (OEH) Due Diligence process. However, Roads and Maritime has developed its own internal procedure for Aboriginal cultural heritage consultation and investigation which complies with state government requirements, and which provides for a consultation process to be carried out at this stage. Specifically, the Roads and Maritime guidelines provide for a consultation process with the Native Title Claimant Group for the proposed proposal area where one is established and recognised, and the Local Aboriginal Land Council (LALC) where one is not.

There are currently no Native Title claimant applications before the Native Title Tribunal for the proposed proposal area. The proposed proposal area lies within the boundary of the Moama Local Aboriginal Land Council (MLALC). As representatives of the local Aboriginal people, MLALC was contacted in relation to this assessment.

Andrew Whitton, Aboriginal Cultural Heritage Officer with Roads and Maritime carried out the consultation process with MLALC and its representatives on behalf of the consultants.

Representatives from MLALC participated in the site inspection. A copy of MLALC's Aboriginal stakeholder cultural heritage survey report is contained in Appendix 2.

A copy of this report will be forwarded to MLALC for their records.



## 4.0 AHIMS DATABASE & LANDSCAPE FEATURES

Steps 2a and 2b of the NSW *Due Diligence Code of Practice* (DECCW 2010) require consideration of whether Aboriginal objects have been recorded on the Aboriginal Heritage Information Management System (AHIMS) and the likelihood that Aboriginal objects are present in the proposed proposal area, given the landscape features of the area.

### 4.1 AHIMS Database Basic Search

Step 2a of the Due Diligence process is to search the AHIMS database to identify any Aboriginal sites that have been recorded in or near the proposal area.

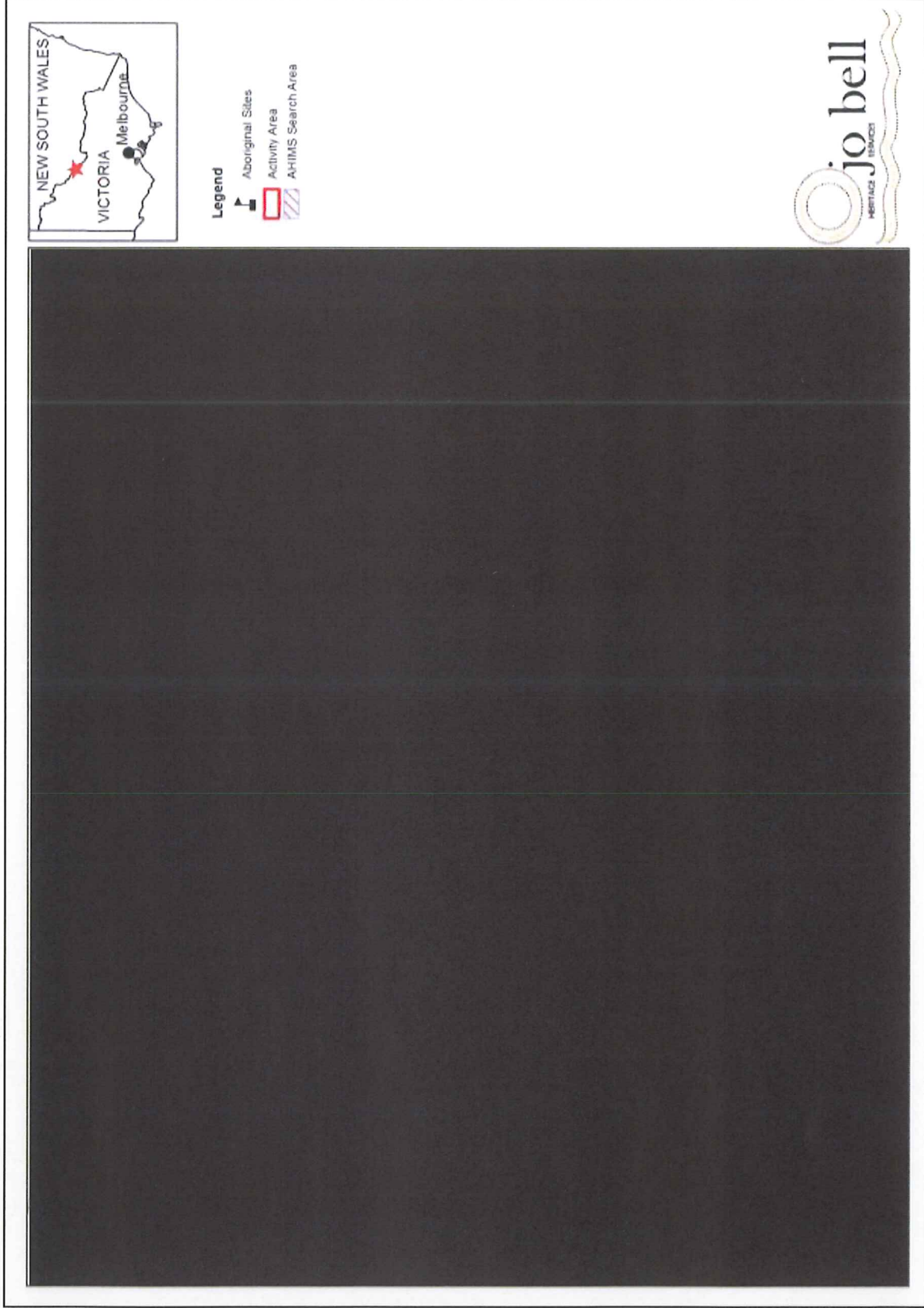
A Basic Search of the Aboriginal Heritage Information Management System (AHIMS) was conducted by NGH Environmental as a part of the *Barham Bridge Rehabilitation: Review of Environmental Factors* in 2012. The following is taken from that report (NGH Environmental 2012:14):

*A search of the Aboriginal Heritage Information Systems (AHIMS) was requested on the 4 August 2009 with the search area focusing on a 5km radius around the bridge. The search identified 17 Aboriginal objects and Aboriginal places that have been previously recorded within this area. The majority of these sites are from irrigated land located to the west of the Barham Bridge within Victoria, the closest of these records being located approximately 3km from the bridge. Two sites were also identified to the north of the bridge along the Murray River and along North Barham Road. Both of these sites are located approximately 3.5 kilometres from the bridge.*

An updated Basic Search of AHIMS was conducted on 17 December 2014 by Ashley Edwards (see Appendix 3). The results indicated that there were 26 Aboriginal places or sites within the general area.

### 4.2 AHIMS Database Extensive Search

An Extensive Search of the Aboriginal Heritage Information Management System (AHIMS) was conducted on 17 December 2014 by Ashley Edwards (see Appendix 4). The area in a five-kilometre radius around the proposal area was used for this search. The results indicated that there were two Aboriginal sites or objects within the search area (see Map 3). These sites are discussed in detail in Section 6.6.



Map 3: AHIMS Extensive Search Area (5km radius of the Proposal Area)

### 4.3 Landscape Features or Landforms Likely to Contain Aboriginal Objects in the Proposal Area

Step 2b in the Due Diligence process requires a consideration of the landscape features or landforms in the proposal area and whether they may indicate the presence of Aboriginal objects.

Aboriginal objects are often associated with particular landscape features or landforms as a result of Aboriginal people's use of those features in their everyday lives and for traditional cultural activities. Landscape features that are considered as likely to contain Aboriginal places or sites include:

- Watercourses (or within 200 m of)
- A sand dune system
- A ridge top, ridge line or headland;
- A cliff face (or within 200 m of)
- A cave, rock shelter, or a cave mouth (or within 20 m of).

The NSW *Due Diligence Code of Practice* (DECCW 2010) specifies that if the proposal area contains any of the above landforms and is also on land that is not disturbed land then the Due Diligence must proceed to Step 3.

The proposal area is situated across and next to the Murray River and so contains a landscape feature that is likely to contain Aboriginal objects. While the proposal area has been subject to some disturbance from construction of the existing roads and agricultural proposal, it is unclear how much of the proposal area has been disturbed and to what extent. As a result Step 3 in the Due Diligence process is required.

