

Appendix 5

Aboriginal Cultural Heritage Assessment Report

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Aboriginal Cultural Heritage Assessment Report

Avoca Tank Project Environmental Impact Statement

***Tritton Resources, Girilambone,
Bogan Shire NSW 2831***

**A report prepared for
RW Corkery & Co Pty Limited
Geological and Environmental Consultants
and Tritton Resources Pty Ltd**

May 2014

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EXECUTIVE SUMMARY

R.W. Corkery and Co is preparing an Environmental Impact Statement (EIS) for Tritton Resources Pty Ltd (the Applicant) to undertake mining activity at an identified resource to the north of its Girilambone Copper Mine, currently referred to as the Avoca Tank Project (the Proposal). On Site Cultural Heritage Management Pty Ltd (On Site CHM) has been engaged by RW Corkery and Co Pty Limited and Tritton Resources to prepare an Aboriginal Cultural Heritage Assessment to inform the EIS about the management of Aboriginal heritage places values within the Avoca Tank Project Site.

The information presented in this Aboriginal Cultural Heritage Assessment has built upon the assessment (On Site CHM 2013) originally prepared for the exploration phase and Review of Environmental Factors (REF) that preceded the EIS. The survey and assessment processes and Aboriginal community consultation to inform the Proposal was undertaken in a two stage assessment process between March and August of 2012 and September 2012 and January 2013.

The results and recommendations of that assessment (On Site CHM 2013) were considered in the final design of the Proposal which has avoided all identified Aboriginal places and values. This report describes the Aboriginal heritage assessment processes undertaken by On Site CHM for the Avoca Tank Project and provides management strategies to ensure the conservation of identified Aboriginal places within the Avoca Tank Project Site during the development and operation of the Proposal.

The Avoca Tank Project Site is located approximately 4 kilometres northwest of Girilambone NSW 2831 along the Mitchell Highway within the Bogan Shire NSW 2831. The Project Site covers an area of 1846 ha (18.46 km²) and the Proposed Disturbance Footprint covering an area of 33.6 ha (0.336 km²). Proposed extraction will occur underground meaning that the Proposed Disturbance Footprint will only cover a small percentage (1.8%) of the entire Project Site. The Avoca Tank Project Site occurs across Lots 135 and 144 (DP 751315) and part Lots 10 (DP 751315) and part Lot 3 (DP 751342). The Project Site is situated on the Coolabah 8235 1:100,000 map sheet.

Four objectives were defined for the Aboriginal Cultural Heritage Assessment in partnership with the local Aboriginal community:

1. Investigate and assess the nature and extent of Aboriginal heritage places and values within the Avoca Tank Project Site
2. Assess the cultural significance of these places and values
3. Assess the potential impacts on identified Aboriginal heritage places and values
4. Provide appropriate recommendations for the conservation and management of identified Aboriginal heritage places and values during the development and operation of the Proposal.

Extensive consultation has been conducted with the Aboriginal community in accordance with the *Aboriginal cultural heritage consultation requirements for proponents 2010 (Section 3.0)*. The Avoca Tank project area falls within the boundaries of the Nyngan Local Aboriginal Land Council and according to Tindale (1974) falls within the boundaries of the Wongaibon Aboriginal people. The project area is also within land under the Ngemba/Ngiyampaa Native Title Claim. A copy of relevant claim details was provided by the National Native Title Tribunal and is included in **Appendix 1**.

On the basis of the review of the environmental context (**Section 4.0**) and previous archaeological studies (**Section 5.0**) predictions were made about the archaeological potential of the Avoca Tank project area:

1. Scarred trees are likely to be the most common site type within the Study Area with hearth sites (some potentially with artefacts) likely to be the next most common site type.
2. Stone artefact occurrences are predicted to be low given the paucity of potable water and suitable stone for the manufacture of stone tools.
3. The broad scale land clearing and previous land-use practices within the Study Area are likely to have impacted heavily on all of the site types discussed above.

On the basis of these predictions the archaeological potential and sensitivity of the Avoca Tank project area was considered to be low.

Representatives of the Nyngan Local Aboriginal Land Council (Sheila Couley) and Bogan Aboriginal Corporation (Lesly Ryan) participated in the archaeological survey of the Avoca Tank (Stage 1) assessment area between 26 and 30 April 2012. These representatives and Neville Merritt of the Ngemba/Ngiyampaa Native Title Claim group also participated in the archaeological survey of the Avoca Tank (Stage 2) assessment area between 29 October and 2 November 2012. During the fieldwork the significance and management of all Aboriginal objects and sites was discussed with representatives of the Nyngan Local Aboriginal Land Council, Bogan Aboriginal Corporation and the Ngemba/Ngiyampaa Native Title Claim group.

Assessment of the Avoca Tank Project Site has identified a total of five locations where Aboriginal objects and occupation evidence occurs (See **Table Error! Reference source not found.**, Avoca Tank 1 to 5).

A review of the 11 previously recorded AHIMS sites within the Avoca Tank Project Site determined that there are duplicate recordings and these 11 sites actually represent 5 sites. Two of these sites were rerecorded as part of this survey. Duplicate site recordings 26-3-0034 / 26-3-0119/ 26-3-0149 have been rerecorded as Avoca Tank 1 and duplicate site recordings 26-3-0067 / 26-3-0146, 26-3-0068 / 26-3-0147, 26-3-0066 / 26-3-0145 have been recorded as Avoca Tank 3 comprising 3 hearth locales. Hearth nodules previously recorded at site 26-3-0070 / 26-3-0071 were unable to be relocated as part of this survey and it is likely that these features have since eroded away.

Table 1: Results of archaeological assessment of Avoca Tank Project Site. Grid references recorded by On Site CHM (GDA 94) and differ from AHIMS (See Section 5.1)

On Site CHM Site Name	Site Features	Easting	Northing	Corresponding AHIMS Sites
Avoca Tank 1	Stone artefact scatter	55 484966	6548490	26-3-0034 / 26-3-0119/ 26-3-0149 (open artefact scatter) 26-3-0070 / 26-3-0071 (hearth)
Avoca Tank 2	Isolated stone artefact	55 484857	6548245	-
Avoca Tank 3 (3 x hearths)	Hearth 1	55 484835	6547528	26-3-0067 / 26-3-0146
	Hearth 2	55 484815	6547517	26-3-0068 / 26-3-0147
	Hearth 3	55 484729	6547486	26-3-0066 / 26-3-0145
Avoca Tank 4	Historic Scar Tree & Aboriginal Stockman's Camp	55 485027	6547775	-
Avoca Tank 5	2 x isolated stone artefacts	55 481436	6548043	-

The results of this assessment reveal Aboriginal occupation evidence is sparsely distributed across the Avoca Tank Project Site and is indicative of low intensity use of the landscape by Aboriginal people characterised by a high level of mobility and relatively short term occupation or single use of these places.

The low intensity of Aboriginal occupation materials across the Project Site is likely due to the paucity of reliable sources of potable water, stone outcrops suitable for the manufacture of stone tools and to some extent the disturbance upon Aboriginal occupation materials by previous land use practices.

The cultural significance (encompassing Aboriginal and archaeological significance) of the identified Aboriginal places and the Project site has been assessed through Aboriginal consultation and archaeological analysis within a regional context as follows:

- Avoca Tank 1 (an open artefact scatter) is assessed as having a low to moderate level of cultural significance.
- Avoca Tank 2 (a single isolated stone artefact) is assessed as having a low level of cultural significance.
- Avoca Tank 3 (three 'hearths') is assessed as having a low level of cultural significance.
- Avoca Tank 4 (historic scar tree and Aboriginal stockman's camp) is assessed as having a moderate level of cultural significance. Avoca Tank 4 has been identified by Registered Aboriginal Parties as having a moderate to high level of Aboriginal significance and also attributed with historic and aesthetic values.

- Avoca Tank 5 (2 x isolated stone artefacts) is assessed as having a low level of cultural significance.
- The Registered Aboriginal Parties (RAPs) participating in the survey attributed the Study Area with a low level of Aboriginal significance.
- Given the paucity of Aboriginal sites and objects across the Project Site, the subject land has also been assessed as having a low archaeological potential and significance.

The Proposal has subsequently been developed to avoid all of the identified Aboriginal sites and objects within the Avoca Tank Project Site. None of the identified places (Avoca Tank 1 to 5 and associated AHIMS Sites) are proposed to be directly impacted upon or *harmed* during the development of this Proposal and AHIPs will therefore not be required.

The development of management strategies is therefore concerned with the prevention of *harm* through protection and conservation of these places during the development and operation of the Proposal.

On the basis that all of the identified places (Avoca Tank 1 to 5) and locations of previously recorded AHIMS Sites will be avoided and conserved during the development and operation of the Proposal, it is recommended that:

1. Avoca Tank sites (1 to 5) and locations of previously recorded AHIMS sites should continue to be designated as 'no go' areas in accordance with the Straits Community and Heritage Policy and Straits Procedures - Heritage Management Planning (Australia).
2. The existing fencing to demarcate these sites as 'no go' areas should be upgraded to steel pickets and wire sufficient to prevent unauthorised persons and animals prior to the development and operation of the Proposal. Fencing of these places does not require an Aboriginal Heritage Impact Permits (AHIPs).
3. The design and construction of Proposal components should consider the effect of water movement across the landscape and be sensitive to the possibility of creating indirect potential threats that may impact upon these places. This potential is perhaps most acute for the design of the haul road and location of drains. A buffer of at least 50 metres should be established and maintained between the 'no go' areas around identified places and proposed mine infrastructure.
4. Some specific conservation management planning is undertaken for Avoca Tank 4 to mitigate the potential increased risk of fire. The fencing of Avoca Tank 4 and shift in fire management across the Project Site may result in an increased fuel load and fire risk. Specific conservation management strategies may involve spraying / slashing of grass at appropriate intervals to suppress the fuel load or installation of a fire break outside fencing. The development of these management strategies should be Informed by specialist advice.

5. The location of each place be accurately mapped as a polygon and incorporated into the relevant spatial management tool (GIS - Geographic Information System) during the development and operation of the Proposal. A buffer of at least 50 metres should be applied for these places.
6. Long term conservation management and monitoring strategies be developed and implemented for these places. These strategies should be developed as part of a specific Heritage Management Plan or incorporated into the relevant Environmental Management Plan as appropriate.
7. Information about the presence of these Aboriginal places, their values and management be incorporated into the induction materials and delivered to relevant personnel or contractors that may come into contact with these places.
8. Given the paucity of Aboriginal objects and sites across the Avoca Tank Study Area no further archaeological surveys of the Proposed Disturbance Footprint are considered warranted.

With regard to Recommendation 8, the previous assessment (On Site CHM 2013) prepared for Tritton Resources also recommended that no further archaeological surveys of the Avoca Tank Study Area were required should the project proceed to full scale mining.

Two of the Registered Aboriginal Parties (Nyngan LALC and Bogan Aboriginal Corporation) provided their support for this recommendation. Native Title Services Corporation, on behalf of the Ngemba/Ngiyampaa Native Title claim group considered that further more intensive surveys of the Proposed Disturbance Footprint should be undertaken. A response was provided by On Site CHM to NTS Corp (**Appendix 7**) who provided a further response also included at **Appendix 7**.

A copy of this assessment report has been distributed to the Registered Aboriginal Parties.

A summary of sites identified within the Avoca Tank Project Site, their significance and recommendations is provided below in **Table 10.1**.

Table 2: Summary table for identified sites within Avoca Tank project area, assessed significance, impacts and recommendations

Sites	Previously recorded AHIMS Sites	Site type and comments	Aboriginal Significance	Archaeological Significance	Impacts of Proposed Disturbance	Summary of mitigation strategy
Avoca Tank 1	26-3-0034 / 26-3-0119 / 26-3-0149	Open artefact scatter –Low density scatter (11 x stone artefacts) with high raw material diversity and moderate artefact type diversity.	Moderate	Low to moderate	None	Upgrade existing fencing. Develop and implement appropriate conservation management strategies and incorporate into relevant management systems and documents.
-	26-3-0070 / 26-3-0071	Hearth – unable to be relocated during this survey. Likely washed away and not extant	-	-	None	Location will be avoided. No further action warranted.
Avoca Tank 2	-	Isolated stone artefact	Low	Low	None	Upgrade existing fencing. Develop and implement appropriate conservation management strategies and incorporate into relevant management systems and documents.
Avoca Tank 3	26-3-0067 / 26-3-0146 26-3-0068 / 26-3-0147 26-3-0066 / 26-3-0145	3 x hearths – no other cultural material in association.	Low to moderate	Low	None	Upgrade existing fencing. Develop and implement appropriate conservation management strategies and incorporate into relevant management systems and documents.
Avoca Tank 4	-	Historic scar tree and Aboriginal stockman's camp.	Moderate to high	Moderate	None	Upgrade existing fencing. Develop and implement appropriate conservation management strategies and incorporate into relevant management systems and documents. Undertake specific conservation management planning to mitigate the risk of fire.
Avoca Tank 5	-	2 x Isolated stone artefacts	Low	Low	None	Upgrade existing fencing (if appropriate). Develop and implement appropriate conservation management strategies and incorporate into relevant management systems and documents.

1.0 INTRODUCTION

R.W. Corkery and Co is preparing an Environmental Impact Statement (EIS) for Tritton Resources Pty Ltd (the Applicant) to undertake mining activity at an identified resource to the north of its Girilambone Copper Mine, currently referred to as the Avoca Tank Project (the Proposal). On Site Cultural Heritage Management Pty Ltd (On Site CHM) has been engaged by RW Corkery and Co Pty Limited and Tritton Resources to prepare an Aboriginal Cultural Heritage Assessment to inform the EIS about the management of Aboriginal heritage places values (including Aboriginal sites and objects) within the Avoca Tank Project Site.

The information presented in this Aboriginal Cultural Heritage Assessment has built upon the assessment (On Site CHM 2013) originally prepared for the exploration phase and Review of Environmental Factors (REF) that preceded this EIS. The baseline survey and assessment process undertaken for the exploration phase extended across the entire Avoca Tank Project Site including the Proposed Disturbance Footprint described in **Section 1.1** and displayed in **Figures 1.1** and **1.2**. The results and recommendations of that assessment (On Site CHM 2013) were considered in the final design of the Proposal which has avoided all identified Aboriginal places and values.

This report describes the Aboriginal heritage assessment processes undertaken by On Site CHM for the Avoca Tank Project and provides management strategies to ensure the conservation of identified Aboriginal places within the Avoca Tank Project Site during the development and operation of the Proposal.

1.1 OVER VIEW OF THE AVOCA TANK PROJECT

The Avoca Tank Project Site is located approximately 4 kilometres northwest of Girilambone NSW 2831 along the Mitchell Highway within the Bogan Shire NSW 2831. The Avoca Tank Project Site covers an area of 1846 ha (18.46 km²) and the Proposed Disturbance Footprint covering an area of 33.6 ha (0.336 km²) (See **Figure 1.1**, and **1.2**). Proposed extraction will occur underground meaning that the Proposed Disturbance Footprint will only cover a small percentage (1.8%) of the entire Project Site.

The Avoca Tank Project Site occurs across Lots 135 and 144 (DP 751315) and part Lots 10 (DP 751315) and part Lot 3 (DP 751342). The Project Site is situated on the Coolabah 8235 1:100,000 map sheet.

The Proposal would include the following Key Components (**Figure 1.2**):

- Construction and use of a boxcut, portal, decline, underground workings and two rises (one equipped as an emergency egress and the other with a ventilation fan at surface).

- Extraction of the economically recoverable copper-gold-silver resources to a depth of approximately 500m below surface using bench stoping and long hole open stope mining techniques.
- Transportation of ore material to the Tritton Copper Mine for processing using road registered road trains via a combination of a private haul road and Yarrandale Road.
- Establishment of a temporary surface waste rock emplacement for storage of waste rock extracted during construction of the boxcut and initial sections of the decline and mine workings.
- Establishment of surface infrastructure, including a mine water pond, run-of-mine (ROM) pad, laydown area, fuel store and refuelling bay and a hardstand area comprising a workshop, mobile plant parking area, wash down bay and transportable offices, crib room and ablution facilities.
- Extension of infrastructure from the North East Open Cut, including a site access road, water pipeline and transmission line.
- Establishment of ancillary infrastructure.
- Construction and rehabilitation of a final landform that would be geotechnically stable and suitable for a final land use of intermittent agriculture and nature conservation.

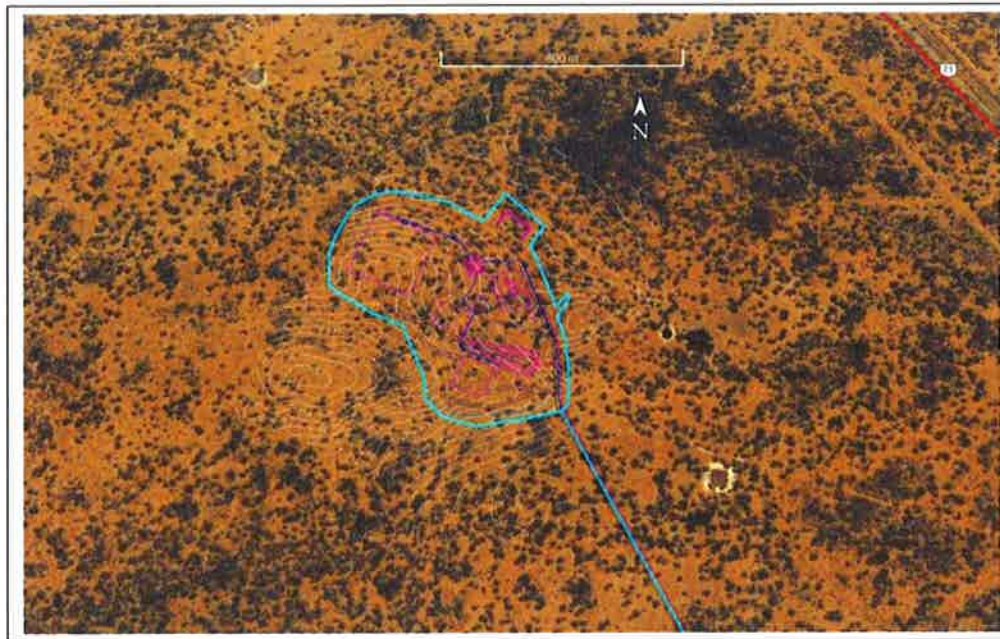
Figure 1.1: Avoca Tank Project Site. Project Site Boundary shown in red outline and Proposed Disturbance Footprint, including the proposed haul road are shown by the light blue line.



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Figure 1.2: Proposed Disturbance Footprint and proposed haul road shown by the light blue line. Project components described in Section 1.1 shown within light blue line.



1.2 OBJECTIVES OF THE ABORIGINAL CULTURAL HERITAGE ASSESSMENT

Four objectives were defined for this Aboriginal Cultural Heritage Assessment in partnership with the local Aboriginal community:

1. Investigate and assess the nature and extent of Aboriginal heritage places and values within the Avoca Tank Project Site
2. Assess the cultural significance of these places and values
3. Assess the potential impacts on identified Aboriginal heritage places and values
4. Provide appropriate recommendations for the conservation and management of identified Aboriginal heritage places and values during the development and operation of the Proposal.

1.3 BACKGROUND TO THIS ABORIGINAL CULTURAL HERITAGE ASSESSMENT

The Aboriginal Cultural Heritage Assessment processes documented in this report were conducted in two stages (Stage 1 and Stage 2) and included Aboriginal community consultation in accordance with *Aboriginal cultural heritage consultation requirements for proponents*.

Aboriginal community consultation, survey and assessment for the Stage 1 assessment area occurred between March and August of 2012 and Stage 2 was undertaken between September 2012 and January 2013.

The results of the Stage 1 and Stage 2 assessments were combined to produce a single assessment report (On Site CHM 2013) for the current Avoca Tank Project Site. These staged assessments were described within the Background Paper prepared for the Applicant by R.W Corkery & Co Pty Ltd (2013). The Aboriginal Cultural Heritage Assessment report (On Site CHM 2013) has been updated to inform the EIS.

Some of the assessment processes undertaken by On Site CHM for Stage 1 and 2 are still described and explained separately within some sections of this report to demonstrate compliance with the NPW Act and associated policy protecting Aboriginal sites and objects.

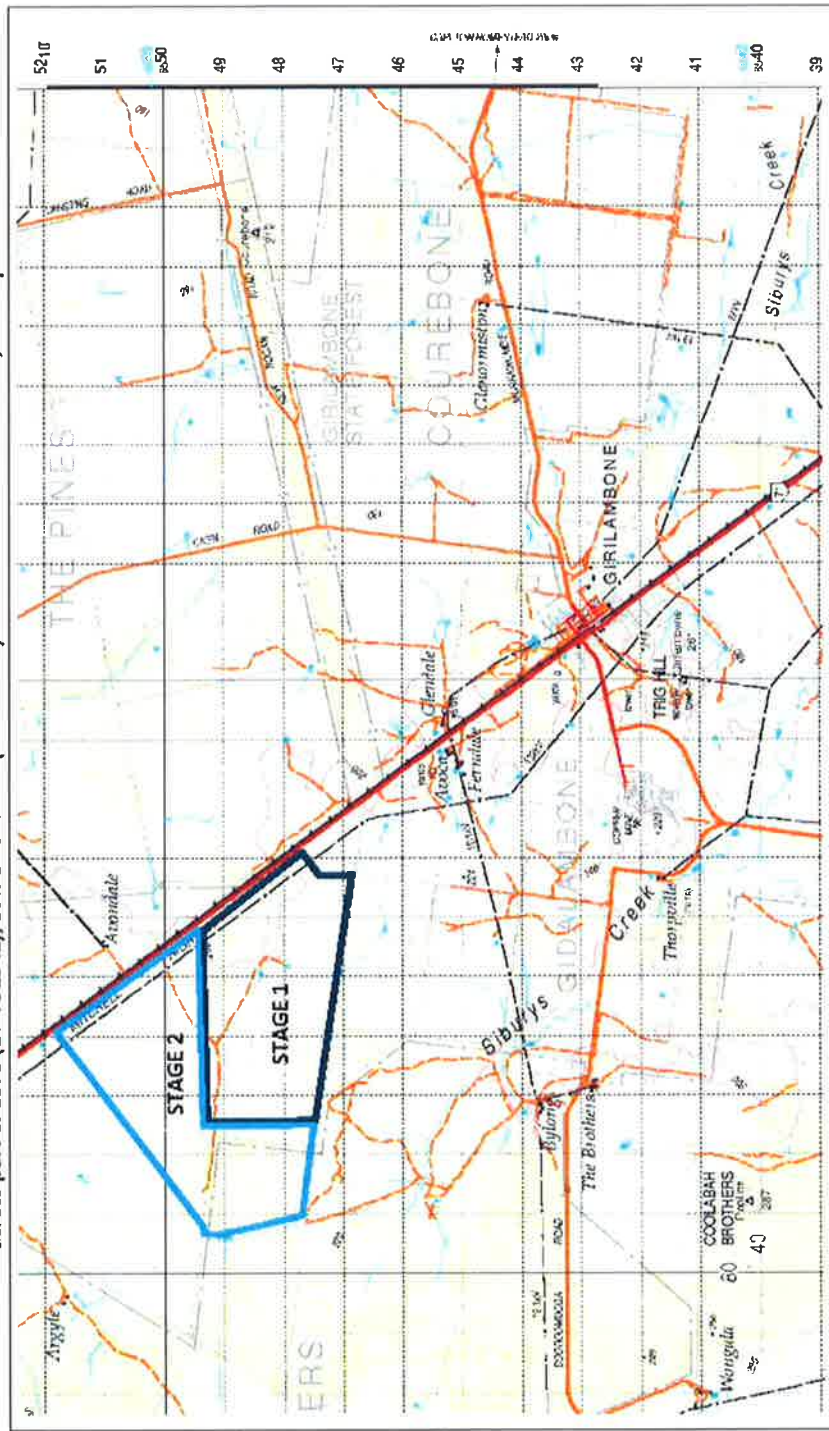
At the time of the surveys and assessments, the combined assessment areas of Stage 1 and 2 was 18.62km², slightly more than the current Project Site described in **Section 1.1** and shown in **Figure 1.1**. The Stage 1 Avoca Tank assessment area covered approximately 8.72km² across part of Lots 10, 135 and 144 (DP 751315) and the Stage 2 assessment area covered approximately 9.90 km² across part of Lot 3 (DP 751342), Lots 10 and 135 (DP 751315). The Avoca Tank assessment areas (Stages 1 and 2) are situated on the Coolabah 8235 1:100,000 map sheet and a map showing their location is shown in **Figure 1.3**.

