



Koondrook-Perricoota Sandy Bridge Road

Barham, NSW



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EXECUTIVE SUMMARY

A replacement bridge is planned along Sandy Bridge Road over Barbers Creek, north-west of Barham, NSW. This bridge will be located in the same position as the existing bridge and the construction footprint will be close to that of the existing bridge. A laydown area is also planned but the exact location and size is yet to be determined.

A survey and heritage assessment was undertaken in May 2016. This report documents the results of a cultural heritage assessment of the proposed replacement bridge along Sandy Bridge Road.

The survey and assessment found:

- No previously recorded sites are located in the Koondrook-Perricoota Sandy Bridge Road project area.
- One probable Aboriginal modified tree was located approximately 80 m outside the study area (KPSBR ST1).
- A shell scatter was located within the study area. This shell scatter is not considered to constitute a site.
- The entirety of the survey area has been identified as an area of archaeological potential (KPSBR PAD1).

Probable scarred tree, KPSBR ST1, is located approximately 80 m outside of the proposed maximum footprint area and will not be impacted by construction activities. Replacement of the existing bridge over Barbers Creek will impact the potential archaeological deposit KPSBR PAD1.

In summary, it is recommended that:

1. Ground disturbance works should be kept to a minimum where possible and Indigenous heritage monitors should be engaged and present during ground disturbance works. The protocols used during the Koondrook-Perricoota Forest Flood Enhancement Works (KPFREW) scheme should be carried through to the Koondrook-Perricoota Sandy Bridge Road project.
2. A cultural heritage induction course should be provided to all personnel and other relevant parties involved in the construction works.
3. The construction footprint area should be fenced in order to keep all impacts within the designated area.
4. The laydown area should be located in an already disturbed area determined in consultation with the Joint Indigenous Group. The laydown area should be covered with imported material (such as gravel) to avoid any inadvertent ground disturbance from heavily vehicle traffic.
5. Information in this report relating to the exact location of the Aboriginal sites detailed in this report should not be published or promoted in the public domain.
6. Where necessary, the protocols for unanticipated discoveries for Aboriginal and European sites and burials detailed in Appendix 3, shall be implemented.

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1. INTRODUCTION

1.1 Project Description

A replacement bridge is planned along Sandy Bridge Road over Barbers Creek, north-west of Barham, NSW (Figure 1.1).

This bridge will be located in the same position as the existing bridge and the construction footprint will be close to that of the existing bridge. It is anticipated that the maximum impact footprint will not exceed beyond 50 m upstream, 50 m downstream and 100 m on the approach either side of the existing bridge (Figure 1.2). A laydown area is also planned near the vicinity of the bridge but the exact location and size is yet to be determined.

This work is part of the wider Koondrook-Perricoota Forest Flood Enhancement Works (KPFREW) project. The Koondrook-Perricoota Forest Flood Enhancement Works are a part of the Living Murray Program. The works have been designed to reinstate the critical process of flooding to Koondrook-Perricoota state forests to improve forest health. This has been achieved through the installation of engineering structures and channels to divert and control flows through the forest in order to mimic a natural flooding event.

This report documents the results of a cultural heritage assessment of the proposed replacement bridge along Sandy Bridge Road, over Barbers Creek. This report addresses the heritage impacts from the bridge only.

The report was commissioned by GHD.

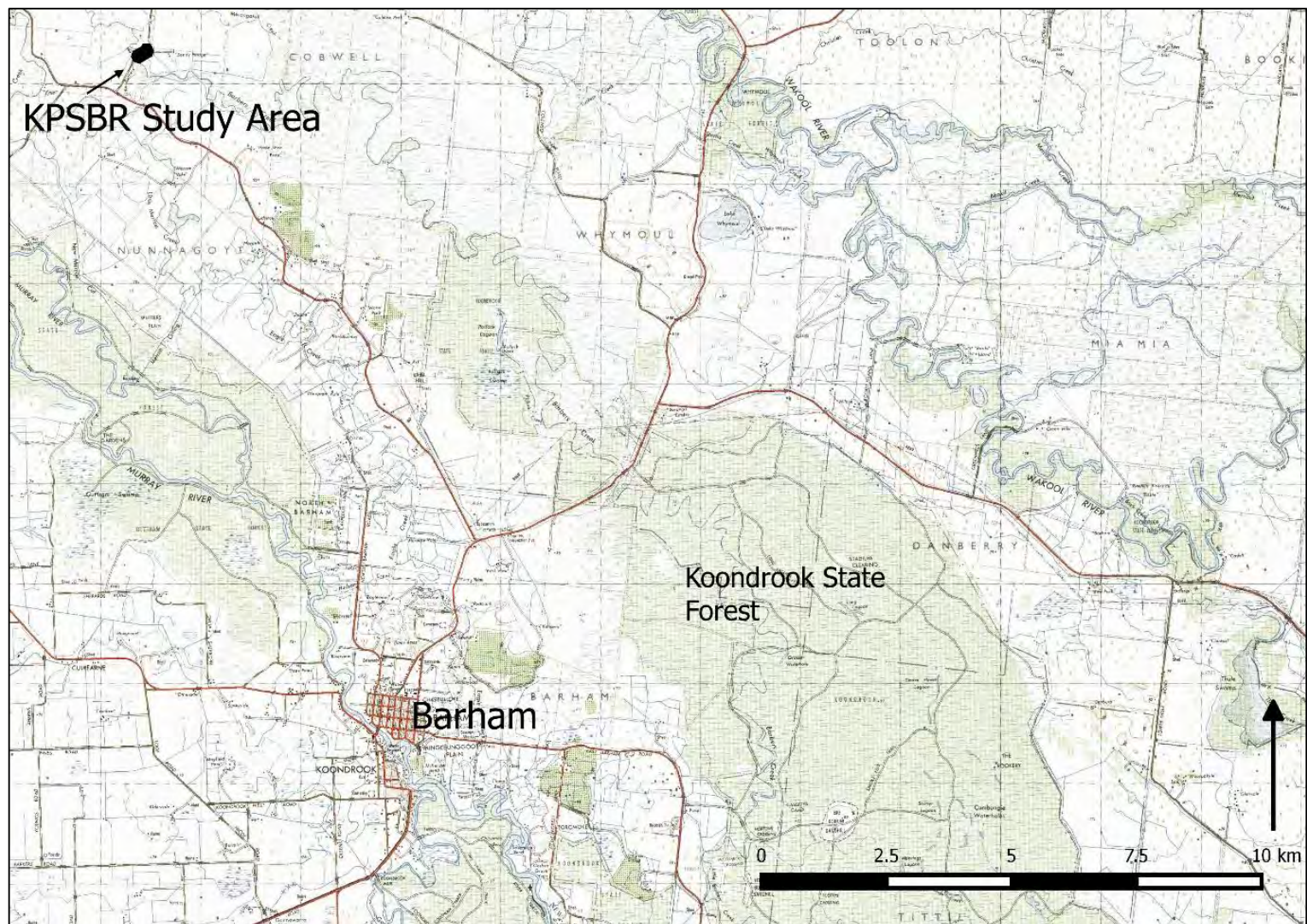


Figure 1.1 Study Area Location



Figure 1.2 Proposed Development



1.2 Study Aims

This study aims to identify Aboriginal cultural material and values present within the Koondrook-Perricoota Sandy Bridge Road project area by conducting a field survey and consultation with local Aboriginal stakeholders.

The results of these investigations will be interpreted with reference to the local and regional Aboriginal cultural resource, in order to facilitate an assessment of the significance of the Koondrook-Perricoota Sandy Bridge Road recordings and to develop appropriate management and mitigation strategies where necessary.

1.3 Project Framework

The proposed Koondrook-Perricoota Sandy Bridge Road will be assessed under:

Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A ACT).

1.4 This Report

1.4.1 Outline

This report:

- Describes the proposed development/works etc. (Section 1);
- Describes the methodology employed in the study (Section 2);
- Describes the environmental setting of the study area (Section 3);
- Provides information relevant to the Aboriginal context of the study area (Section 4);
- Describes the results of the data review, field survey in the context of the assessment (Section 5); and
- Provides management recommendations based on the results of the investigation (Section 6, 7 and 8).

1.4.2 Copyright

Copyright to this report rests with GHD except for the following:

- The Navin Officer Heritage Consultants logo and business name (copyright to this rests with Navin Officer Heritage Consultants Pty Ltd);
- Generic content and formatting which is not specific to this project or its results (copyright to this material rests with Navin Officer Heritage Consultants Pty Ltd);
- Descriptive text and data relating to Aboriginal objects which must, by law, be provided to OEH for its purposes and use;
- Information which, under Australian law, can be identified as belonging to Indigenous intellectual property;
- Content which was sourced from and remains part of the public domain



1.4.3 Restricted Information

Information in this report relating to the exact location of Aboriginal sites, in particular burials, should not be published or promoted in the public domain.

No information provided by Aboriginal stakeholders in this report has been specifically identified as requiring access restrictions due to its cultural sensitivity.

1.4.4 Confidentiality

No information in this report has been classified as confidential.



2. STUDY METHODOLOGY

2.1 Contributors

Archaeologists Jo Dibden and Julia Maskell conducted the field assessment and survey. Dan Hutton (Forestry Corporation) and Warren Parson and Des Morgan from the Joint Indigenous Group (JIG) also undertook the assessment and survey.

The JIG was established during the Koondrook-Perricoota Forest Flood Enhancement Works in 2010 and consists of six representative members from three local Aboriginal groups. The representatives are recognised to represent the interests of the Aboriginal people in the Koondrook-Perricoota Forest area and have the authority to speak on behalf of the communities they represent. These parties are:

- Barapa Barapa Nation Aboriginal Corporation;
- Yorta Yorta Nation Aboriginal Corporation; and
- Moama Local Aboriginal Land Council.

This report was prepared by Julia Maskell (BA Hons), Jo Dibden (BA) and Nicola Hayes (BA, BSc, Grad. Dip, Arts).

2.2 Literature and Database Review

A range of archaeological data was reviewed for the Koondrook-Perricoota Sandy Bridge Road study area and its surrounds. This literature and data review was used to determine if known Aboriginal sites were located within the area under investigation, to facilitate site prediction on the basis of known regional and local site patterns, and to place the area within an archaeological and heritage management context.

Aboriginal literature sources included the Aboriginal Heritage Information Management System (AHIMS) maintained by the NSW Office of Environment and Heritage (OEH) and associated files and catalogue of archaeological reports. Articles, reports, pamphlets and other associated material from previous work in the area was also reviewed.

2.3 Field Methodology

Fieldwork was undertaken on the afternoon of May 5 2016. Fieldwork included a survey of the maximum proposed construction footprint (approximately 100 m on the approach on either side of the bridge and 50 m upstream and downstream from the bridge). Ninety percent of this area (excluding only the creek water body) was surveyed by archaeologists, Jo Dibden and Julia Maskell, Dan Hutton from the Forestry Corporation and JIG representatives, Warren Parson and Des Morgan.

Information was recorded using a handheld Trimble Juno GPS, digital camera and notebook.

2.4 General Aboriginal Site Location Parameters

Based on the results and conclusions of previous archaeological investigations in similar landscape contexts, it is possible to predict the types of sites, and at a broad scale, the topographic contexts of sites in the study area. From this existing body of work the following set of broad site location criteria has been summarised for the area. However, the occurrence and survival of archaeological sites is dependent on many factors, including micro-topography and the degree of land surface disturbance:

- Artefact scatter/camp sites are uncommon and are mainly found on palaeochannel natural levee scalds and sometimes on lunettes or dune margins;



- Middens occur frequently on levees, sometimes on lake margins and can dominate the contents of earth mounds;
- Scarred trees are common and may sometimes occur in groves. They are found in Travelling Stock Reserves and town commons, and along creeks/ rivers. Scars are often on River Red Gum and Black Box;
- Mounds occur on high ground along floodplains and around swamps and lakes. They vary in number from sporadic to large settlements of hundreds over large areas;
- Burials occur mainly on levees, dunes and in mounds. They may be individual burials, clustered or in cemeteries;
- Hearths are common and are often made of fired clay balls and sometimes reflect multiple use;
- The results of systematic archaeological surveys in the Riverina suggest that occupation was focused on the streams and lagoons back from the main river margins. This is also suggested by observations by Sturt in 1829-30, who noted that:

It would appear that the tribes do not generally frequent the river. They must have a better country back from it and most probably linger amongst the lagoons and creeks where food is more abundant. The fact is evident from the want of huts upon the banks of the Murray and the narrowness of the paths along its margin (Sturt 1838 Vol 2:1).