## 5.0 AVOIDANCE OF LANDSCAPE FEATURES

Step 3 is a consideration of whether disturbance to the landscape features that are likely to contain Aboriginal objects can be avoided.

The NSW *Due Diligence Code of Practice* (DECCW 2010:12) specifies that:

'where as a result of Step 2b you have concluded that the landscape features listed are present, you need to decide whether you can move your proposal away from the area with the landscape feature(s) so as to avoid disturbing any Aboriginal objects which may be present'.

Given the nature of the proposal there is no scope to amend the proposal area to avoid the landscape features likely to contain Aboriginal objects.

The NSW *Due Diligence Code of Practice* (DECCW 2010:12) specifies that when disturbance of the landscape feature(s) cannot be avoided the due diligence must proceed to Step 4.

## 6.0 DESKTOP ASSESSMENT

Step 4 of the Due Diligence process is a desktop assessment and a visual inspection. This section of the plan sets out the methodology and results of the desktop assessment.

The aim of a desktop assessment is to examine and collate the available information relating to the Aboriginal history and land use of the proposal area and the general area in which it is located. This information, together with the results of the visual inspection would be used to produce a predictive model about the likelihood of Aboriginal objects occurring in the proposal area. This predictive model is then used to determine the requirement for further steps in the Due Diligence process.

The following section of the report provides the results of the desktop assessment.

### 6.1 Geology, Landforms and Geomorphology

The proposal area lies within the Murray Fans sub-region of the Riverina Bioregion (NPWS 2003). Landforms in the proposed area include Murray channels and floodplains (NPWS 2003:97). Soils in the Murray Fans sub-region are typically red brown earths, grey clays and deep sands (NPWS 2003:97).

The proposal area is located on Quaternary (Holocene) aged unnamed alluvium geology (see Figure 4). This geology typically comprises fluvial and lacustrine clay, sand and sandy clay located on flood and soil plain areas (Offenberg 1969). The Murray River has a wide floodplain and has been meandering across it over the last 10,000 years (Cochrane *et. al.* 1995:76-7).

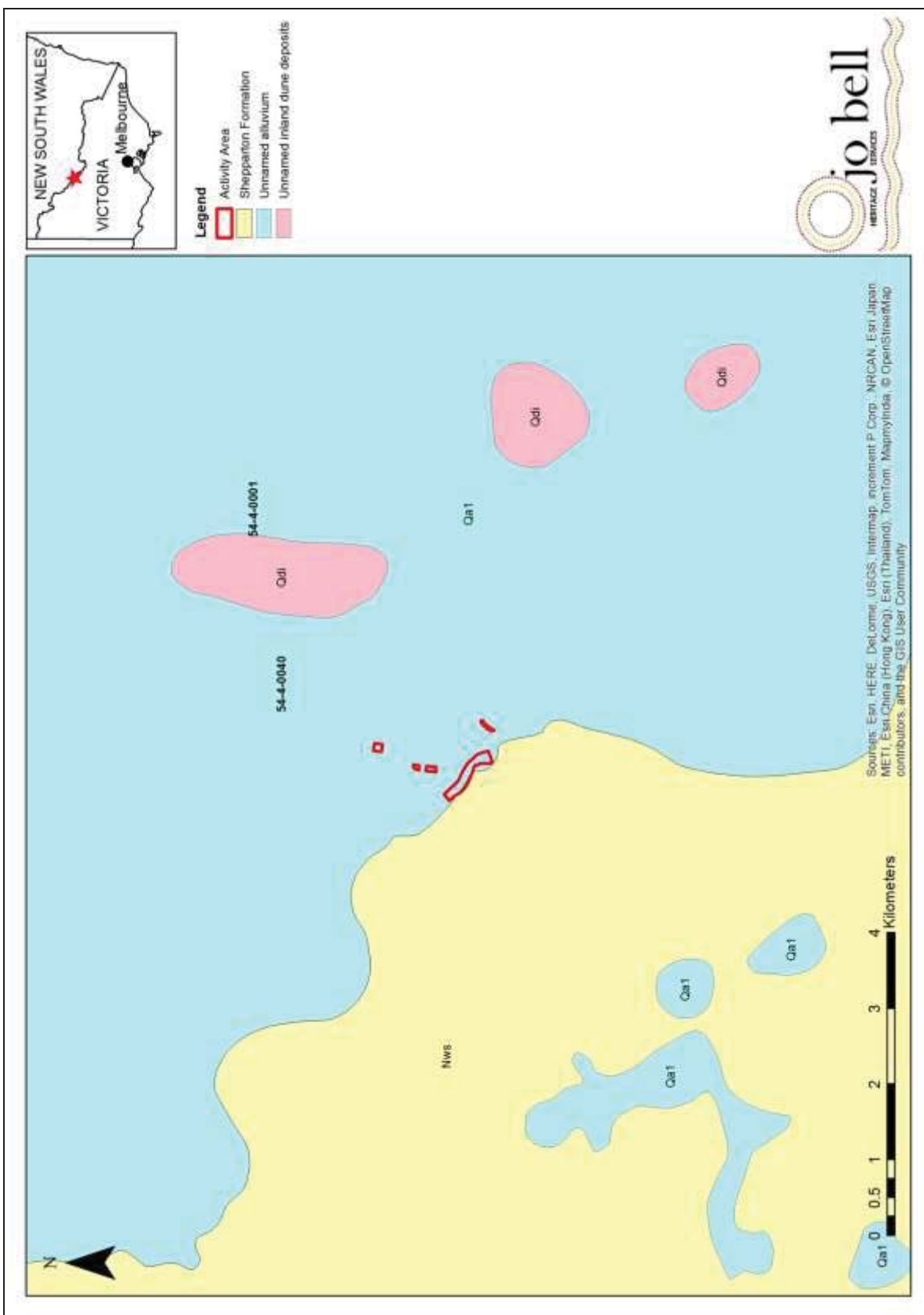


Figure 4: Geology of the Activity Area (source: Offenberg 1969)

## 6.2 Climate and Hydrology

The climate of the general area is persistently dry semi-arid and characterised by hot summers and cool winters with annual rainfall of 238-617mm (NPWS 2003:91).

Maximum (average) temperatures in summer are warm (30.6°C to 33.7°C). The winters are cool to cold (2.2°C to 4.6°C). Overnight minimums average around 3°C (NPWS 2003:91).

The proposed area is situated across and next to the Murray River.

## 6.3 Vegetation

The landforms of the proposal area are characterised by extensive River Red Gum (*Eucalyptus camaldulensis*) forests with River Cooba (*Acacia stenophylla*) on channels and low floodplains (NPWS 2003:97).

On the sandy soils of the Murray floodplain, the River Red Gum understory would have been composed of herbaceous perennial, annual and post-flooding ephemeral species (NPWS 2003:92).

The vast majority of native vegetation in the proposal area has been cleared.

## 6.4 Aboriginal History

### Ethnography and Languages

According to Clark's 2005 mapping, the proposal area lies within the *Barababaraba* language group, which forms a part of the West Kulin language area (see Figure 5).

Clark (1990) lists over 50 variations of the language name, which is derived from the word 'no'. The Barababaraba language was nearly identical to the neighbouring language, *Wembawemba* (93%).

The *Baraparapa* language was spoken over about 9,400 square kilometres (Tindale 1974). According to Tindale (1974:191) the *Baraparapa* area was situated 'on southern tributaries of the Murrumbidgee River from above Hay in New South Wales, to Kerang in Victoria, at Cohuna, Gunbower, Brassi, Conargo, and across the river from Carrathool'.

According to Clark (1990:387), the primary sources for the reconstruction of Barapa Barapa clans include G.A. Robinson, Chief Protector of Aborigines (Journal and Papers), E.S. Parker, Assistant Protector of Aborigines (Journal, Correspondence and Reports), A.M. Campbell (Correspondence), W. Thomas (Papers), and Howitt (Papers).

According to Clark, Barapa Barapa consisted of eight clans ranging across the larger language group area, which was situated across both Victoria and New South Wales.