1.4 PERSONNEL AND AUTHORSHIP

Gerard Niemoeller Principal Heritage Consultant of On Site CHM managed the project and led the research, fieldwork and preparation of this assessment report. Craig Reid, Assistant Archaeologist OSCHM assisted in the field work for Stage 1 and, Kate Duca Assistant Archaeologist On Site CHM assisted in the field work for Stage 2. David Tutchener, Archaeologist of On Site CHM undertook background research and prepared sections of this report.

Gerard Niemoeller conducted the Aboriginal consultation process in accordance with the *Aboriginal cultural heritage consultation requirements for proponents 2010*. Paul Calvin of Straits Resources (Tritton) has also consulted with the Registered Aboriginal Parties about this Proposal and assessment.

Figure 1.3: Avoca Tank assessment area (18.62km²) assessed by On Site CHM (Stages 1 and 2). Stage 1 assessment area (8.72km²) across part of Lots 10, 135 and 144 (DP 751315) is shown in the dark blue polygon. The Stage 2 assessment area is shown in the light blue polygon (9.90 km²), across part of Lot 3 (DP 751342), Lots 10 and 135 (DP 751315) on the Coolabah 8235 1:100,000 map sheet.



2.0 METHODOLOGY

2.1 ABORIGINAL CULTURAL HERITAGE

Aboriginal or Indigenous cultural heritage is a broad and complex concept and encompasses both tangible and intangible aspects relating to Aboriginal Culture, Country and People.

The language for defining and describing Aboriginal cultural heritage (places, sites / archaeological sites, items and objects) is also often complex. The terms and definitions applied for describing Aboriginal cultural heritage varies between Federal, State and Local Government legislation and policy. The language and description applied in studies will not only commonly vary in response to jurisdictions, legislation and policy, but also between disciplines and practitioners in response to range of factors.

To provide some consistency and clarity for the reader this study applies the terms 'Aboriginal heritage places and values' in accordance with the Australia ICOMOS Burra Charter (Marquis-Kyle, P & M. Walker 2004). The *Burra Charter* definition of 'place' includes locations that embody spiritual value (such as Dreaming places, sacred landscapes, and stone arrangements), social and historical value (such as massacre sites), as well as scientific value (such as archaeological sites or objects). In fact, one place may be all of these things or may embody all of these values at the same time. (Practice Note: The Burra Charter and Indigenous Cultural Heritage Management)

In this study and relevant to NSW, use of the term 'place' includes the Aboriginal places, objects, sites and items within the meaning of the *NSW National Parks and Wildlife Act* and associated policy and relevant *NSW Local Environment Plan*. Information about Aboriginal places and objects is registered on the Aboriginal Heritage Information Management System or AHIMS register which commonly refers to 'sites'. Use of the terms sites and objects specifically relate to interpretation of the *NSW National Parks and Wildlife Act* and associated policy.

The values of a place refer to their cultural significance. The Burra Charter defines cultural significance as meaning aesthetic, historic, scientific, social or spiritual for past present or future generations (Marquis-Kyle, P & M. Walker 2004:11).

2.2 STATUTORY AND POLICY FRAMEWORK

Primary protection of Aboriginal heritage places and values in NSW is established at the State level under the *NSW National Parks and Wildlife Act* and information about Aboriginal places and objects is registered on the AHIMS register.

Aboriginal heritage may however also be protected under Commonwealth, additional NSW State and Local Government legislation and included on various databases. Commonwealth

legislation protecting Aboriginal cultural may include the *Environment Protection and Biodiversity Conservation Act (EPBC Act)* and the *Aboriginal and Torres Strait Islander Heritage Protection Act (ATSHPA)*. The Australian Heritage Database contains information about places nominated, under assessment or included on the World, National or Commonwealth Heritage lists and the Register of the National Estate.

In NSW Aboriginal heritage may also be protected under the *NSW Heritage Act* or the *Local Environment Plan* respectively. The NSW State Heritage Inventory or database contains information about heritage places and items on statutory lists in NSW. Relevant registers (Australian heritage database, NSW Heritage database and local heritage inventory) were searched as part of the due diligence process and the results are discussed below.

The Avoca Tank Project Site and any place or feature within is not nominated, under assessment or listed, or subject to relevant processes for the identification and protection of Aboriginal cultural heritage values under EPBC Act, NSW Heritage Act or Local Environment Plan.

2.2.1 NSW National Parks and Wildlife Act

The Director General of the Office of Environment and Heritage (OEH) is responsible for protecting and conserving Aboriginal objects and declared Aboriginal places in NSW protected under the *NSW National Parks and Wildlife Act*.

Aboriginal objects are defined in NPW Act as any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises NSW, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.

Aboriginal places are defined in NPW Act as a place declared under s.84 of the NPW Act that, in the opinion of the Minister, is or was of special significance to Aboriginal culture. Such areas need not contain any Aboriginal objects but can only be gazetted with the approval of the Minister.

Part 6 of the *National Parks and Wildlife Act 1974* (NPW Act) provides specific protection for Aboriginal objects and declared Aboriginal places by establishing offences of harm. Harm is defined to mean destroying, defacing, damaging or moving an object from the land. There are a number of defences and exemptions to the offence of harming an Aboriginal object or place. One of the defences is that the harm was carried out under an Aboriginal Heritage Impact Permit (AHIP).

This assessment is being undertaken in accordance with relevant OEH policy and against the requirements of:

- *Aboriginal cultural heritage consultation requirements for proponents 2010*
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*
- *Guide to investigation, assessing and reporting on Aboriginal Cultural heritage in NSW*

2.3 STUDY METHODOLOGY

This Aboriginal Cultural Heritage Assessment has included:

- Consultation with the Aboriginal Community to: identify Aboriginal traditional owners, elders and custodians who can speak about the assessment area; ascertain their views about the cultural significance of identified Aboriginal heritage places and values; identify whether there are particular research themes or questions of interest that could be incorporated into any research design or addressed through archaeological assessment.
- An AHIMS database search to identify previously recorded Aboriginal sites and objects within or within proximity to the Study Area.
- Review of AHIMS Site cards to provide archaeological context for the assessment of the Study Area.
- Review of other relevant heritage registers and databases (such as the Australian Heritage Database, NSW State Heritage Register and Inventory, Bogan Local Heritage Register).
- Review relevant cultural heritage and archaeological reports to provide a regional and local context for the assessment of the Study Area and Aboriginal places and values.
- A description of the environmental context of the Study Area as an explanation of the relevant resource structure and to aid the development of predictions.
- Development of predictions concerning the archaeological potential within the Study Area.
- Conduct a site assessment/archaeological survey in partnership with the Aboriginal community to record and document information about Aboriginal places relevant to determining and assessing the cultural heritage significance.
- Relocation of previously recorded Aboriginal places, sites and objects (if appropriate or possible).
- Preparation of this report documenting the results of the above processes, assessing the significance of identified places and formulation of management strategies.

3.0 ABORIGINAL COMMUNITY AND CONSULTATION

3.1 Aboriginal People in the Bogan Shire

The Avoca Tank study area falls within the boundaries of the Nyngan Local Aboriginal Land Council. According to Tindale (1974) the Girilambone and study area and falls within the boundaries of the Wongaibon Aboriginal people.

The study area is also within land under the Ngemba/Ngiyampaa Native Title Claim. A copy of relevant claim details was provided by the National Native Title Tribunal and is included in **Appendix 1**.

On Site Cultural Heritage Management and Straits Resources have consulted with NTS Corp in relation to the Native Title application for the Ngemba/Ngiyampaa People (Federal Court number: NSD415/12, NNTT number: NC12/1) throughout the assessment processes. Consultation against the *Aboriginal cultural heritage consultation requirements for proponents 2010* is documented in **Section 3.3**

3.2 Aboriginal history

This section will outline the Aboriginal occupation of the region by drawing on available historical, ethno-historical and anthropological records of the Ngiyampaa Wangaaypuwan (Wongaibon) Aboriginal people and their neighbours.

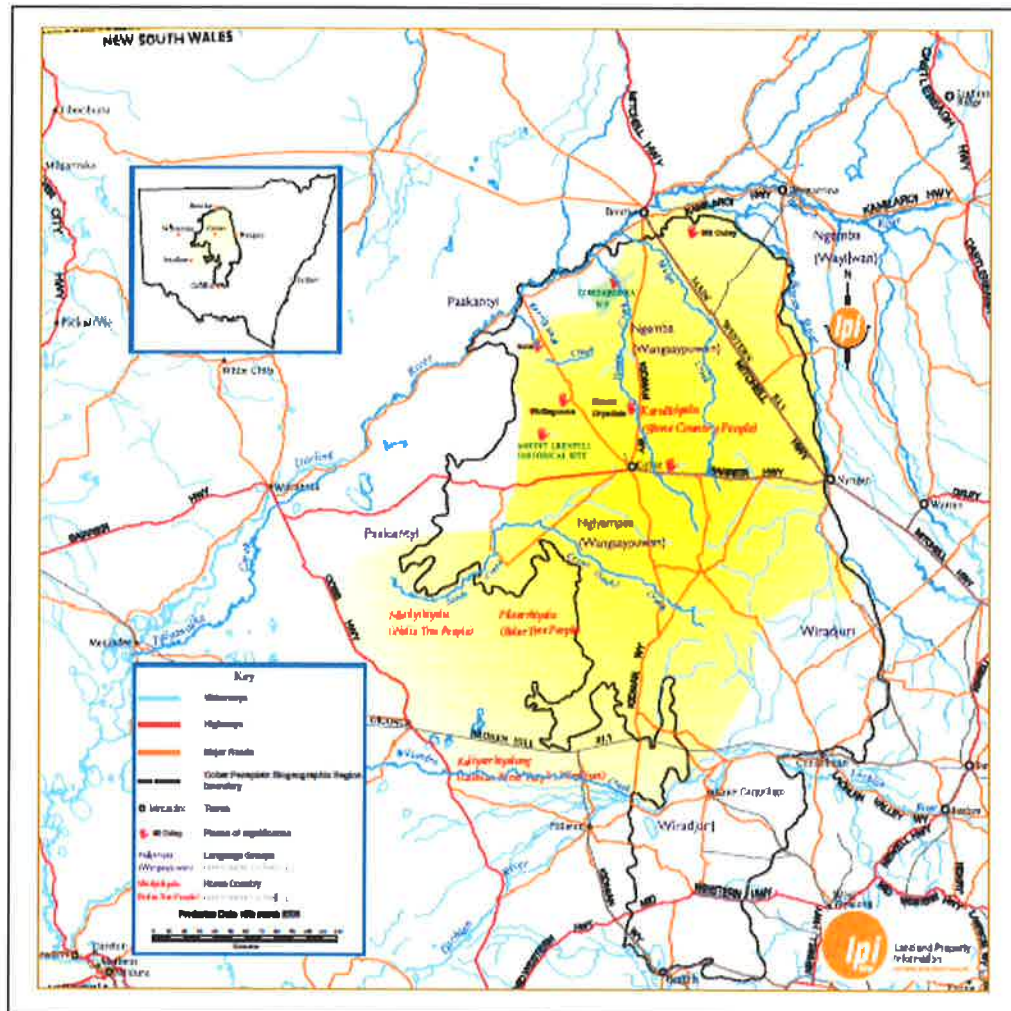
The Ngiyampaa Wangaaypuwan people are associated with the country roughly bounded in the north by the Darling-Barwon and Bogan Rivers, and in the south by the Lachlan River (Beckett et al, 2003) (See **Figure 3.3.1**). Ngiyampaa is a Pamu-Nyungan language of the Wiradhuric subgroup that once dominated the central highlands of the New South Wales. Ngiyampaa is also the word used to identify its speakers in this case, the Ngiyampaa Wangaaypuwan people. They distinguish themselves from other language groups in the area, these being the Ngemba, the Wiradjuri and the Paakantkji people.

Historical sources indicate that the European recording of the Ngiyampaa Wangaaypuwan and the consequent confusion in spelling causes some difficulty for the researcher. Other names for this group include Wongaibon, Wongai-bun, Wonghibone, Wonjhibon, Wonjibone, Wongibone, Wonghi, Wungai, Wuzai and Wozai (Tindale, 1974). Research (Donaldson, 1984) indicates that Wangaaypuwan is a way of speaking Ngiyampaa and differentiates them from other Ngiyampaa people in the area. Wangaaypuwan is comprised of the word 'Wangaay' and means the people who use 'Wangaay' for the word 'no' (Beckett et al, 2003). Ngiyampaa people also defined their identity by the type of country they occupied. For example the Ngiyampaa Wangaaypuwan people were stone country people whereas pilarr-kiyalu or Belar tree people lived near Willandra Creek. Donaldson (1997) has made a detailed comparison of

the Ngiyampaa place names and their anglicized equivalents. This study also includes further

details of the language and how it utilizes names to structure and communicate aspects of the Ngiyampaa Wangaaypuwan's knowledge about and relationships to the land (Donaldson, 1997).

Figure 3.1: Ngiyampaa Wangaaypuwan country (from Beckett, et al 2003:7)



Traditionally the Ngiyampaa Wangaaypuwan people were organized as a matriarchal society with men moving to live with the bride's family group after marriage. There were also strict laws regarding organized marriage and not marrying within your own 'meat', or family group. According to Fred Biggs who was interviewed by Jeremy Beckett the Ngiyampaa Wangaaypuwan people's religion centred on the sky world inhabited by a creator Baiami and his law was used in initiation and marriage ceremonies (Beckett, 1994). A particular aspect of the Baiami belief system was the role of the 'clever men' who were mortal men who were

able to perform extraordinary feats. Exploits included such things as travelling long distances and being able to project long strings from their testicles, from which they were able to project themselves into the sky world and make rain (Beckett, 1994).

It is recorded that The Bogan River Wiradjuri, the Ngilyampaa Wangaaypuwan's eastern neighbours suffered significant conflict with early white settlers in the region. The early contact history in this region from 1835 to the 1920's is characterized by conflict between indigenous people and white settlers regarding land use (Native Title Tribunal, 1998). The penalties for Indigenous people attacking stock, or indeed settlers, were in many cases extreme. In 1824, Aboriginal resistance to pastoralism west of the Great Dividing Range was met with a proclamation of martial law, the NSW colonial government's strongest military response to pastoralist complaints (Harrison, 2004). Even still by 1846–49, there were 1866 squatters' runs in New South Wales and from 1860 to 1890 the success of the colonies' wool industry accompanied intensified European land use (Roberts, 1970: 362).

The transportation of convict labour to NSW ended in during the 1840s, and the discovery of gold in the 1850s produced an employment gap in the pastoral industry that was met by Indigenous men and women (See Figure 2.2) (Harrison, 2004).

The work itself was often only seasonal and mostly poorly paid. Often after time pastoralists came to appreciate the in depth Indigenous knowledge of the land including water sources, which made it possible to transport stock over long distances. In later years, as more European workers became available, pastoralists reduced the cash component of Aboriginal workers' wages to virtually nothing, or entrapped it in the accounts book of the property store (Goodall, 1995).

Figure 2.2: W H Watts, 'Aboriginal workers, Willandra Station, Hillston area, New South Wales', c 1880. (Harrison, 2004: 33)



By the 1930s, in most parts of NSW nearly all of the Indigenous pastoral workers were either fringe dwellers or 'clients' of the Aborigines Protection Board (Harrison, 2004). This was due to number of factors including; The Soldier Settlement Scheme which was used as a way of settling returned soldiers in the country after both world wars, and the simple fact that family sized blocks of land needed less people to work them than the larger pastoral properties had done in earlier periods (Brock, 1995). With the introduction of various technologies by the 1950's the swathes of jobs were lost in both the agricultural and pastoral industries, for example mechanized harvesters, the widespread use of motorbikes instead of horses and road trains eliminated the need for droving almost completely.

3.3 Aboriginal Community Consultation

The Aboriginal Consultation for this assessment has been conducted in accordance with the consultation processes set out in the OEH policy *Aboriginal cultural heritage consultation requirements for proponents 2010*.

According to the *Aboriginal cultural heritage consultation requirements for proponents 2010* (Section 1.1, pg 1) the purpose of the document is to establish the requirements for consultation with the registered Aboriginal parties as part of the heritage assessment process to determine potential impacts of proposed activities on Aboriginal objects and places and to inform decision making for any application for an AHIP.

The aim is to facilitate positive Aboriginal cultural heritage outcomes by:

- Affording an opportunity for Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects(s) and/or place(s) in the area of the proposed project to be involved in consultation so that information about cultural significance can be provided to OEH to inform decisions regarding applications for an AHIP.
- Providing Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects (s) and/or place(s) in the area of the proposed project with the opportunity to participate in decision making regarding the management of their cultural heritage by providing proponents information regarding cultural significance and inputting into management options.

The requirements set out a 4 stage consultation process (see attached summary) designed to feed into the assessment process and establish a timeframe of 84 days to progress through the 4 stages. The timeframes are documented against the stages in the table below. **Please note this is a simplified outline of the requirements.** A full version of the requirements can be downloaded at the OEH website:

www.environment.nsw.gov.au/resources/cultureheritage/commconsultation/09781ACHconsultreq.pdf

STAGE	MANDATORY TASKS FOR CONSULTATION STAGES	MIN REVIEW PERIOD
Stage 1:	(Section 4.1.2) Notification of project proposal Proponents required to identify Aboriginal persons who may hold cultural knowledge relevant to determining the significance of any Aboriginal places and objects within the study area by corresponding with 7 organisations as stipulated in requirements.	14 days
	(Section 4.1.3) Registration of Interest Advertise in the local newspaper Write to identified Aboriginal organisations or individuals and provide opportunity to register their interest to be consulted about the project and AHIPs (Registered Aboriginal Parties)	14 days
Stage 2	(Section 4.2) Presentation of information about the proposed project Provide information and methodology for the project to the Registered Aboriginal Parties	28 days
Stage 3	(Section 4.3) Gathering information about cultural significance Gather and document information about cultural significance of places and objects through consultation (conducted concurrently with Stage 2)	
Stage 4	(Section 4.4) Review of draft cultural heritage assessment report Incorporate information obtained in Stages 2 & 3 into draft Aboriginal heritage assessment report. Distribute draft Aboriginal heritage assessment report to Registered Aboriginal parties for review and incorporate any further input or comments.	28 days

Aboriginal consultation for Avoca Tank Study Areas (Stages 1 and 2) was conducted as part of the assessment process. Aboriginal community consultation process Stages 1 – 4 (consistent with that discussed in **Section 3.2** above) was conducted for the Avoca Tank Stage 1 Study Area between March and August of 2012.

The Aboriginal community consultation process was conducted for the Avoca Tank Stage 2 Study Area between September 2012 and January of 2013. The record of consultation for the Avoca Tank assessments for Stages 1 and 2 and demonstration of compliance with the requirements is detailed below in **Sections 3.3.1** and **3.3.2**

3.3.1 Aboriginal Community Consultation: Avoca Tank Study Area – Stage 1

Stage 1 (Section 4.1.2)

In accordance with Stage 1 (Section 4.1.2) of the requirements On Site CHM wrote to the below organisations on 19 March 2012 to identify Aboriginal persons who may hold cultural knowledge relevant to determining the significance of the Avoca Tank Study Area and any Aboriginal values that may be located within. Closing date for replies was 3 April 2012.

- Office of Environment and Heritage EPRG regional office, North West Dubbo.
- Nyngan Local Aboriginal Land Council.
- The Registrar, *Aboriginal Land Rights Act 1983* for a list of Aboriginal owners.
- The National Native Title Tribunal for a list of registered native title claimants, native title holders and registered Indigenous Land Use Agreements.

- e) Native Title Services Corporation Limited (NTSCORP Limited).
- f) Bogan Shire Council, Nyngan.
- g) Central West Catchment Management Authority, Nyngan for contact details of any established Aboriginal reference group.

Four responses were received from organisations (a), (b), (d) and (f) by close of comments on 3 April. Joedie Davis of CMA replied on 5 April following the close of comments. The only additional Aboriginal party identified by the CMA (other than OEH) not identified in correspondence from organisations (a), (b), (d) and (f) was that of Raylene Weldon.

The Aboriginal persons and organisations identified as potentially holding cultural knowledge relevant to determining the significance of Aboriginal values within the Avoca Tank Study Area are shown below in **Table 2.1**.

Table 2.1: Aboriginal persons and organisations identified during stage 4.1.2 of the Aboriginal cultural heritage consultation requirements for proponents 2010

Aboriginal Organisation / Individual Name	Address	Contact Details
Bogan Aboriginal Corporation CEO Lesly Ryan	46 Nymagee St NYNGAN NSW 2825	boganac@netxp.com.au Ph: (02) 6832 1750 M: 0419418851
Nyngan Local Aboriginal Land Council / Vaneta Dutton CEO	PO Box 43 NYNGAN NSW 2825	nynganlalc@bigpond.com
Marra Wallan Pty Ltd Mr John Shipp CEO	PO BOX 6088 Dubbo NSW 2830	John@marrawallan.com.au john.shipp@bigpond.com
NTS Corp Ltd on behalf of Native Title application for the Ngemba/Ngiyampaa People (Federal Court number: NSD415/12, NNTT number: NC12/1) and Native Title applicants: Mrs Elaine Ohlsen Mr Peter Williams Mr Brett Smith Ms Danielle Flakeler-Carney Mr Neville Merritt Mr Edward Shipp Mr John Shipp Ms Grace Gordon Mr Jason Ford (identified by National Native Title Tribunal)	NTSCORP Ltd Unit 1a Suite 2.02, 44-70 Rosehill Street REDFERN NSW 2016	Phone: (02) 9310 3188 Fax: (02) 9310 4177 tlawrence@ntscorp.com.au nkim@ntscorp.com.au
Raylene Weldon Aboriginal Community member		raylene.weldon@det.edu.nsw.gov.au

Stage 1 (Section 4.1.3)

On Site CHM wrote to identified Aboriginal persons and organisations listed in Table 2.1 on 4 April 2012 inviting them to register their interest by 19 April 2012 (**Appendix 1**).

In accordance with Section 4.1.3 of the consultation requirements a notice inviting registrations of interest and participation in the community consultation process also appeared in the Public Notices of the Nyngan Observer on Wednesday 4 April 2012. A copy of the advert is included below. Respondents were asked to register their interest by 19 April 2011 (**Appendix 1**).

Aboriginal Cultural Heritage Assessment

Tritton Resources Limited Pty proposes to undertake mineral exploration within part of Lots 10, 135 and 144 (DP 751315) on the Coolabah 8235 1:100,000 map sheet. The project area is approximately 4 kilometres northwest of the town of Girilambone NSW 2831 along the Mitchell Highway within the Bogan Shire.

Pursuant to *Aboriginal cultural heritage consultation requirements for proponents* and *National Parks & Wildlife Act 1974*, Aboriginal people holding cultural knowledge relevant to determining the significance of the subject land or Aboriginal objects within are invited to register interest and participate in a community consultation process.

The purpose of this consultation is to assist the proponent undertake an Aboriginal cultural heritage assessment, prepare an Aboriginal Heritage Impact Permit application if required and assist the Director General of OEH consider and make a determination of the application. Please register your interest by 19 April 2012.

Gerard Niemoeller
On Site Cultural Heritage Management
PO Box 574 NAROOMA NSW 2546
gerard@onsitechm.com.au
Ph: 0414441896

Below is a list of Aboriginal persons and organisations who registered their interest in response to the correspondence and advertisement in the paper to participate in the community consultation process (Registered Aboriginal Parties).

1. Bogan Aboriginal Corporation - Lesly Ryan, (via email)
2. Nyngan Local Aboriginal Land Council - Vaneta Dutton CEO (via email)
3. Marra Wallan Pty Ltd – John Shipp, CEO (via email)
4. Native Title Services for Ngemba/Ngiyampaa Claimants

Stage 2 (Section 4.2) and Stage 3 (section 4.3)

In accordance with Stage 2 (Section 4.2) and Stage 3 (section 4.3) of the *Aboriginal cultural heritage consultation requirements for proponents 2010* information about the proposed project, assessment methodology and request for information about the significance of this place was sent to the Registered Aboriginal parties on 24 April 2012 (**Appendix 1**). Respondents were asked to provide their input by 23 May 2012.

In accordance with Section 4.2.4(b) of the requirements and as part of the Aboriginal Cultural Heritage Assessment, the Registered Aboriginal parties (1, 2 and 3) were invited by Tritton Resources to participate in fieldwork between 26 - 30 April 2012.

Representatives of the Nyngan Local Aboriginal Land Council (Sheila Couley) and Bogan Aboriginal Corporation (Lesly Ryan) participated in an archaeological survey of the Avoca Tank Study Area area (Stager 1) between 26 and 30 April. Both Nyngan Local Aboriginal Land Council and Bogan Aboriginal Corporation are Registered Aboriginal Parties and participating in the formal consultation process. John Shipp of Marra Wallan was unable to participate in the fieldwork.