- Ground stone, mostly fragments, is common; and
- With the exception of some Hay Plain mounds, flaked stone is uncommon and very small in size – mainly silcrete and quartz debitage.

2.5 Recording Parameters

The archaeological survey aimed at identifying material evidence of Aboriginal occupation as revealed by surface artefacts and areas of archaeological potential unassociated with surface artefacts. Potential recordings fall into two broad categories: sites and potential archaeological deposits.

Sites

A site is defined as any material evidence of past Aboriginal activity that remains within a context or place which can be reliably related to that activity.

Most Aboriginal sites are identified by the presence of three main categories of artefacts: stone or shell artefacts situated on or in a sedimentary matrix, marks located on or in rock surfaces, and scars on trees.

Frequently encountered site types within southeastern Australia include stone artefact occurrences - including isolated finds and open artefact scatters, coastal and freshwater middens, rock shelter sites - including occupation deposit and/or rock art, grinding groove sites and scarred trees. For the purposes of this section, only the methodologies used in basic site identification are outlined, together with those for the recording types encountered by this investigation.

Stone Artefact Occurrences

Stone artefact occurrences are the most commonly recorded site type in Australia. They may consist of single artefacts - described as isolated finds; or as a distribution of more than one artefact – often described as an artefact scatter or 'open camp site' when recording surface artefacts, or as a subsurface artefact distribution when dealing with an archaeological deposit.



Where artefact incidence is very low, either in terms of areal distribution (artefacts per square metre) or density (artefacts per cubic metre), then the differentiation of the recording from background artefacts counts or *background scatter* may be an issue.

Scarred Trees

Trees with scars of Aboriginal origin form the other major type of artefactual evidence. Each tree is normally considered to be a separate site. The identification of a scar as Aboriginal in origin is dependent on a set of inter-related interpretive criteria. The credibility of alternative causal explanations such as natural traumas and other types of human scarring must be tested for each scar.

A range of diagnostic criteria has been developed to assist in the identification of Aboriginal scarred trees. The following criteria are based on archaeological work conducted by Simmons (1977) and Beesley (1989), and the field manual for Aboriginal scarred trees developed by Long (2005):

1. The scar does not normally run to ground level: (scars resulting from fire, fungal attack or lightning nearly always reach ground level). However, ground termination does not necessarily discount an Aboriginal origin (some ethno-historical examples of canoe scars reach the ground);
 - 1(a). If a scar extends to the ground, the sides of the original scar must be relatively parallel: (natural scars tend to be triangular in shape);
2. The scar is either approximately parallel sided or concave, and symmetrical: (few natural scars are likely to have these properties except fire scars which may be symmetrical but are wider at the base than their apex. Surveyors marks are typically triangular, and often adzed);
3. The scar should be reasonably regular in outline and regrowth: scars of natural origin tend to have irregular outlines and may have uneven regrowth;
4. The ends of the scar should be 'shaped', either squared off, or pointed (often as a result of regrowth): (a 'keyhole' profile with a 'tail' is suggestive of branch loss);
5. A scar which contains adze or axe marks on the original scar surface is likely to be the result of human scarring. Their morphology and distribution may lend support to an interpretation of an Aboriginal origin: (marks produced after the scarring event may need to be discounted);
6. The scar must date to the time of Aboriginal bark exploitation within its region: The traditional Aboriginal exploitation of bark probably ceased in most regions between 100 and 150 years ago. However, in some locations associated with Aboriginal settlement, the Aboriginal removal of bark may have continued to the present day, or restarted as part of new cultural movements.
7. The tree must be endemic to the region: (and thus exclude historic plantings).

Field based identification of Aboriginal scars, is based on surface evidence only and will not necessarily provide a definitive classification. In many cases the possibility of a natural origin cannot be ruled out, despite the presence of several diagnostic criteria or the balance of interpretation leaning toward an Aboriginal origin. For this reason interpretations of an Aboriginal origin are qualified by the recorder's degree of certainty. The following categories were used:

- Aboriginal scar - This is a scar where an Aboriginal origin is considered the most likely. The scar conforms to all of the criteria and a natural origin is considered unlikely and improbable;
- Probable Aboriginal scar - This is a scar that conforms to all of the criteria and where an Aboriginal origin is considered to be the most likely. Despite this, a natural origin cannot be ruled out; and
- Possible Aboriginal scar - This is a scar which conforms to all or most of the criteria and where an Aboriginal origin cannot be reliably considered as more likely than alternative natural causes. The characteristics of this scar will also be consistent with a natural cause.



Midden Sites

These sites are camp sites which contain the remains of meal and food preparation. They contain a significant proportion of shell, and may also contain charcoal, bone and stone artefacts. The shell in a midden is nearly always related to a nearby environment which in this instance is freshwater.

Midden sites are normally found close to a source of shellfish, such a former prehistoric coastline, and the edges of estuaries, and rivers. In addition, middens generally occur on relatively level ground in well drained and locally elevated landforms. Typically middens occur frequently on levees, sometimes on lake margins and can dominate the contents of earth mounds.

Earth Mounds

An earth mound is a matrix of archaeological material and can include heat retainers, lithics, charcoal, faunal remains, stone tools and in some cases, burials. These may be individual burials, clustered or in cemeteries. Earth mounds occur on high ground along floodplains and around swamps and lakes. They vary in number from sporadic to large settlements of hundreds over large areas.

Potential Archaeological Deposits

A potential archaeological deposit, or PAD, is defined as any location where the potential for subsurface archaeological material is considered to be moderate or high, relative to the surrounding study area landscape. The potential for subsurface material to be present is assessed using criteria developed from the results of previous surveys and excavations relevant to the region.

Where necessary, PADs can be given an indicative rating of their 'archaeological potential' based on a combined assessment of their potential to contain artefacts, and the potential archaeological value of the deposit.

Table 3.1 illustrates the matrix on which this assessment is based. Locations with low potential for artefacts fall below the threshold of classification. In such cases the potential incidence of artefactual material is considered to be the same as, or close to that for background scatter. Where there is moderate potential for artefacts, the predicted archaeological potential parallels the potential significance of the deposit. For deposits with high potential for artefacts, the assessed archaeological potential is weighted positively.

The boundaries of PADs are generally defined by the extent of particular micro-landforms known to have high correlations with archaeological material. A PAD may or may not be associated with surface artefacts. In the absence of artefacts, a location with potential will be recorded as a PAD. Where one or more surface artefacts occur on a sedimentary deposit, a PAD may also be identified where there is insufficient evidence to assess the nature and content of the underlying deposit. This situation is due mostly to poor ground surface visibility.

Table 2.1 Matrix showing the basis for assessing the archaeological potential (shown in bolded black text) of a potential archaeological deposit.

		Potential to contain Aboriginal objects		
		<i>Low</i>	<i>Moderate</i>	<i>High</i>
Potential archaeological significance	<i>Low</i>	---	low	moderate
	<i>Moderate</i>	---	moderate	high
	<i>High</i>	---	high	high



3. LANDSCAPE CONTEXT

The following information is derived from Murray Darling Basin Commission (2006: 4-5, 59-60).

The River Red Gum forests of Koondrook-Perricoota (NSW) and Gunbower (Victoria) cover approximately 50,000 ha of River Murray floodplains to the west of the town of Echuca. This combined forest is second only in size to the 70,000 ha of the Barmah-Millewa Forest, about 100 km upstream.

These River Red Gum forests have developed around the natural flooding of the River Murray. However, since the early 1900s, the River Murray has been increasingly regulated to provide secure supplies of water for irrigation and many other uses. This has led to a change of natural flooding regimes and a decline in the health and productivity of the forest ecology.

The main topographic feature that has determined the nature of the landscape and the ecological development of the forests is the Cadell Tilt – a fault line that runs north-south from Deniliquin to Echuca. The fault, which caused a series of up lifts, occurred about 35,000 to 15,000 years ago. This fault resulted in the land to its immediate west being elevated some 10 m above the previous level of the plain, effectively creating a dam across the course of the River Murray. This caused the river to split into two arms, the Murray going south around the tilt and joining with the Goulburn River, and the Edward River going north and then west to rejoin the Murray almost 200 km downstream. Prior to the tilt, the River Murray flowed through the system now known as the Green Gully and Thule Creek and thence to the Wakool River. Further south of the Murray was the Goulburn River, which eventually joined the River Murray channel.

The flow of floodwater through the Koondrook-Perricoota Forest is dominated by the Burrumbarr-Barber Creek system, which is sourced from the Murray at a large oxbow formation known as Swan Lagoon. The system comprises several deep, well-defined channels that flow westward then break down into a myriad of smaller interlinked runners and eventually back into several defined streams. Downstream of Swan Lagoon are a number of other oxbow lagoons, several of which have associated natural effluents that form secondary inflow points. As river levels rise higher, an increasing number of these smaller channels begin to flow.

Outflow from the forest occurs primarily via Thule Creek, about halfway through the forest and through the Barbers, Calf and Cow Creeks at its western end. During large floods, water also drains out of the Axe and Pothole Creeks and floods into adjoining private property.

Relatively small changes in topography influence the distribution and depth of flooding. Water passes over the floor of the forests as sheet flow in large floods, and through the forests as creek flow during smaller flood events. Surface flooding restores soil moisture reserves necessary for tree growth, and sustains the productivity of wetland habitats.

Underground water sources also contribute to forest water demands, but these systems of underlying sandy aquifers of prior stream origin, generally only influence localised areas. Their ecological significance is also secondary to overland flooding, as wetland dependent flora and fauna rely on flooding to establish suitable feeding and breeding habitats within creeks, billabongs and swamps.

River Red Gum (*Eucalyptus camaldulensis*) is the predominant overstorey species, which occupies over 80% of the nearby state forest estate. Tree height and diameter are related to moisture availability. Black Box (*E. largiflorens*) also occurs on areas prone to floods of lower frequency and duration. Other overstorey species, such as Grey Box (*E. microcarpa*), Yellow Box (*E. melliodora*) and White Cypress Pine (*Callitris glaucophylla*), occur above the level of the floodplain on lighter textured soils and sandhills.

Few woody species exist as an understorey. Silver Wattle (*Acacia dealbata*) may be locally common on the banks of the river but only occurs infrequently throughout the greater floodplain area. On frequently flooded areas, native perennial sedges, such as Spike-rushes (*Eleocharis* spp.), *Carex* spp. and *Cyperus* spp., and rushes (*Juncus* spp.) dominate ground cover. Moira Grass (*Pseudoraphis spinescens*) occurs on wetter sites in pure stands or in association with the Common Reed (*Phragmites*



australis). On infrequently flooded areas, ground cover is dominated by naturalised aliens, especially annual grasses (*Avena barbata*, *Bromus* spp., and *Vulpia* spp.) and clovers (*Trifolium* spp.).

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On infrequently flooded areas, ground cover is dominated by naturalised aliens, especially annual grasses (*Avena barbata*, *Bromus* spp., and *Vulpia* spp.) and clovers (*Trifolium* spp.).