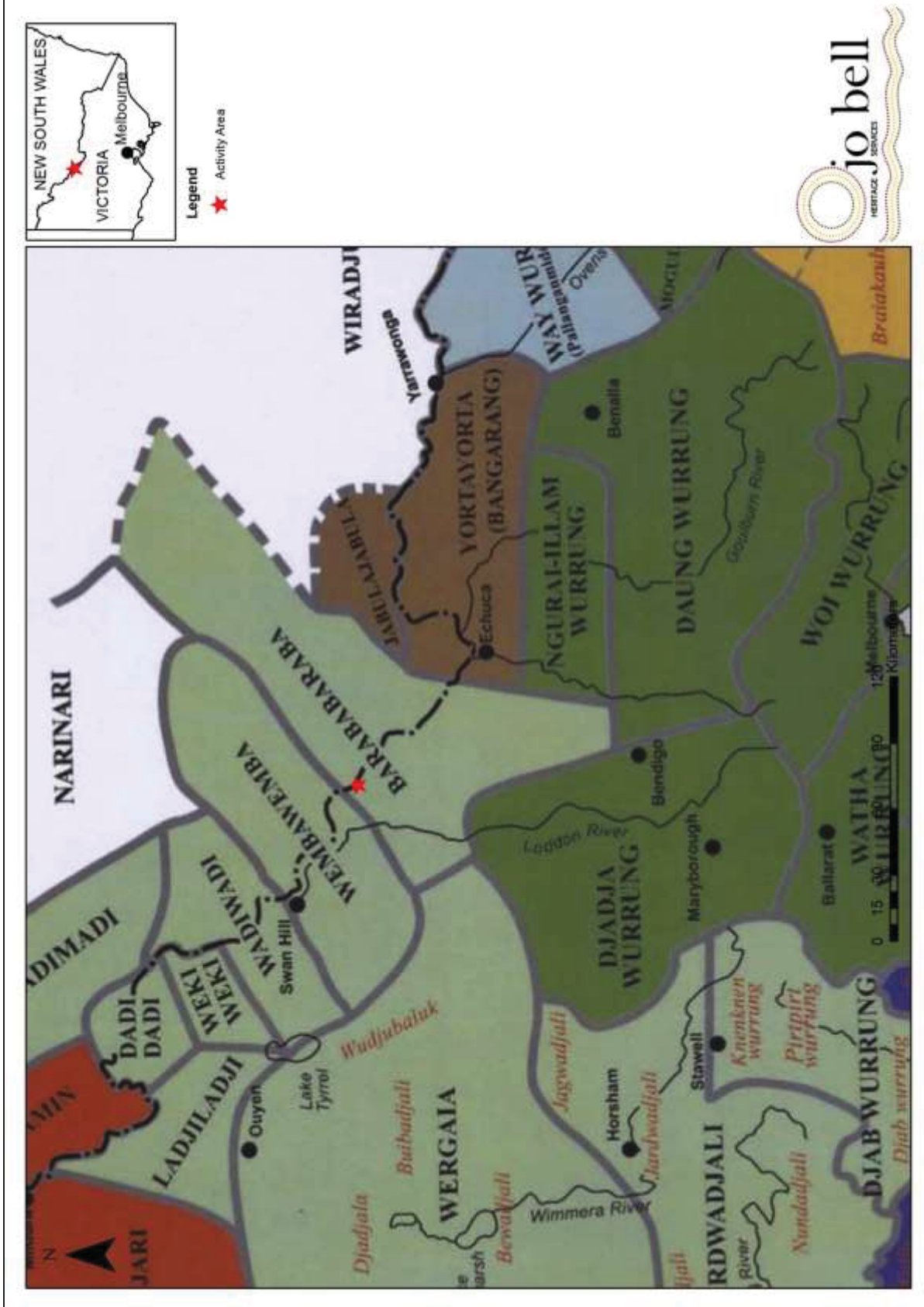


Figure 5: Aboriginal Language Areas (source: Clark 2005)

The *Mially Water* clan was situated around Koondrook/Barham. Information about the clan comes from A. M. Campbell (Bride 1983:350 in Clark 1990:391) of Gannawarra Station.

In 1846 Mr Campbell told G. A. Robinson that the Aboriginal people were good workers. Campbell also told Robinson that the first thing that he did when he arrived was to make a sign of a man on a tree and fire at it with a rifle in front of 'the natives'. Robinson also noted that 'native women were allowed at Campbell's'.

In 1853 Campbell noted that the 'natives' were friendly and that he found them 'inoffensive and obedient'. According to Campbell, the clan population was 32 at that time (Bride 1983:350 in Clark 1990:391).

### Economy

Barapa Barapa economy would have focused very much on the major rivers (such as the Murray), larger creeks and their associated resources.

In terms of subsistence, irrespective of inferences of higher populations along the major river systems, people remained hunter-gatherers, exploiting the natural resources available in the area and using trade networks to obtain those items that were not available locally.

Locally sourced raw materials for making flaked stone tools would have included the high quality crystal quartz and fine-grained volcanic material from Mt. Terrick, quartz and quartzite from Mt. Hope and Pyramid Hill in Victoria.

The generally open plains surrounding the proposal area would have supported such animals as kangaroo, emu and wallaby, which would have been hunted; the river and creek systems of the proposal area and the larger geographic region would have provided habitat for birds, reptiles and fish, all of which would also have been caught and utilised by people living in the area. Terrestrial plant resources such as the River Red Gum, herbs and grasses; and aquatic plant resources such as Cumbungi all would have provided specialised food or utilitarian items.

### Contact, Conflict & Disease

Relations between the Aboriginal people and the incoming squatters were often violent however it was disease that caused the greatest decline in the population of the local Aboriginal people. By the 1830s, diseases such as influenza, smallpox and syphilis had ravaged the Aboriginal communities of the Riverina (HO and DUAP 1996 in NPWS 2003:95).

### Missions and Reserves

In 1883 the Aborigines Protection Board of New South Wales (the Board) was established to manage reserves and control the estimated 9,000 Aboriginal people living at the time. According to Thinee & Bradford (1998), during the early years there was no legislation to authorise the actions of the Board, the churches, or private landholders in their attempts to 'centralise Aboriginal people onto missions and reserves and begin the removal of children from Aboriginal families'.

Missions were compounds established by churches as a 'sanctuary' to protect Aboriginal people from mistreatment by European settlers. They were institutions that 'arguably' had a detrimental influence on the people that they were supposed to protect (Thinee & Bradford 1998). The Board controlled these missions.



Reserves were established by the Government, although they had the same purpose as missions (Thinee & Bradford 1998). There were only ten actual missions established in New South Wales (Thinee & Bradford 1998).

According to Thinee & Bradford (1998), there were over 180 reserves in New South Wales by 1939, most of which were small with housing that consisted of 'humpies made from iron roofing'. Reserves that were established near Barham included Balranald, Moama, Moulamein, Calino and several near Deniliquin (Thinee & Bradford 1998). Many reserves were revoked between the 1930s and 1960s, including the one at Balranald (Thinee & Bradford 1998).

Today the Aboriginal people of the area are represented by the Moama Local Aboriginal Land Council.

## 6.5 Archaeological Reports

The AHIMS database was searched for existing archaeological investigation reports that related to the proposal area. The results indicate that the proposal area has not been subject to previous archaeological investigation.

### Buchan (1974)

Buchan carried out a survey of a number of areas in the Murray Valley between 1937 and 1974. A total of nearly 200 Aboriginal sites were recorded during the survey including ovens, scarred trees, shell middens, surface campsites, burials, ceremonial sites and an archaeological deposit. The most common sites were ovens and scarred trees, which were found in association with creeks and rivers. It is unclear whether the survey included the proposal area however, no sites were identified in the Barham area.

### Yarkuwa Indigenous Knowledge Centre 2010

A cultural impact assessment of riparian zones on the Murray River at Barham was carried out by the Yarkuwa Indigenous Knowledge Centre Aboriginal Corporation for the River Life Project. The assessment identified an oven mound on high ground on the Murray River floodplain, south of East Barham Road (about 1.7km southeast of the Barham Bridge), however there is no record of the site on AHIMS.