During the fieldwork the significance and management of all Aboriginal places were discussed with representatives of the Nyngan Local Aboriginal Land Council and Bogan Aboriginal Corporation (See **Section 9.0**).

It was also discussed that should the proposal shift from exploration to mining that AHIPs may be sought by Tritton Resources Pty Ltd to disturb the identified Aboriginal sites and objects.

The Registered Aboriginal Parties did not submit any written information or comments in response to documentation provided as part of Stage 2 or 3.

Stage 4 (Section 4.4)

A draft of the Stage 1 assessment report was sent to the registered Aboriginal parties on 26 July 2012. The Registered Aboriginal parties were provided 28 days to review the report and provide comment. The closing date for comments is 23 August 2012.

The Registered Aboriginal Parties did not submit any written information or comments about the draft assessment.

All correspondence documenting the consultation process for the Stage 1 Study Area is provided in **Appendix 1**.

3.3.2 Aboriginal Community Consultation: Avoca Tank Study Area – Stage 2

Stage 1 (Section 4.1.2)

In accordance with Stage 1 (Section 4.1.2) of the requirements On Site CHM wrote to the below organisations on 12 September 2012 to identify Aboriginal persons who may hold cultural knowledge relevant to determining the significance of the Avoca Tank Study Area and any Aboriginal values that may be located within. Closing date for replies was 27 September 2012.

- a) Office of Environment and Heritage EPRG regional office, North West Dubbo
- b) Nyngan Local Aboriginal Land Council
- c) the Registrar, *Aboriginal Land Rights Act 1983* for a list of Aboriginal owners
- d) the National Native Title Tribunal for a list of registered native title claimants, native title holders and registered Indigenous Land Use Agreements
- e) Native Title Services Corporation Limited (NTSCORP Limited)
- f) Bogan Shire Council, Nyngan
- g) Central West Catchment Management Authority, Nyngan for contact details of any established Aboriginal reference group

Five responses were received from organisations (a), (b), (c), (d) and (e) by close of comments on 27 September. The Aboriginal persons and organisations identified as potentially holding cultural knowledge relevant to determining the significance of Aboriginal values within the Avoca Tank Study Area are shown below in Table 3.2.

Table 3.2: Aboriginal persons and organisations identified during stage 4.1.2 of the Aboriginal cultural heritage consultation requirements for proponents 2010

Aboriginal Organisation / Individual Name	Address	Contact Details
Bogan Aboriginal Corporation CEO Lesly Ryan	46 Nymagee St PO Box 345 NYNGAN NSW 2825	boganac@netxp.com.au Ph: (02) 6832 1750 M: 0419418851
Nyngan Local Aboriginal Land Council / Vaneta Dutton CEO	PO Box 43 NYNGAN NSW 2825	nynganlalc@bigpond.com
Marra Wallan Pty Ltd Mr John Shipp CEO	79 Thompson Street / PO BOX 6088 Dubbo NSW 2830	John@marrawallan.com.au john.shipp@bigpond.com
NTS Corp Ltd on behalf of Native Title application for the Ngemba/Ngiyampaa People (Federal Court number: NSD415/12, NNTT number: NC12/1) and Native Title applicants: Mrs Elaine Ohlsen Mr Peter Williams Mr Brett Smith Ms Danielle Flakeler-Carney	NTSCORP Ltd Notifications Officer PO Box 2105 STRAWBERRY HILLS NSW 2012. Unit 1a Suite 2.02, 44-70 Rosehill Street REDFERN NSW 2016	Phone: (02) 9310 3188 Fax: (02) 9310 4177

Mr Neville Merritt Mr Edward Shipp Mr John Shipp Ms Grace Gordon Mr Jason Ford (identified by National Native Title Tribunal)		
Trevor Robinson	PO Box 73, Peak Hill NSW 2869	
Wiradjuri Interim Working party	PO Box 73, Peak Hill NSW 2869	

Stage 1 (Section 4.1.3)

On Site CHM wrote to identified Aboriginal persons and organisations listed in **Table 2.2** on 9 October 2012 inviting them to register their interest by 24 October 2012 (**Appendix 2**).

In accordance with Section 4.1.3 of the consultation requirements a notice inviting registrations of interest and participation in the community consultation process also appeared in the Public Notices of the Nyngan Observer on Wednesday 10 October 2012. Copy of the advert is included below (see below). Respondents were asked to register their interest by 24 October 2012 (**Appendix 2**).

Aboriginal Cultural Heritage Assessment

Tritton Resources Limited Pty proposes to undertake mineral exploration within part of Lots 3 (DP 751342), Lots 10 and 135 (DP 751315) on the Coolabah 8235 1:100,000 map sheet. The Avoca Tank (Stage 2) project area is approximately 9 kilometres northwest of the town of Girilambone NSW 2831 along the Mitchell Highway within the Bogan Shire.

Pursuant to *Aboriginal cultural heritage consultation requirements for proponents and National Parks & Wildlife Act 1974*, Aboriginal people holding cultural knowledge relevant to determining the significance of the subject land or Aboriginal objects within are invited to register interest and participate in a community consultation process.

The purpose of this consultation is to assist the proponent undertake an Aboriginal cultural heritage assessment, prepare an Aboriginal Heritage Impact Permit application if required and assist the Director General of OEH consider and make a determination of the application. Please register your interest by 24 October 2012.

Gerard Niemoeller
 On Site Cultural Heritage Management
 PO Box 574 NAROOMA NSW 2546
gerard@onsitechm.com.au
 Ph: 0414441896

Below is a list of Aboriginal persons and organisations who registered their interest in response to the correspondence and advertisement in the paper to participate in the community consultation process (Registered Aboriginal Parties).

1. Bogan Aboriginal Corporation - Lesly Ryan, CEO (via email).
2. Nyngan Local Aboriginal Land Council - Vaneta Dutton CEO (via email).
3. Native Title Services for Ngemba/Ngiyampaa Claimants – c/o Neville Kim.

Stage 2 (Section 4.2) and Stage 3 (section 4.3)

In accordance with Stage 2 (Section 4.2) and Stage 3 (section 4.3) of the *Aboriginal cultural heritage consultation requirements for proponents 2010* information about the proposed project, assessment methodology and request for information about the significance of this place was sent to the Registered Aboriginal parties on 26 October 2012 (**Appendix 2**). Respondents were asked to provide their input by 24 November 2012.

In accordance with Section 4.2.4(b) of the requirements and as part of the Aboriginal Cultural Heritage Assessment, the Registered Aboriginal parties (1, 2 and 3) were invited by Tritton Resources to participate in fieldwork survey from the 29th of October – 2nd of November 2012.

Representatives of the Nyngan Local Aboriginal Land Council (Sheila Couley) and Bogan Aboriginal Corporation (Lesly Ryan) participated in an archaeological survey of the Avoca Tank area between 29 October and 2 November 2012. Both Nyngan Local Aboriginal Land Council and Bogan Aboriginal Corporation are Registered Aboriginal Parties and participating in the formal consultation process. Neville Merritt of the Ngemba/Ngiyampaa Native Title claim group also participated in the fieldwork and survey on 1 – 2 November 2012. On November 1 Neville Merritt met with Sheila Couley (Nyngan Local Aboriginal Land Council) and Lesly Ryan (Bogan Aboriginal Corporation), Paul Calvin (Straits Resources) and Gerard Niemoeller and Kate Duca of On Site CHM. Paul Calvin and Gerard Niemoeller provided an overview of the survey and assessment process for the Avoca Tank project area. Results and identified places within the Avoca Tank Stage 1 study area were also discussed. The agenda and survey plan for following day was also discussed.

On Friday 2 November 2012, Neville Merritt was also shown the Avoca Tank Stage 1 study area surveyed in April 2012. We also visited sites Avoca Tank 1, 2 and 4. Management recommendations from the Stage 1 assessment were also discussed with Neville. Some lengthy discussion was had with the Aboriginal parties about the scar tree (Avoca Tanks 4) and the potential mine footprint. The mine footprint would largely be determined by the location and depth of the target ore deposit and whether the mine was proposed to be open cut or underground.

The Aboriginal parties agreed that if the tree needed to be moved it could and some preliminary strategies about any future potential removal and relocation were discussed. The

Aboriginal parties present expressed the opinion that the sensitive removal, conservation treatment, relocation and reinstatement at another location would be an acceptable outcome. The Registered Aboriginal parties would decide on an appropriate location for the relocation and reinstatement of the tree. On Site CHM explained that such a process would require an AHIP and a methodology for the removal, conservation and reinstatement would need to be developed as part of the AHIP application. A Care Agreement would also need to be developed as part of the AHIP application. Aboriginal parties present were satisfied with these discussions and generally in agreement with this management strategy if required. The Registered Aboriginal Parties did not submit any written information or comments in response to documentation provided as part of Stage 2 or 3.

Stage 4 (Section 4.4)

A draft of this report was sent to the registered Aboriginal parties on 21st February 2013. The Registered Aboriginal parties were provided 28 days to review the report and provide comment. The closing date for comments was 22nd March 2013.

All of the registered parties supplied comment on the draft. Nyngan LALC and Bogan Aboriginal Corporation endorsed the assessment and resulting recommendations. A copy of these endorsement letters is included in **Appendix 2**.

Native Title Services Corporation, on behalf of the Ngemba/Ngiyampaa Native Title claim group, also provided comment on the assessment. A copy of the comments is also included at **Appendix 2** and a response to these comments is included in **Section 10.4**. NTS provided further response to these comments and these are also included at **Appendix 2**.

4.0 LANDSCAPE CONTEXT

According to the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010: 8), the purpose of reviewing the landscape context is to assist in the determination or prediction of:

- The potential of the landscape, over time, to have accumulated and preserved objects.
- The ways Aboriginal people have used the landscape in the past, with reference to the presence of resource areas, surfaces for art, other focal points for activities and settlement.
- The likely distribution of the material traces of Aboriginal land use based on the above.

Consideration of the landscape is essential to the definition and interpretation of Aboriginal land use across a landscape. The landscape will provide clues as to those areas of land that may have been more intensively used by Aboriginal people in the past, and also provide the context within which the material remains of past Aboriginal occupation may be preserved and detectable (DECCW 2010:8).

The landscape context should be appropriate in scale and detail relative to the study area and might include aspects relating to landscape history, description of landforms and geomorphic activity, soils, land use history and where relevant natural resources.

The archaeological record that we seek to understand is a reflection of Aboriginal land use and occupation. The archaeological potential of a given area will commonly be influenced by major factors such as access to potable water, stone resources suitable for the manufacture of stone tools, natural resources providing foodstuffs and other materials, shelter and suitable camping areas.

4.1 ENVIRONMENTAL CONTEXT OF THE AVOCA TANK STUDY AREA

Unless otherwise referenced the following environmental information is summarised from information supplied by Tritton from the Review of Environmental Factors for the Avoca Tank Project.

The Girilambone Region is classified as having a sub-arid climate with mean daily temperatures ranging between 19°C to 34°C in summer (January) and 4°C to 16°C in winter and with annual rainfall of approximately 445mm. The landscape around Girilambone consists of flat to gently undulating surfaces with extensive low lying ridges formed in response to the more resistant lithologies, such as quartzites and minor volcanic, formed throughout the region (Ackerman 2005:66). There are no major outcrops of these lithologies within the study area.

The desktop review indicates that there is very little topographic variation or relief within the Avoca Tank study areas (Stage 1 and Stage 2). Topographic maps show no rivers, creeks or permanent water holes and no potable water is readily available. Several dams are present but these are presumably from more recent times.

Most of the Stage 1 Study Area is dominated by a low rise extending east west. Broad and shallow drainage channels extend along the northern and southern margin of the rise. Several broad and shallow drainage channels also dissect the Stage 2 Study Area project and low rises in between. Drainage channels in the Stage 1 and 2 Study Areas are generally marked by dense white cypress regrowth. The drainage channels do not hold water or form formalised creeks at any point in the Study Areas and would only drain water during periods of heavy rains.

The Study Area appears to have been grazed heavily in the past. This is based on signs of disturbance including bare soil scalds, soil erosion, multi-stemmed Poplar Box trees (which have coppiced after ring barking or cutting off near the base) and patches of dense White Cypress pine regrowth. Minor areas occur as derived grassland, probably from more recent land clearing, while the entire Study Area was probably cleared at an earlier time based on the number of coppiced trees.

Geology

The Girilambone region is located within the western portion of the Lachlan Fold Belt. The district is underlain by the Girilambone Beds, a Cambro-Ordovician sequence of dominantly clastic rock types. Regionally, the Girilambone Beds consist of quartzofelspathic schist, phyllite, greywacke, slate, quartzite and minor altered basic volcanics and intrusives.

Within the vicinity of the Avoca Tank Project area, the Girilambone Beds include variably to well laminated psammopelites, pelites and greywackes lying stratigraphically above a thick sequence of mafic volcanics and intrusives. Strong magnetite minor sulphide alteration occurs on and above the contact zone and locally is well mineralised.

Landscapes

According to the landscape classification system described by Mitchell DECCW (2002) the Study Area falls within the Cobar Downs (Crd) landscape of the Cobar Peneplain Bioregion. The Cobar Downs landscape includes parts of seven land systems: *Cobar, Coolabah, Ironstone, Killala, Kopyje, Pirillie and Prattenville*.

According to Mitchell DECCW (2002:32) the Cobar Downs landscape is a landscape complex of slightly undulating rounded ridges and higher residuals of many Ordovician and Silurian sedimentary and metamorphic rocks, undulating rounded Devonian sandstone ridges or low plateau, rounded ridges with siliceous and ferruginous stones from Cretaceous or Tertiary conglomerates. Occasional overlying sand dune. Well defined dendritic drainage lines vary from broad to narrow, relief 10 to 20m. Scattered rock outcrop on ridges, stony surfaces

common on slopes. Shallow gravelly loamy soils, or ferruginous clay loam on ridges, grading to deeper acid and neutral red earths with hardpan down slope and calcareous red earths with areas of gilgai in drainage lines. Deep sands, sandy earths, and red earths on dunes.

Soils

Soils in the Girilambone area typically comprise sands, red-brown sandy gravels and colluvial soil. Around the minor rocky outcrops on the exploration site the soils are normally skeletal and on the hill flanks and plains, silty clays and sandy loams predominate.

Soils within the Study Area are classified within the Cobar land system and the Mineshaft land system. Soils of the Cobar land system comprise shallow gravelly loamy soils, grading to deeper acid and neutral red earths with hardpans downslope and in drainage lines. Soils of the Mineshaft land system comprise shallow stony, sandy and loamy soils that deepen slightly along drainage lines.

Soils within the Study Area are characterised by red earths. Very little topsoil remains, principally, as a result of poor farming practices, such as overgrazing. Gully erosion is evident on and surrounding the Avoca Tank Project area.

Vegetation Communities of the Study Area (Stages 1 and 2) can be characterized as woodland. The canopy trees are generally relatively young in age and most trees are coppiced confirming that broad scale clearing has occurred in the past. Vegetation of the study area is described as:

- **Canopy:** Dominated by Poplar Box (*Eucalyptus populnea* subsp. *bimbi*) and Gum Coolibah (*Eucalyptus intertexta*), with occasional Kurrajong (*Brachychiton populneus* subsp. *populneus*) with areas of dense White Cypress Pine regrowth.
- **Midstorey:** Dominated by Wilga (*Geijera parviflora*) and Emubush (*Eremophilla mitchellii*), with various Wattles (*Acacia* spp.) and Western Rosewood (*Alectryon oleifolius*). Poplar Box and Gum Coolibah saplings were quite common.
- **Groundcover layer:** Dominated by various native grasses, including Curly Windmill Grass (*Enteropogon acicularis*), Purple Lovegrass (*Eragrostis lacunaria*), Panic grass (*Panicum decompositum* var. *tenuius*), Knottybutt Grass (*Paspalidium constrictum*), Small Burrgrass (*Tragus australianus*), Five minute Grass (*Tripogon loliiformis*), plus various chenopods and herbs.

EnviroKey (2012) identified four vegetation communities within the study Avoca Tank Stage 1 and 2 Study Areas. A table showing identified vegetation communities is provided at Table 3.1 and the spatial extent of vegetation communities described by EnviroKey is shown in Figure 4.14.1.

Table 3.1: Native vegetation communities of the Study Area (Stages 1 and 2) (after EnviroKey 2012).

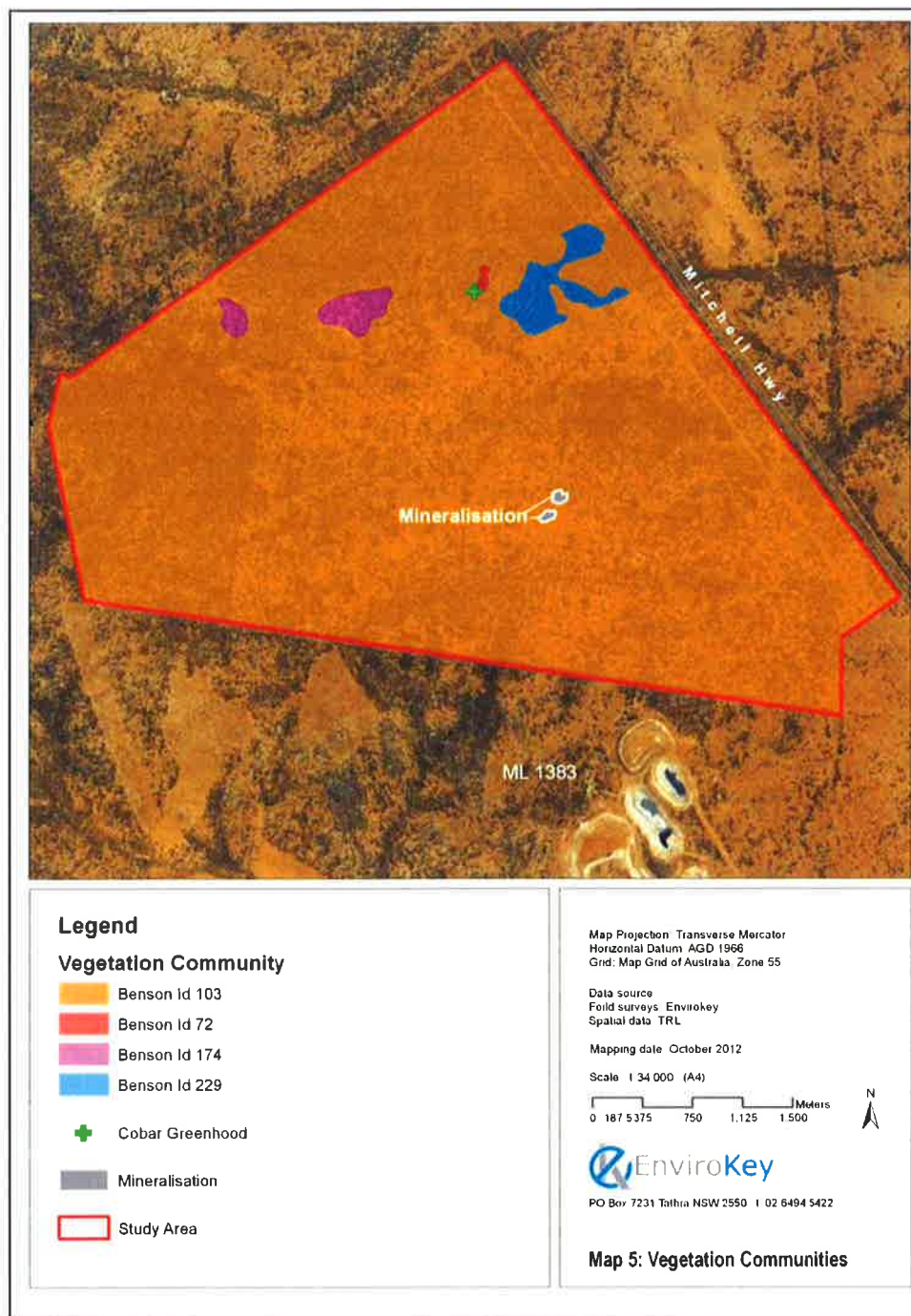
Vegetation Community Type	Extent within study area (ha)	Extent within study area (%)
Benson ID 103 - Poplar Box – Gum Coolabah and White Cypress Pine Shrubby Woodland mainly in the Cobar Peneplain Bioregion	1,749 ha	97.5 %
ID 72 – White Cypress Pine – Poplar Box woodland on footslopes and peneplains mainly in the Cobar Peneplain Bioregion	1.4 ha	0.08 %
ID 174 – Mallee – Gum Coolabah woodland on red earth flats of the eastern Cobar Peneplain Bioregion	17 ha	0.9 %
Benson ID 229 – Derived mixed shrubland on loamy-clay soils in the Cobar Peneplain Bioregion	29 ha	1.6 %

The majority vegetation community (Benson ID 103) is described below. For additional vegetation descriptions please see EnviroKey (2012).

Benson ID 103 - Poplar Box – Gum Coolabah and White Cypress Pine Shrubby Woodland mainly in the Cobar Peneplain Bioregion

- This community comprised a woodland (occasionally an open woodland) and was generally dominated by Poplar Box (*Eucalyptus populnea* subsp. *bimbil*) and Gum Coolabah (*Eucalyptus intertexta*), with occasional Kurrajong (*Brachychiton populneus* subsp. *populneus*) and White Cypress Pine (*Callitris glaucophylla*) to 20m in height. In run-on areas, Gum Coolabah and White Cypress Pine dominated. Shrub cover ranged from sparse to dense, with the most dense cover occurring under canopy trees and/or in run-on areas. The most common shrub species were Wilga (*Geijera parviflora*), Budda (*Eremopholia mitchellii*), Western Golden Wattle (*Acacia decora*) and Ironwood (*Acacia excelsa*). Good rainfall in recent seasons supported a relatively high number and density of native groundcovers, including 20 grass species and various chenopods and herbs.
- Some variation in vegetation composition was evident within the study area, which generally is associated with subtle differences in topography. Run-on areas often had a relatively dense canopy/midstorey cover that was dominated by Poplar Box (*Eucalyptus populnea* subsp. *bimbil*) and/or White Cypress Pine (*Callitris glaucophylla*). Whereas, run-off areas generally had a sparser canopy/midstorey cover with Gum Coolabah (*Eucalyptus intertexta*) being a co-dominant with Poplar Box and only scattered White Cypress Pine. Historic disturbance factors probably played a role in this variation also (e.g. some run-on areas were covered with patches of very dense White Cypress Pine regrowth). Despite this variation, vegetation composition and structure across the entire site aligned more closely to Benson ID 103 than any other vegetation communities described in that classification.

Figure 4.1: Native vegetation communities of the Study Area (reproduced from EnviroKey 2012).



4.2 EUROPEAN HISTORY AND LANDUSE

Early History

Charles Sturt first named the River Bogan in 1828, yet it was explorer and surveyor Major Mitchell who documented early European exploration of the Bogan region (Bogan Shire Council, 2012). Mitchell first surveyed the area in 1835 and many settlers came closely behind, but due to the resistance of the local indigenous groups many cattle runs were given up and later reclaimed by other graziers, making it difficult to record all the changes that occurred (Nyngan Historical Society, 1983). The European relationship with local indigenous groups on the lower Bogan River was strained by conflict and, as a result, and after multiple massacres and retaliations in the area the government cancelled a number of pastoral licenses in 1845 (About NSW, 2012). The area surrounding the Bogan River was difficult to settle in a number of ways as the early graziers of West Bogan County not only had difficulties attempting to subdue the local Indigenous groups, but they also suffered through anthrax outbreaks among their sheep and cattle herds, which devastated livestock numbers (Nyngan Historical Society, 1983). The Municipality of Nyngan was proclaimed on February 17, 1891 with Nyngan having a population of 1355, and in 1906 the Bogan Shire was incorporated.

History of the Avoca Tank Project Area

The subject land within the Avoca Tank Project area (Lots 10, 135 and 144 [DP 751315] or part of) are within the local government area of Bogan, Parish of Gidalmabone within the county of Canbelego.

Investigation into the site history for the Avoca Tank project area is divided into two stages: Stage 1 (Lot 135 and subsequently 144 and 10) and Stage 2 investigations (Lot 3).

Stage 1 Study Area

An early Parish Map of Gidalmabone indicates that the land units in the activity area of the Avoca Tank Project Stage 1 was marked as Lot 135 and was wholly owned by a Kenneth MacKinnon as early as 1910 and had a total area of 4087 acres (See **Appendix 3.1**). The Sydney Morning Herald on Tuesday 14 January 1919 notes that upon his death Kenneth MacKinnon, grazier, bequeathed his property to his widow Catherine MacKinnon and two sons Malcolm and Donald.