Figure 3.1 Koondrook-Perricoota Sandy Bridge Road landscape and study area



4. ABORIGINAL CULTURAL AND ARCHAEOLOGICAL CONTEXT

4.1 Ethnohistory

The study area was inhabited by members of two tribal groups at the time of European settlement. However, it should be noted that tribal boundaries within Australia are based largely on linguistic evidence and it is probable that boundaries, clan estates and band ranges were fluid and varied over time. Consequently, 'tribal boundaries' as delineated today must be regarded as approximations only, and relative to the period of, or immediately before, European contact. Social interaction across these language boundaries appears to have been a common occurrence.

The tribal groups delineated by Tindale (1974) that were resident in the study area, are:

The *Jotijota* on the Murray River whose territory extended from east of Cohuna to Echuca and a point 30 km by river west of Tocumwal in Victoria; along Tullah Creek to Yielima; at Tuppal, Conargo, and Deniliquin in New South Wales ... They were reported in 1842 as visiting the Murrumbidgee River. Much of *Jotijota* country is open eucalypt woodland. Curr (1887 iii: 567) included two of the four hordes (Ngarri-mowro and Woolithiga) in his Pangerang horde list.

The *Baraparapa* whose territory was located chiefly on southern tributaries of the Murrumbidgee River from above Hay to Kerang in Victoria; at Cohuna, Gunbower, Brassi, Conargo, and across the river from Carrathool ... Mathews (1902) may have transposed the positions of this tribe and the Wembawemba. In his 1904 paper he carries this tribal territory down river to Moulamein. He evidently worked with two separate hordes of this tribe. Beveridge (1889) lists his Boora Boora as though it was a tribe separate from this one.

4.2 Regional Overview

The study area is located within the Riverina Bioregion of NSW. This bioregion extends from Ivanhoe in the Murray Darling Depression Bioregion south to Bendigo, and from Narrandera in the east to Balranald in the west.

The first European explorers' contact with the Riverina tribes was in 1825 when Hume and Hovell neared Battery Mount, having reached Port Phillip and recrossed the Hume (Murray) River, which they had discovered and named on their journey south. On 6 January 6 1825,

they came by surprise upon a body of natives, consisting of eight men; these appeared much alarmed, and on perceiving the bullocks, fled through a small creek, and concealed themselves among the reeds on its banks. In the evening, about a mile from the spot where they had been first seen, the natives again made their appearance, and approached with marks of friendship (in Bland 1965).

Estimates of the number of Aboriginal people along the Riverina watercourses varied greatly. It is believed that the Central Murray area may have been one of the most highly populated places in Australia prior to European arrival (Webb 1984). The range, diversity and reliability of the natural resources associated with the Murray River meant that people could gather together for long periods (Bonhomme 1993:14).

Beveridge (1889) made an account of the lifestyle and practices of the Aboriginal people of Victoria and the Riverina. His account includes details of the burial practices, tools including their use and manufacture, the use of mounds as ovens, and the use of plant fibres.

John Cotton (in Billis and Kenyon 1930) from Doogalook Station on the Goulburn River described the construction of shelters, and Andrew Crombie (1927) recalled how he employed Aboriginal people to supply bark for his station.



Archaeological investigations and reporting on carvings and mounds in the region within the Riverina began as early as the late 1930s with works by Dow (1938a, b; 1939). Black in the 1940s self publishes articles on burial trees (1941) and bora grounds (1944) and produces a paper for *Mankind* on the 'Material Culture of the Aborigines of the Darling River Valley' (1949).

Archaeological investigation began in earnest in the late 1960s and early 1970s with discoveries at Lake Mungo (Bickford 1966; Bowler, Jones, Allen and Thorne 1970; Thorne 1971; Barbetti and Allen 1972; Bowler, Thorne and Polach 1972; Thorne 1975) and Kow Swamp (Thorne 1971, 1975). Lake Victoria also became a focus of work (Barbetti 1973). Work also began on stone artefacts from the region (Casey 1973) and mounds (Coutts et al 1976).

Klaver (1987) conducted an investigation of Aboriginal mound sites between Wagga Wagga and Narrandera, focusing on a central section of the Old Man Creek, a substantial anabranch of the Murrumbidgee River. Of the 112 mound sites investigated in the Old Man Creek area, 10 were located in the creek and associated levee areas, 18 were located on the floodplain proper, 28 were situated on elevated areas of the floodplain and 56 were located on the sandhills and sandsheets that fringe the Old Man Creek floodplain. Klaver concluded that the mounds recorded in her survey could be interpreted primarily as earth ovens.

In her review of work carried out in the region to 1987, Klaver noted,

'Aboriginal sites generally appear to occur in association with some form of water source, again emphasising the importance of water as a determinant of site location. Settlement strategies are largely suggested as embodying short-term exploitation of seasonal resources. The suite of sites recorded is quite similar to many other areas of southeastern Australia... Also it becomes apparent that the archaeological sites in this area may be hard to identify due to similarities to natural features. In many respects the archaeology of this region is an unknown quantity, there is no indication of any occupation chronology, nor any real understanding of the overall settlement pattern' (pp47-49).

The prehistory of the Aboriginal population within the Murray and Darling River Corridors was also investigated in more depth (Kefous 1983, 1988; Webb 1984 and Pardoe 1988). Pardoe (1988) concluded that people of the River Murray Corridor probably settled the region at least 38,000 years ago. 'By around 12,000 years ago, some expression of social behaviour indicates that organisation was firmly grounded in the principle of exclusion' (Pardoe 1988:5).

Smaller development-based surveys have also been taking place in the region since at least the 1980s and it is these studies that continue through to the present time and provide most of the site location data for the region.

4.3 Koondrook-Perricoota Sandy Bridge Road Study Area

An AIHMS search of the immediate study area showed no sites located directly in the construction footprint. However, previously recorded sites have been located in the surrounding landscape (Figure 4.1). A copy of the AHIMS search is provided in Appendix 1.

Previously recorded sites near the footprint include a midden approximately 220 m north-west of the bridge. The midden was recorded on the bank of Barbers Creek in 2014 during a Cultural Heritage Inspection of Proposed Hydrometric Station Locations as part of the wider Koondrook-Perricoota Forest Flood Enhancement Works (KPFFEW). The exposed midden surface consisted of shell fragments, charcoal, animal bone and baked clay balls and was noted to be heavily disturbed, likely from grazing activity (KPFFEW 2014).

Twenty individual burial sites were also recorded during the KPFFEW project in the natural levees near adjacent creeks. This included nine burials adjacent to Barbers Overflow, Barbers Creek and Cow Creek (Pardoe 2011a, 2011b, 2012, 2013) (Appendix 2). These have predominately dated to between 1000 and 2000 BP and in some cases flexed burials were recorded (Pardoe 2011a, 2013). The use of LiDAR imagery was employed during the KPFFEW project to assess areas of potential including



identifying possible earthen mounds, middens and the natural levee banks where the majority of burials were discovered (D. Hutton pers. comm. 5 May 2016).

Scarred trees have been recorded during the KPFFEW project located in the Koondrook State Forest to the south-east of the study area (NOHC 2010). Earthen mounds, shell middens and stone artefacts have also been recorded during the KPFFEW near the current project area (KPFFEW 2014).

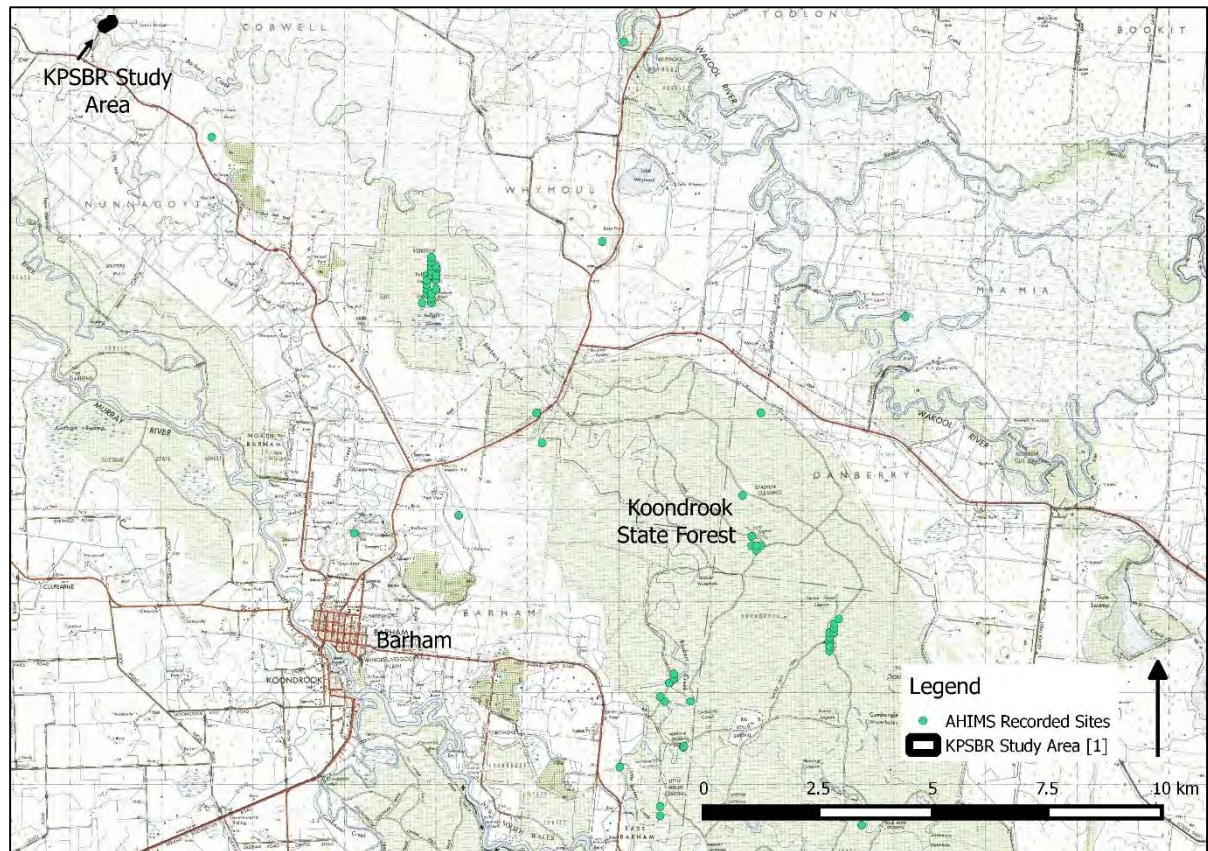


Figure 4.1 Recorded Site near the study area



5. RESULTS

5.1 Summary

The area surrounding the existing bridge across Barbers Creek varies between moderately to highly disturbed. Adjacent private land has been levelled and artificial levees created along Barbers Creek. The gravel road approaching the existing bridge had been recently graded and the road verge particularly near to the bridge was disturbed by wheel ruts (Figures 5.1 and 5.2).

Ninety percent of the area of the proposed maximum impact area, approximately 3.05 ha, was surveyed on foot (excluding only the creek water body). Two different landforms were identified during the survey: the creek bank and the surrounding flood plain area.

The survey and assessment found that:

- No previously recorded sites are located in the Koondrook-Perricoota Sandy Bridge Road study area;
- One probable Aboriginal modified tree was located approximately 80 m outside the study area;
- A shell scatter was located within the study area. This shell scatter is not considered to constitute a site; and
- The entirety of the survey area has been identified as an area of archaeological potential.



Figure 5.1 Recently graded road facing north



Figure 5.2 Artificial levee bank facing north-east

5.2 Survey Coverage and Visibility Variables

The effectiveness of archaeological field survey is to a large degree related to the obtrusiveness of the sites being looked for and the incidence and quality of ground surface visibility. Visibility variables were estimated for all areas of comprehensive survey within the study area. These estimates provide a measure with which to gauge the effectiveness of the survey and level of sampling conducted. They can also be used to gauge the number and type of sites that may not have been detected by the survey.