### Navin Officer Heritage Consultants 2010

Navin Officer Heritage Consultants conducted a cultural heritage assessment of the proposed flood enhancement work in the Koondrook–Perricoota Forest between Barham and Moama in 2010. The study area is located east of the Barham Bridge. The assessment identified six sites including one previously identified burial and five additional scarred trees.

### Pardoe 2011

Pardoe documents four burials that were identified during the flood enhancement works in the Koondrook–Perricoota Forest in 2011 (Barham KP Burial 001 to 004). The ancestral remains are of four adults, buried on either side of a small creek. The burials are outside the AHIMS five kilometre search area that was conducted for this assessment.

### Cupper 2011

Cupper documents two additional burials that were identified during the flood enhancement work in the Koondrook–Perricoota Forest in 2011 (BUR-006 & BUR-007). The burials are the BUR-006 site, comprising at least three adults buried within an area measuring around three metres by three metres; and BUR-007 site, a single adult. These burials are also outside the AHIMS five kilometre search area that was conducted for this assessment and are located about seven kilometre east of Barham.

## **6.6 Aboriginal Sites and Objects**

There are two Aboriginal sites located within five kilometres of the existing Barham Bridge.

### Barham, Kanowna (54-4-0001)

Barham, Kanowna (54-4-0001) is an open site situated on a floodplain landform three kilometres north east of the most northern part of the proposal area. The site includes a 10 square metre oven containing ancestral remains (two adults and one child). This site was apparently 'disturbed' by person/s from the University of Sydney. The site was recorded by Thornhill in 1977.

### Eagle Creek Burial, Barham (54-4-0040)

Eagle Creek Burial, Barham (54-4-0040) is an open site situated on a dune 1.25 km north of the proposal area. The site is located within 100 m of Eagle Creek and contains two ancestral burials. The site was recorded in 1992 by Harvey Johnston. The site was originally investigated by Dan Witter in 1992.

An analysis of the sites within the search area suggests that burials are likely to be found in association with floodplains and dune landforms.

## **6.7 Land Use History**

### Squatting Period

In 1843 Edward B. Green acquired 114,656 acres of land between the Wakool and Murray Rivers. Green named the property 'Barham' after his wife's maiden name (Barham Historical Research Group 1993).

A farmer and land agent, William McConnell, obtained an area on the north side of the Murray River opposite Koondrook for the Barham Village, which was gazetted in 1892. Ten years later 320 acres were gazetted as a 'village and suburban area' (Barham Historical Research Group 1993).

The first sale of Crown Land in the new township of Barham took place on 28 July 1893. A second sale was held in December the same year (Barham Historical Research Group 1993).

### Historic Plans

An 1893 parish plan of Barham (County of Wakool) shows the riverbank as undeveloped with the location of a ferry crossing shown upstream of the town (see Figure 6).

Later parish plans from 1924 and 1939 show the growing town and the addition of the lift span Barham-Koondrook Bridge (see Figure 7).

### Aerial Photography

Aerial photography from 1945 shows the proposal area as mostly cleared and vacant land with the exception of the tree lined Murray River bank (see Figure 8). Aerial photography from 1967 shows that a number of structures have been built both north of the river and along the riverbank (see Figure 9). Another photograph taken in 1993 shows the bridge from the NSW side of the river (Figure 10).





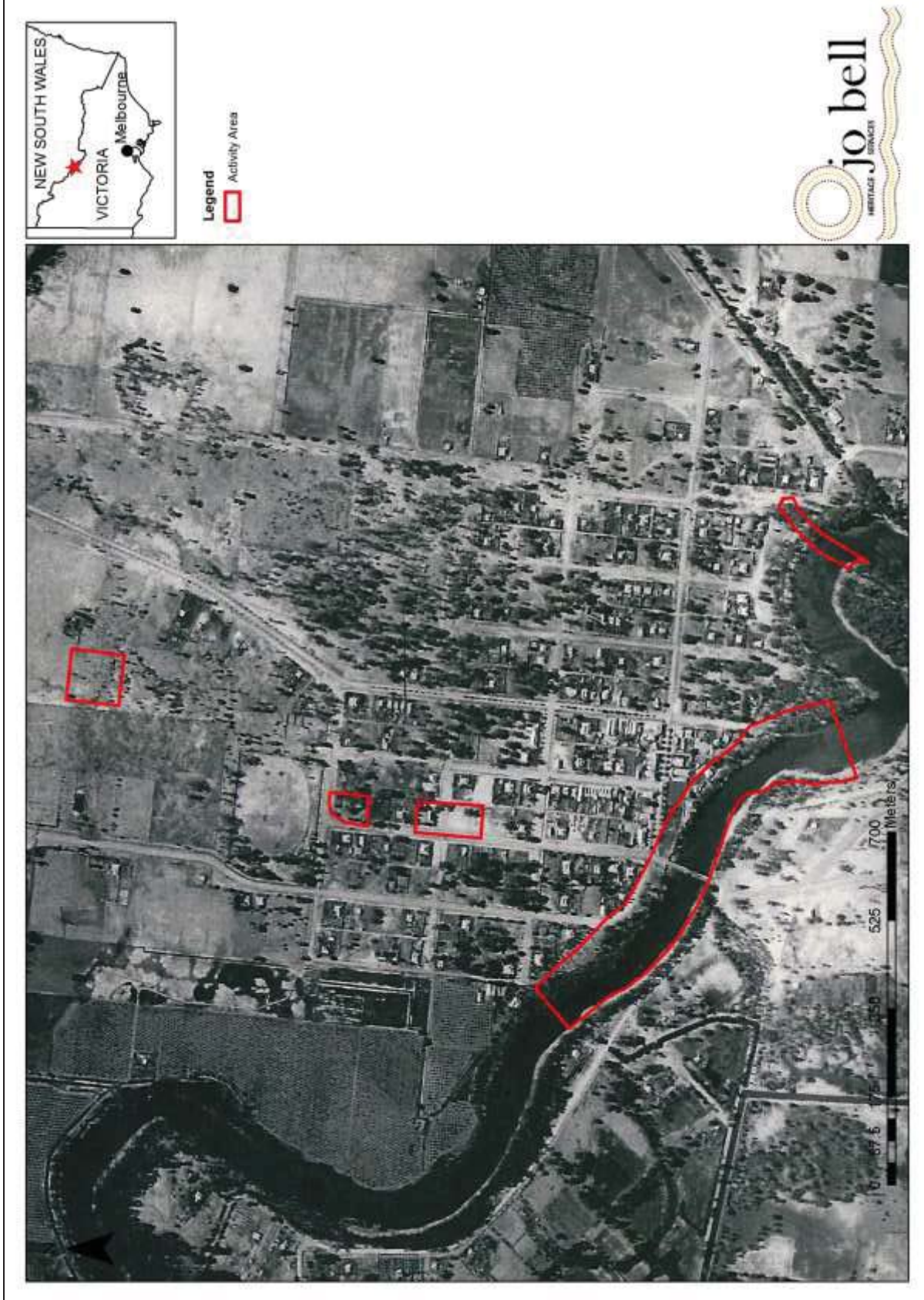


Figure 8: 1945 Aerial Photograph (source: Land Victoria)