A later Parish Map in 1916 (See **Appendix 3.2**) indicates that the original Lot 135 was subdivided as early as 1907 into three parcels; Lot 10 (Acres 2563), Lot 135 (502 Acres) and Lot 144 (1022 Acres). Lot 144 was acquired by The Australian Bank of Commerce (See **Appendix 3.2**) and repurchased by at a later date by MacKinnon, Fuller and Lanson as illustrated by a 1937 parish map (See **Appendix 3.3**).

It would appear likely that the activity area under investigation was not only used for grazing purposes, but also for mining or at the very least mineral prospecting. The activity area, which

incorporates the Avoca Tank project area, is clearly marked as part of the Bogan Gold Fields on the map of West Bogan (See **Appendix 3.3**). It is also noted in a local history of the region (Heckendorf, K. 1980) that at Avoca, 3 miles NNW of Girilambone traces of gold were found.

It is also quite possible that the MacKinnon family (the name was most probably also spelt McKinnon) was related to the Alec McKinnon who held the licence for the Railway Hotel (also known as the Girilambone Hotel) from 1881 to 1921 (Heckendorf, K. 1980; 28).

Stage 2 Study Area

Is located to the south western corner of McKinnon's block, Lot 3 that comprises an area of 1575 acres is marked in 1910 as under the control of H. Thorpe, and may have utilized for mining purposes at some point (See **Appendix 3.1**). This block falls into a different parish division from the Stage 1 investigation and is included in the Parish of The Brothers. This is most likely the Henry Thorpe who also owned the block directly to the north of the activity area. A Parish map of the Brothers in 1911 (See **Appendix 3.4**) shows that this portion of the activity area was a Crown Lease under the name of J.H. Ferguson. Later maps of the Brothers Parish (See **Appendix 3.5** and **3.6**) indicated that Lot 3 was still listed under the name J.H. Ferguson in 1926 and 1957.

In 1900 the Girilambone Primary School photo (See Figure 4.2) a pupil named Mary Thorpe is listed as Mary Thorpe (McKinnon) of 'Glendale', most likely indicating a marriage later in life into the McKinnon family, perhaps coincidentally there is a Tom McKinnon of 'Glendale' is also shown in the photo (Heckendorf, K. 1980; 48). 'Glendale' appears to be an agricultural property within Girilambone. It would also appear that both the Thorpe's and McKinnon's had a hand in the businesses of Girilambone in stores and hotels respectively (Heckendorf, K. 1980; 19).

It would appear that the Thorpe family had a substantial impact on the town of Girilambone as it is known that the 'Thorpe boys had a butchery and other retail based interests in the town' (Heckendorf, K. 1980; 17). It is also quite likely that William Henry Thorpe who was postmaster of Girilambone from 1921-24 was a descendant of Henry Thorpe (Heckendorf, K. 1980; 39).

4.3 LATER 20TH CENTURY LAND USE

The area of Bogan in the later 20th Century has been utilized mostly for agricultural purposes and mining. For instance during the 1980's the price of copper was pushed to record highs because of supply disruptions such as the Bougainville conflict. This stimulated the slackened local interest in copper exploration, and Nord Pacific Ltd commenced work aimed at bringing the old Girilambone copper mine back into production as an open cut mine (NSW DPI, 2007).

Figure 4.2: 1900 the Girilambone Primary School photo (Heckendorf, K. 1980; 48)



Girilambone School Pupils, 1900. Teacher, Mr Garland; Pupil Teacher, Miss Alice Funck. The photo and names by courtesy of Miss Annie Hegg. Top Row: Katie Johnson (Murchison), Ada Payne (Robinson), Gertie Sinclair, Bill Gibson, Tom Hegg and Joe Power at the end. The three boys at Katie Johnson's right-hand from L. to R. are Dave Gibson, Alpi Milligan and Donald Murchison. In front of Katie Johnson myself Annie Hegg, Ettie Sinclair and Laura Rodburn (Robinson) and next to her is Lizzie Hansard (Murchison), Mary McDonald, Alice Eldridge and Mary Thorne (McKinnon) of "Glendale". Next Row: Miss Alice Funck, pupil teacher; can't remember the boy's name in front of her, but the girl next to him is Gracie Lewis, next Davie McDonald, Willie Rimmer, Emily Pearock, Nita Rimmer, Addie Hawker, Milly Gibson, Mary Sinclair, Jean Hegg, but can't remember the next two girls. Next Row: Simpie McDonald with black band on arm for her mother's death, next to her is Rose Power, Vera Hegg, Gracie Davis, Ida Power (Mrs Vern Dicker) Maggie Gibson, Ruby Murchison (Williamson), Jim Robinson, Tom Murchison, Tom McKinnon of "Glendale", David Milligan, Walter Eldridge. Next Row: George Milligan, Harry Sinclair, Les Power, Bill Hegg, Dave Garland (teacher's son), Bob Sinclair, Phil Carmichael, Harry Rimmer's brother and Jim Power.

The greater area of Nyngan has suffered from a number of major floods in the 1990's, in order to combat this a levee was built to protect against future flooding of the Bogan River (Bogan Shire Council, 2012).

4.4 SUMMARY CONCLUSIONS

The Avoca Tank Study Area (Stages 1 and 2) does not contain major sources of potable water likely to act as a foci point for Aboriginal occupation in the past. No major topographic relief, reflecting more resistant lithologies (such as quartzite and minor volcanic) is apparent in the Study Area. This is also likely to mean that stone outcrops suitable for the manufacture of stone tools may be scarce.

The integrity of the Study Area has been degraded due to previous land use and practices. Based on the number of coppiced trees the entire Study Area was probably cleared at an earlier time. Very little topsoil remains, principally, as a result of poor farming practices, such as overgrazing. Floods in the 1990's are also likely to have displaced, eroded or potentially obscured Aboriginal objects. These factors are likely to have had an effect on the visibility and integrity of any Aboriginal occupation material within the Study Area.

5.0 PREVIOUS ARCHAEOLOGICAL WORK

5.1 PREVIOUS STUDIES AND DISTRIBUTION OF SITES IN GIRILAMBONE AREA

A search of the Aboriginal Heritage Information Management System or AHIMS register was undertaken for a 10 EW x 10 NS kilometre area (100 km²) surrounding the Avoca Tank Study Area. Table 4.1 below shows the grid coordinates for the AHIMS register search. A total of 57 sites have been previously recorded within the 100 km² search area. Aboriginal sites identified by the AHIMS site register search are listed in Table 5.2 and shown in Figure 5.1. The results of the AHIMS site register search are provided in **Appendix 4**.

Table 4.1 - Minimum and maximum grid references employed for AHIMS register search

	Minimum	Maximum
Easting	55 478000	55 488000
Northing	6545000	6555000

Of the 57 previously recorded AHIMS sites a total of 11 sites have been previously recorded within the current Avoca Tank Study Area. Sites previously recorded within Study Area are listed in Table 5.33 and their distribution is shown in Figure 5.25.2. The site cards for the 11 sites previously recorded within the Study Area are also provided in **Appendix 4**.

Table 5.2 – AHIMS Sites recorded in within 100km² search area. Grid references from AHIMS

SiteID	SiteName	Zone (AGD)	Easting	Northing	Site Features
26-3-0067	GM-HS-28_(Hearth);Girilambone Copper Mine;	55	484710	6547330	Earth Mound :Hearth : -
26-3-0068	GM-HS- 9_(Hearth);Girilambone Copper Mine;	55	484680	6547340	Earth Mound : -, Hearth : -
26-3-0070	GM-OS/HS- 1_(Hearth); Girilambone Copper Mine;	55	484760	6548100	Earth Mound : -, Hearth : -, Artefact : -
26-3-0071	GC-OS/HS-2_(Hearth); Girilambone Copper Mine;	55	484760	6548100	Earth Mound : -, Hearth : -, Artefact : -
26-3-0017	GC-ST-11; Girilambone Copper Mine;	55	485880	6545950	Modified Tree (Carved or Scarred) : -
26-3-0018	GC-ST-12;Girilambone Copper Mine;	55	485880	6545950	Modified Tree (Carved or Scarred) : -
26-3-0019	GC-ST-13;Girilambone Copper Mine;	55	485960	6546010	Modified Tree (Carved or Scarred) : -
26-3-0020	GC-ST-14;Girilambone Copper Mine;	55	485960	6546010	Modified Tree (Carved or Scarred) : -
26-3-0021	GC-ST-15;Girilambone Copper Mine;	55	485960	6546010	Modified Tree (Carved or Scarred) : -
26-3-0022	GC-ST-16;Girilambone Copper Mine;	55	485930	6545730	Modified Tree (Carved or Scarred) : -
26-3-0023	GC-ST-17;Girilambone Copper Mine;	55	486390	6545590	Modified Tree (Carved or Scarred) : -

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SiteID	SiteName	Zone (AGD)	Easting	Northing	Site Features
26-3-0024	GC-ST-18;Girilambone Copper Mine;	55	486390	6545590	Modified Tree (Carved or Scarred) : -
26-3-0025	GC-ST-19;Girilambone Copper Mine;	55	486390	6545470	Modified Tree (Carved or Scarred) : -
26-3-0026	GC-ST-20;Girilambone Copper Mine;	55	486680	6545530	Modified Tree (Carved or Scarred) : -
26-3-0027	GC-CT/ST-20;Girilambone Copper Mine;	55	486650	6545500	Modified Tree (Carved or Scarred) : -
26-3-0028	GC-CT/ST-22;Girilambone Copper Mine;	55	486650	6545500	Modified Tree (Carved or Scarred) : -
26-3-0029	GC-ST-23;Girilambone Copper Mine;	55	487690	6545180	Modified Tree (Carved or Scarred) : -
26-3-0030	GC-ST-24;Girilambone Copper Mine;	55	487700	6545510	Modified Tree (Carved or Scarred) : -
26-3-0031	GC-ST-25;Girilambone Copper Mine;	55	485990	6545590	Modified Tree (Carved or Scarred) : -
26-3-0032	GC-ST-26;Girilambone Copper Mine;	55	485760	6546080	Modified Tree (Carved or Scarred) : -
26-3-0033	GC-ST-27;Girilambone Copper Mine;	55	484900	6545900	Modified Tree (Carved or Scarred) : -
26-3-0034	GC-OS-1;Girilambone Copper Mine;	55	484760	6548100	Artefact : -
26-3-0065	GM-HS-26_(Hearth);Girilambone Copper Mine;	55	486680	6545530	Earth Mound : -, Hearth : -
26-3-0066	GM-HS-27_(Hearth);Girilambone Copper Mine;	55	484630	6547340	Earth Mound : -, Hearth : -
26-3-0011	GC-ST-7;Girilambone Copper Mine;	55	485780	6544830	Modified Tree (Carved or Scarred) : -
26-3-0012	GC-ST-6;Girilambone Copper Mine;	55	485780	6544830	Modified Tree (Carved or Scarred) : -
26-3-0013	GC-ST-8;Girilambone Copper Mine;	55	486150	6545810	Modified Tree (Carved or Scarred) : -
26-3-0014	GC-ST-10;Girilambone Copper Mine;	55	485930	6546000	Modified Tree (Carved or Scarred) : -
26-3-0016	GC-ST-9;Girilambone Copper Mine;	55	485930	6546000	Modified Tree (Carved or Scarred) : -
26-3-0119	GC-OS-1	55	484760	6548100	Artefact : 1
26-3-0144	GC-HS-26	55	486680	6545530	Hearth : 1
26-3-0145	GC-HS-27	55	484630	6547340	Hearth : 1
26-3-0146	GC-HS-28	55	484710	6547330	Hearth : 1
26-3-0147	GC-HS-29	55	484680	6547340	Hearth : 1
26-3-0149	GC-OS-HS-1	55	484760	6548100	Hearth : 1
26-3-0155	GC-ST-6	55	485780	6544830	Modified Tree (Carved or Scarred) : 1
26-3-0156	GC-ST-7	55	485780	6544830	Modified Tree (Carved or Scarred) : 1
26-3-0157	GC-ST-8	55	486150	6545180	Modified Tree (Carved or Scarred) : 1
26-3-0158	GC-ST-9	55	485930	6546000	Modified Tree (Carved or Scarred) : 1
26-3-0159	GC-ST-10	55	485930	6546000	Modified Tree (Carved or Scarred) : 1
26-3-0160	GC-ST-11	55	485880	6545950	Modified Tree (Carved or Scarred) : 1
26-3-0161	GC-ST-12	55	485880	6545950	Modified Tree (Carved or

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SiteID	SiteName	Zone (AGD)	Easting	Northing	Site Features
					Scarred) : 1
26-3-0162	GC-T-13	55	485960	6546010	Modified Tree (Carved or Scarred) : 1
26-3-0163	GC-ST-14	55	485960	6546010	Modified Tree (Carved or Scarred) : 1
26-3-0164	GC-ST-15	55	485960	6546010	Modified Tree (Carved or Scarred) : 1
26-3-0165	GC-ST-16	55	485930	6545730	Modified Tree (Carved or Scarred) : 1
26-3-0166	GC-ST-17	55	486390	6545590	Modified Tree (Carved or Scarred) : 1
26-3-0167	GC-ST-18	55	486390	6545590	Modified Tree (Carved or Scarred) : 1
26-3-0168	GC-ST-19	55	486390	6545470	Modified Tree (Carved or Scarred) : 1
26-3-0169	GC-ST-20	55	486680	6545530	Modified Tree (Carved or Scarred) : 1
26-3-0170	GC-CT/ST-21	55	486650	6545500	Modified Tree (Carved or Scarred) : 1
26-3-0171	GC-CT/ST-22	55	486650	6545500	Modified Tree (Carved or Scarred) : 1
26-3-0173	GC-ST-24	55	487700	6545510	Modified Tree (Carved or Scarred) : 1
26-3-0174	GC-ST-25	55	485990	6545590	Modified Tree (Carved or Scarred) : 1
26-3-0175	GC-ST-26	55	485760	6546080	Modified Tree (Carved or Scarred) : 1
26-3-0176	GC-ST-27	55	484900	6545900	Modified Tree (Carved or Scarred) : 1
26-3-0172	GC-ST-23	55	487690	6545180	Modified Tree (Carved or Scarred) : 1

Table 5.3: AHIMS Sites recorded in within the Avoca Tank Project Site. Grid references from AHIMS (Datum AGD)

AHIMS Site ID	Site Name	Easting	Northing	Site Features
26-3-0067	GM-HS-28Hearth Girilambone Copper Mine;	484710	6547330	Earth Mound, hearth
26-3-0068	GM-HS-29_(Hearth) ;Girilambone Copper Mine;	484680	6547340	Earth Mound, hearth
26-3-0070	GM-OS/HS-1JHearth);Girilambone Copper Mine;	484760	6548100	Earth Mound, hearth, artefact
26-3-0071	GC-OS/HS-2_(Hearth);Girilambone Copper Mine;	484760	6548100	Earth Mound, hearth, artefact
26-3-0034	GC-OS-1;Girilambone Copper Mine;	484760	6548100	Artefact : -
26-3-0066	GM-HS-27_(Hearth);Girilambone Copper Mine;	484630	6547340	Earth Mound, hearth
26-3-0119	GC-OS-1	484760	6548100	Artefact : 1
26-3-0145	GC-HS-27	484630	6547340	Hearth : 1
26-3-0146	GC-HS-28	484710	6547330	Hearth: 1

AHIMS Site ID	Site Name	Easting	Northing	Site Features
26-3-0147	GC-HS-29	484680	6547340	Hearth: 1
26-3-0149	GC-OS-HS-1	484760	6548100	Hearth : 1

Review of the AHIMS site cards and details reveals duplicate recordings of these sites and their features. This duplication is most evident in the site names and grid references but also in the descriptions and attached drawings. An examination of the site cards shows that the 11 sites are actually 5 sites with duplicate recordings. Table below shows these AHIMS sites re-organised accordingly. Site cards have been similarly organised and grouped in **Appendix 4**.

**Table 5.4: AHIMS Sites recorded in within the Avoca Tank project area noting duplications.
 Grid references from AHIMS (Datum AGD)**

AHIMS Site ID	Site Name	Easting	Northing	Site Features
26-3-0066 / 26-3-0145	GM-HS- 27_(Hearth); Girilambone Copper Mine;	484630	6547340	Earth Mound, hearth
26-3-0067 / 26-3-0146	GM-HS-28 Hearth Girilambone Copper Mine;	484710	6547330	Earth Mound, hearth
26-3-0068 / 26-3-0147	GM-HS-29_(Hearth); Girilambone Copper Mine;	484680	6547340	Earth Mound, hearth
26-3-0070 / 26-3-0071	GM-OS/HS-1 (Hearth); Girilambone Copper Mine;	484760	6548100	Earth Mound, hearth, artefact
26-3-0034 / 26-3-0119 26-3-0149	GC-OS-1; GC-OS-HS-1 Girilambone Copper Mine;	484760	6548100	Open Artefact scatter / Hearth

All but one of the 57 previously recorded sites were recorded by Central West Archaeological and Heritage Services. Annie Nicholson of National Heritage Studies also undertook two studies in the Girilambone Region in 1989 and 1990. Available reports are reviewed below. Tritton Resources supplied these reports, as none appear listed or available through the OEH AHIMS Database.

Figure 5.1: AHIMS Search boundary (orange) and plotted AHIMS Sites (red dots) from (Table 5.2) shown in relation to Avoca Tank Project. Project Site Boundary shown in red outline and Proposed Disturbance Footprint, including the haul road are shown by the light blue line. AHIMS Sites plotted with grid references from AHIMS. See also Figure 5.2.

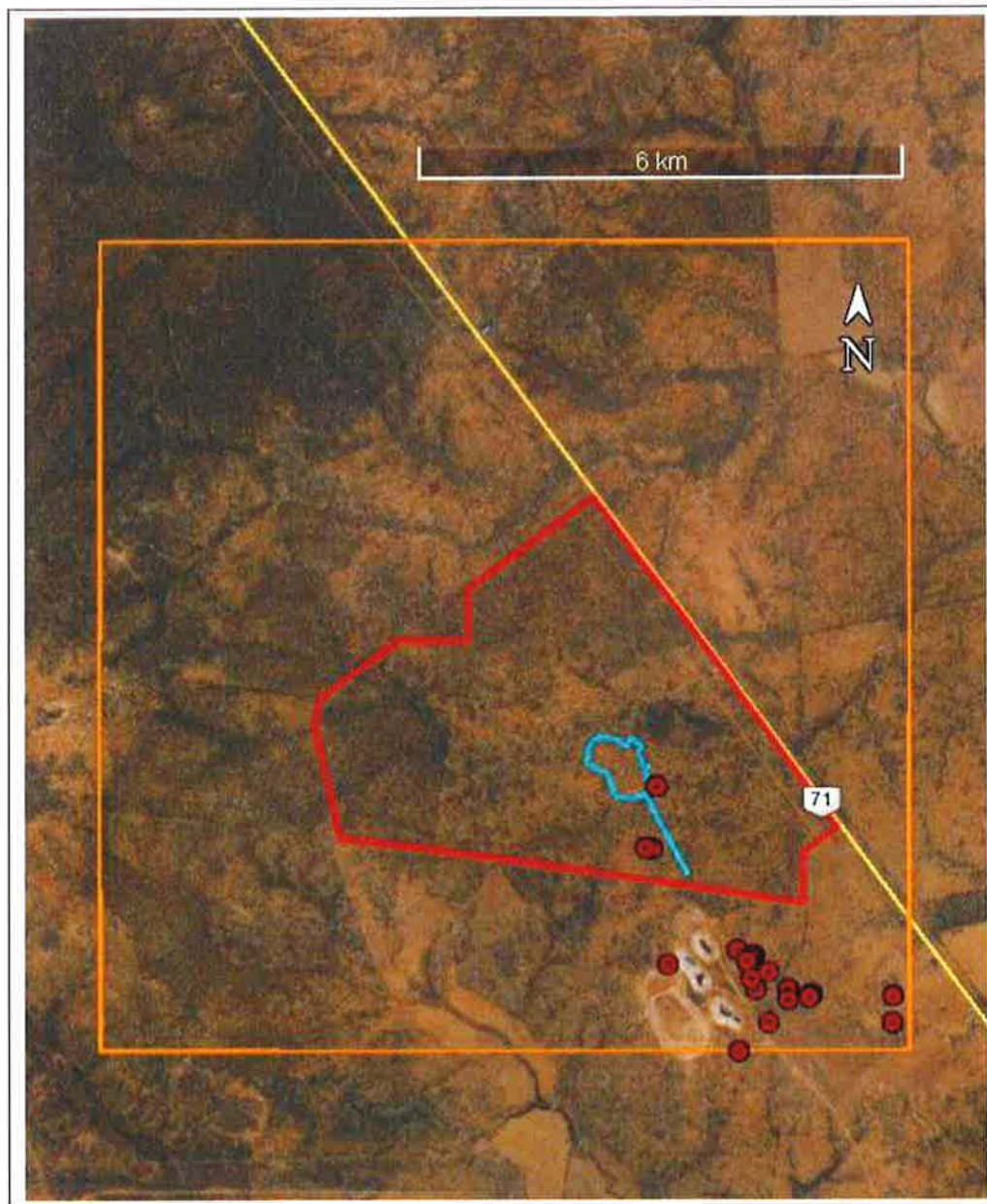
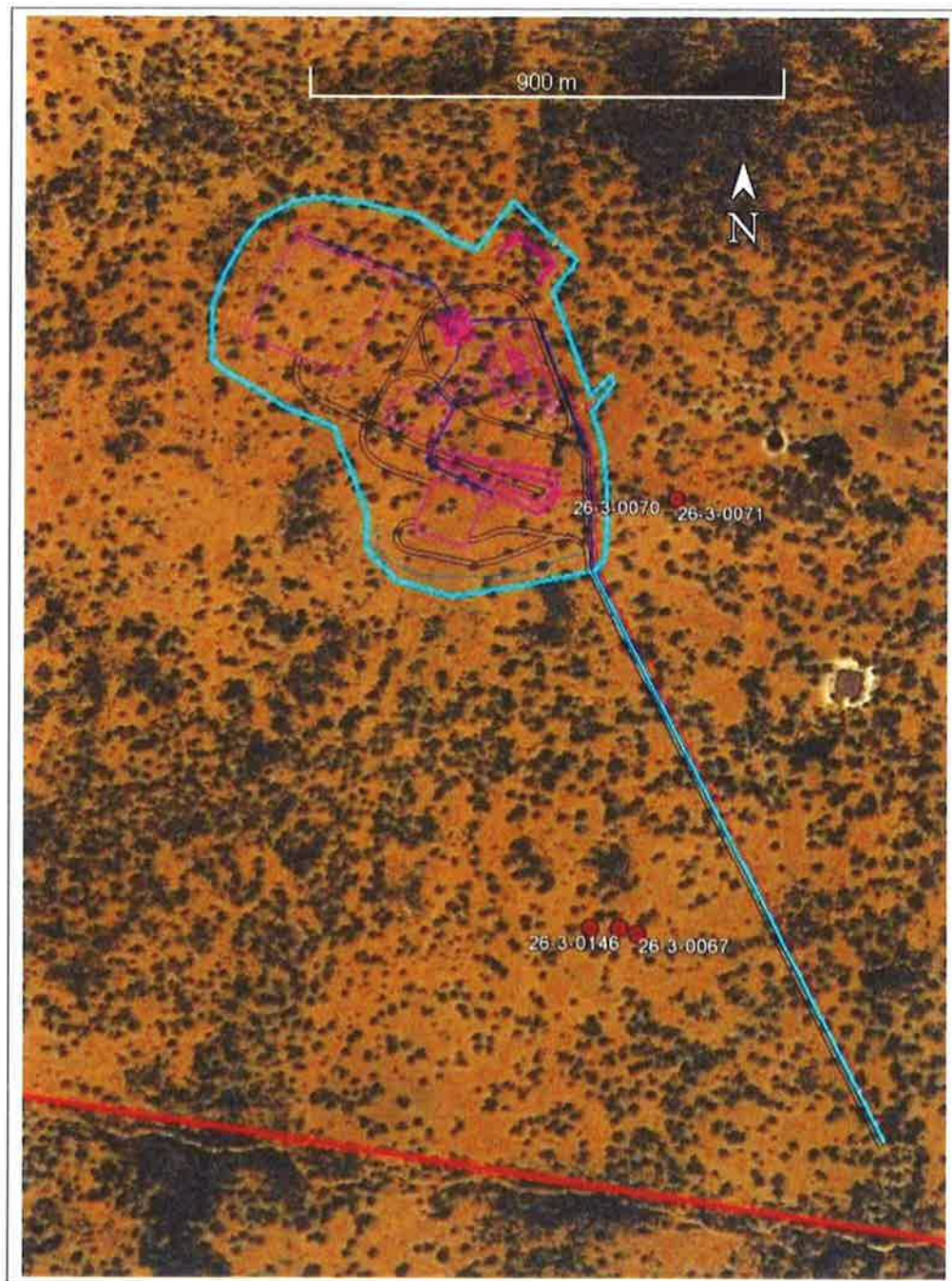


Figure 5.2: Distribution of previously recorded AHIMS Sites (red dots) within the Avoca Tank Project area and Proposed Disturbance Footprint. Southern Project Site Boundary shown in red at bottom of figure. Note the identical grid references and duplicate recordings of these sites as shown in Table 5.4. AHIMS Sites plotted with grid references from AHIMS



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Nicholson (1989)

Nicholson (1989) conducted an Environmental Baseline Report for the Environmental Impact Statement for proposed copper mining activities at the old Girilambone mine workings (the North-East Prospect and the Girilambone Prospect). The North-East prospect included a survey across Lot 138, an area of land adjoining the southern boundary of Lot 144 forming part of the current Avoca Tank study area. The survey was conducted with Lesly Ryan of Bogan Aboriginal Corporation who also participated in the current survey for the Avoca Tank project.