Ground surface visibility is a measure of the bare ground visible to the archaeologist during the survey. There are two main variables used to assess ground surface visibility, the frequency of exposure encountered by the surveyor and the quality of visibility within those exposures. The predominant factors affecting the quality of ground surface visibility within an exposure are the extent of vegetation and ground litter, the depth and origin of exposure, the extent of recent sedimentary deposition, and the level of visual interference from surface gravels. Two variables of ground surface visibility were estimated during the survey:



- A percentage estimate of the total area of ground inspected which contained useable exposures of bare ground; and
- A percentage estimate of the average levels of ground surface visibility within those exposures. This is a net estimate and accounts for all impacting visual and physical variables including the archaeological potential of the sediment or rock exposed.

The obtrusiveness of different site types is also an important factor in assessing the impact of visibility levels.

For example, artefacts made from locally occurring rock such as quartz may be more difficult to detect under usual field survey conditions than rock types that are foreign to the area. The impact of natural gravels on artefact detection was taken into account in the visibility variables estimates outlined above.

The natural incidence of sandstone platforms suitable for grinding grooves or engraving, together with the incidence of old growth trees, are important considerations in identifying both survey effectiveness and site location patterns outside of environmentally determined factors.

Table 5.1 summarises estimates for the degree to which separate landforms within the study area were examined and also indicates the exposure incidence and average ground visibility present in each case. During the survey two different landforms were identified: the creek bank and the surrounding flood plain area (Figure 5.3). A potential third landform, the natural creek levee, may exist in this survey area. This landform was not visible during the survey due to the level of disturbance surrounding the existing bridge. Further ground disturbance work has the potential to expose this landform.

A total of 90% of the ground area in the study area (approximately 3.05 ha) was inspected during the survey (the entire project area excluding the creek body of water), with 65% providing useable archaeological exposures.

Taking into account survey coverage, archaeologically useable exposures, and visibility variables, the effective survey coverage (ESC) was 58.5 % of the total survey area. The ESC attempts to provide an estimate of the proportion of the total study area that provided a net 100% level of ground surface visibility to archaeological surveyors.



Figure 5.3 Survey Unit Landforms



Table 5.1 Survey Coverage Data

Survey Unit	Landform	Survey unit area (ha)	Exposure Incidence %	Average Exposure Visibility %	Effective coverage area (ha)	Effective Coverage %
1	Creek flood plain	2.15	50	90	0.97	45 %
2	Creek bank	0.90	80	90	0.65	72 %
Totals	All Landforms	3.05			1.62	58.5 %

5.3 Aboriginal Sites

No sites were located directly within the construction footprint. A probable scarred tree KPSBR ST1 was found just outside the footprint area and it will not be affected by construction.

The survey area is considered to have a moderate potential for subsurface deposits. For this reason, the entirety of the survey area has been designated as a potential archaeological deposit (PAD).

A shell scatter was found within the construction footprint. This consisted of fragmented shell (species unable to be determined due to the fragmentary nature) located on the ground surface immediately adjacent to a concrete support for the existing bridge. It is likely that this shell was located in sediment fill used following construction.

Koondrook-Perricoota Sandy Bridge Road Scarred Tree 1 (KPSBR ST1)

GDA 234829.6066584

This site is a probable culturally modified scarred tree located within the water of Barbers Creek at the time of survey (Figure 5.6). Due to this the length, width and regrowth of the scar were not able to be measured during the survey (Figures 5.4 and 5.5).

Tree and Scar Description:

Tree Type:	Unable to determine
Tree Circumference:	N/A
Tree Condition:	dead
Scar length:	N/A
Scar length with regrowth:	N/A
Scar width:	N/A
Scar width with regrowth:	N/A
Regrowth max:	N/A
Description:	scar ends above ground; scar has parallel sides; scar is not rounded at either end.



Figure 5.4 KPSBR ST1 located in Barbers Creek



Figure 5.5 Scar visible on KPSBR ST1



Figure 5.6 KPSBR ST1 Location



Koondrook-Perricoota Sandy Bridge Road PAD 1 (KPSBR PAD1)

GDA 234930.66066786

The entire proposed impact area of the Koondrook-Perricoota Sandy Bridge Road project (Figures 5.3 and 5.6) has been assessed as having moderate potential subsurface deposits. Two different landforms were noted in the survey: the creek bank and the surrounding flood plain. Both areas are assessed as having subsurface potential based upon the local site location model specific to this region where:

- Middens occur frequently on levees, sometimes on lake margins and can dominate the contents of earth mounds;
- Mounds occur on high ground along floodplains and around swamps and lakes. They vary in number from sporadic to large settlements of hundreds over large areas;
- Burials occur mainly on levees, dunes and in mounds. They may be individual burials, clustered or in cemeteries; and
- The results of systematic archaeological surveys in the Riverina suggest that occupation was focused on the streams and lagoons back from the main river margins. This is also suggested by observations by Sturt in 1829-30, who noted that:

It would appear that the tribes do not generally frequent the river. They must have a better country back from it and most probably linger amongst the lagoons and creeks where food is more abundant. The fact is evident from the want of huts upon the banks of the Murray and the narrowness of the paths along its margin (Sturt 1838 Vol 2:1).

Shell Scatter

GDA 234981.6066798

A shell scatter was located next to the existing bridge (Figure 5.9). The shell scatter was located near a new concrete support for the bridge and appears to be sitting in fill used during the construction of this support (Figure 5.7). The shell is located in a dark brown silt whereas the surrounding bank consists of an orange-brown sandy silt. The shell scatter is highly fragmented (Figure 5.8) and due to this the species was not able to be determined.

There was no associated cultural material with the shell scatter. This is in contrast to the previously recorded midden located 220 m from this scatter, which despite being noted as heavily disturbed by grazing activity, had visible charcoal, animal bone and baked clay balls on its surface (KPFFEW 2014).

This scatter is not considered to constitute a site.



Figure 5.7 Shell scatter next to concrete support



Figure 5.8 Shell fragment near concrete support



Figure 5.9 Shell scatter location

5.4 Analysis and Discussion

No surface sites were recorded during the survey directly in the construction footprint. The scarred tree falls outside the proposed impact area and will not be disturbed during construction.

There is a moderate potential for archaeological deposits to exist subsurface. The surrounding landscape within the impact area has been heavily disturbed in most areas. Private land in the adjacent flood plain have been levelled and artificial levees created along the creek margins. The road verge on the southern side of the bridge is largely disturbed from wheel ruts due to heavy machinery traffic. Despite this, there is a moderate potential that subsurface deposits may remain below these disturbed areas or along the lesser disturbed margins of the creek.



The Sandy Bridge Road project area is similar to that of nearby Barbers Creek, Cow Creek and Calf Creek regulator sites where subsurface deposits, including burials were found (D. Hutton pers. comm. 5 May 2016). Sandy Bridge Road is more disturbed than these aforementioned sites and previously used techniques by the KPFFEW project, such as the use of LiDAR imagery cannot be used to assist in the determination of any earth mounds, midden deposits and natural creek levees.

The previously recorded midden and the probable scarred tree just outside the impact area demonstrate past exploitation of this area by Aboriginal people and the surrounding region is known to contain many significant Aboriginal sites, including 20 burials (KPFFEW 2014; Pardoe 2011). The landscape that construction impacts will occur is an area of potential. As noted in Section 2.4 middens will often be found in levees, burials will often occur in natural levees, dunes and mounds and can be individual or clustered. Past occupation of this region was historically observed to be focused of the streams and creeks back from the main river margins (Sturt 1838). Given the archaeological potential of the area and the historic level of disturbance there is moderate potential for archaeological subsurface deposits.



6. SIGNIFICANCE ASSESSMENT

6.1 Assessment Criteria

The Burra Charter of Australia defines cultural significance as 'aesthetic, historical, scientific or social value for past, present and future generations' (Aust. ICOMOS 1987). The assessment of the cultural significance of a place is based on this definition but often varies in the precise criteria used according to the analytical discipline and the nature of the site, object or place.

In general, Aboriginal archaeological sites are assessed using five potential categories of significance:

- significance to contemporary aboriginal people;
- scientific or archaeological significance;
- aesthetic value;
- representativeness; and
- value as an educational and/or recreational resource.

Many sites will be significant according to several categories and the exact criteria used will vary according to the nature and purpose of the evaluation. Cultural significance is a relative value based on variable references within social and scientific practice. The cultural significance of a place is therefore not a fixed assessment and may vary with changes in knowledge and social perceptions.

Cultural significance can be defined as the cultural values of a place held by and manifest within the local and wider contemporary Aboriginal community. Places of significance may be landscape features as well as archaeologically definable traces of past human activity. The significance of a place can be the result of several factors including: continuity of tradition, occupation or action; historical association; custodianship or concern for the protection and maintenance of places; and the value of sites as tangible and meaningful links with the lifestyle and values of community ancestors. Aboriginal cultural significance may or may not parallel the archaeological significance of a site.

Scientific significance can be defined as the present and future research potential of the artefactual material occurring within a place or site. This is also known as archaeological significance.

There are two major criteria used in assessing scientific significance:

1. The potential of a place to provide information which is of value in scientific analysis and the resolution of potential research questions. Sites may fall into this category because they: contain undisturbed artefactual material, occur within a context which enables the testing of certain propositions, are very old or contain significant time depth, contain large artefactual assemblages or material diversity, have unusual characteristics, are of good preservation, or are a constituent of a larger significant structure such as a site complex.
2. The representativeness of a place. Representativeness is a measure of the degree to which a place is characteristic of other places of its type, content, context or location. Under this criteria a place may be significant because it is very rare or because it provides a characteristic example or reference.

The value of an Aboriginal place as an educational resource is dependent on: the potential for interpretation to a general visitor audience, compatible Aboriginal values, a resistant site fabric, and feasible site access and management resources.

The principal aim of cultural resource management is the conservation of a representative sample of site types and variation from differing social and environmental contexts. Sites with inherently unique features, or which are poorly represented elsewhere in similar environment types, are considered to have relatively high cultural significance.

The cultural significance of a place can be usefully classified according to a comparative scale which combines a relative value with a geographic context. In this way a site can be of low, moderate or high



significance within a local, regional or national context. This system provides a means of comparison, between and across places. However it does not necessarily imply that a place with a limited sphere of significance is of lesser value than one of greater reference.

The following assessments are made with full reference to the scientific, aesthetic, representative and educational criteria outlined above. Reference to Aboriginal cultural values has also been made where these values have been communicated to the consultants. It should be noted that Aboriginal cultural significance can only be determined by the Aboriginal community, and that confirmation of this significance component is dependent on written submissions by the appropriate representative organisations.

6.2 The Koondrook-Perricoota Sandy Bridge Road Study Area

All archaeological objects and sites have cultural value for present-day Aboriginal people, as they were created by prehistoric, ancestral Aboriginal people and provide tangible evidence of past occupation of the landscape.

The probable culturally modified tree is in poor condition and is assessed as being of low-moderate archaeological significance. This site type is considered significant to the local Aboriginal people.

The significance of the PAD cannot be specifically assessed without further investigations of the area. The potential scientific significance of the identified PAD is moderate given the results of the ongoing KPFFEW where multiple burials and sites have been located in similar landforms. The PAD is located in an area that has historically been highly disturbed. Due to this the PAD has a moderate potential to contain subsurface deposits which is of value in scientific analysis and in the resolution of potential research questions.

JIG representatives, Warren Parson and Des Morgan have expressed that the PAD is of high cultural significance. They noted that subsurface sites and burials had been found on the natural levees and margins of Barbers Creek and nearby creeks.



7. STATUTORY AND POLICY CONTEXT¹

7.1 *Environmental Planning and Assessment Act 1979*

This Act (EP&A Act) and its regulations, schedules and associated guidelines require that environmental impacts are considered in land use planning and decision making. Environmental impacts include cultural heritage assessment. The Act was reformed by the *Environmental Planning and Assessment Amendment (Infrastructure and other Planning Reform) Act 2005*.