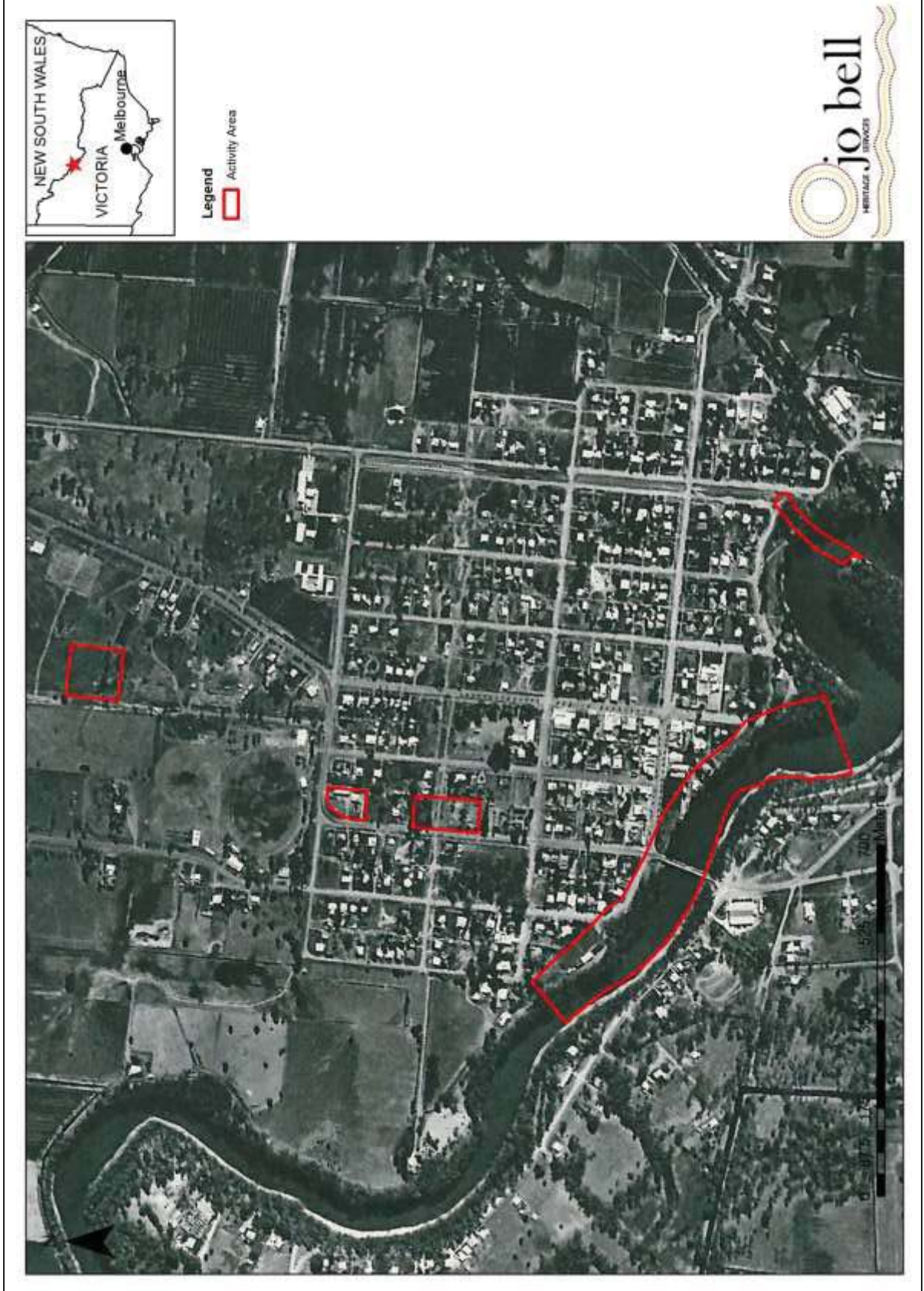


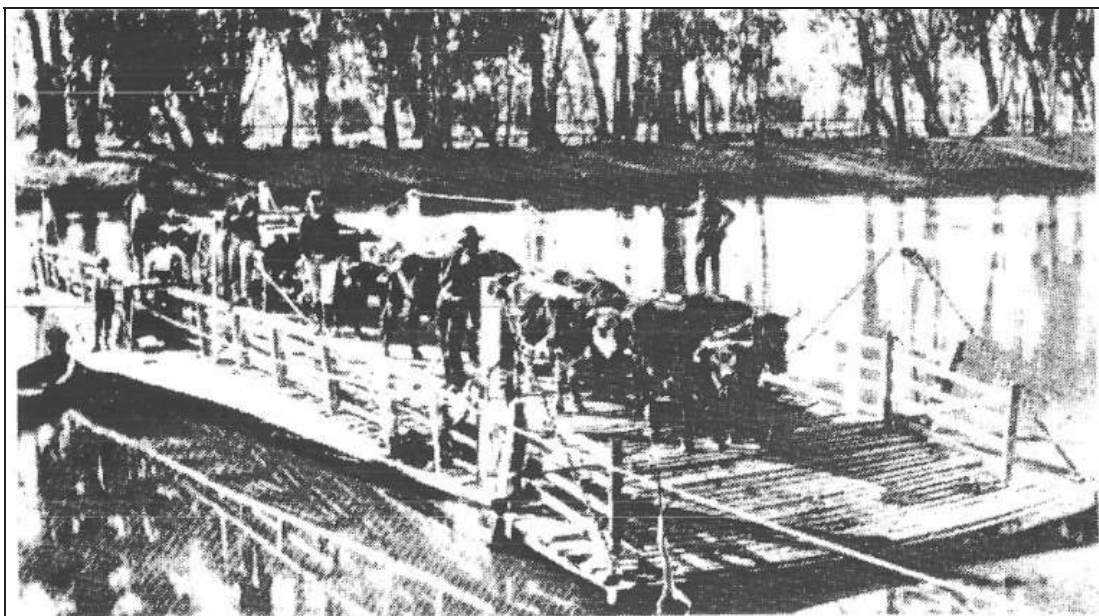
Figure 9: 1967 Aerial Photograph (source: Land Victoria)



**Figure 10: Bridge over the Murray River at Barham  
(source: Barham-Koondrook Historical Society 2004)**

Barham-Koondrook Bridge

A punt over the river at Barham-Koondrook carried travellers, food, stock, grain and wool between New South Wales and Victoria from 1884 to 1904 (Barham Historical Research Group 1993; see Figure 11).



**Figure 11: Punt over the Murray River at Barham  
(source: Barham Historical Research Group 1993)**

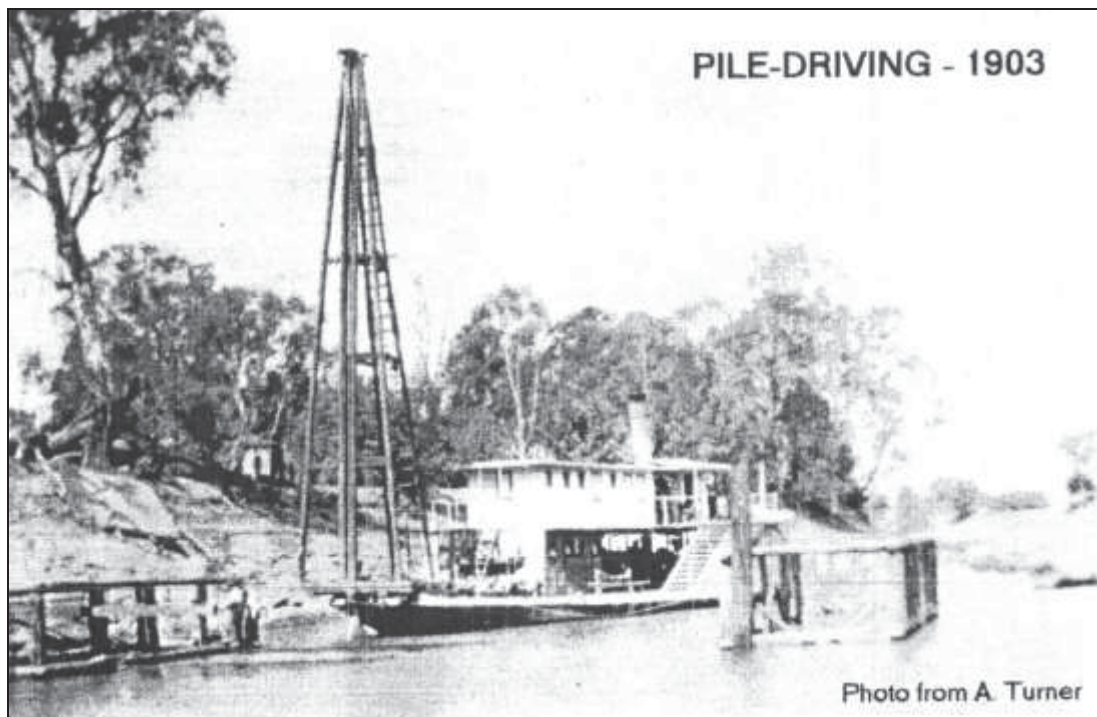
Construction of a new bridge over the Murray River at Barham-Koondrook began in April of 1903 and concluded with the opening of the bridge in October of 1904 (Barham-Koondrook Historical Society 2004; see Figures 12 to 14).