Nicholson (1989:2) in establishing a predictive model for the study area, discusses the range of site types present in the North-Central Rivers region and to the east of Nyngan. According to Nicholson (1989:2) these sites were represented in the following proportions;

Scarred trees	29% (20)
Carved trees	29% (20)
Open camp sites	19% (13)
Burial sites	9% (6)
Stone arrangements	7% (5)
Quarries	6% (4)
Contact sites	2% (1)

Nicholson (1989:3) also reviewed the work of Witter (cited in Nicholson 1989: 3, 1990:6) and Hughes, Hiscock and Donaldson (1984, cited in Nicholson 1989: 3). Witter found that large scatters of artefacts were found adjacent to water sources whilst on the plain away from major creek lines the artefact scatters were found to be much smaller.

Witter interpreted the large artefacts scatters as 'base camps' occupied by large groups of Aboriginal people between 5000 and 2000 years ago. The major water sources provided the focus for occupation during this period with people foraging out from these locations on a day-to-day basis (Nicholson 1989:3).

According to Witter (cited in Nicholson 1989: 3) sometime between 2000 and 200 years ago this settlement pattern changed, and people become more dispersed across the landscape. This settlement pattern change is reflected in the numerous small, widely dispersed artefact scatters characterising the region.

Hughes, Hiscock and Donaldson (1984; cited in Nicholson) conducted an archaeological survey south of Cobar and found that major campsites occurred throughout the region and were concentrated around major water sources (such as rivers, creeks, springs, rockholes and soaks). Other sites such as rock shelters with occupation deposit, rock art sites and axe grinding grooves occur but are restricted to the sandstone hill country and generally located near water.

Nicholson (1989:3) also reviews work conducted by Bonhomme (1983, cited in Nicholson 1989) near Cobar that identified the termite lump and/or sandstone hearth as the most common site type. This study produced the same pattern of base camps associated with small transient camps as discussed by Hughes et al (1984) and special activity areas previously identified by Witter (cited in Nicholson). A date of 4000 years B.P. for occupation in this area was obtained by dating material excavated from one of the hearths (Nicholson 1989:3-4).

Nicholson (1989:5) located one scarred tree and two isolated stone artefacts outside the Girilambone Prospect during the survey. The scarred tree recorded was a river red gum with a well defined oval scar on its trunk and measuring approximately 1.2 x 0.55m and 2.7m above the base of the trunk. One of the isolated stone artefacts recorded was a yellow chert flaked piece found on an eroded surface. The second isolated stone artefact was a broken river pebble utilised as a grinding stone (6.5 x 3.5cm) and was smooth on one side.

Nicholson (1989:7) concluded that the absence of more extensive archaeological material in the study area is expected due to the lack of any major water sources and the results were consistent with models proposed for Aboriginal settlement in this region. These models posited that Aboriginal occupation focused on the major water sources with base camps (characterised by large artefact scatters) located adjacent to rivers, creeks, springs and soaks. Away from these areas evidence of occupation reduces to small low density scatters of artefacts representing short-term camps and/or special activity areas used during hunting and gathering trips (Nicholson, 1989:7).

Nicholson (1989:7) further concludes that the absence of archaeological remains in the North-East Prospect suggests that this; harsh, dry, flat land was probably not occupied by Aboriginal people in the past although it is likely to have been visited. The presence of a scarred tree and two isolated artefacts in the area around the Girilambone Prospect is indicative of this sort of activity.

Nicholson (1990)

A second survey was also conducted by Nicholson (1990) for associated mining infrastructure including a pumping station on the Bogan River, an electricity spurline and a 22 km pipeline corridor extending west to proposed settling ponds to the immediate east of the Girilambone Prospect (the current Girilambone Copper Mine).

A total of five sites were located, all were open surface scatters of stone artefacts. The sites were clustered in two locations. Two of the sites (Sites 1 and 2) were found in the vicinity of the Bogan River with the remaining three sites located in the area proposed for the series of settling ponds on the Girilambone Prospect (Sites 3, 4 and 5). Three of the sites contained less than 11 stone artefacts whilst the remaining two sites contained 42 and +50 stone artefacts and all but one site displayed 'extremely low' artefact densities. Flakes represented the majority of the recorded artefacts types for all assemblages (81%) and whilst quartz represented the dominant raw material type (82%). Other raw materials represented include

chert (10%), silcrete (3%), metamorphosed shale (2%), quartzite (2%) and volcanics (1 %) (Nicholson 1990:17). Sites 4 and 5 contained the highest raw material diversity with the remaining 3 sites being composed nearly entirely of quartz.

Two of the smaller sites (Sites 2 and 3) contained flakes only and cores represented 13% of the recorded artefact assemblages and were present on at three sites (Sites 1, 4 and 5). The cores were of a small size (<5cm) and taken to indicate that artefact manufacture had occurred at these locations (Nicholson 1990: 17-19). The presence of cortex on several cores allowed Nicholson to conclude that the cores were derived from river-rolled cobbles.

(Nicholson 1990: 17-19) concluded that sites 1 and 2 near the Bogan River were originally part of the same artefact scatter subject to disturbance in the space between which had subsequently revegetated to obscure connecting archaeological material. Sites 3, 4 and 5 were located adjacent to small ephemeral drainage lines. (Nicholson 1990:21) suggests that sites 3 – 5 (ie. small, low density scatters) represented a typical sample of the archaeological signature of the region.

(Nicholson 1990: 20) concluded that the pattern of artefact scatters located adjacent to watercourses is characteristic of semi-arid regions. The absence of sites away from watercourses was not unexpected and the pattern of site location recorded during the survey consistent with predictive models for site location in this region.

Kelton (1995)

Jim Kelton of Central West Archaeological and Heritage Services conducted an archaeological survey of an area of the proposed North Copper Mine, a portion of which was subject to previous archaeological investigation by Nicholson (1989). The original area surveyed by Kelton (1995) included a large part of the current Avoca Tank Stage 1 project area and adjoining land to the immediate south of the current Avoca Tank Stage 1 project area. The survey area was subsequently reduced to exclude the current Stage 1 area land.

Kelton (1995:6) also reports that he resurveyed at least part of the land surveyed by Nicholson (1989) as part of her investigation for the initial Girilambone Copper Mine Environmental Impact Assessment. Nicholson (1989) did not locate or record sites in this area.

Based on previous work in the region and his own observations Kelton predicts that open artefact scatters, scarred / carved trees, burial sites, hearth sites, ceremonial sites (such as 'bora grounds') are possible within the study area.

Kelton (1995:10) suggests criteria established by Pearson (cited in Kelton) for the location of camp sites/open artefact scatters in the NSW tablelands could also be applied to the region, with the most relative criteria being the following:

1. Accessibility to water. The need for ample supplies of drinking water, and a sufficiently large resource zone associated with that supply;
2. Level ground with good drainage;
3. Shelter from cold winter winds, with adequate summer cooling breezes; and,
4. Adequate fuel supplies.

Kelton (1995:12) in discussing hearth sites posits:

Termite nest material was often use by Aboriginal people in the region as an alternative heat retaining material in cooking fires, or else in conjunction with natural stone hearths which were used for the same purpose. A difficulty of interpretation arises where termite nest material occurs isolated from any other cultural material in what appears to be a hearth formation. The problem occurs in determining whether the hearth is in fact an Aboriginal hearth or else a natural occurrence resulting from a rotted and burnt tree.

This site type is common in the region and it is predicted that Aboriginal fire hearths of stone and termite nest material will occur across the study area, perhaps with the exception of on the higher quartzite hills and associated rocky slopes.

Kelton (1995) divided the survey area in two based on the different level of proposed mining activity (high and low impact) and surveyed these areas with differing levels of intensity/coverage. Kelton (1995:19) located 34 hearth sites, 27 scarred tree sites (including 2 possible carved trees), one open artefact scatter site, and 4 isolated artefact finds located during the field survey. A number of these sites recorded by Kelton (1995) are shown in Table 5.3 and are of relevance to the current study area.

Kelton (1995:24) recorded a total of 32 hearth sites during the field survey, all of which were of termite nest material (with a further two sites recorded as part of a site complex, GC-OS-1). Kelton (1995:24-25) states that "a number of hearths have questionable Aboriginal origin due to the lack of supporting, associated cultural material, and the apparent questionable origin of the actual hearth material, with some material indicating the possibility that it has originated from natural sources rather than from collection and exploitation by past Aboriginal groups. However, when comparison was drawn between hearth sites of doubtful origin and hearth sites located in association with stone artefactual material, e.g. GC-OS-1, little difference could be established, thus raising the credibility of the majority of doubtful sites".

"On the other hand, some clumps of termite nest material were definitely observed to be the remains of rotted, burnt trees, with no cultural heritage value. These occurrences were not recorded" (Kelton 1995:24-25).

According to Kelton (1995:25) hearth sites were recorded across the study area with the only landform unit void of these sites being the rocky quartzite ridges and peaks. Kelton (1995:25) concludes that "based on the relatively large number of hearth sites located over the study area, it would appear that the drier areas away from perennial water sources may have been

more significant for resource exploitation to past Aboriginal groups in the region than has been proposed by those who have previously conducted archaeological studies in the region".

Kelton (1995:25) assessed the majority of hearth sites with a Low to Moderate significance due to their low scientific and educational value and the large number of this site type in the study area and adjacent areas. The two hearth sites associated with open artefact scatter site GC-OS-1 were attributed with moderate to high level of significance due to their relationship with the open artefacts scatter site complex.

Kelton (1995:26) states that 23 of the 27 recorded scarred tree sites displayed no axe marks. Two sites of the sites displaying axe marks GC-CT/ST- 21 and 22 were asserted be burial site markers by the Aboriginal representative present. The majority of scarred trees located during the field survey reflect the opportunistic removal of portions of bark and / or outer cambium, for use as implements or else shelters.

Kelton (1995:30) concluded that the site prediction model produced by Nicholson (1989,1990) was reasonably accurate with regard to the level of past Aboriginal 'settlement' or occupation site density in the locality, but not entirely reliable when applied to the level of occupation evidence identified during the 1995 survey by Kelton.

Kelton (1995:30) however could not explain the disparity between the site types and the numbers of sites located during that study (1995) when compared to the site types and numbers recorded in Nicholson's overlapping study area. Kelton (1995:31) posits that site types recorded during his study reflected a greater level of occupation than was expected throughout that study area.

Kelton (1995:31) argues that the results of his study tend to support Witter's (c1990) theory of change in Aboriginal settlement patterns throughout the region, depending on the potential of sites to yield reliable dates.

According to Kelton (1995:31) the evidence of occupation in the study area certainly pointed to the movement of small groups across the landscape, however, it could also be argued that this pattern of occupation would have been expected, given the nature of the local environment, irrespective of changes in settlement patterns.

"The high number of small hearth sites and scarred trees points to considerable, (and unexpected) possibly seasonal exploitation of the locality, even if only by small groups, and if only for short periods during the year. This higher than expected evidence of occupation within the study area should have been predicted, bearing in mind the relatively close proximity of the study area to the Bogan River and the associated rich riverine margin resource zone. The presence of 'soaks' some distance from the river would have meant adequate supplies of water were available to small groups of hunter gatherers whilst

travelling out from the resource rich riverine margins, and particularly following seasonal rain" (Kelton 1995:31).

According to Kelton (1995:31) the virtual absence of open artefact scatter sites was not unexpected, given that the study area was by no means abundant in resources and would not have supported large gatherings for any length of time. The location of a single extensive scatter of artefacts and hearth sites in the study area's northern section does not comply, totally, with previous models of occupation proposed for the area by researchers.

Central West Archaeological and Heritage Services (1998)

Central West Archaeological and Heritage Services also undertook an archaeological survey for the Tritton Copper project EIS (1998: 3-40-42) some 20 kms to the south west of the current study area. The predictive model developed by Central West predicted:

- Open campsites with stone artefacts and possible hearth sites might be expected around water occurrences such as the banks of ephemeral creeks and drainage lines.
- Scarred trees can be expected across all landform units.
- Isolated artefacts might occur across the entire survey area.
- Presence of previously recorded stone axe grinding groove site located 5km west of that survey area may indicate potential for similar occurrences.

The survey located a total of 47 scarred trees, two open artefact scatters one containing a single hearth and two isolated stone artefacts.

Both of the open artefact scatters were located along ephemeral creeks, one of which was described as extensive and of moderate to high significance. The other was extensively disturbed by Council works and considered of low significance.

Interestingly all of the scarred trees were considered to be of 'possible' Aboriginal origin and considered of low significance. Central West asserted that most of the tree sites identified were "bark shelter" type scars and that many were of European origin.

5.2 PREDICTIONS FOR THE STUDY AREA

Prior to undertaking any archaeological study it is useful to assess the archaeological potential of the Study Area. Predictions on the archaeological potential of a given area are made through synthesis of the environmental context, land use history and applying the findings of previous studies within the local area or region. This provides information about whether Aboriginal sites or objects are likely to occur in a given area, where these sites are likely to be located, their potential frequency, type, density and nature of Aboriginal sites or objects.

An analysis of the site details for the previously recorded AHIMS sites in **Table 5.3** shows that the most common site type recorded was that scarred trees (44, 77.2%) followed by hearths

(11, 19.3%) two of which were associated with artefacts, and 2 (3.5%) open stone artefact scatters.

It was previously discussed in **Section 4.0** that the Study Area is unlikely to contain substantial potable water. The relationship between Aboriginal occupation evidence and potable water is well understood and often most pronounced in semi arid to arid regions with low rainfall conditions. The Study Area does not contain any permanent water or defined ephemeral creek channels likely to support long to medium term Aboriginal occupation. Potential Aboriginal occupation evidence in the Study Area is therefore more likely to be sparsely distributed and discrete reflecting high mobility of small groups and short term task specific localities.

Review of the available information above in **Section 5.1** suggests that scarred trees are likely to be most common site type to occur in the region, although previous studies have treated this site type cautiously (Central West A&HS 1998). Hearths sites are likely to be the next most common site type. Stone artefacts scatters were found to be generally associated with water. The absence of potable water in the Study Area is likely to mean that open artefact scatters reflecting longer term encampments will be relatively few within the Study Area. The scarcity of stone outcrops suitable for the manufacture of stone artefacts is also likely to influence stone artefact occurrence in the Study Area.

It was also discussed in **Section 4.0** that the integrity of the Study Area has been degraded due to previous land use practices. Based on the number of coppiced trees the entire Study Area was probably cleared at an earlier time. Very little topsoil remains, principally, as a result of poor farming practices, such as overgrazing. These factors are also likely to have an effect on the integrity of any Aboriginal occupation material.

On the basis of the review of the environmental context and previous studies discussed above some predictions can be made about the archaeological potential of the Avoca Tank Study Area:

1. Scarred trees are likely to be the most common site type within the Study Area with hearth sites (some potentially with artefacts) likely to be the next most common site type.
2. Stone artefact occurrences are predicted to be low given the paucity of potable water and suitable stone for the manufacture of stone tools.
3. The broad scale land clearing and poor previous land-use practices within the Study Area are likely to have impacted heavily on all site types discussed above.

On the basis of these predictions the archaeological potential and sensitivity of the Avoca Tank Study Area is considered to be low.

6.0 SURVEY METHODOLOGY

Avoca Tank Stage 1

The archaeological survey strategy for the Stage 1 Study Area was designed with consideration of the immediate potential *harm* to Aboriginal objects was posed by the exploratory drilling program. Accordingly these potential impacts influenced the survey strategy. Tritton Resources supplied the location of all drill lines and holes to On Site CHM and the location of each and every proposed drill hole was inspected.

The drill lines formed the basis for the archaeological survey transects which were extended towards the boundaries of the Study Area to achieve greater coverage over the Study Area. The location of transects conducted across the Stage 1 Study Area are shown in **Figure 6.1**. The Proposed Disturbance Footprint and survey transects across this area are shown in **Figure 6.2** to understand the coverage of the survey further discussed in **Section 10.0**.

An intensive pedestrian archaeological survey of the Avoca Tank Study Area was conducted between 26 and 30 April 2012 by On Site Cultural Heritage Management archaeologists Gerard Niemoeller and Craig Reid.

Representatives of the Nyngan Local Aboriginal Land Council and Bogan Aboriginal Corporation participated in the entire archaeological survey and were present during the recording of all Aboriginal archaeological sites. Representatives were:

Sheila Couley – Chair, Nyngan Local Aboriginal Land Council
Lesly Ryan – CEO, Bogan Aboriginal Corporation
Deputy Chair, Nyngan Local Aboriginal Land Council

At least one but usually 2 to 3 representatives of Tritton/Straits participated and assisted in the survey every day over the 5 days. Tritton/Straits participants included:

Paul Calvin - Community and Heritage Manager
Phil Jones - Senior Project Geologist
Catherine Sullivan - Environmental Officer
Rodney Cooper - Environmental Advisor

The survey consisted of a series of transects north south along the proposed drill lines, spaced approximately 200 metres apart. Survey participants were spaced approximately 10 to 20 metres apart providing good survey coverage along each of the drill lines across the Avoca Tank project area. Each participant was therefore able to survey approximately 20 metres in width and allowing survey of approximately 100 metres in width per transect.

Transects were generally in straight lines along the drill lines but particular attention was also afforded to interesting features within the landscape such as prominent clearings or

exposures, gravel lags or concentrations, deflations or other areas of erosion and trees potentially bearing scars. This sometimes resulted in a meandering transect.

Avoca Tank Stage 2

At the time of the survey the proponent had advised that the Stage 2 area was being subject to archaeological survey to identify potential impacts on Aboriginal objects and identify constraints on the planning process for the mine footprint should the exploration program shift to full scale mining to be considered in the EIS.

For consistency and compatibility of results between the Stage 1 and 2 Study Areas a similar survey strategy was employed for the Stage 2 Study Area as was employed for the Stage 1 Study Area. The location of transects undertaken as part of Stage 2 is also shown in Figure 6.1. The Proposed Disturbance Footprint is also shown to understand the coverage of the survey strategy.

A pedestrian archaeological survey of the Avoca Tank Study Area (Stage 2) was conducted between 29 October and 2 November 2012 by On Site Cultural Heritage Management Principal Heritage Consultant / Archaeologist Gerard Niemoeller and Assistant Archaeologist Kate Duca.

Representatives of the Nyngan Local Aboriginal Land Council and Bogan Aboriginal Corporation participated in the entire archaeological survey and were present during the recording of all Aboriginal archaeological sites. Representatives were:

Sheila Couley – Chair, Nyngan Local Aboriginal Land Council
Lesly Ryan – CEO, Bogan Aboriginal Corporation
Deputy Chair, Nyngan Local Aboriginal Land Council

Neville Merritt of the Ngemba/Ngiyampaa Native Title claim group also participated in the fieldwork and survey on 1 – 2 November 2012.

At least one representative of Tritton/Straits participated and assisted in the survey every day over the 5 days. Tritton/Straits participants included:

Paul Calvin - Community and Heritage Manager
Rodney Cooper - Environmental Advisor

The survey consisted of a series of transects in a north south direction and spaced approximately 200 metres apart but at times, depending on the vegetation between 150 and 300 metres apart. Survey participants were spaced approximately 20 metres apart providing good survey coverage along each of the transects. Each participant was therefore able to

survey approximately 20 metres in width and allowing survey of approximately 100 metres in width per transect.

Transects were generally in a north south direction although particular attention was also afforded to interesting features within the landscape such as prominent clearings or exposures, gravel lags or concentrations, deflations or other areas of erosion and trees potentially bearing scars. This sometimes resulted in a meandering transect.

6.1 RELOCATION OF PREVIOUSLY RECORDED SITES

As discussed in **Section 5.1**, five AHIMS sites have been previously recorded within the Avoca Tank Study Area. An attempt to relocate all of these sites (via grid references) was undertaken as part of the Stage 1 survey. The AHIMS site cards do not however provide a datum for their recording beyond AGD. Given the age of the recording (1994) the grid references and localities were investigated using different datums (AGD 66, WGS 84, GDA 94) where required. Investigations to relocate these sites are discussed below in **Section 7.0**.

Figure 6.1: Pedestrian survey transects shown in yellow, Stage 2 shown in green. Red dots show previously recorded AHIMS Sites. Current Project Site Boundary shown in red and Proposed Disturbance Footprint shown in light blue. Orange line west of Mitchell Highway is power easement.