Part 3A of the EP&A Act

Part 3A of the Act is a streamlined and integrated development assessment and approvals regime for major State government infrastructure projects, development that was previously classified as State Significant development, and other projects, plans or programs declared by the Minister for Planning.

Part 3A removes the stop-the-clock provisions and the need for single-issue approvals under eight other Acts, including the NP&W Act and the *Heritage Act 1977*. Environmental planning instruments such as the heritage provisions within REP and LEPs, (other than State environmental planning policies) do not apply to projects approved under Part 3A.

Where warranted the Minister may declare any project subject to Part 3A to be a critical infrastructure project.

Under the provisions of Part 3A, proponents of major and infrastructure projects must make a project application seeking approval of the Minister. The application is to include a preliminary assessment of the project. Application may be for concept approval or project approval. Following input from relevant agencies and council(s), DoP will issue the proponent with requirements for the preparation of an Environmental Assessment. The Director-General's requirements generally state that the Environmental Assessment must include a Statement of Commitments that outlines the strategies to be implemented to manage potential impacts.

Following submission of an Environmental Assessment and draft Statement of Commitments to DoP, these documents are variously evaluated, reviewed, circulated and exhibited. The proponent may modify the proposal to minimise impacts in response to submissions received during this process. The proponent then provides a Statement of Commitments and, following any project changes, a Preferred Project Report. An assessment report is then drafted by the Director-General and following consultation with relevant agencies, a final report with recommendations for approval conditions or application refusal is submitted to the Minister. The Minister may refuse the project, or approve it with any conditions considered appropriate.

7.2 Implications for the Proposed Works

The Koondrook-Perricoota Sandy Bridge Road project will be assessed under Part 3A of the EP&A 1977 (which removes the need for single-issue approvals under the NP&W Act and the *Heritage Act 1977*). Consequently, there is no requirement to obtain an AHIP under the NP&W Act in order to impact the heritage sites and items identified in the study area.

7.3 Statement of Commitments

Approval for the Koondrook-Perricoota Flood Enhancement Works was given by the Minister for Planning under Part 3A of the *Environmental Planning and Assessment Act 1979* (NSW) (EPA Act).

¹ The following information is provided as a guide only. Readers are advised to seek qualified legal advice relative to legislative matters.



The *Statement of Commitments* for the Project requires that:

Indigenous Heritage Impacts			
22	Preserve Indigenous cultural heritage values	Where practicable, the layout of the project works will avoid potential impacts on items of Aboriginal heritage significance.	During design and before construction commences
23		An indigenous heritage management plan will be developed as part of the CEMP to define procedures to be implemented during construction to avoid or otherwise minimise impacts on items of Aboriginal heritage significance. This will include: An education program for all construction personnel on their obligations relating to Aboriginal cultural materials; A program for surveys by representatives of the Traditional Owners along the construction corridor during construction to identify potential issues of concern. This will involve at least one Aboriginal representative being present on site during construction; Developing work practices to reduce the risk of damage to heritage items, such as limiting disturbance, fencing, and worker education; and A flowchart to clearly define the process to be followed, and associated reporting procedures, should an item of potential significance to the Aboriginal community be encountered.	Prior to and during construction
24	If encountered, previously unidentified Aboriginal objects are managed appropriately	If previously unidentified Aboriginal objects are discovered during construction, all work likely to affect the object(s) will cease and DECCW and representatives of the Traditional Owners will be notified. An investigation will be undertaken by a suitably qualified archaeologist to identify measures to be implemented to reduce impact on the objects discovered, prior to recommencing works.	During construction.
25	A Joint Indigenous Group will be formed to advise on management of indigenous heritage impacts	A Joint Indigenous Group will be established comprising representatives from Yorta Yorta Nation, Barapa Barapa Nation, Deniliquin Local Aboriginal Land Council, and Moama Local Aboriginal Land Council. The purpose of the JIG will be to work in partnership with the project Integration Team to provide advice on how the Aboriginal custodians may protect the integrity of their cultural heritage during the construction of the project and how to achieve both cultural and socio-economic outcomes through the project to benefit Indigenous peoples. This will involve input to development of the Cultural Heritage Management Plan.	Prior to and during construction



8. IMPACT ASSESSMENT AND RECOMMENDATIONS

8.1 Impact Assessment

Probable scarred tree, KPSBR ST1 is located outside of the footprint and will not be impacted by construction activities.

Replacement of the existing bridge over Barbers Creek along Sandy Bridge Road will impact the potential archaeological deposit KPSBR PAD1.

8.2 Management and Mitigation Measures

The management and mitigation measures proposed for the sites in the project area are:

1. Protocols and processes developed during the construction of the KPFFEW scheme should be applied to the Koondrook-Perricoota Sandy Bridge Road project. The principals, protocols and processes developed in the Project Cultural Heritage Management Plan (NOHC 2010) should be followed.

The PAD should be designation as a “Heritage Sensitive Area” (HSA) and corresponding construction and heritage management processes applied. This includes soil disturbance being minimised and restricted to essential only specific construction excavation methodologies. Aboriginal heritage monitors should be engaged and present during ground disturbance works across the PAD.

2. Construction crew should complete an Aboriginal heritage cultural induction.
3. The construction footprint area should be fenced in order to prevent any inadvertent impacts to sites that lie outside the designated impact area.
4. The laydown area should be located in an area determined in consultation with JIG representatives and located in an already disturbed area. JIG representatives, Warren Parson and Des Morgan suggested the following (ordered by preference):
 - a. “Keogh’s” property north of the bridge on an area of the property that has been previously disturbed or levelled.
 - b. The levelled and disturbed area directly north of the bridge.
 - c. The disturbed and levelled area south-east of Sandy Bridge Road on the southern side of the bridge.
 - d. The disturbed and cleared area near the recently installed hydrometric station.
 - e. Along the road verge on the southern side of the bridge.

The laydown area should be covered with imported material (such as gravel) prior to use to avoid any inadvertent ground disturbance from the heavily vehicle traffic.

5. The protocols for the unanticipated discovery of archaeological material and suspected human remains (presented in Appendix 3) would be adopted and complied with during construction activities involving ground surface disturbance and excavation.

Warren Parson and Des Morgan (JIG) expressed that once the construction of the bridge was complete that the low level bypass should be removed as it will no longer be required. They noted that this would allow uninterrupted fish passage and allow natural water flow to resume. The Barapa Barapa consider this a cultural responsibility to ensure the natural flow and fish reach the traditional owners up and downstream.



8.3 Recommendations

It is recommended that:

1. Ground disturbance works should be kept to a minimum where possible and Indigenous heritage monitors should be engaged and present during ground disturbance works. The protocols used during the KPFFEW scheme should be carried through to the Koondrook-Perricoota Sandy Bridge Road project.
2. A cultural heritage induction course should be provided to all personnel and other relevant parties involved in the construction works.
3. The construction footprint area should be fenced in order to keep all impacts within the designated area.
4. The laydown area should be located in an already disturbed area determined in consultation with the Joint Indigenous Group. The laydown area should be covered with imported material (such as gravel) to avoid any inadvertent ground disturbance from heavily vehicle traffic.
5. Information in this report relating to the exact location of the Aboriginal sites detailed in this report should not be published or promoted in the public domain.
6. Where necessary, the protocols for unanticipated discoveries for Aboriginal and European sites and burials detailed in Appendix 3, shall be implemented.



9. REFERENCES

- Australia ICOMOS 1987 *The Australia Icomos Charter for the Conservation of Places of Cultural Significance (The Burra Charter), Guidelines to the Burra Charter: Cultural Significance and Conservation Policy*. Pamphlet, Australia Icomos (Inc).
- Barbetti, M. and H. Allen 1972 Prehistoric Man at Lake Mungo, Australia by 32 000 BP. *Nature* 240:46-48.
- Barbetti, M. 1973 Magnetic dating of some Aboriginal fire places from the Lake Victoria Region of NSW, Australia. *Memoirs of the National Museum of Victoria* 34:219-224.
- Beesley, J. 1989 The Scarred Tree. Unpublished report to the Victoria Archaeological Survey, Melbourne.
- Beveridge, P. 1889 *The Aborigines of Victoria and Riverina*. M.L. Hutchinson, Melbourne.
- Bickford, R. A. 1966 Material Culture and diet of the Aborigine of the River Murray. BA (Hons) thesis, Dept. Anthropology, University of Sydney.
- Billis, R. V. and A. S. Kenyon 1930 *Pastures New*. McCarron, Bird & Co., Melbourne.
- Bland, W. A. 1965 *Journey of Discovery to Port Philip New South Wales, in 1824 and 1825, by W. H. Hovell and H. Hume, Esquires*, facsimile edition, Libraries Board of South Australia, Adelaide.
- Black, R. L. 1941 *Burial Trees*. Published by the author, Leeton.
- Black, R. L. 1944 *The Bora Ground*. Published by the author, Leeton.
- Black, R. L. 1949 Notes on the Material Culture of the Aborigines of the Darling River Valley, Western NSW. *Mankind* 4:102-7.
- Bonhomme, T. 1993 State Forests of NSW Murray Valley Archaeological Study Lake Victoria and Koondrook State Forests. Report to NSW Forestry Commission by the NSW National Parks and Wildlife Service.
- Bowler, J. M., R Jones, H. Allen and A.G. Thorne 1970 Pleistocene human remains from Australia: a living site and human cremation from Lake Mungo, Western NSW. *World Archaeology* 2:39-60.
- Bowler, J. M., A. G. Thorne and H. A. Polach 1972 Pleistocene man in Australia: age and significance of the Mungo skeleton, *Nature* 240:48-50
- Casey, D. A. 1973 Aboriginal Stone Artefacts from the Murray River Region between Mildura and Renmark, Australia. *Memoirs of the Natural Museum of Victoria* 34:209-214.
- Coutts, P. J. F., D. C. Witter, M. McIlwraith and R. Frank 1976 The Mound People of Western Victoria: A Preliminary Statement in *Records of the Victorian Archaeological Survey* 1:1-54.
- Crombie, A. 1927 After sixty years, or, Recollections of an Australian bushman. Watson, Ferguson. Brisbane.
- Curr, E. M. 1965 Recollections of Squatting in Victoria from 1841 to 1851. Melbourne University Press 2nd ed. First published 1883 by George Robertson, Melbourne.
- Dow, E. B. 1938a Aboriginal Ceremonial Cairns near Broken Hill. *Oceania* 9:30-6.