The bridge was built by Sir John Monash and J. T. Noble Anderson to a design by New South Wales Public Works Department engineer, Ernest De Burgh. The Barham-Koondrook Bridge is a composite De Burgh truss and steel centre lift-span bridge. The following is taken from the Victorian Heritage Register (H0795) Statement of Significance for the bridge:

*The bridge comprises of a timber bridge deck supported by two 31.7 m metre long De Burgh composite truss spans each side of a 17.8 m steel lift-span bridge. The lift-span is supported by four cast iron pillars filled with concrete built into two cofferdams also filled with concrete. The approach spans are 9.1 m each and are constructed of round timber girders on round timber trestle piers. The raising and lowering of the bridge deck was designed to allow paddle steamers and to pass through. The cross girders on the top of the structure are unusually curved and decorated with plaques showing the construction date and the names of both New South [Wales] and Victoria.*

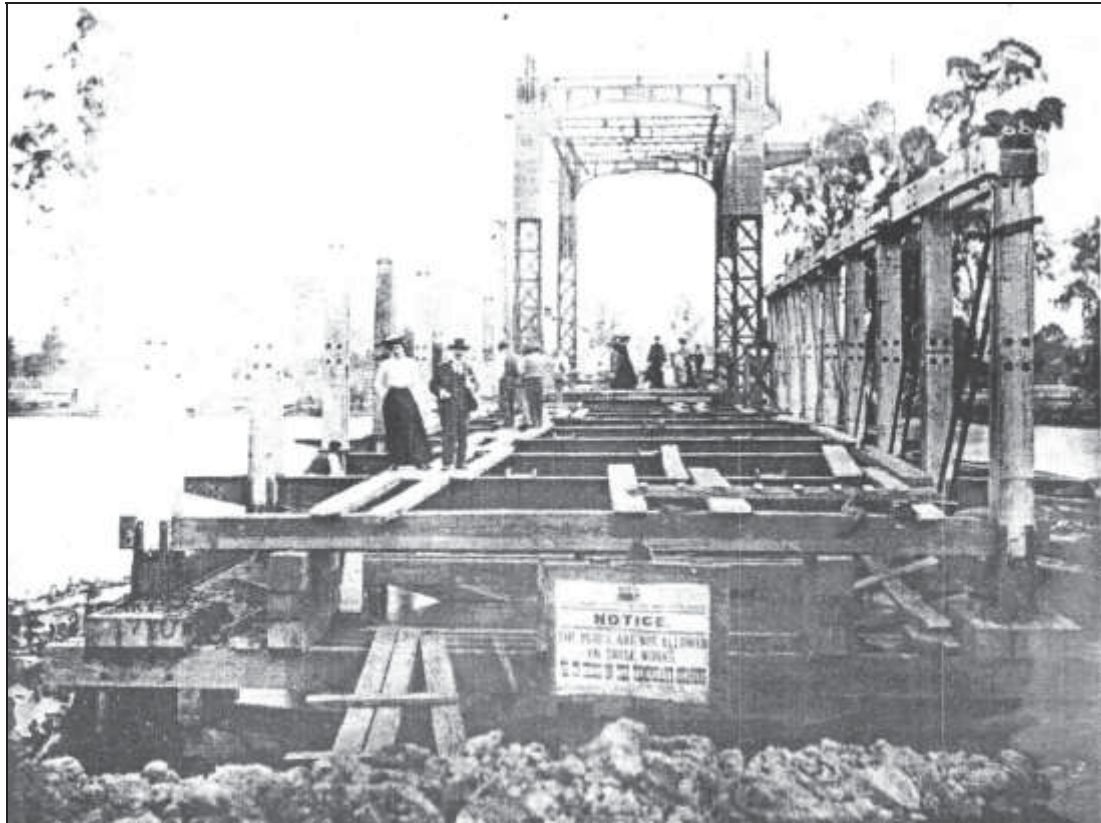
*The bridge timbers are tallowwood and ironbark from the northern rivers region of New South Wales, although some local river red gum was used for the decking on the minor timber spans. The northern rivers timber was used because of its superior strength and durability. Unlike the local river red gum, which has a tendency to twist and split when sawn into squared timber, ironbark retains its shape and strength.*



**Figure 12: Construction of the Barham-Koondrook Bridge, 1903  
(source: Barham-Koondrook Historical Society 2004)**



**Figure 13: Construction of the Barham-Koondrook Bridge, 1904**  
(source: Barham-Koondrook Historical Society 2004)



**Figure 14: Construction of the Barham-Koondrook Bridge, 1904**  
(source: Barham-Koondrook Historical Society 2004)

## 6.8 Site Prediction Model

An analysis of the sites within a five kilometre radius of the proposal area suggests that burials are likely to be found in association with floodplains and dune landforms.

The results of the desktop assessment confirm that the proposal area is within 200 metres of the Murray River and as a result contains landscape features likely to contain Aboriginal objects/sites.

Historical and ethnographic evidence suggests that Aboriginal people were present in the landscape before and after the arrival of European pastoralists in the area.

The land use history of the proposal area indicates a long history of native vegetation removal from the general area. Construction of the punt crossing, stock-waiting areas on the banks, the existing Barham Bridge, road construction and utility installation would have also caused significant disturbance to the proposal area.

## 7.0 VISUAL INSPECTION

The second component of Step 4 of the Due Diligence process is a visual inspection. The purpose of a visual inspection of the proposal area is to verify whether Aboriginal objects may be identified or are likely to be present on or below the surface.

### 7.1 Methodology

The proposal area was to be systematically surveyed during the inspection. This methodology was to include the targeted inspection of all mature Eucalypts and landscape features or landforms likely to contain Aboriginal objects. It was proposed to record any Aboriginal sites or places and to note any landforms that were likely to contain Aboriginal objects.


### 7.2 Results

The visual inspection was undertaken on 12 December 2014 by Jo Bell (Director/ Archaeologist) and Bridget Grinter (Project Archaeologist) of Jo Bell Heritage Services Pty Ltd, Phil Hudson (Site Officer) and James Bamblett (Trainee Site Officer) of MLALC and Andrew Whitton (Aboriginal Community Heritage Advisor) of Roads and Maritime.

The proposal area was subject to a pedestrian survey with mature trees and areas of good ground surface visibility targeted for a more detailed examination. The proposal area was comprised of riverbank and plain landforms. Table 1 contains the results of the visual inspection.

### 7.3 Summary

No Aboriginal places/objects were identified within the proposal area during the visual inspection.



No further undisturbed landscape features or landforms likely to contain Aboriginal objects/sites were identified within the proposal area during the visual inspection.

Poor ground surface visibility was the only obstacle encountered during the visual inspection.

Given the highly disturbed nature of the proposed area, the likelihood of finding sub surface Aboriginal objects within the proposed area is low, and of identifying intact, *in situ* Aboriginal objects/sites is extremely low.