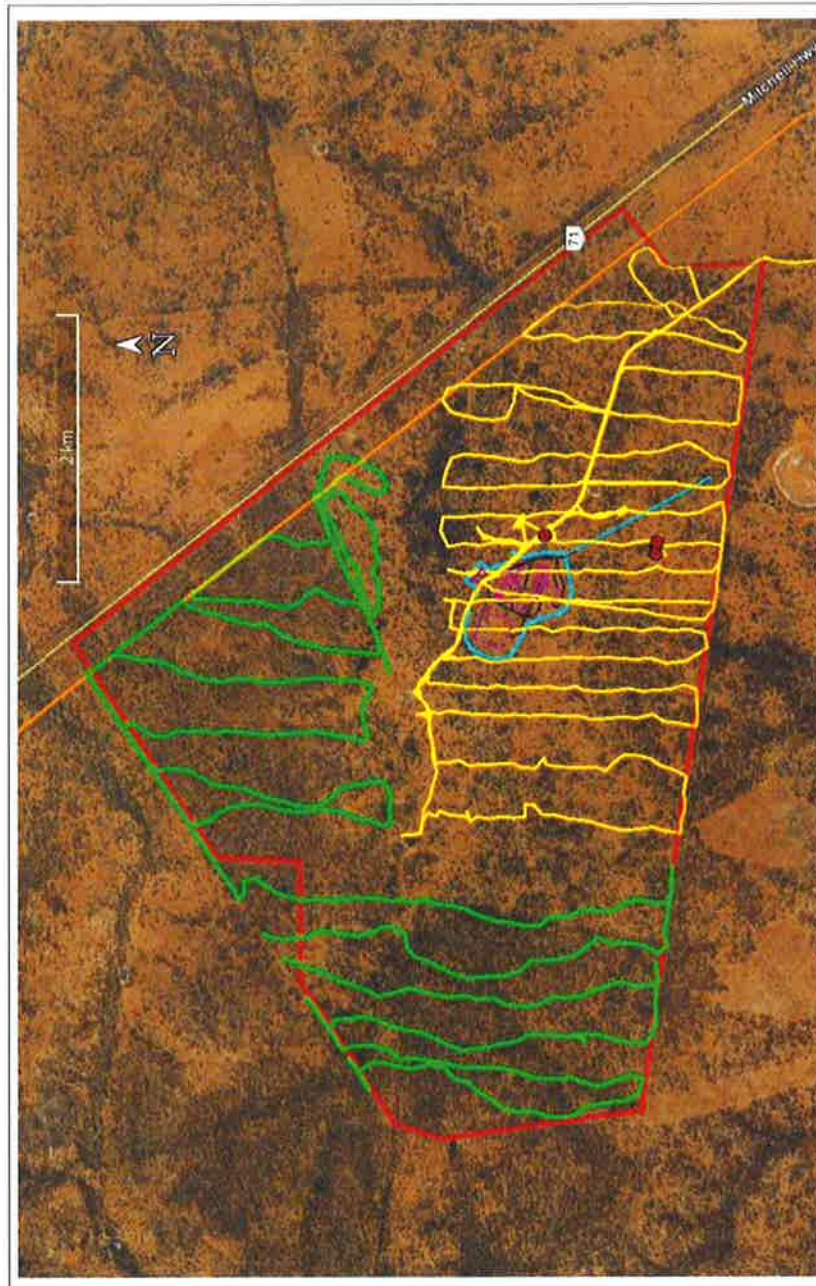
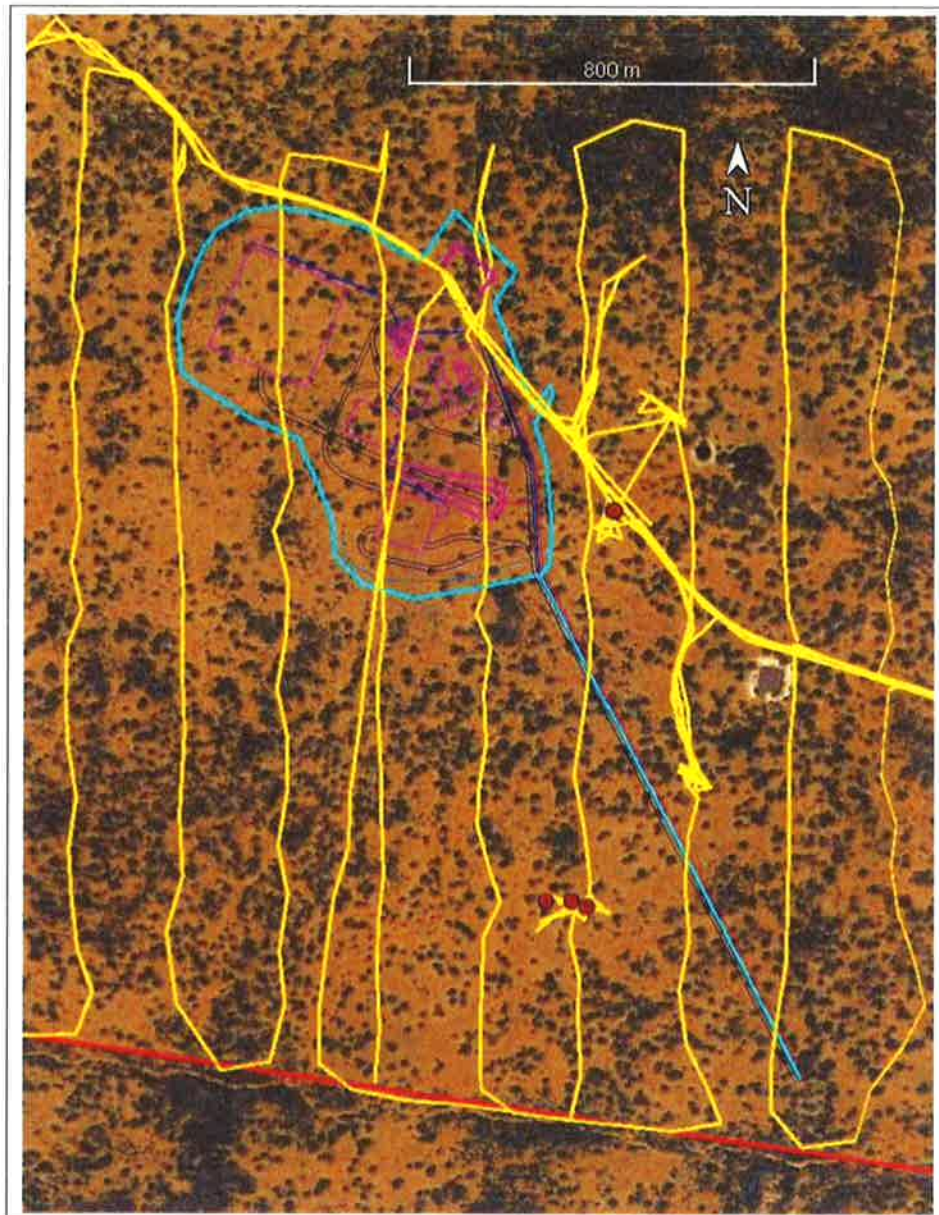


Figure 6.2: Stage 1 Study Area survey transects (yellow) in relation to the Proposed Disturbance Footprint (light blue). Red dots show previously recorded AHIMS Sites. Southern Project Site Boundary shown in red at bottom of figure.



7.0 RESULTS

7.1 GENERAL COMMENTS

The total length of all survey transects walked across the Avoca Tank project area Stages 1 and 2 (18.62km²) was 63.5 kms. Based on the 100 metres wide survey transect it is estimated that 6.35km², or 34.1% of the 18.62 km² Avoca Tank Study Area was surveyed during the Stage 1 and 2 investigations.

A total of 4 transects conducted as part of the Stage 1 study traversed the Proposed Disturbance Footprint. Based on the 100 metres wide survey transect it is calculated that the Stage 1 transects covered approx 221,900m² (0.222km² or 66%) of the 0.336 km² Proposed Disturbance Footprint. Survey coverage of the Proposed Disturbance Footprint was shown in Figure 6.2.

Low quality milky quartz gravels were widespread across the project area but were generally too small to be part of any stone tool reduction sequence (median size 1-2cm). Gravel lags were still consistently inspected for evidence of artefact manufacture. A single outcrop of low quality milky quartz boulders (up to 60cm) was located during the survey. The outcrop was carefully inspected for any evidence of stone tool quarrying or manufacturing, of which there was none.

Five locations containing Aboriginal occupation evidence were located during the surveys (See Figure 7.1). Avoca Tank 1 to 4 were located within the Stage 1 area and one of these places Avoca Tank 3 consists of three 'hearths' within proximity and was recorded as one site. Avoca Tank 5 was located within the Stage 2 area. The location and summary details for these places are included in Table 7.1 below.

AVOCA TANK STAGE 1

The total length of all survey transects walked along the drill lines was 35.9 kms. Based on the 100 metres wide survey transect discussed above it is estimated that 3.59km², or 41% of the 8.74 km² Avoca Tank project area was surveyed during this investigation.

The average percentage of ground surface visibility and exposures was recorded for every transect. The average visibility across the area is calculated to be 24.6% and average area of ground surface exposure is 14.6%. Details recorded for each pedestrian transect (Transects A-Q) as was shown in Figure 6.1 is included in Appendix 5.

AVOCA TANK STAGE 2

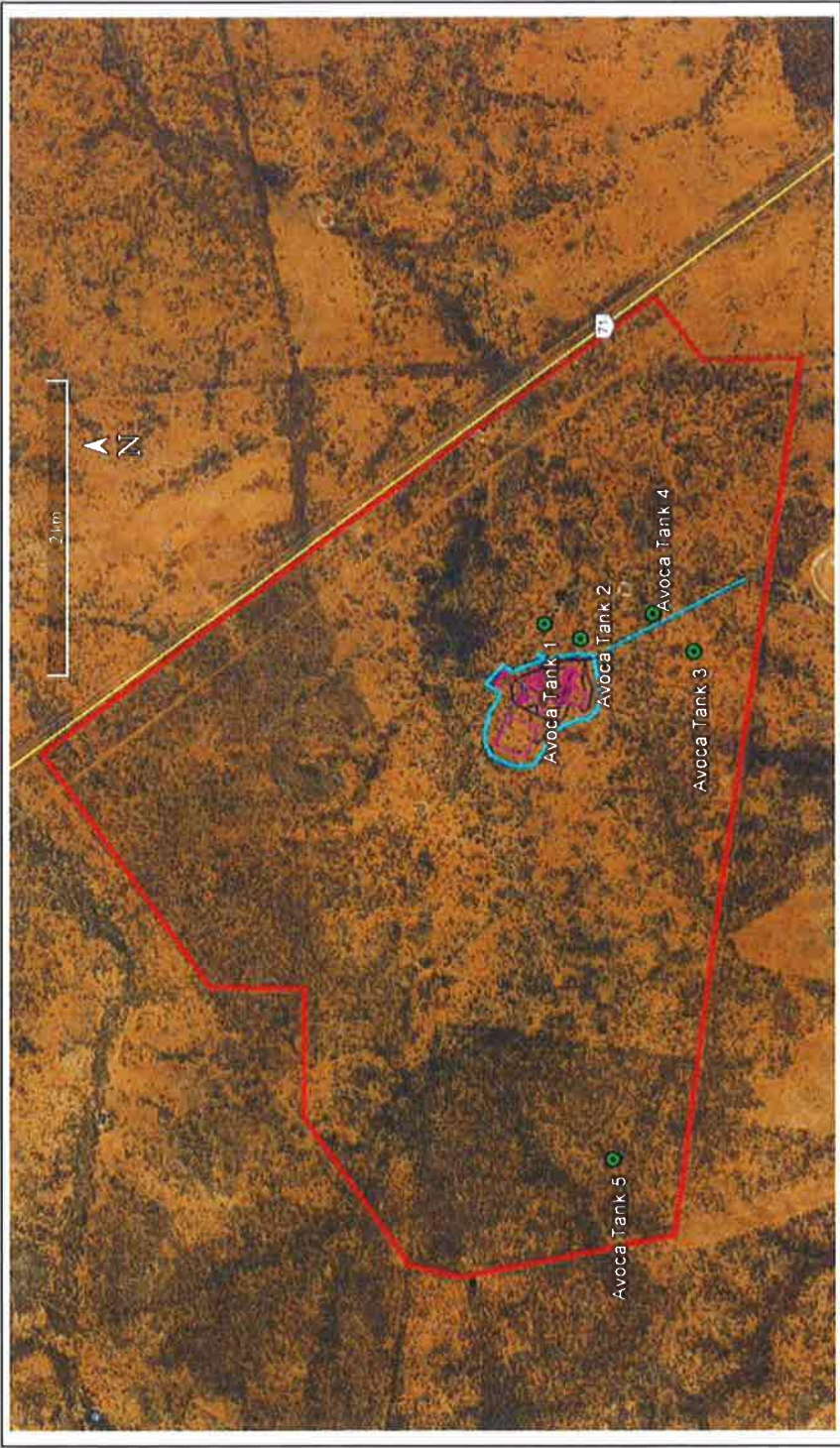
The total length of all survey transects walked as part of the Stage 2 survey 27.6 kms. Based on the 100 metres wide survey transect discussed above it is estimated that 2.76 km², or 28% of the 9.90 km² Avoca Tank project area (Stage 2) was surveyed during this investigation.

The average percentage of ground surface visibility and exposures was recorded for every transect. The average visibility across the Stage 2 area is calculated to be 26.6% and average area of ground surface exposure is 15.3%. Details recorded for each pedestrian transect (Transects 1-16) shown in Figure 6.1 is included in Appendix 5.

Table 7.1: Summary details for Aboriginal sites recorded during this survey.
 Datum is GDA 94. Grid references recorded by On Site CHM.

Study Area	Site Name	Site Features	Easting	Northing
Stage 1	Avoca Tank 1	Stone artefact scatter	55 484966	6548490
Stage 1	Avoca Tank 2	Isolated stone artefact	55 484857	6548245
Stage 1	Avoca Tank 3 (3 x hearths)	Hearth 1	55 484835	6547528
Stage 1		Hearth 2	55 484815	6547517
Stage 1		Hearth 3	55 484729	6547486
Stage 1	Avoca Tank 4	Historic Scar Tree and Aboriginal Stockman's camp	55 485027	6547775
Stage 2	Avoca Tank 5	2 x isolated stone artefacts	55 481436	6548043

Figure 7.1 Sites Avoca Tank 1-5 (green dots) recorded across the Avoca Tank Project area.



7.2 SITE DESCRIPTIONS

7.2.1 Avoca Tank 1

Grid Reference: 55 484966 E, 6548490 N (GDA 94)

Site Type: Stone artefact scatter

Site Description: Avoca Tank 1 is located on an open gently undulating grassy plain with tall open eucalypt woodland and some minor acacia. The site is located on a gentle slope with south east aspect. Artefacts are distributed along and either side of a disused eroded track.

The ground surface consists of fine grain silts with some minor quartz gravels. More dense quartz gravels are eroding out along track. A total of 11 artefacts were sparsely distributed along the eroded track and to either side. The majority of the artefacts are located at the eastern end of the scatter. It is likely that artefacts have been washed down the eroded track and gentle slope. The site is located approximately 50 metres north west of a dam. It is not clear whether this dam is a modified soak or entirely of more recent historical creation. Spoil around the edges of the dam indicates that the dam has been modified in recent times. Research of historical parish maps for this location did not show a dam.

Table 7.27.2 and 7.3 below show summary details for this site and recorded artefacts. Detailed attributes recording of these artefacts are provided in **Appendix 5**.

Table 7.2: Summary details for Avoca Tank 1

Approximate site size	2600 m ²	20m NS x 130 m EW	
Visibility (%)	Min: 0	Mean: 70	Max: 100
No. artefacts types represented	4		
No. raw materials represented	5		
Artefact densities (m ²)	Min: 0.1	Mean: 0.2	Max: 1
Artefact lengths (mm)	Min: 17	Mean: 34.8	Max: 80.8

Table 7.3: Artefact and raw material types recorded at Avoca Tank 1

	Basalt	Grannodiorite	Porphyritic	Quartz	Quartzite	Total	%
Flake	1			3	1	5	45.5
Retouched flake				1	3	4	36.3
Ground fragment		1				1	9.1
Hammerstone			1			1	9.1
Total	1	1	1	4	4	11	100
%	9.0	9.0	9.0	36.5	36.5	100	

Despite the low density of artefacts the site displays a relatively high diversity of stone artefact and raw material types. According to Phil Jones, Senior Geologist with Straits, three of these raw material types (porphyritic, grannodiorite, basalt) are not local and from outside the immediate region. The porphyritic and grannodiorite artefacts appeared to be manufactured from rounded worn cobbles indicating that these may have been sourced from a waterway. A high diversity of raw materials and low density of artefacts may indicate that Aboriginal occupants were highly mobile, visiting repeatedly but staying for short periods of time.

Site Integrity

The integrity of the site is considered low to moderate given the erosion that has occurred over the site. The erosion is also likely to have diminished the archaeological significance of this site.

Potential Impact of proposal:

The western end of Avoca Tank 1 is approximately 150 metres from the eastern extent of the Proposed Disturbance Footprint and will therefore not be directly impacted by the Proposal. The site is within proximity to the Proposal and therefore has the potential to be accidentally disturbed through ancillary activities. Any disturbance or impact upon this site would require an Aboriginal Heritage Impact Permit (AHIP).

To protect this site during the development and operation of the Proposal it is recommended that the proponent:

- Cordon off the site to prevent accidental disturbance through entry by any vehicles or unauthorised persons.
- Inform Tritton personnel of the location and designate this area is a "no go zone".
- Develop appropriate management strategies to ensure the long term conservation of this site

Plate 7.1: Ground fragment of granno-diorite at Avoca Tank 1



7.2.2 Avoca Tank 2

Grid Reference: 55 484857 E, 6548245 N (GDA 94)

Site Type: Isolated stone artefact

Site Description: Avoca Tank 2 consists of a single silcrete stone artefact located on a large open grassy plain with open eucalypt woodland. The site is located approximately 40 metres south west of grid reference provided for (AHIMS Sites 26-3-0070, 26-3-0071, 26-3-0034, 26-3-0119, 26-3-0149). The artefact is located on the lower slope of a gentle rise to the west. Large exposures, with low quality quartz gravels and a low level of grass cover afforded good visibility across the immediate area (60%). There was also evidence of widespread sheet wash and gullying across the area. Detailed attributes recording of these artefacts are provided in Appendix 5.

Potential impact of proposal:

Avoca Tank 2 is approximately 120 metres east of the Proposed Disturbance Footprint and will therefore not be directly impacted by the Proposal. The site is within proximity to the Proposal and therefore has the potential to be accidentally disturbed through ancillary activities. Any disturbance or impact upon this site would require an Aboriginal Heritage Impact Permit (AHIP).

To protect this site during the development and operation of the Proposal it is recommended that the proponent:

- Cordon off the site to prevent accidental disturbance through entry by any vehicles or unauthorised persons.
- Inform Tritton personnel of the location and designate this area is a "no go zone".
- Develop appropriate management strategies to ensure the long term conservation of this site.

7.2.3 Avoca Tank 3

Site Type: 3 x Hearths

General Site Description: 3 hearth features (within 80 metres) are located on large open grassy plain gently sloping to the north. The area is vegetated with sparse tall eucalypts with minor acacias around their drip line. The ground surface is comprised of thick grasses and large exposures with low quality gravels. The area has been subject to sheet wash. These places have been recorded due to their proximity to previously recorded 'hearth sites' by Kelton (1995) on the AHIMS Database as opposed to exhibiting any convincing evidence that they are in fact Aboriginal sites (See Section 7.3 and 8.0).

Hearth 1: (55 484835 E 6547528 N) (GDA 94)

Is situated on a hard exposure and consists of 4 loose compacted sediment nodules (all <10cm in size) over a 3m x 3m area. This feature is approximately 20 metres north east from the grid reference provided for AHIMS Site 26-3-0067/26-3-0146.

Hearth 2: (55 484815 E 6547517 N) (GDA 94)

Consists of small, hard nodules of sediments embedded in hard compacted silty matrix. The feature is approximately 1m x 1m and located in thick grass. Nodules appear to have minor charcoal content. This feature is approximately 9 metres WNW from the grid reference provided for AHIMS Site 26-3-0067/26-3-0146 and 22 metres ENE from the grid reference provided for 26-3-0068/26-3-0147.

Hearth 3: (55 484729 E 6547486 N) (GDA 94)

Is located on a large exposure (20m x 20m) with quartz gravels. The feature consists of small, hard nodules of sediments embedded in hard compacted silty matrix over an area of 2m x 2m. This feature is approximately 40 metres SSW from the grid reference provided for AHIMS Site 26-3-0066/26-3-0145

Despite an extensive search of the immediate surrounding area for each of these features no other cultural features or Aboriginal artefacts were located.

Potential impact of proposal:

Avoca Tank 3 is approximately 650 metres south of the Proposed Disturbance Footprint and 280 west of the proposed haul road and will therefore not be directly impacted by the Proposal. The site is within proximity to the Proposal and therefore has the potential to be accidentally disturbed through ancillary activities. Any disturbance or impact upon this site would require an Aboriginal Heritage Impact Permit (AHIP).

To protect this site during the development and operation of the Proposal it is recommended that the proponent:

- Cordon off the site to prevent accidental disturbance through entry by any vehicles or unauthorised persons.
- Inform Tritton personnel of the location and designate this area is a "no go zone".
- Develop appropriate management strategies to ensure the long term conservation of this site.

Plate 7.2: 'Hearth' 3 located near AHIMS Site localities 26-3-0066, 26-3-0145.



7.2.4 Avoca Tank 4

Grid Reference: 55 485027 E, 6547775 N (GDA 94)

Site Type: Historic scar tree, Aboriginal stockmen's camp and dam

Site Description:

Site is located at a low point within a wide grassy plain and consists of two small waterholes at the end of an ephemeral drainage line. The western water hole is a natural soak and at a low point in landscape. The eastern waterhole appears to be either entirely man made or heavily modified soak evidence by the spoil heaps around the northern, eastern and southern boundary of the waterhole.

Some additional historic material also occurs in association with the waterhole. A small white earthenware ceramic jar base and three small blackened rocks which may have been used as part of a campfire (see Plates 5.5 and 5.6) were located between the waterholes and amongst a group of trees occur. Five burnt nodules across an area of 2 square metres, indicating a potential hearth, were located approximately 10 metres to the north east of the scar tree

An iron strip wedge was also located 1.5 metres north west from the base of the scar tree. The iron strip measured 250mm Long x 40mm wide and 15mm thick tapering to a thin edge at one end. The function or origin of this "wedge" is unclear but the general form, tapered edge and association with the scar tree suggest that it may have been used in the extraction of the bark from the tree. Another function for this wedge may be for the locking of cart wheels in place. The area was likely used as a water hole for working animals.

An historic flattened tin can was also found nearby.

The area does not show any intensive use or particular features that may indicate repeated use, accumulated Aboriginal objects excavation potential.

Scar Tree:

A large dead tree bearing a scar occurs on the north west margin of the eastern soak. The scar is 2.1 metres long and extends around 81% of the trunk. The bottom of the scar begins 40 cm from the ground and extends up the tree to approximately 2.5 metres above the ground. An epicormic or subsidiary stem extends from the base of the scar. Recorded attributes for the scar and tree are provided in Table 7.4 below.

Table 7.4: Scar Tree dimensions

Scar Length	210 cm
Scar circumference around tree at midpoint of scar	112 cm
Circumference of tree at midpoint of scar	138 cm
Scar Depth (min and maximum)	30mm, 60mm

The tree has been ring barked and displays several isolated and distinct axe marks above the ring barking and on remaining dead bark (xylem) running the length of the scar. These marks were made by a sharp, straight and even edge, characteristics more distinctive of a steel axe. No tool marks are visible on the scar and it is therefore difficult to discern whether this scar was produced using a stone or steel axe. It is also difficult to discern whether the removal of bark and the ring barking of the host tree are related.

The size and shape of the removed bark, a large rectangle, suggests use for a temporary shelter. The steel axe marks on the tree and presence of several historic artefacts suggest that the scar was probably produced in historic times. The absence of stone tools or other pre-contact Aboriginal occupation materials does not refute a historical date.

Aboriginal community members present suggested that the evidence represented the remains of an Aboriginal stockmen's camp. Aboriginal people were widely employed in the region during the 1900s to ring bark trees and clear land. Large dead ring barked trees were numerous across the survey area.

Site Integrity

The waterholes and surrounding area is heavily vegetated and grassed and does not appear subject to the erosion that covers much of the survey area. The scar tree is dead, continuing to degrading and in relatively poor condition.

Potential impact of proposal:

Avoca Tank 4 is approximately 480 metres south east of the Proposed Disturbance Footprint and will therefore not be directly impacted by the Proposal. The site is however approximately 60 metres east of the proposed haul road and therefore has the potential to be accidentally disturbed through ancillary activities. Any disturbance or impact upon this site would require an Aboriginal Heritage Impact Permit (AHIP).

To protect this site during the development and operation of the Proposal it is recommended that the proponent:

- Cordon off the site to prevent accidental disturbance through entry by any vehicles or unauthorised persons.
- Inform Tritton personnel of the location and designate this area is a "no go zone".
- Develop appropriate management strategies to ensure the long term conservation of this site.



Plate 7.3 (above):

Waterhole with scar tree at left of frame

Plate 7.4: (right)

Scar tree located near waterhole





Plate 7.5: (above)
Tapered Iron strip (wedge)
located near scar tree



Plate 7.6: (right)
Ceramic jar

7.2.5 Avoca Tank 5

Grid Reference: 55 481436 E, 6548043 N (GDA 94)

Site Type: Isolated artefacts

Site Description: Avoca Tank 5 consists of two quartz flakes, 20 metres apart and located on a gentle slope ($<2^{\circ}$) with a south aspect. A low rise trending east west is situated to the north.

The area is characterised by mixed eucalypt woodland with sparse grasses and some young cypress. A low level of grass cover afforded good visibility across the immediate area (60%). The ground surface consists of compacted silts with low quality quartz gravels. Detailed attributes recording of these artefacts is provided in **Appendix 5**.

Potential impact of proposal:

Avoca Tank 5 is approximately 2700 metres west of the Proposed Disturbance Footprint and will therefore not be directly impacted by the Proposal. Given the considerable distance from the Proposed Disturbance Footprint there is also a low potential for this site to be accidentally disturbed through ancillary activities. Any disturbance or impact upon this site would require an Aboriginal Heritage Impact Permit (AHIP). The below recommendations are provided as a precaution.

To protect this site during the development and operation of the Proposal it is recommended that the proponent:

- Cordon off the site to prevent accidental disturbance through entry by any vehicles or unauthorised persons.
- Inform Tritton personnel of the location and designate this area is a "no go zone".
- Develop appropriate management strategies to ensure the long term conservation of this site

7.3 RELOCATION OF PREVIOUSLY RECORDED AHIMS SITES

As discussed in **Section 5.1** a review of the AHIMS site cards for the 11 previously recorded AHIMS sites within the Project Site Boundary determined that there are actually 5 sites with duplicate recordings. **Table 7.5** below shows these AHIMS sites re-organised accordingly.

An intensive inspection of (identical) grid references for AHIMS sites 26-3-0070/ 26-3-0071, 26-3-0034, 26-3-0119, 26-3-0149 was conducted using different datums (AGD 66, WGS 84 and GDA 94). A single stone artefact was located within 40 metres of the grid reference (AGD 66) and was recorded as Avoca Tank 2.

Table 7.5: Previously recorded AHIMS Sites within the Avoca Tank project area. Grid references from AHIMS. Extensive Search states AGD as Datum.

AHIMS Site ID	Site Name	Easting	Northing	Site Features
26-3-0066 / 26-3-0145	GM-HS- 27_ (Hearth); Girilambone Copper Mine;	484630	6547340	Earth Mound, hearth
26-3-0067 / 26-3-0146	GM-HS-28 Hearth Girilambone Copper Mine;	484710	6547330	Earth Mound, hearth
26-3-0068 / 26-3-0147	GM-HS-29_ (Hearth); Girilambone Copper Mine;	484680	6547340	Earth Mound, hearth
26-3-0070 / 26-3-0071	GM-OS/HS-1 (Hearth); Girilambone Copper Mine;	484760	6548100	Earth Mound, hearth, artefact
26-3-0034 / 26-3-0119 26-3-0149	GC-OS-1; GC-OS-HS-1 Girilambone Copper Mine;	484760	6548100	Open Artefact scatter / Hearth

A stone artefact scatter, Avoca Tank 1, consisting of 11 stone artefacts was also located 200 metres to the north, north east of the grid reference provided for these AHIMS Sites. All of the artefacts located at Avoca Tank 1 were recorded in detail (**Appendix 5**) with summary details included in the site description at 7.2.1.