- Dow, E. B. 1938b Aboriginal Carvings: West Darling District of NSW. *Mankind* 2:201-20.
- Dow, E. B. 1939 Rock Carvings and Ceremonial Mounds, Noothorungee Ranges, Koonawarra, NSW. *Mankind* 2:210-16.
- Kefous, K. C. 1983 Riverain: Water availability and Aboriginal prehistory of the Murray River, Lake Victoria area, western New South Wales. MA thesis, Australian National University, Canberra.
- Kefous, K. C. 1988 Butlin's Bootstraps: Aboriginal population in the pre-contact Murray-Darling region in B. Meehan and R. Jones (eds) *Archaeology with Ethnography: An Australian Perspective*, Australian National University, Canberra.
- Klaver, J. 1987 Old Ovens are Soon Hot: A Study of Function and Location of Aboriginal Mounds in the Upper Murrumbidgee Region, BA (hons) Thesis, Australian National University, Canberra.
- Koondrook Perricoota Forest Flood Enhancement Works (KPFFEW) 2014 Aboriginal Cultural Heritage Inspection of Proposed Hydrometric Station Locations.
- MDBC 2006 *The Gunbower Koondrook-Perricoota Forest. One of the living Murray's icon sites. Icon site Environmental Management Plan 2006-2007*. MDBC, ACT.
- Navin Officer Heritage Consultants (NOHC) 2010 Koondrook-Perricoota Forest Flood Enhancement Works: Cultural Heritage Management Plan. Prepared for GHD on behalf of Forests NSW and the NSW Office of Water.
- Navin Officer Heritage Consultants (NOHC) 2010 Koondrook-Perricoota Forest Flood Enhancement Works: Cultural Heritage Assessment Indigenous and Non-Indigenous Heritage. A report to GHD.
- Pardoe, C. 1988 Prehistoric Biology, Demography and Society of the River Murray Corridor. *Biol., Demog. and Society*.
- Pardoe, C. 2011a News update on Barapa skeletal remains from Koondrook Forest, NSW. A report to Barapa Barapa Nation Aboriginal Corporation, Joint Indigenous Group, Forests NSW, and State Water Corporation NSW.
- Pardoe, C. 2011b Barham KP Burials: Murray River, NSW. An information pamphlet to the Barapa Barapa Nation Aboriginal Corporation.
- Pardoe, C. 2012 Burials from Barber Overflow, Koondrook State Forest, NSW. An information pamphlet to Barapa Barapa Nation Aboriginal Corporation, Joint Indigenous Group, Forestry Corporation NSW and Sate Water Corporation NSW.
- Pardoe, C. 2013 Burials Through the Ages Among the Barapa Barapa. An information pamphlet to Joint Indigenous Group, Barapa Barapa Nation Aboriginal Corporation, Yorta Yorta Nation Aboriginal Corporation, Forestry Corporation NSW and Sate Water Corporation NSW.
- Simmons, S. 1977 Hume Freeway - Seymour to Avenel Section; Archaeological Survey Report. Victoria Archaeological Survey, Ministry of Conservation, Melbourne.
- Sturt, C. 1838 Journal, entry for 9 June 1838.
- Thorne, A. G. 1971 Mungo and Kow Swamp: Morphological Variation in Pleistocene Australians. *Mankind* 8:85-9
- Thorne, A. G. 1975 Kow Swamp and Lake Mungo. PhD Thesis, University of Sydney.



Tindale, N. 1974 *Aboriginal Tribes of Australia*. University of Berkeley California.

Webb, S. G. 1984 Intensification, Population and Social Change in Southeastern Australia: the skeletal evidence. *Aboriginal History* 8:154-172.



APPENDIX 1

AHIMS HERITAGE REGISTER SEARCH RESULTS



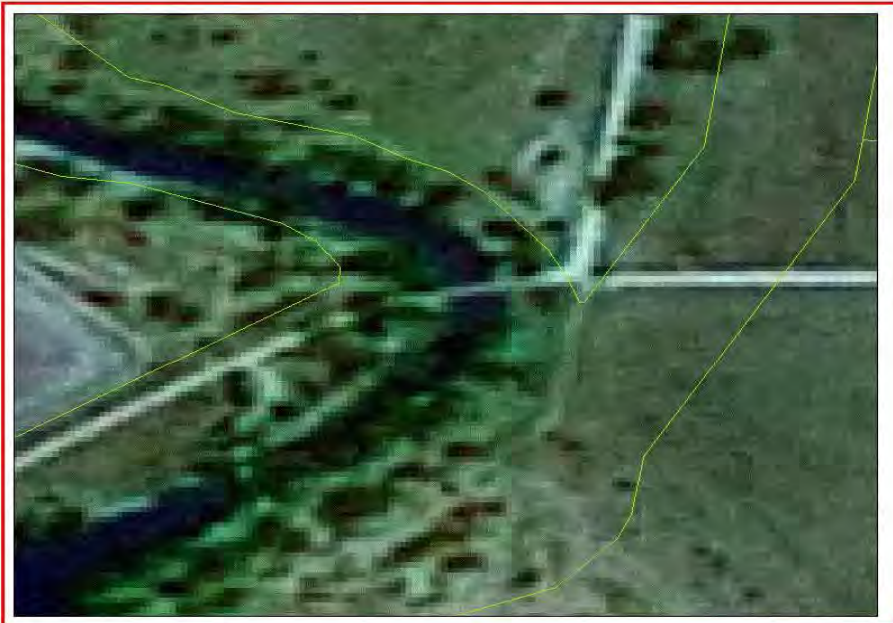
Navin Officer Heritage Consultants Pty Ltd
4/71 Leichhardt Street
Kingston Australian Capital Territory 2604
Attention: Nicola Hayes
Email: nhayes@nohc.com.au

Date: 04 May 2016

Dear Sir or Madam:

**AHIMS Web Service search for the following area at Datum :GDA, Zone :55, Eastings :234833 - 235059,
Northings : 6066718 - 6066855 with a Buffer of 50 meters, conducted by Nicola Hayes on 04 May 2016.**

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:

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



If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette](http://www.nsw.gov.au/gazette) (<http://www.nsw.gov.au/gazette>) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request.

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not to be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister.
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings.
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

3 Marist Place, Parramatta NSW 2150
Locked Bag 5020 Parramatta NSW 2220
Tel: (02) 9585 6380 Fax: (02) 9873 8599

ABN 30 841 387 271
Email: ahims@environment.nsw.gov.au
Web: www.environment.nsw.gov.au



APPENDIX 2

LOCATION OF ALL CULTURAL HERITAGE SITES IN THE BARBERS OVERFLOW, BARBERS AND COW CREEK AREA



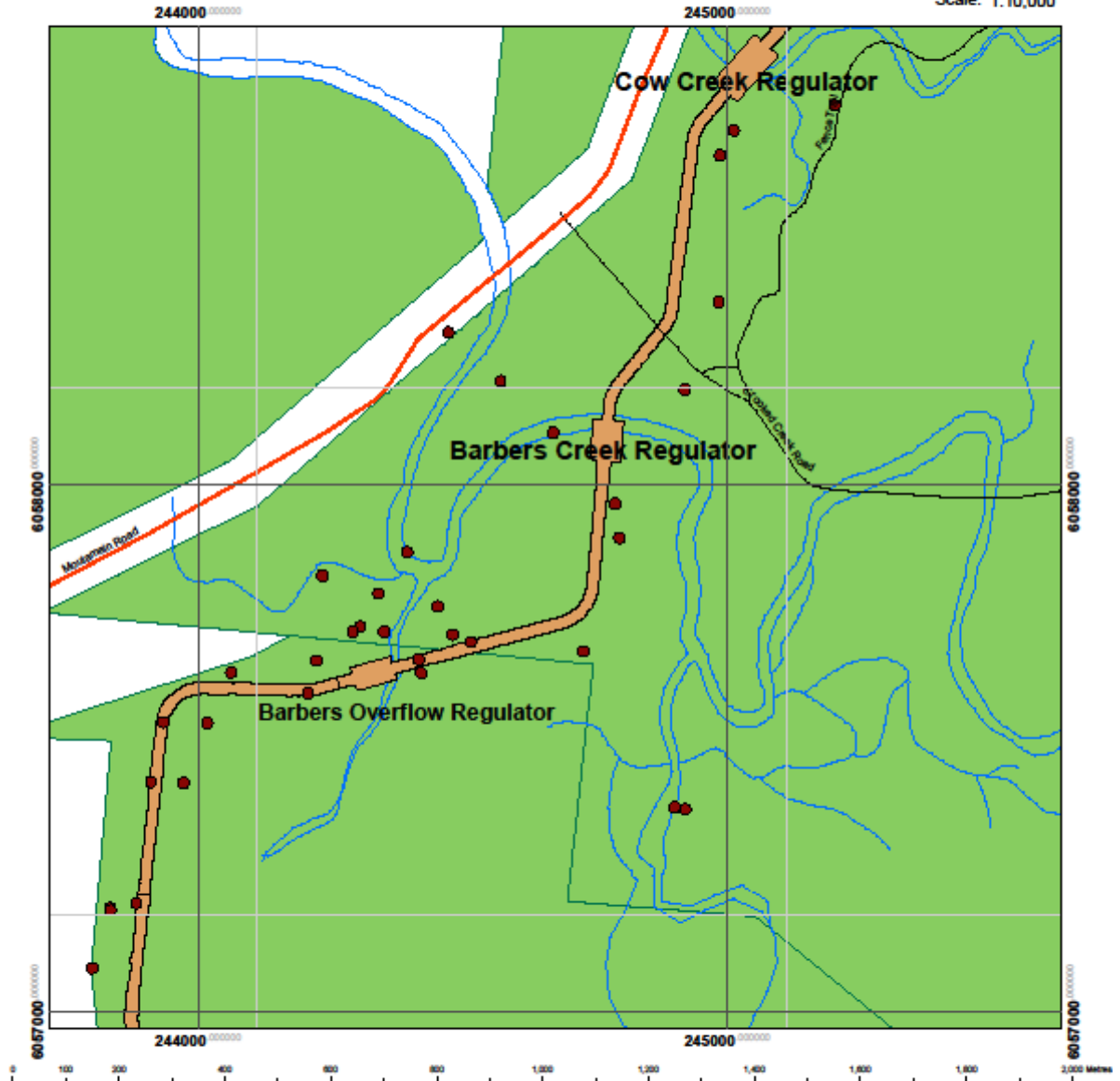
KOONDROOK FOREST

Aboriginal Cultural Heritage Sites

Barbers Overflow, Barbers Creek & Cow Creek

AMG25 Grid

Scale: 1:10,000



Legend

- Cultural Heritage Sites
- Drainage
- Natural/Loose surface
- Levee & Regulators
- Sealed surface
- 4 Wheel Drive
- Forest Boundary

June 2016

Produced by Forestry Corporation of NSW



APPENDIX 3

UNANTICIPATED DISCOVERY PROTOCOLS



A3.1 Protocol For Discovery Of Aboriginal Cultural Heritage Sites Or Material During Construction

In the event that one or more Aboriginal objects are revealed during works associated with the Koondrook-Perricoota Flood Enhancement Works, the following protocol will be actioned:

1. The discoverer of the find(s) will notify machinery operators in the immediate vicinity of the Aboriginal object so that work can be halted in the area of the find(s), and the site supervisor advised. All work will cease within 5 m of the Aboriginal object(s).
2. The find will be reported to the Cultural Heritage Advisor/Site Monitor Co-ordinator and to Forestry Corporation and Principal Contractor's supervisor.
3. The approximate extent, nature, associated archaeological potential and likely significance of the Aboriginal object(s) will be determined by the Cultural Heritage Advisor/Site Monitor Co-ordinator.
4. The Cultural Heritage Advisor/Site Monitor Co-ordinator will determine if the find(s) belong to a previously recorded site and assess the significance of the site.
5. If the location of the finds is consistent with a previous recording, construction work can proceed provided that any required mitigative actions defined in the report have been completed.
6. If the find is a new recording then OEH, the Environmental Manager and Project Archaeologist will be notified of the find.
7. A temporary operational buffer zone will be established around the find. Construction operations may recommence outside of the buffer zone.
8. The new recording will be documented on a OEH site card and lodged with OEH.
9. If the site is an artefact scatter the Aboriginal objects will be collected and stored in the temporary storage facility. In the event of the collection of Aboriginal artefacts from the project area:
 - a. The artefacts will be recorded and collected using the form shown in Appendix 4.