**Table 1: Results of the Visual Inspection**

Area	Description	Disturbance	Ground Surface Visibility	Abor object/site
<b>West of Barham Bridge</b>	Rock beaching. Built up walking track along the riverbank. Willows and dumped concrete. Landscaped public space. River Red Gum and Sheoak.	Drains, landscaping, walking tracks, irrigation system, power poles, roads.	Exposed banks along the river allowed for good ground surface visibility (up to 100%). Visibility was poor in landscaped and grassed areas (0%).	None
<b>East of Barham Bridge</b>	Landscaped parkland and artscape. Kurrajong and River Red Gums.	Walking track, boat ramp, drainage, viewing platform; Bank erosion. Benched areas.	As above.	None
<b>Old Punt Crossing/ Caravan Park</b>	Location of old punt on river bend south of Hudson Boulevard (1884).	Clearance of vegetation Highly disturbed, excavated for original punt crossing.	0%	None
<b>Thule Street</b>	Location of old school. Cleared of native vegetation. Area has been levelled and landscaped.	Clearance of vegetation.	5%	None
<b>Thule/Gonn Street</b>	Very disturbed lot. Previous buildings have been demolished and removed. Lot has been levelled and filled with gravel.	Clearance of vegetation. Demolition of structures.	0% (not original ground surface).	None
<b>Parkman Avenue</b>	Wakool Water Board building and leased block. Gravel and concreted levelled compound. Stockpiled material.	Clearance of vegetation. Levelled.	0% (not original ground surface)	None



**Plate 1: Along the river, near the bowling club, facing 124°  
(Photo: B. Grinter 12/12/2014)**



**Plate 2: Good ground surface visibility on riverbank (Photo: B. Grinter 12/12/2014)**



**Plate 3: Drain near the riverbank, west of the bridge, facing 110° (Photo: B. Grinter 12/12/2014)**



**Plate 4: Riverbank east of the Barham Bridge, facing 90° (Photo: B. Grinter 12/12/2014)**



**Plate 5: Disturbance east of the Barham Bridge, facing 280°  
(Photo: B. Grinter 12/12/2014)**



**Plate 6: Pier east of the Barham Bridge, facing 128°  
(Photo: B. Grinter 12/12/2014)**





**Plate 7: Retaining walls east of the Barham Bridge, facing 125°  
(Photo: B. Grinter 12/12/2014)**



**Plate 8: Drain disturbance, facing 340° (Photo: B. Grinter 12/12/2014)**



**Plate 9: Old punt crossing, facing 190° (Photo: B. Grinter 12/12/2014)**



**Plate 10: Caravan park, facing 78° (Photo: B. Grinter 12/12/2014)**



**Plate 11: Old school site on Thule Road, facing 0° (Photo: B. Grinter 12/12/2014)**



**Plate 12: Vacant lot on corner of Thule & Gonn Streets, facing 140°  
(Photo: B. Grinter 12/12/2014)**



**Plate 13: Leased area on Parkman Avenue, facing 345° (Photo: B. Grinter 12/12/2014)**

## **8.0 FURTHER INVESTIGATION & IMPACT ASSESSMENT**

In addition to the desktop assessment and visual inspection, a further and more detailed investigation and impact assessment is required to be undertaken if it is indicated that there are (or are likely to be) Aboriginal objects/sites in the area of the proposal. This constitutes Step 5 in the Due Diligence process.

If after this detailed investigation and impact assessment the proponent decides that harm to Aboriginal sites or places cannot be avoided, then an AHIP application must be made.

No Aboriginal places/object or undisturbed landscape features or landforms likely to contain Aboriginal objects/sites were identified within the proposal area during the visual inspection. As this is so, further investigation and impact assessment (Step 5) is not required.

## **9.0 RECOMMENDATIONS**

No Aboriginal places/objects or undisturbed landscape features or landforms likely to contain Aboriginal objects/sites were identified within the proposal area during the visual inspection. However, in the event that new Aboriginal objects are found during the conduct of the proposal, relevant contingency arrangements, as outlined in the next section must be followed. This applies to both during and after the proposal.

## 10.0 CONTINGENCY PLANS

Aboriginal sites in NSW are primarily protected under the *National Parks and Wildlife Act* 1974. In the event that Aboriginal objects are found during the conduct of the proposal, contingency measures are set out below. The contingency measures set out the proponent's requirements in the event that Aboriginal objects are identified during the conduct of the proposal.

### 10.1 Management and Notification of Aboriginal Objects found during the Proposal

The NPW Act requires that, if a person finds an Aboriginal object on land and the object is not already recorded on AHIMS, they are legally bound under s.89A of the NPW Act to notify DECCW of the object's location, as soon as possible.

In the event that new Aboriginal objects are found during the conduct of the proposal, then the following must occur:

- The person who discovers Aboriginal object/s during the proposal will immediately notify the person in charge of the proposal
- The person in charge of the proposal must then suspend any relevant work at the location of the discovery and within 5 metres of the relevant site boundary
- In order to prevent any further disturbance, the location will be isolated by safety webbing or an equivalent barrier and work may recommence outside the area of exclusion
- The person in charge of the proposal must contact a cultural heritage advisor/ archaeologist immediately
- The cultural heritage advisor/ archaeologist must contact the NPWS Office of Environments & Heritage (OEH) Regional Aboriginal Heritage Division (Southern Region)
- Within a reasonable period, a decision/ recommendation will be made by the cultural heritage advisor/ archaeologist in consultation with the relevant Aboriginal stakeholder group(s) and OEH as to the process to be followed to manage the Aboriginal object/s in a culturally appropriate manner, and how to proceed with the work
- Options for management may include:
  - Recording the site and submitting the relevant forms to the AHIMS Registrar
  - Developing a strategy to avoid harm to the site
  - If avoiding harm is not possible, further investigation, an impact assessment and an AHIP may be required.
- A separate contingency plan has been developed in the event that suspected human remains are discovered during the conduct of the proposal.

### 10.1.1 Protocols for handling sensitive information

Aboriginal cultural heritage encompasses all aspects of Aboriginal culture, including tangible evidence such as stone artefacts, shell middens and ancestral remains; intangible evidence such as oral histories; and song lines as well as living culture. While not all aspects of Aboriginal culture is considered sensitive, especially evidence of activities of daily living, there are some aspects that may relate to ceremony, ritual or ancestral remains that are of a particularly sensitive nature. Culturally-sensitive information is inherently bound up with cultural significance. 'If we accept that cultural significance is not an inherent quality of a place, but a social outcome resulting from people's interactions with a place, then the community itself must be the most important source of significance' (Burke & Smith 2004:245).

In the event that further Aboriginal cultural material is identified *during the conduct of the proposal*, the cultural heritage advisor must ensure that any investigations undertaken in relation to the Aboriginal objects are carried out in a culturally-sensitive manner, which may include limiting access to the objects during investigations and further advising the proponent/ contractors/ employees of their obligations in relation to the culturally-sensitive nature of the heritage and their obligations in relation to the relevant legislation.

### 10.2 Notification of the Discovery of Skeletal Remains during the carrying out of the Proposal

#### 1. Discovery:

- If suspected human remains are discovered, all proposal in the vicinity must **stop** to ensure minimal damage is caused to the remains, and,
- The remains must be left in place, and protected from unauthorised access and harm or damage.

#### 2. Notification:

- Once suspected human skeletal remains have been found, New South Wales Police (use the local number) must be notified immediately;
- If there is reasonable grounds to believe that the remains could be Aboriginal, the NPWS Head Office must be immediately notified on (02) 9585 6444 or contact the Aboriginal Heritage Officer at the Heritage Branch on (02) 9873 8500 for further advice;
- All details of the location and nature of the human remains must be provided to the relevant authorities; and
- The remains should also be reported to the relevant Traditional Owners.

## 11.0 REFERENCES

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*Historic Plans (NSW Department of Lands: Land and Property Information - Historical Parish Maps Collection)*

- 1893 - Parish of Barham, County of Wakool
- 1924 - Parish of Barham, County of Wakool
- 1939 - Parish of Barham, County of Wakool

*Aerial Photography - Land Victoria*

- 1945 – Run 6, May 1945, 1:15840, 11,200ft, 7726 N2, 757/7
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*Urana 1:500,000 Geological Map.* Geological Survey of New South Wales: Sydney.

### Legislation

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### Registers

New South Wales Aboriginal Heritage Information Management System (AHIMS)

Victorian Heritage Register (VHR)

## **12.0 APPENDICES**

## **Appendix 1: Qualifications of Cultural Heritage Advisor**

**Joanne Bell**  
**Director**  
**Jo Bell Heritage Services Pty. Ltd.**

**Qualifications:**

BA (Hons) Archaeology, La Trobe University, Bundoora, 2000  
Cert. IV Training and Assessment, ECEC 2006

Joanne is qualified in Indigenous Australian prehistory and non-Indigenous historic archaeology. She has more than fifteen years professional experience in heritage management, including development and research projects. Fields of research include Australian Indigenous archaeology, Australian historic archaeology, stone artefact analysis, cultural heritage management and heritage training.