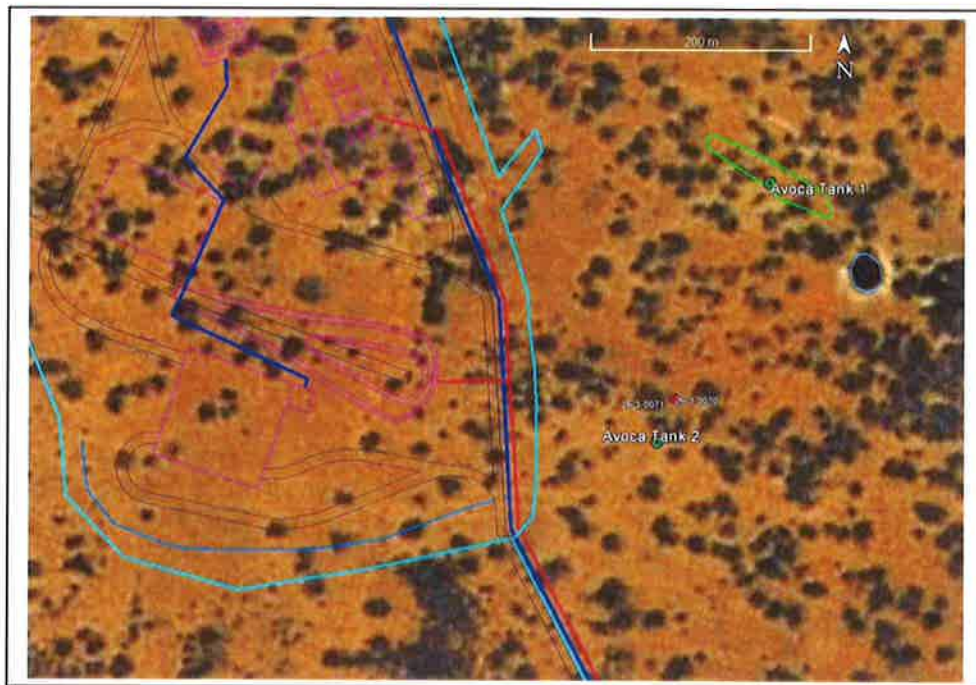
Avoca Tank 1 is located approximately 50 metres north west of a dam and occurs on an eroding vehicle track. The AHIMS site cards also reports that the open artefact scatter (26-3-0034, 26-3-0119, 26-3-0149) is located on a track and 60 metres from a dam. The major difference between the current recording and AHIMS Site cards is the number of artefacts and size of the site reported. On Site CHM estimated the site area to be approximately 2600m² (20m NS x 130 m EW). The size of the site was defined by the spatial plotting of each artefact recorded on the site. The AHIMS site cards reports the site as 10,000m² (200 x 50 metres) and attached photos also show a much higher level of visibility, probably due to drought, than that recorded during this survey. It is quite possible that the floods of recent years and resulting erosion noted in 7.2.1 has displaced and dispersed much of the assemblage. On the basis of these similarities Avoca Tank 1 and 26-3-0034, 26-3-0119, 26-3-0149 is considered the same site. The spatial error margin (200 metres) is common for recordings prior to 2000 prior to more accurate GPS technology.

A comparison of the assemblages recorded at Avoca Tank 1 and AHIMS Sites 26-3-0034, 26-3-0119, 26-3-0149 shows some similarity in the raw materials (predominantly quartz and quartzite), although the current survey recorded more raw material diversity. It is highly probable that the porphyritic hammer stone recorded as part of this survey (artefact 7, **Appendix 5**) is the same as the artefact illustrated on site cards 26-3-0034, 26-3-0119, 26-3-0149 (see **Appendix 4**). On this basis it is asserted that Avoca Tank 1 and AHIMS Sites 26-3-0034, 26-3-0119, 26-3-0149 are the same site.

The AHIMS sites cards for 26-3-0070 / 26-3-0071 reported a hearth at this same location as poorly preserved and eroded in 1994. This hearth could not be re-located as part of this investigation. Given the substantial rains experienced since 1994 and widespread evidence of sheet wash, erosion and gullying noted across the survey area it is highly probable that this site has eroded away and is no longer extant.

The location of these previously recorded AHIMS sites and those recorded during this survey is shown below in **Figure 7.2**. The spatial difference shown between AHIMS Sites 26-3-0034, 26-3-0119, 26-3-0149 26-3-0070, 26-3-0071 and Avoca Tank 1 is likely to result from spatial error margins and subsequent improvement in GPS technology and spatial recording techniques.

Figure 7.2: Proposed Disturbance Footprint (light blue outline) in relation to location of previously recorded AHIMS Site AHIMS Sites 26-3-0034, 26-3-0119, 26-3-0149 26-3-0070, 26-3-0071 (Datum AGD 66) (red dot) and sites recorded by On Site CHM (Datum GDA 94) (green dots). Blue circle near Avoca Tank 1 marks outline of dam.



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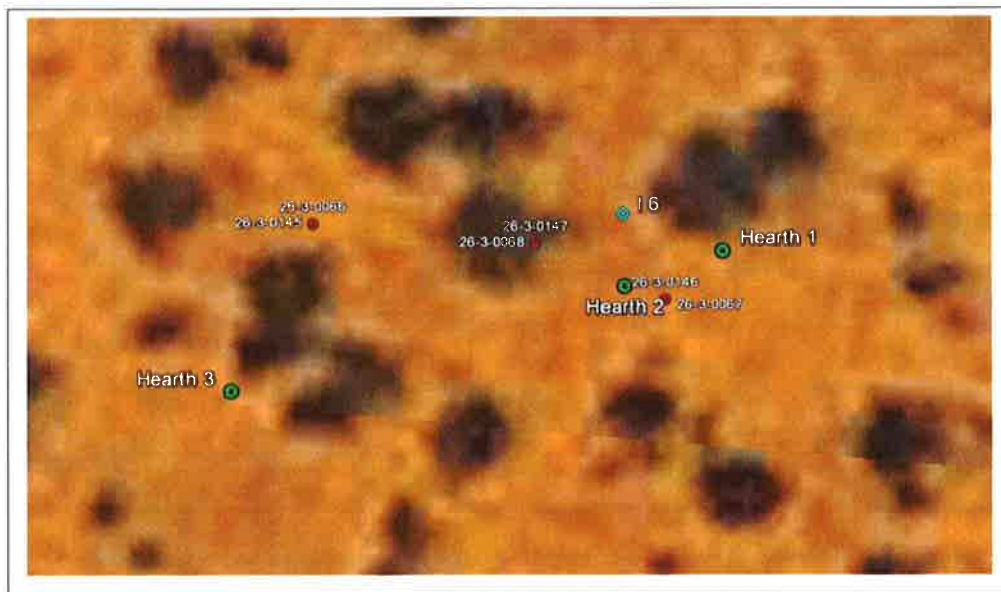
Each of the 'hearths' located at Avoca Tank 3 were also within close proximity to the grid references provided for the AHIMS sites recorded as hearths/earth mounds:

- 1: 26-3-0067, 26-3-0146
- 2: 26-3-0068, 26-3-0147
- 3: 26-3-0066, 26-3-0145

Although the location of the 'hearths' recorded at Avoca Tank 3 during this survey approximate the locations of previously recorded AHIMS hearth sites above the general site descriptions for two of the hearths recorded during this survey are appear different. The AHIMS Site cards for these sites seem to show loose scattered nodules of ant nest. 'Hearths' 2 and 3 at Avoca Tank 3 appear less scattered and are embedded in the ground more consistent with the remains of an ant nest. None the less an extensive search of the wider surrounding area failed to locate any further nodules more consistent with that described within the AHIMS Site cards. It may be that further erosion across the area has exposed more of the underlying baked sediments or it could be that these features are unrelated.

The location of these previously recorded AHIMS sites and hearths recorded during this survey is shown below in **Figure 7.3**.

Figure 7.3: Location of previously recorded AHIMS Sites (Datum AGD 66) (red dots) and hearths recorded at Avoca Tank 3 by On Site CHM (Datum GDA 94) (green dots). 16 is location of a drill hole.



In the absence of other supporting Aboriginal cultural material the author is somewhat sceptical about the definition of these nodules alone as a site within this particular environment. Numerous occurrences of ant nests at or within the base of large uprights or fallen dead rotting or hollow, un-burnt or semi-burnt trees were noted across the study area. The eventual burning out of these stumps and logs over some days would be likely to produce areas of baked sediments, hardened clumps or 'nodules'. With time and weather, the charcoal remnants of the tree would disappear and likely leave a similar manifestation to the 'nodules' recorded as sites. In the absence of any other cultural material it is unclear how these natural processes might be distinguished from cultural processes. This difficulty was previously noted by Kelton (1995) and is discussed further in **Section 8**.

7.4 SUMMARY OF RESULTS

The field survey of the Avoca Tank Project areas (Stages 1 and 2) covered 41% of the total land area and located Aboriginal occupation evidence at five localities (Avoca Tank 1 – 5).

At least two of these sites have been determined to be the same locations for several previously recorded AHIMS Sites. Table 7.6 shows a comparison of for previously recorded sites and those recorded during this study.

Table 7.6: Comparison of previously recorded AHIMS sites and sites recorded during this study. Grid references recorded by On Site CHM (Datum GDA 94).

On Site CHM Site Name	Site Features	Easting	Northing	Corresponding AHIMS Sites
Avoca Tank 1	Stone artefact scatter	55 484966	6548490	26-3-0034 / 26-3-0119/ 26-3-0149 (open artefact scatter) 26-3-0070 / 26-3-0071 (hearth)
Avoca Tank 2	Isolated stone artefact	55 484857	6548245	-
Avoca Tank 3 (3 x hearths)	Hearth 1	55 484835	6547528	26-3-0067 / 26-3-0146
	Hearth 2	55 484815	6547517	26-3-0068 / 26-3-0147
	Hearth 3	55 484729	6547486	26-3-0066 / 26-3-0145
Avoca Tank 4	Historic Scar Tree & Aboriginal Stockman's Camp	55 485027	6547775	-
Avoca Tank 5	2 x isolated stone artefacts	55 481436	6548043	-

The hearth nodules recorded at site 26-3-0070 / 26-3-0071 were unable to be relocated as part of this survey. The AHIMS site card reported this site to be eroded and in poor condition in 1994 and it is likely that these features have since been further displaced.

8.0 DISCUSSION

A number of predictions were outlined in **Section 5.2** concerning the nature, extent and types of Aboriginal objects that may occur within the Study Area.

These predictions were:

1. Scarred trees are likely to be the most common site type within the Study Area with hearth sites (some potentially with artefacts) likely to be the next most common site type.
2. Stone artefact occurrences are predicted to be low given the paucity of potable water and suitable stone for the manufacture of stone tools.
3. The broad scale land clearing and poor previous land-use practices within the Study Area are likely to have impacted heavily on all of the site types discussed above.

All of the site types predicted to occur within the Study Area were recorded during this survey. The scar tree recorded during this survey is, upon analysis, most likely to have been created during historic times (1900s).

A total of 14 stone artefacts were recorded at three locations (Avoca Tank 1, 2 and 5) representing a low density of artefacts across the Study Area. This was predicted to result from the paucity of potable water and suitable stone for the manufacture of stone tools. The results of this study are considered to confirm these predictions. It is also relevant to note the one artefact scatter is situated in the immediate vicinity of water. It is further interesting to note that no stone artefacts were located at the water source of Avoca Tank 4. This may indicate that the dam/waterhole was heavily modified in historical times from a seasonal soak, which may not have been particularly reliable.

It was also discussed in **Section 5.2** that potential Aboriginal occupation evidence in the Study Area was likely to be sparsely distributed and discrete reflecting high mobility and short term task specific localities. This is perhaps best reflected by the low number of artefacts yet relatively high diversity of stone artefact types and raw materials at Avoca Tank 1 (see 7.2.1). The presence of several exotic stone raw materials is a likely signature of this high mobility suggesting repeated but short term use of this locality. The absence of pre-contact Aboriginal occupation evidence at the Avoca Tank 4 waterhole may also indicate this.

Certainly the Aboriginal community representatives were of the view that occupation of the Study Area would have been infrequent and for very short periods of time. Aboriginal history from the informants suggests that people largely travelled along watercourses (rivers and creeks) rather than across the country between. It may be that the quite diverse assemblage at Avoca Tank 1 reflects such transit across country. Anecdotal evidence (Phil Jones, Tritton Senior geologist) suggests that none of the raw materials, except quartz, at Avoca Tank 1 occur within the Study Area. Certainly the authors own observations support this view where the only exposures of rock were quartz and some minor shales in several isolated areas. The

presence of two cobbles with smooth rolled surfaces suggests procurement from a distant water source.

It may also be plausible that the creation of this dam or modification of an existing soak to create a more reliable water source may have also encouraged Aboriginal people to congregate at this location of potable water in post contact times.

It was also predicted that the broad scale land clearing and poor previous land-use practices were likely to have impacted on all site types within the Study Area. It is not clear from the results of this study whether these practices have impacted or not. Recent flooding and resulting erosion in the area appears to have impacted upon Aboriginal occupation evidence and degraded artefact numbers at Avoca Tank 1 (AHIMS Sites 26-3-0034, 26-3-0119, 26-3-0149) and displaced the loose hearth nodules previously recorded at AHIMS sites 26-3-0070, 26-3-0071.

It was also predicted that the archaeological potential and sensitivity of the Study Area was considered to be low. This archaeological survey has determined that Aboriginal occupation evidence is sparsely distributed across the Avoca Tank Project area and found to only occur at five discrete locations. Despite a relatively intensive archaeological survey program, this study has only located three additional sites (Avoca Tank 2, 4 and 5) besides those previously recorded during the survey program by Kelton (1995).

8.1 PREVIOUS STUDIES AND SITE DEFINITION IN THE REGION

The general archaeological model posited in the region is that Aboriginal occupation, and therefore Aboriginal archaeological materials, are strongly associated with sources of potable water. (Nicholson 1989, 1990, Hughes, Hiscock and Donaldson 1984, Witter; cited in Nicholson). According to this model, occupation material will generally decrease in both frequency and density with distance away from water sources.

This decrease is likely to reflect one or all of the following factors: high level of mobility, movement of smaller groups or resource procurement in response to seasonal variation. All of these factors have been discussed in some form in the studies undertaken by practitioners in the Girilambone region.

Kelton's (1995) study results are generally consistent with this model although also indicate that occupation materials may be far more densely distributed across the landscape than previous and current studies have found. Indeed Kelton (1995:30) admits he could not explain the disparity between the site types and the numbers located during that study (1995) when compared to the site types and numbers recorded in Nicholson's overlapping study area.

One explanation for this disparity may concern the definition of sites and subsequent over representation of certain site types within the region. The most represented sites in the

region are scar trees and hearths. Discussion about the identification of scar trees is beyond the scope of the current study but the identification of hearths is discussed below in light of some observations from the current investigation.

Kelton (1995:12) in discussing hearth sites suggests:

“Termite nest material was often use by Aboriginal people in the region as an alternative heat retaining material in cooking fires, or else in conjunction with natural stone hearths which were used for the same purpose. A difficulty of interpretation arises where termite nest material occurs isolated from any other cultural material in what appears to be a hearth formation. The problem occurs in determining whether the hearth is in fact an Aboriginal hearth or else a natural occurrence resulting from a rotted and burnt tree”.

Unfortunately Kelton (1995:12) does not discuss this methodological issue any further or provide any criteria to distinguishing between cultural and natural formation of these features in the absence of other supporting other cultural evidence.

Kelton (1995:24) recorded a total of 32 hearth sites during the field survey, all of which were of termite nest material (with a further two sites recorded as part of a site complex, GC-OS-1). Kelton (1995:24-25) states that “a number of hearths have questionable Aboriginal origin due to the lack of supporting, associated cultural material, and the apparent questionable origin of the actual hearth material, with some material indicating the possibility that it has originated from natural sources rather than from collection and exploitation by past Aboriginal groups. However, when comparison was drawn between hearth sites of doubtful origin and hearth sites located in association with stone artefactual material, e.g. GC-OS-1, little difference could be established, thus raising the credibility of the majority of doubtful sites”.

“On the other hand, some clumps of termite nest material were definitely observed to be the remains of rotted, burnt trees, with no cultural heritage value. These occurrences were not recorded” (Kelton 1995:24-25).

Examination of the raw data presented for hearth sites in Appendix 4 of Kelton’s (1995) report shows that the association between hearth sites and other Aboriginal cultural material evidence only occurs at 5 (14 %) (includes duplication of site recordings) of the 34 hearth occurrences.

Based on the line of reasoning employed by Kelton, the inverse could also apply: when comparison was drawn between hearth sites of doubtful origin and hearth sites located in association with stone artefactual material, e.g. GC-OS-1, little difference could be established, thus lowering the credibility of hearth sites located in association with stone artefactual material. It is just as plausible that occurrences of ‘hearth nodules’ associated with other cultural evidence are unrelated and may also result from the natural occurrences.

It also seems that much of Kelton's assertions are based on the works of Bonhomme (1983). According to Bonhomme (1983, cited in Nicholson 1989). Open camp sites including stone artefact scatters and Aboriginal hearths were found to be the most common site type in the study area south of Cobar. Aboriginal hearths in this region consist of either lumps of termite mound and/or sandstone, clay lumps or simply accumulations of charcoal.

Several differences are apparent between Bonhomme's study area and results and that of the current Avoca Tank study area. Many of these hearth sites were located on the margins of a dry lake and across adjacent lunettes and many were closely associated with other occupation material. The occurrence of 'hearth' in a sand lunette largely absent of trees and termite mounds that may have created naturally burnt nodules is likely to be considerably more convincing than the current environment. Such occurrences in lunettes are also common in the Lake Mungo region and commonly occur with other faunal remains and artefacts.

It is evident that the identification of hearth sites should be treated somewhat cautiously given these methodological issues. It is certainly not contended here that all of the hearth sites recorded by Kelton (1995) are of natural origin but it is suggested that environmental context and association with other cultural evidence should play a critical and key role in determining whether such a feature may be of cultural or natural origin.

Certainly a reinterpretation of Kelton's 1995 findings applying such caution and indicators such as cultural association would both explain the disparity (5 hearth sites instead of 34) and present an archaeological model more consistent with the picture emerging from interpreting other more definable and reliable features of the archaeological record for Aboriginal occupation.

9.0 CULTURAL SIGNIFICANCE ASSESSMENT

The Burra Charter (the Australia ICOMOS Charter for Places of Cultural Significance) defines cultural significance as meaning aesthetic, historic, scientific, social or spiritual for past present or future generations (Marquis-Kyle, P & M. Walker 2004:11).

Cultural significance is embodied in; the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects. Places may have a range of values for different individuals or groups.

The cultural significance of the Study Area is assessed below. In the context Aboriginal cultural heritage and occupation evidence (or archaeology) and development assessment, the criteria most commonly applied to assess cultural significance are those of Aboriginal significance (encompassing social and spiritual) and archaeological (scientific significance). Where relevant aesthetic and historic values are also discussed. Educational values or potential is another category often applied to the assessment of significance. The level of educational values will comply range between different individual or groups (eg Aboriginal people and archaeologists). Management strategies to conserve identified values are discussed in Section 10.

9.1 ABORIGINAL SIGNIFICANCE (SOCIAL AND SPIRITUAL)

For Aboriginal people places of cultural significance are tangible expressions of identity and experience. The Study Area contains Aboriginal objects which represent a tangible link to Aboriginal identity and experience. To some degree then all Aboriginal objects and places are likely to be of significance to Aboriginal people. The degree of significance will vary according to a number of culturally determined factors.

Avoca Tank Study Area

In general terms the Registered Aboriginal Parties (RAPs) participating in the survey attributed the Study Area with a low level of Aboriginal significance. Nyngan LALC and Bogan AC representatives were generally satisfied that the survey was thorough and sufficient and did not see the need for further survey should the proposal shift from exploration to mining.

All of the sites recorded during this survey were individually discussed with the Registered Aboriginal Parties participating in the survey (Section 3.3). Management strategies and options were also discussed for each site and were developed based on RAP views about the significance of each site. These discussions and their interpretation provided a basis to understand the Aboriginal significance of the identified sites discussed below and the development of management strategies discussed in Section 10.

Avoca Tank 1: (stone artefact scatter)

Registered Aboriginal Party participants attributed this place with a moderate level of significance. They did not express concern about Tritton applying for an AHIP to disturb the area if required but did think that the artefacts should be collected should an AHIP be granted. Participants considered many of the artefacts of interest and wanted them kept locally by the Nyngan LALC.

Avoca Tank 2: (isolated stone artefact)

Registered Aboriginal Party participants attributed this place with a low level of significance. They did not express concern about Tritton applying for an AHIP to disturb the artefact and did not wish to collect the single flake if required.

Avoca Tank 3: (hearths)

Registered Aboriginal Party participants were familiar with hearth type sites as represented at Avoca Tank 3 and did not view these hearths as particularly significant due to the absence of other occupation material. Participants attributed this place with a low to moderate level of significance and did not express concern about Tritton applying for an AHIP to disturb this place if required.

Avoca Tank 4: (historic scar tree, Aboriginal stockmen's camp and dam)

Registered Aboriginal Party participants attributed this place with moderate to high level of significance. They discussed this place for some time, showed interest and offered historical information about Aboriginal people being employed as stockmen as interpretation of the features. Participants attributed the place with both *historical* and *aesthetic* values and expressed a desire to retain this place. This place is also likely to have educational and interpretive values to the local Aboriginal community.

Avoca Tank 5: (2 x isolated stone artefacts)

Registered Aboriginal Party participants attributed this place with a low level of significance. They did not express concern about Tritton applying for an AHIP to disturb these artefacts if required and did not wish to collect them.

9.2 ARCHAEOLOGICAL SIGNIFICANCE

The archaeological significance of a site or artefacts may be assessed according to two criteria, representativeness/rarity and research potential. These two criteria are interrelated.

- **Representativeness / Rarity** refers to the frequency of a particular site type, or particular attributes of a site, the similarities between site types in the study area and the wider regional context. Rare or unique site types are accorded higher archaeological significance than site types that are more common. The representativeness refers to the capacity of a site to demonstrate particular attributes within a site class. A site with high representative values will commonly be an outstanding example of its type. Sites with high

representativeness and rarity values will also commonly have high educational or interpretive values.

- **Archaeological research potential** refers to the degree to which a site can contribute data to answer specific research questions. The degree of a site's research potential is related to factors such as size, structure and content reflecting the range and frequency of activities exhibited at the site, regional frequency and the level of site integrity and preservation.

The attributing of archaeological significance is primarily based on the discussion of previously recorded site types within the region.

Avoca Tank 1: (stone artefact scatter)

Stone artefact scatters are a moderately common site type but are generally confined to water. It is not clear whether the dam nearby may be a soak modified in recent historical times. It was discussed in Section 7 that Avoca Tank 1 was previously recorded in 1994 as AHIMS sites 26-3-0034, 26-3-0119, 26-3-0149. Recent flooding and resulting erosion has evidently degraded artefact numbers previously recorded. Avoca Tank 1 is assessed as having a **moderate level of rarity value and low level of representative value.**

A high diversity of artefact types and raw materials at a given site generally indicates a higher level of archaeological research potential. This is based on the potential of the assemblage to answer a range of questions about stone artefact manufacture and technologies or their use. The stone artefact assemblage has however been degraded and is relatively small. Partial artefact values have also been recorded as part of this study. Avoca Tank 1 is therefore assessed as having a **low to moderate level of archaeological research potential.** The archaeological values would be largely salvaged should collection of these artefacts occur under an AHIP and Care Agreement.

Avoca Tank 2: (isolated stone artefact)

Isolated stone artefacts cannot be considered particularly unusual or rare in regional terms and the capacity of a single stone artefact to answer specific research questions limited. Artefact attributes (scientific values) have also been recorded as part of this study. Avoca Tank 2 is therefore assessed as having a **low level of rarity and representative value and a low level of archaeological research potential.**

Avoca Tank 3: (hearth)

It was previously discussed in Section 5 that this type of hearth site is relatively common and well represented in the region. Avoca Tank 3 is therefore assessed as having a **low level of rarity and representative value.**

The absence of other occupation material in association limits the archaeological research potential of Avoca Tank 3 beyond those already recorded as part of this survey. As noted

previously the author, in the absence of other occupation material in association, is sceptical about the definition of this site type. Avoca Tank 3 is therefore assessed as having a **low level of archaeological research potential**.