The location of the recovered artefacts will be recorded using a hand-held GPS, (if available and where necessary), or alternatively, by noting chainage intervals and a photograph taken of the general area;
 - b. The collected artefacts will be placed in a clear-plastic bag and placed in temporary secure storage at the site office

Each bag should have the following information marked on it using a broad nib permanent spirit pen:

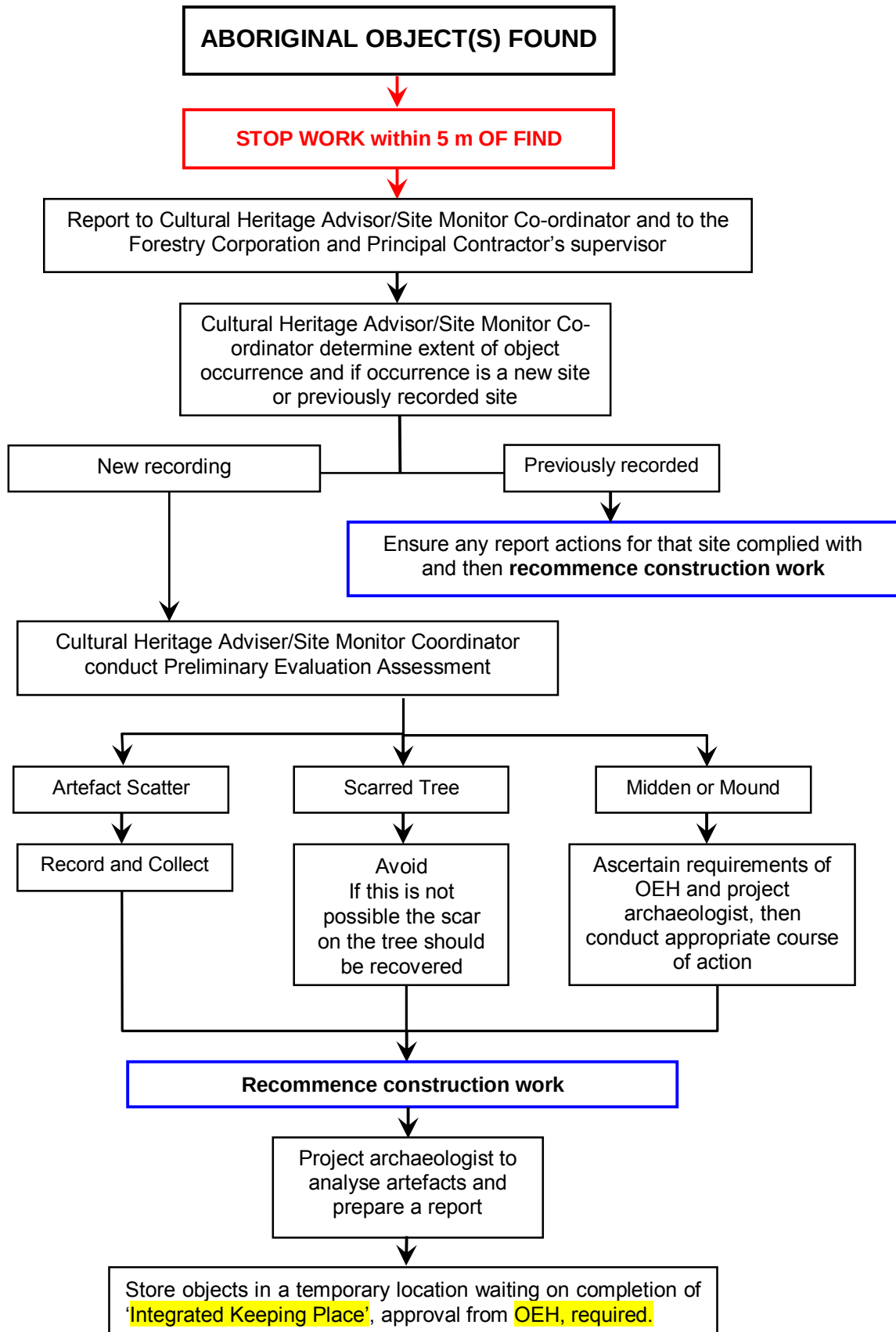
 - The site location;
 - The date (day/month/year);
 - The collector's name; and
 - Any other relevant information (such as a GPS reference or description of contents)
10. If the site is a scarred tree the tree is to be avoided. If this is not possible the scar on the tree should be recovered and curated appropriately; professional advice from an archaeologist should be sought on the conservation of the tree trunks.
11. If the site is a midden or mound then:
 - a. Ascertain the requirements of the JIG, the OEH and the project archaeologist.



- b. Based on the above, determine and conduct an appropriate course of action. Possible strategies could include one or more of the following:
- Avoiding further disturbance to the site and conserving the site *in situ*, (this option may require relocating the development and this may not be possible in some contexts);
 - Conducting (or continuing) archaeological salvage of the finds;
 - Scientific description (including excavation where necessary), and possibly also analysis of the site;
 - Recovering samples for dating and other analyses; and
 - Collection of the site using the form shown in Appendix 4.
12. Following the completion of one of the above management strategies to the satisfaction of the project archaeologist, OEH, and the JIG, recommence the previously suspended construction activities.
13. Following the completion of those construction works in which Aboriginal objects may potentially be revealed, the project archaeologist will analyse the data from collected artefacts, together with any data and finds from salvage excavations, (conduct any radiocarbon dating determinations, where appropriate) and prepare a report.
14. The following should be undertaken for the management of recovered items:
- a. Forestry Corporation NSW obtain a “Care and Control Permit” on behalf of the Traditional Owners
 - b. The Forestry depot at Barham be used as a “Temporary Keeping Place” for any recovered material
 - c. Any recovered material stays local and “On Country”
 - d. Any stone artefacts recovered are added to the collection of those discovered during the earlier Project construction.



PROTOCOL FOR DISCOVERY OF ABORIGINAL CULTURAL HERITAGE SITES OR MATERIAL DURING CONSTRUCTION





A3.2 Protocol To Be Followed In The Event That Suspected Human Remains Are Revealed Within The Project Area

The potential for human skeletal remains to be uncovered when excavating in sandy environments in the vicinity of the Murray River cannot be discounted. The following actions should be followed if human skeletal material is detected in the course of earthworks within the proposed development areas:

1. All ground surface disturbance in the area of the finds should cease immediately the finds are encountered.
 - a. The discoverer of the find(s) should notify machinery operators in the immediate vicinity of the find(s) so that work can be halted; and
 - b. The following parties should be informed of the find(s):
 - i. Forestry Corporation
 - ii. The Cultural Heritage Advisor/Site Monitor Co-ordinator and
 - iii. The Principal Contractor's supervisor.
2. Do not remove any find(s) or disturb the area of the find(s);
3. If there is substantial doubt regarding a human origin for the remains, then gain a qualified opinion.
 - If feasible, gain a qualified opinion on the material (this can circumvent proceeding further along the protocol for remains which turn out to be non-human). A photograph can be sent to a qualified person for quick identification.
 - This opinion must be gained without further disturbance to the find and its context. (Be aware that the site may be considered a crime scene containing forensic evidence if the remains are found to be human, and not of an Aboriginal person who died more than 100 years ago).
4. Immediately notify the following people of the discovery (if not already informed):
 - a. The local Police (this is required by law);
 - b. An OEH archaeologist or Aboriginal Heritage Officer and the Heritage Branch of the DoP;
 - c. The JIG; and
 - d. The project archaeologist.
5. Facilitate the evaluation of the find(s) by the statutory authorities and comply with any stated requirements. Depending on the evaluation of the find(s), the management of the find(s) and their location may become a matter for the Police and/or Coroner.
6. Construction related works in the area of the find(s) may not resume until the proponent receives written approval from the relevant statutory authority: from the Police or Coroner in the event of an investigation, from OEH in the case of Aboriginal remains outside of the jurisdiction of the Police or Coroner, and from the Heritage Office, Department of Planning in the case of non-Aboriginal remains outside of the jurisdiction of the Police or Coroner.

In the event that the proponent continues an active role in the evaluation and/or management of the find(s), via a direction or advice from the Police, Coroner and/or Heritage Council, then all or some of the following steps may be conducted:

7. Facilitate, in co-operation with the appropriate authorities and the JIG, the definitive identification of the human remains by a qualified person (if not already completed). This must be done with as little further disturbance to any remaining skeletal material and its context as possible.



8. If the specialist identifies the remains as non-human then, where appropriate, the protocol for the discovery of historical or Aboriginal artefacts (above) should be followed.
9. If the specialist determines that remains are human, then the proceeding course of action may be of three types:
 - a. The remains are of an Aboriginal or non-Aboriginal person who died less than 100 years ago. All further decisions and responsibilities regarding the remains and find location rest with the Police and/or the State Coroner.
 - b. The remains are of a non-Aboriginal person who died more than 100 years ago. In this case, and where the Police have indicated that they have no interest in the find(s), the following steps may be followed:
 - i. Ascertain the requirements of the Heritage Branch of the Department of Planning, the proponent, the project archaeologist, and the views of any relevant community stakeholders;
 - ii. Based on the above, determine and conduct an appropriate course of action. Possible strategies could include one or more of the following:
 1. Avoiding further disturbance to the find and conserving the remains in situ (this option may require relocating the development and this may not be possible in some contexts);
 2. Conducting (or continuing) archaeological salvage of the finds following receipt of any required statutory approvals;
 3. Scientific description (including excavation where necessary), and possibly also analysis of the remains prior to reburial;
 4. Recovering samples for dating and other analyses; and/or
 5. Subsequent reburial at another place and in an appropriate manner determined by the Heritage Council and in consultation with other relevant stakeholders.
 - c. The remains are of an Aboriginal person who died more than 100 years ago. In this case the following steps may be followed:
 - i. Ascertain the requirements of the JIG, the OEH, the proponent, and the project archaeologist;
 - ii. Based on the above, determine and conduct an appropriate course of action. Possible strategies could include one or more of the following:
 1. Avoiding further disturbance to the find and conserving the remains in situ, (this option may require relocating the development and this may not be possible in some contexts);
 2. Conducting (or continuing) archaeological salvage of the finds following receipt of any required statutory approvals;
 3. Scientific description and recording (including excavation where necessary), of the remains prior to reburial;
 4. Recovering soil samples for dating and other analyses; and/or
 5. Subsequent reburial as close as possible to the original location and in an appropriate manner determined by the JIG and the OEH.



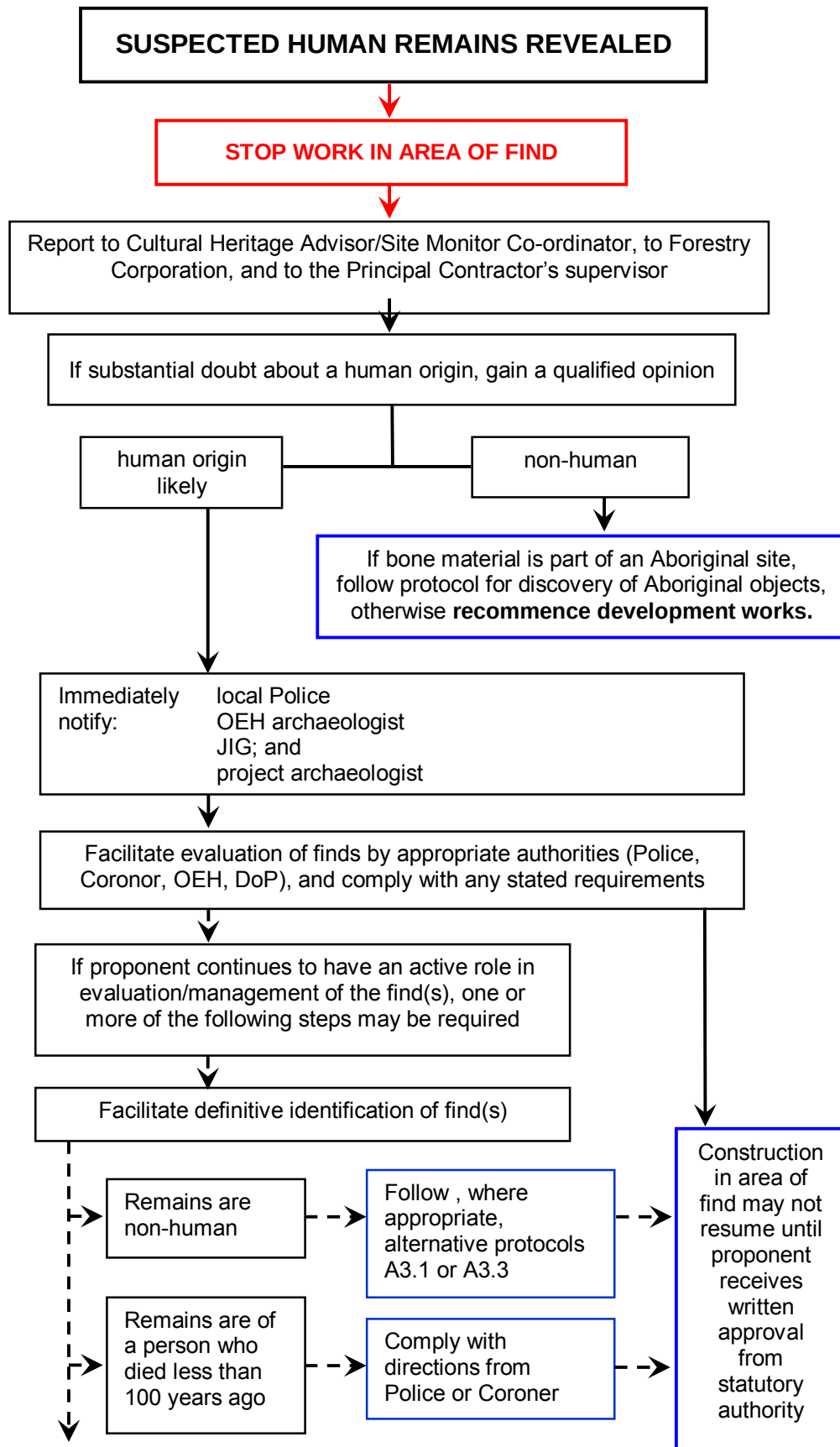
- iii. If burials are found with secret sacred goods they are to be treated as one item with the burial and not separated. No photos are to be taken of the goods. They are to remain with the burial and reburied along with it.
- iv. There is to be not direct or indirect damage to the burial. For example no samples of the burial are to be obtained for analysis.