**Ashley Edwards**  
**Project Archaeologist**  
**Jo Bell Heritage Services Pty. Ltd.**

**Qualifications:**

Master of Arts (Archaeology), University of New England, Armidale, 2010  
BArch (Hons), La Trobe University, Bundoora, 2006

Ashley is qualified in Indigenous Australian prehistory and non-Indigenous historic archaeology. She has more than nine years of professional experience in heritage management, including development and research projects. Fields of experience include Australian Indigenous archaeology, Australian historic archaeology, stone artefact analysis and cultural heritage management.

**Bridget Grinter**  
**Project Archaeologist**  
**Jo Bell Heritage Services Pty. Ltd.**

**Qualifications:**

BA (Hons) Archaeology, La Trobe University, Bundoora 2008

Bridget is qualified in Indigenous Australian prehistory and non-Indigenous historic archaeology. She has six years of experience in the industry including survey, background research, artefact analysis and cultural heritage management.

## **Appendix 2: Aboriginal Stakeholder Cultural Heritage Survey Report**



# **BARHAM BRIDGE**

## **Aboriginal stakeholder cultural heritage survey report**

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

**DECEMBER 2014**

## **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: Barham Bridge
  
- b) Location of study area: Barham
  
- c) Name of Aboriginal site officer(s) completing this assessment:  
Phil Hudson (Site officer) & James Bamblett (Trainee SO)
- d) Name of Aboriginal organisation(s) represented by this survey:  
Moama Local Aboriginal Land Council
- e) Name of site officer(s) who undertook site survey:  
Phil Hudson (Site officer) & James Bamblett (Trainee SO)
- f) Date of survey:  
Friday, 12 December 2014



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.)

In excess of 80% of the project area was surveyed. A lot of the project area
has been heavily disturbed by previous bridge construction and maintenance
activities.
Weather conditions were favourable for the survey. Ground visibility varied
from 0 – 100%.

- 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 undertaken on foot, walking with the group in a line. Those
attending/participating include: Phil Hudson, James Bamblett (Moama LALC),
Jo Bell and Brdget (??) (Jo Bell Heritage – archaeologists), and Andrew
Whitton (RMS).

3



(If additional space is required, please attach sheets)



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

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> stone tools or flakes | <input type="checkbox"/> hearths                                 | <input type="checkbox"/> shell middens |
| <input type="checkbox"/> scarred trees         | <input type="checkbox"/> shelters                                | <input type="checkbox"/> art sites     |
| <input type="checkbox"/> bora circles          | <input type="checkbox"/> significant spiritual or social areas   |  |
| <input type="checkbox"/> totems                | <input type="checkbox"/> significant cultural landscape features |  |
| <input type="checkbox"/> 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).

A shell midden was identified [REDACTED]
[REDACTED]
No other Aboriginal object or places were identified during the survey.



(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. Although the surrounding environment has been heavily disturbed by
Various developments, including, pathways, bridge construction, former
punt sites and the developments associated with Koondrook and Barham.

- 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 fauna and flora resources would have been readily accessible to
Aboriginal people in this area.



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.

Punt site, saw mill, bridge construction and maintenance activities, path ways.
Development of Koondrook and Barham. Erosion and movement of banks
flood events. Development of ports for paddle boats etc.





This assessment has been completed by:

**Name:** Phil Hudson   
*Provide name* *Provide signature*

**Position title:** Moama LALC site officer  
*Provide title*

**Organisation name:** Moama Local Aboriginal Land Council  
*Provide name of Aboriginal organisation*

**On the following date:** 15-16-2014  
*Insert date*



9

(If additional space is required, please attach sheets)

## **Appendix 3: AHIMS Basic Search**





## AHIMS Web Services (AWS) Search Result

Purchase Order/Reference : Barham Bridge  
Client Service ID : 158612

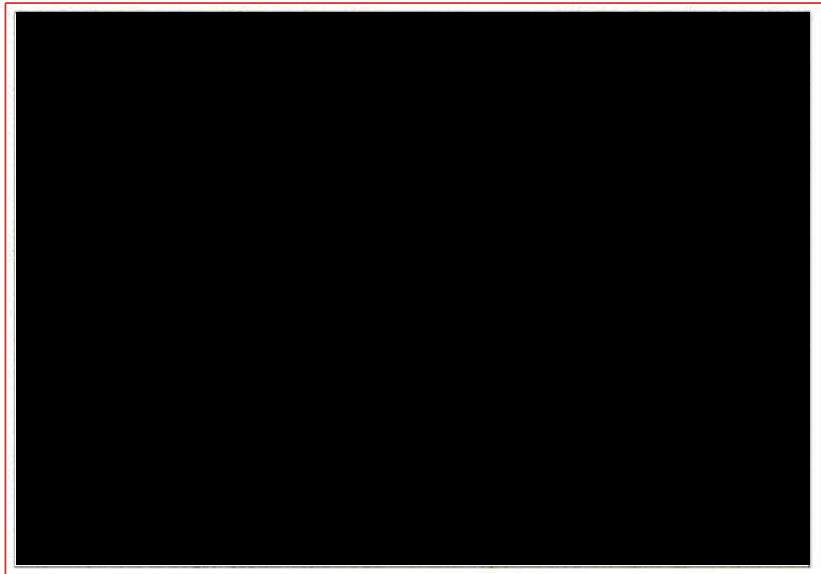
Jo Bell Heritage Services Pty Ltd  
PO Box 248  
Euroa Victoria 3666  
Attention: Ashley Edwards  
Email: ae.jbhs@bigpond.com

Date: 17 December 2014

Dear Sir or Madam:

**AHIMS Web Service search for the following area at Datum :GDA, Zone : 55, Eastings : 234741 - 261478, Northings : 6055112 - 6058265 with a Buffer of 0 meters, conducted by Ashley Edwards on 17 December 2014.**

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

26	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

## **Appendix 4: AHIMS Extensive Search**



**AHIMS Web Services (AWS)  
Search Result**

Purchase Order/Reference : Barham Bridge  
Client Service ID : 158624

Jo Bell Heritage Services Pty Ltd  
PO Box 248  
Euroa Victoria 3666  
Attention: Ashley Edwards  
Email: ae.jbhs@bigpond.com

Date: 17 December 2014

Dear Sir or Madam:

**AHIMS Web Service search for the following area at Search using shape-file Barham5kmRadius.SHP with a buffer of 0 meters. Additional Info : Desktop Assessment for Due Diligence, conducted by Ashley Edwards on 17 December 2014.**

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

2	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

## **Appendix 5: Glossary**

### Proposal

The development or use of land.

### Proposal Area

The area or areas to be used or developed for a proposal.

### Archaeology

The study of the past through the systematic recovery and analysis of material culture.

### Artefact Scatter

A group of stone artefacts found scattered on the ground surface.

### Assemblage

A collection of artefacts that are derived from the same Aboriginal place.

### Burial (Human skeletal remains)

Usually represented by a concentration of human bones or teeth. Burials can be associated with charcoal or ochre, shell, animal bone or stone tools. They tend to be located in sandy areas, which were easy to dig or in rock shelters or tree hollows. They are usually exposed through earthworks or erosion.

### Earth Feature

Includes mounds, rings, hearths, post holes and ovens.

### Excavation

The systematic recovery of archaeological data through the exposure of buried sites and artefacts.

### Material culture

The tangible evidence or cultural remains that are produced by human proposal.

### Quarry

A location from which Aboriginal people have extracted stone for making stone artefacts or minerals such as ochre for use in painting.

### Rock Art

Paintings or engravings on the surface of caves or rockshelters, created by Aboriginal people in the past.

### Scarred Tree

Trees from which bark has been removed for the manufacture of utilitarian items such as containers, shelter sheets, canoes or medicine.

### Shell Midden

A midden is the remains of a meal. In the case of shell middens, marine or freshwater molluscs are the dominant component.