Reference

Donlan, D., McIntyre-Tamwoy, S. and A. Thorne 2002 Aboriginal Skeletal Remains Manual. NSW National Parks and Wildlife Service, Hurstville.

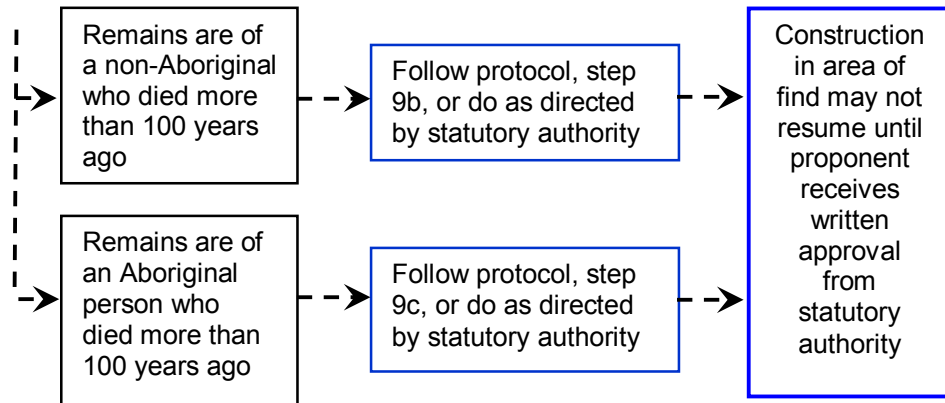


PROTOCOL FOR SUSPECTED HUMAN REMAINS REVEALED IN THE DEVELOPMENT AREA





PROTOCOL FOR SUSPECTED HUMAN REMAINS REVEALED IN THE DEVELOPMENT AREA (cont.)





A3.3. Protocol To Be Followed In The Event That Previously Unrecorded (Non Aboriginal) Relics (Historical Artefacts) Are Revealed During Project Works

In the event that historical sites/objects are revealed during construction works, the following protocol will be actioned:

1. The discoverer of the find(s) will notify machinery operators in the immediate vicinity of the find(s) so that work can be halted in the area of the find(s), and the site supervisor advised.
2. The find will be reported to the Environmental Manager.
3. The approximate extent, nature, associated archaeological potential and likely significance of the find(s) will be determined by an appropriately qualified person, such as the project archaeologist.
4. The appropriately qualified archaeologist will determine if the finds belong to a previously recorded site. If the location of the finds is consistent with a previous recording, construction work can proceed provided that any required mitigative actions defined in the report have been completed.
5. If the find is a new recording then the Heritage Branch, Department of Planning, will be notified of the find and an appropriately qualified person or persons (such as the project archaeologist), will record the find(s), and assess the likely significance of the finds and any associated deposits.
6. The recording and assessment results will be reported to the Environmental Manager and an appropriate management strategy will be developed and instigated, in consultation with the Heritage Branch. The management of the find(s) may involve
 - a. No further action,
 - b. Collection of surface artefacts and any other required samples; or
 - c. The conduct of an archaeological salvage excavation with the aim of recovering a sufficient sample of the deposit to allow an analysis which is commensurate with the assessed potential of the deposit, and
 - d. The temporary storage of recovered items by the project archaeologist pending the completion of analysis.
7. In the event of the collection of non-Aboriginal artefacts from the project area:
 - a. The artefacts will be recorded and collected using the form shown in Appendix 4.

The location of the recovered artefacts will be recorded using a hand-held GPS, (if available and where necessary), or alternatively, by noting chainage intervals;

- b. The collected artefacts will be placed in a clear-plastic bag and placed in temporary secure storage at the site office

Each bag should have the following information marked on it using a broad nib permanent spirit pen:

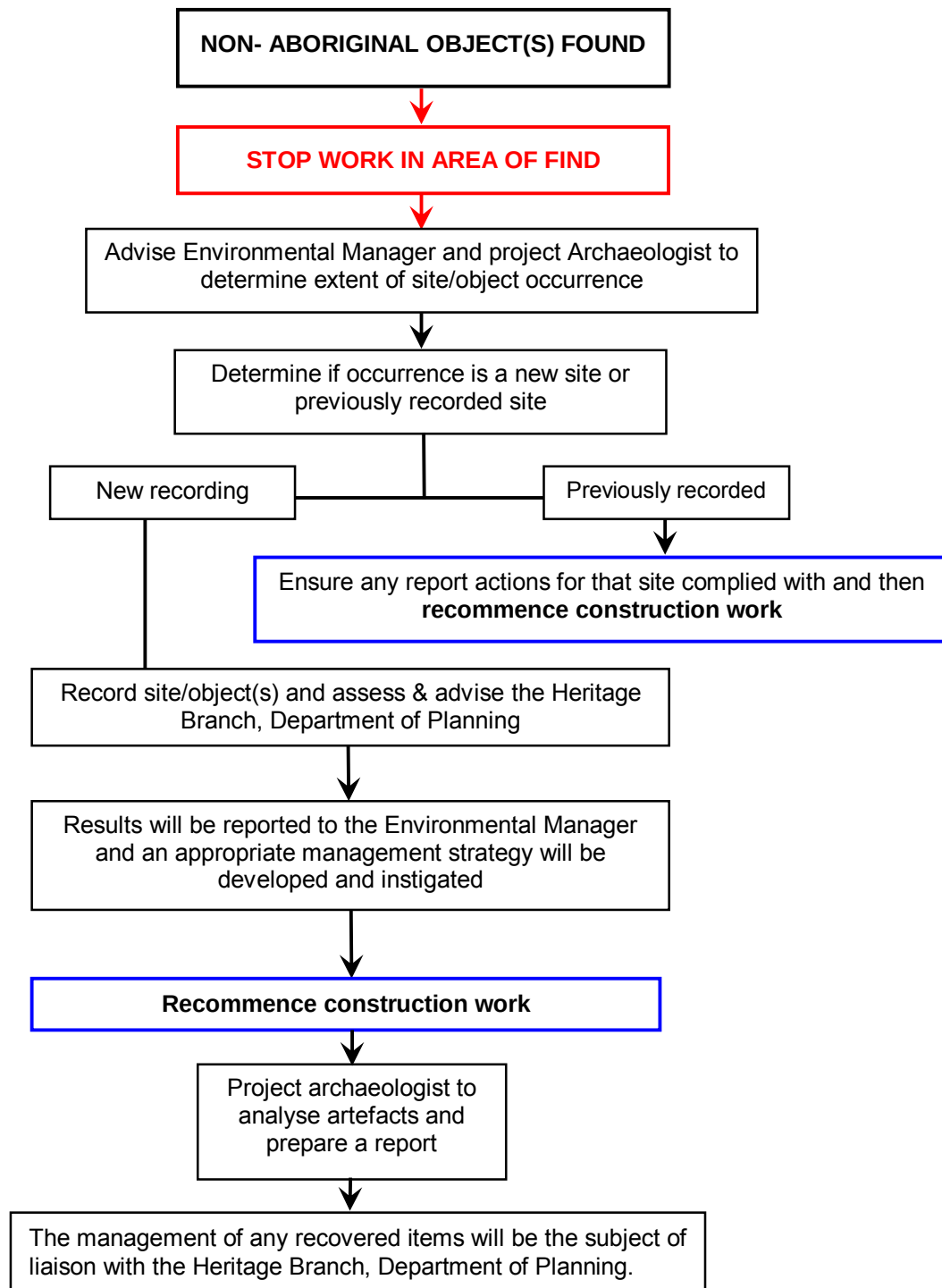
- The site location;
- The date (day/month/year);
- The collector's name; and
- Any other relevant information (such as a GPS reference or description of contents);
- Where necessary, Forestry Corporation is responsible for the temporary and secure storage of recovered non-Aboriginal artefacts prior to their long term management.



8. Following the completion of the agreed management strategy to the satisfaction of the project archaeologist and the Heritage Branch, Department of Planning, recommence the previously suspended construction activities.
9. Following the completion of those construction works, the project archaeologist will analyse the data from the collected artefacts, together with any data from the recorded sites and prepare a report as per standard Heritage Branch, Department of Planning reporting guidelines.
10. The management of any recovered items will be the subject of liaison with the Heritage Branch, Department of Planning.



PROTOCOL FOR DISCOVERY OF NON-ABORIGINAL OBJECTS





APPENDIX 4

FORMS FOR RECORDING, RECOVERY AND RE-POSITIONING OF ARTEFACTS



Record of Discovery of Aboriginal Objects

Koondrook-Perricoota Sandy Bridge Road

Who and When?

Name of Recorder		Date	
Site name or number			

What has been recovered, and from Where? GPS Datum: ☐ AGD66 ☐ WGS84 ☐ other (specify)

Chainage (m) or GPS reference	Description of object(s)		No. of bags
	No. of items	Type of object(s) (e.g., stone, shell, bone, charcoal, burnt clay)	

Sketch Map (Show north, location of finds, concentrations or points of interest – use other side of form for more space – also take a photograph of the general area).

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Note that an OEH site card must also be filled out and lodged with OEH

Record of Repositioning of Collected Aboriginal Objects

Koondrook-Perricoota Sandy Bridge Road

Who and When?

Site name or number		Date	
Name of Aboriginal Community Representative			
Name of Archaeologist			

What has been repositioned, and to Where? GPS Datum: ☐ AGD66 ☐ WGS84 ☐ other (specify)

GPS reference for new locations	Inventory numbers for items	Describe location and nature of repositioning (e.g., by large tree, scattered on surface, buried (how deep?, in or out of plastic bag))

Sketch Map (Show north, location of repositioned finds, distance and compass bearings from fixed objects – use other side of form for more space - also take a photograph of the general area).

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Note that a OEH site card must also be filled out and lodged with OEH

Record of Discovery of Historical Site/Object

Koondrook-Perricoota Sandy Bridge Road

Who and When?

Name of Recorder		Date	
Site name or number			

What has been discovered, and Where? GPS Datum: ☐ AGD66 ☐ WGS84 ☐ other (specify)

Chainage (m) or GPS reference	Description of site/object(s)		No. of bags
	No. of items	Site Type and Type of object(s)	

Sketch Map (Show north, location of finds, concentrations or points of interest – use other side of form for more space - also take a photograph of the general area).