Avoca Tank 4: (historic scar tree, Aboriginal stockmen's camp and dam)

Scar trees generally have a high level of rarity value and their numbers are in steady decline due to their vulnerability to destructive natural and biological elements (storms, lightning, fire, rot and insect attack etc). However according to the literature scar trees are also well represented in the wider and local region.

Examination of the data presented by Kelton (1995; Appendix 3) shows that 8 (29.6%) of the 27 scar trees recorded were considered to result from extraction of bark for 'shelters' similar to that at Avoca Tank 4. Similarly the survey by Central West Archaeological and Heritage Services (1998) for the Tritton Copper project EIS (1998: 3-40-42) some 20 kms to the south west of the current study area identified a total of 47 scarred trees all of which were considered to be of 'possible' Aboriginal origin and considered of low significance. Central West asserted that most of the tree sites identified were "bark shelter" type scars and that many were of European origin. Some time has elapsed since the undertaking of these studies and natural processes are likely to have decreased their numbers further. It is also suggested that their numbers may be overrepresented in previous studies.

The assertion that this place represents an Aboriginal stockman's camp remains an interpretation and cannot be substantiated or refuted through this study. Nonetheless it remains a very plausible explanation for the presence of the different features and in the author's opinion the most likely. It is unclear how common Aboriginal stockmen camps may be in the wider area or what typical features of such camps may be. However given the widespread employment of Aboriginal men as stockmen such camps are, or at least were, likely to be relatively common.

The top of this tree and scar is substantially deteriorated and is not considered to be a good representative example of its type. Avoca Tank 4 (scar tree) is therefore considered to have a **moderate to high level of rarity and moderate level of representative value**.

The scar tree has a limited potential to answer questions about the removal and use of bark given the degraded state of the tree and absence of tool marks. The tree therefore has a **low to moderate level of archaeological research potential**.

Avoca Tank 5: (2 x isolated stone artefacts)

Isolated stone artefacts cannot be considered particularly unusual or rare in regional terms and the capacity of 2 single stone artefacts to answer specific research questions is limited. Artefact attributes (scientific values) have also been recorded as part of this study. Avoca Tank 5 is therefore assessed as having a **low level of rarity and representative value** and a **low level of archaeological research potential**.

Given the paucity of Aboriginal sites and objects across the Project Site, the subject land is generally assessed as having a low archaeological potential and significance.

9.3 AESTHETIC SIGNIFICANCE

With the exception of the scar tree and environmental context of Avoca Tank 4 none of the recorded sites display any particularly prominent aesthetic values.

Although the environmental context of each site could be considered to have aesthetic values, those values are no greater than the surrounding areas without Aboriginal objects. Further such values do not directly relate to understanding the identified Aboriginal objects or sites or their management under the NPW Act.

It could be argued that the Aboriginal stone artefacts identified at Avoca Tank 1, 2 and 5 have some aesthetic values to Aboriginal people. These values are considered secondary to the primary value, of social significance, attributed to artefacts by Aboriginal people.

9.4 HISTORICAL SIGNIFICANCE

The Registered Aboriginal Parties participating in the survey attributed Avoca Tank 4 with some historical significance based on the interpretation that the features are all related and represent the activities of Aboriginal stockmen employed in the early 1900s.

This interpretation cannot be substantiated or refuted but remains a very plausible explanation for this place. This historical association remains significant for Aboriginal people at the local level.

9.5 ATTRIBUTING SIGNIFICANCE

Identified sites were attributed with a separate value between (1 to 5 / low to high See Table 9.1) for their Aboriginal significance (based on interpretations of the consultation) and archaeological significance (representative / rarity values and archaeological research potential). Values attributed for archaeological significance were based on the discussion above.

These scores were then totalled (0 to 5 values x 4 significance indicators = cumulative values) to provide a numeric value reflecting the level of cultural significance for each place (See Table 9.2).

These values were ranked against the following index of cumulative values to determine the overall cultural significance of each place. Aboriginal significance was also included in this matrix. The cultural significance for each site is summarised in Table 9.3.

Table 9.1: Significance indicators and cumulative values index

Value	Significance	Cumulative values	Attributed significance
1	Low	4-7	Low
2	Low to moderate	8-11	Low to moderate
3	Moderate	12 – 14	Moderate
4	Moderate to high	15 - 17	Moderate to high
5	High	18 – 20	High

Table 9.2: Significance values assigned for identified sites

Sites	Aboriginal significance	Rarity values	Representative values	Archaeological research values	Cumulative Value total	Attributed significance
Avoca Tank 1	3	3	1	2	9	Low to moderate
Avoca Tank 2	1	1	1	1	4	Low
Avoca Tank 3	2	1	1	1	5	Low
Avoca Tank 4	4	4	3	2	13	Moderate
Avoca Tank 5	1	1	1	1	4	Low

Table 9.3: Summary of cultural significance for identified sites

Sites	Attributed significance	Comments
Avoca Tank 1	Low to moderate	Small, low density artefact scatter with moderate diversity of stone artefact type and raw material diversity reflecting. Moderately significant to RAPs.
Avoca Tank 2	Low	Single isolated stone artefact. Common in region and of low significance to RAPs.
Avoca Tank 3	Low	3 x hearth sites with no other cultural material in association. Common site type in region. Low to moderate significance to RAPs.
Avoca Tank 4	Moderate	Scar tree has moderate to high rarity value and significance to RAPs. Aboriginal Stockmen's camp has historical and aesthetic value to RAPs
Avoca Tank 5	Low	2 x isolated stone artefact. Common in region and of low significance to RAPs.

10.0 CONCLUSIONS, MANAGEMENT AND RECOMMENDATIONS

10.1 CONCLUSIONS

1. The survey and assessment process for the Avoca Tank Project has identified a total of five locations where Aboriginal sites and objects occurs. (Avoca Tank 1 to 5).
2. A review of the 11 previously recorded AHIMS sites within the Project Site Boundary has determined that there are duplicate recordings. These 11 sites actually represent 5 sites. Two of these sites have been rerecorded as part of this survey. Duplicate site recordings 26-3-0034 / 26-3-0119/ 26-3-0149 have been identified and rerecorded as Avoca Tank 1 and duplicate site recordings 26-3-0067 / 26-3-0146, 26-3-0068 / 26-3-0147, 26-3-0066 / 26-3-0145 have been recorded as Avoca Tank 3 comprising 3 hearth locales. Hearth nodules recorded at site 26-3-0070 / 26-3-0071 were unable to be relocated as part of this survey and it is likely that these features have since eroded away. Problems relating to the definition of the 'hearth' site type have also been discussed within this assessment.
3. The results of this assessment reveal Aboriginal occupation evidence is sparsely distributed across the Study Area and is indicative of low intensity use of the landscape by Aboriginal people in the past. This use was characterised by a high level of mobility and relatively short term occupation or single use of these places.
4. The low intensity of Aboriginal occupation evidence across the Study Area is likely due to the paucity of reliable sources of potable water, stone outcrops suitable for the manufacture of stone tools and to some extent the disturbance upon Aboriginal occupation evidence through previous land use practices.
5. The cultural significance (encompassing Aboriginal and archaeological significance) of the study area and these places has been assessed through Aboriginal consultation and archaeological analysis within a regional context. The Registered Aboriginal Parties (RAPs) participating in the survey attributed the Study Area with a low level of Aboriginal significance. Given the paucity of Aboriginal sites and objects across the Project Site, the subject land has also been assessed as having a low archaeological potential and significance. Avoca Tank 1 (an open artefact scatter), is assessed as having a low to moderate level of cultural significance. Avoca Tank 2 (a single isolated stone artefact), is assessed as having a low level of cultural significance. Avoca Tank 3 (three 'hearths') is assessed as having a low level of cultural significance. Avoca Tank 4 (historic scar tree and Aboriginal stockman's camp) is assessed as having a moderate level of cultural significance. Avoca Tank 4 has been assessed by Registered Aboriginal Parties as having a moderate to high level of Aboriginal significance and also attributed with historic and aesthetic values. Avoca Tank 5 (2 x isolated stone artefacts), is assessed as having a low level of cultural significance.

10.2 COMMENTS FROM THE REGISTERED ABORIGINAL PARTIES

A draft of the previous assessment report (On Site CHM 2013) was sent to the Registered Aboriginal Parties on 21st February 2013. The Registered Aboriginal Parties were provided 28 days to review the report and provide comment. The closing date for comments was 22nd March 2013.

All of the Registered Aboriginal Parties supplied comment on that draft. Nyngan LALC and Bogan Aboriginal Corporation endorsed the assessment and the recommendations. A copy of those endorsement letters is included in **Appendix 7**.

Native Title Services Corporation, on behalf of the Ngemba/Ngiyampaa Native Title claim group, also provided comment on the assessment (**Appendix 7**). A response was provided to NTS Corp who provided further response also included at **Appendix 7**.

The recommendations of that report included strategies to mitigate potential impacts and disturbance of identified Aboriginal sites and objects if AHIPS were sought by the proponent. Given the Proposal will now avoid all identified Aboriginal sites and objects, the focus of the recommendations in this report have been revised from mitigating impact to managing the conservation of places during the development and operation of the Proposal. A copy of the original recommendations (On Site CHM 2013) has been provided at **Appendix 7** to provide context to the comments of the Registered Aboriginal Parties.

Plate 10.1 (below): (from left) Aboriginal Representatives Lesly Ryan (Bogan Aboriginal Corporation), Shella Couley (Nyngan Local Aboriginal Land Council), Kate Duca (OnSite CHM), Neville Merritt (Ngemba/Ngiyampaa Native Title claim group) discuss site protection with Paul Calvin (Tritton / Straits Resources) (On Site CHM 2013).



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10.3 MANAGEMENT OPTIONS

This assessment has identified five Aboriginal heritage places (Avoca Tank 1 to 5) within the Avoca Tank Project Site containing Aboriginal objects legally protected under the *National Parks and Wildlife Act (NPW Act)*. Part 6 of the NPW Act provides specific protection for Aboriginal objects by establishing offences of *harm*. *Harm* is defined to mean destroying, defacing, damaging or moving an object from the land. There are a number of defences and exemptions to the offence of harming an Aboriginal object. One of these defences is that the *harm* was carried out under an Aboriginal Heritage Impact Permit (AHIP).

The Proposal has subsequently been developed to avoid all of the identified Aboriginal sites and objects within the Avoca Tank Project Site. None of the identified places (Avoca Tank 1 to 5 and associated AHIMS Sites) are proposed to be directly impacted upon or *harmed* during the development of this Proposal and AHIPs will therefore not be required.

The development of management strategies is therefore concerned with the prevention of *harm* through protection and conservation of these places during the development and operation of the Proposal. The main risks of *harm* to these places through accidental or indirect impacts are discussed below.

During the exploratory drilling program Tritton Resources implemented a series of management strategies to afford protection to these places. These strategies were implemented in accordance with the Straits Community and Heritage Policy and Straits Procedures - Heritage Management Planning (Australia). A copy of the recommendations from the internal memo and photographic evidence (see **Plate 10.1**) of implemented protection measures are provided in **Appendix 6**.

One of the protection measures implemented by Tritton included cordoning off and classifying these places as "no go zone areas" (**Appendix 6**). The continuity of the implemented 'no go' areas and avoidance strategy will ensure that many potential accidental risks for the conservation of these places will be mitigated (Avoca Tank 1 to 5).

Stone artefacts are, by their nature durable objects. The most common direct human induced *harm* to stone artefacts and scatters (Avoca Tank 1, 2, 3 and 5) is generally through vehicle movement and associated disturbance or casual collection. The adequate exclusion of these places and designation as 'no go' will generally mitigate these potential harms. NTS comments (**Appendix 7**) on the previous assessment requested the upgrade of this fencing from a temporary to more permanent nature and this has been considered within the below recommendations (**Section 10.4**).

Common indirect and inadvertent harm to stone artefacts and scatters may also occur through undertaking of earthworks and construction of infrastructure within their proximity. The modification of areas near stone artefacts scatters may alter the natural movement of

water and thereby increase the erosive effect of water movement on a stone artefact scatter. Considering this effect within the design and ensuring adequate buffers will also mitigate this effect (Avoca Tank 1, 2, 3 and 5).

In addition to the potential disturbances and mitigative strategies discussed above, the development of conservation management strategies for Avoca Tank 4 and the scar tree should also consider the threat of fire. The landscape of the Study Area is likely to have been previously burnt on occasions. The cessation of burning (due to the proposed operational mine), near the scarred tree may result in an increased fuel load developing and posing a fire threat to the scar tree. Similarly, the exclusion of the scar tree through fencing will also exclude animal grazing and trampling which may also result in an increased fuel load and threat by fire. Ongoing management should consider and mitigate these potential risks.

10.4 RECOMMENDATIONS

On the basis that all of the identified places (Avoca Tank 1 to 5) and locations of previously recorded AHIMS Sites will be avoided and conserved during the development and operation of the Proposal, it is recommended that:

1. Avoca Tank sites (1 to 5) and locations of previously recorded AHIMS sites should continue to be designated as 'no go' areas in accordance with the Straits Community and Heritage Policy and Straits Procedures - Heritage Management Planning (Australia).
2. The existing fencing to demarcate these sites as 'no go' areas should be upgraded to steel pickets and wire sufficient to prevent unauthorised persons and animals prior to the development and operation of the Proposal. Fencing of these places does not require an Aboriginal Heritage Impact Permits (AHIPs).
3. The design and construction of Proposal components should consider the effect of water movement across the landscape and be sensitive to the possibility of creating indirect potential threats that may impact upon these places. This potential is perhaps most acute for the design of the haul road and location of drains. A buffer of at least 50 metres should be established and maintained between the 'no go' areas around identified places and proposed mine infrastructure.
4. Some specific conservation management planning is undertaken for Avoca Tank 4 to mitigate the potential increased risk of fire. The fencing of Avoca Tank 4 and shift in fire management across the Project Site may result in an increased fuel load and fire risk. Specific conservation management strategies may involve spraying / slashing of grass at appropriate intervals to suppress the fuel load or installation of a fire break outside fencing. The development of these management strategies should be informed by specialist advice.

5. The location of each place be accurately mapped as a polygon and incorporated into the relevant spatial management tool (GIS - Geographic Information System) during the development and operation of the Proposal. A buffer of at least 50 metres should be applied for these places.
6. Long term conservation management and monitoring strategies be developed and implemented for these places. These strategies should be developed as part of a specific Heritage Management Plan or incorporated into the relevant Environmental Management Plan as appropriate.
7. Information about the presence of these Aboriginal places, their values and management be incorporated into the induction materials and delivered to relevant personnel or contractors that may come into contact with these places.
8. Given the paucity of Aboriginal objects and sites across the Avoca Tank Study Area no further archaeological surveys of the Proposed Disturbance Footprint are considered warranted.

With regard to Recommendation 8, the previous assessment (On Site CHM 2013) prepared for Tritton Resources also recommended that no further archaeological surveys of the Avoca Tank Study Area were required should the project proceed to full scale mining.

The survey strategy employed by On Site CHM achieved coverage across 34% of the entire Avoca Tank Study Area and above 60% survey coverage of the Proposed Disturbance Footprint (See **Section 7.1.** and **Figure 6.2**). This level of coverage is considered sufficient to understand the potential for further Aboriginal objects and occupation evidence to occur across this landscape. This assessment has determined that Aboriginal objects and occupation evidence is sparsely distributed across the Avoca Tank Study Area.

Further archaeological surveys were not recommended due to the low density of Aboriginal objects and occupation evidence and low potential for further such evidence to occur. Subsequent and more intensive surveys are generally only considered warranted when a baseline survey identifies a moderate to high potential for further Aboriginal occupation evidence to occur. This is not the case within the Avoca Tank Project Site.

Two of the Registered Aboriginal Parties (Nyngan LALC and Bogan Aboriginal Corporation) provided their support for this recommendation. Native Title Services Corporation, on behalf of the Ngemba/Ngiyampaa Native Title claim group considered that further more intensive surveys of the Proposed Disturbance Footprint should be undertaken. A response was provided by On Site CHM to NTS Corp (**Appendix 7**) who provided a further response also included at **Appendix 7**.

A copy of this assessment report has also been distributed to the Registered Aboriginal Parties.

A summary of sites identified within the Avoca Tank Project Site, their significance, impacts of the proposed disturbance and recommendations is provided below in **Table 10.1**.

Table 10.1: Summary table for identified sites within Avoca Tank project area, assessed significance, impacts and recommendations

Sites	Previously recorded AHIMS Sites	Site type and comments	Aboriginal Significance	Archaeological Significance	Impacts (harm) of Proposed Disturbance	Summary of mitigation strategy
Avoca Tank 1	26-3-0034 / 26-3-0119 / 26-3-0149	Open artefact scatter –Low density scatter (11 x stone artefacts) with high raw material diversity and moderate artefact type diversity.	Moderate	Low to moderate	None	Upgrade existing fencing. Develop and implement appropriate conservation management strategies and incorporate into relevant management systems and documents.
-	26-3-0070 / 26-3-0071	Hearth – unable to be relocated during this survey. Likely washed away and not extant	-	-	None	Location will be avoided. No further action warranted.
Avoca Tank 2	-	Isolated stone artefact	Low	Low	None	Upgrade existing fencing. Develop and implement appropriate conservation management strategies and incorporate into relevant management systems and documents.
Avoca Tank 3	26-3-0067 / 26-3-0146 / 26-3-0068 / 26-3-0147 / 26-3-0066 / 26-3-0145	3 x hearths – no other cultural material in association.	Low to moderate	Low	None	Upgrade existing fencing. Develop and implement appropriate conservation management strategies and incorporate into relevant management systems and documents.
Avoca Tank 4	-	Historic scar tree and Aboriginal stockman's camp.	Moderate to high	Moderate	None	Upgrade existing fencing. Develop and implement appropriate conservation management strategies and incorporate into relevant management systems and documents. Undertake specific conservation management planning to mitigate the risk of fire.
Avoca Tank 5	-	2 x Isolated stone artefacts	Low	Low	None	Upgrade existing fencing (if appropriate). Develop and implement appropriate conservation management strategies and incorporate into relevant management systems and documents.

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APPENDIX 1



PO Box 574 NAROOMA NSW 2546

gerard@onsitechm.com.au

ABN: 43 329 728 630

Ph: 04 1444 1896

www.onsitechm.com.au

Our Ref: A015

19 March 2012

Establishing a Register of Interest for an Aboriginal Cultural Heritage Assessment and Aboriginal Heritage Impact Permit application – Girilambone Avoca Tank Project NSW 2831

I am writing to you in accordance with Section 4.1.2 of the ***Aboriginal cultural heritage consultation requirements for proponents*** and specifically to initiate Stage 1 of the Aboriginal consultation process.

Tritton Resources Limited Pty is in the early stage of exploration of a newly identified resource to the north of its Girilambone Copper Mine, currently referred to as the Avoca Tank Project. The Avoca Tank Project area covers approximately 8.7km² across part of Lots 10, 135 and 144 (DP 751315) on the Coolabah 8235 1:100,000 map sheet. The project area is approximately 4 kilometres north west along the Mitchell Highway of the town of Girilambone NSW 2831. A map showing the location of the subject area is attached.

On Site Cultural Heritage Management has been engaged to conduct an Aboriginal Cultural Heritage Assessment of the subject land. The assessment may result in an application for an Aboriginal Heritage Impact Permit (AHIP) pursuant to the *NSW National Parks and Wildlife Act*.

In accordance with Stage 1 of the *Aboriginal cultural heritage consultation requirements for proponents*, I am writing to you to identify Aboriginal persons who may hold cultural knowledge relevant to determining the significance of Aboriginal objects that may be located within the project area.

Could you please conduct relevant database or register searches and provide the names of Aboriginal people you consider may be affected by this proposal. The names of Aboriginal persons you provide will be invited to register an interest in the project and participate in the consultation process.

Your assistance in this process would be much appreciated and ensure that the proponent and OEH consider the views of Aboriginal people affected by this proposal.

Could you please forward the names of those Aboriginal persons you consider may be affected by this proposal to me by 3 April 2012.

Please note that this correspondence has been sent to the following organisations in accordance with Section 4.1.2 of the consultation requirements:

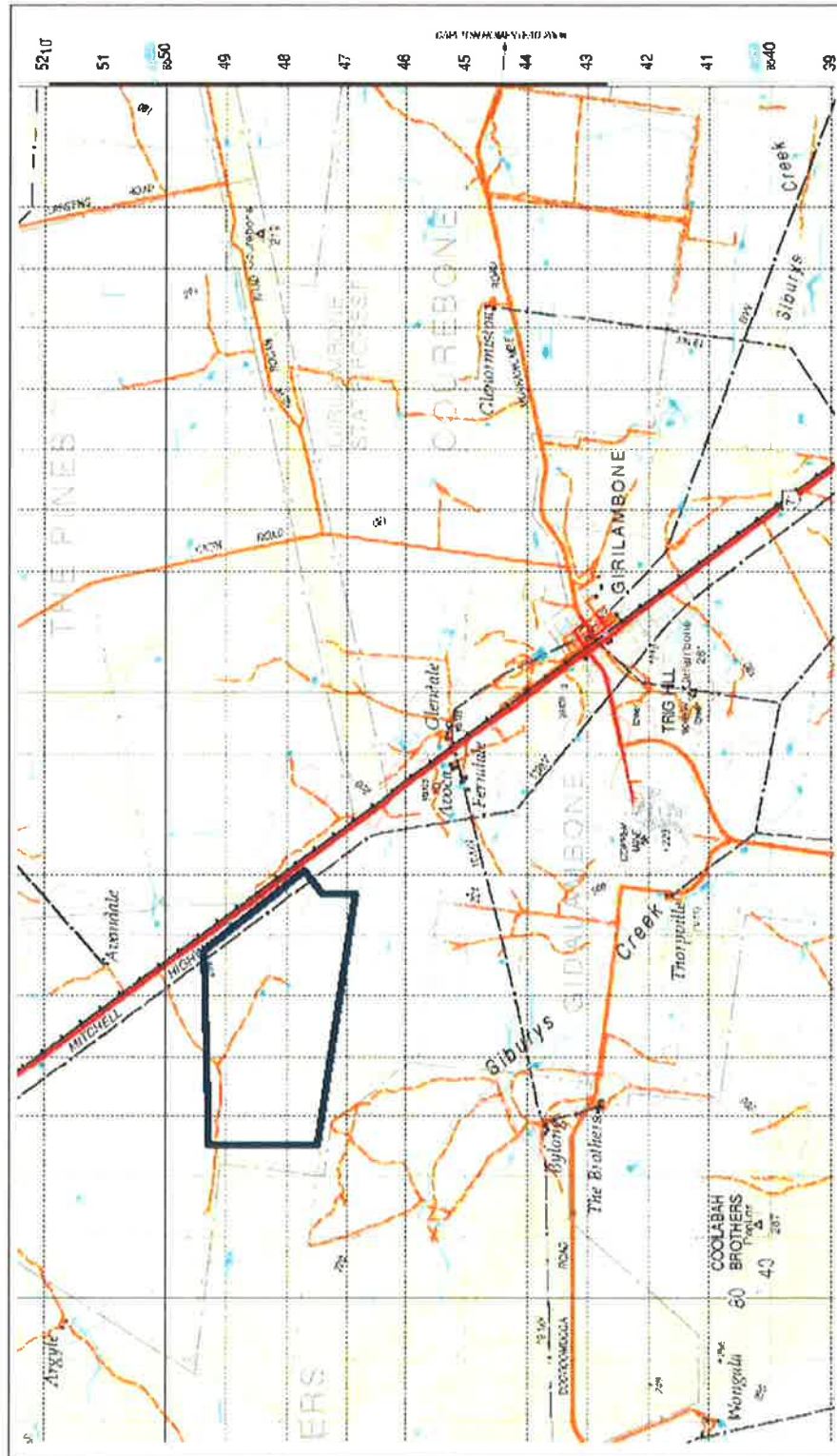
- a) Office of Environment and Heritage EPRG regional office, North West Dubbo
- b) Nyngan Local Aboriginal Land Council
- c) the Registrar, *Aboriginal Land Rights Act 1983* for a list of Aboriginal owners
- d) the National Native Title Tribunal for a list of registered native title claimants, native title holders and registered Indigenous Land Use Agreements
- e) Native Title Services Corporation Limited (NTSCORP Limited)
- f) Bogan Shire Council, Nyngan
- g) Central West Catchment Management Authority, Nyngan for contact details of any established Aboriginal reference group

Please contact me should you require any further information or wish to discuss this proposal.

Regards

Gerard Niemoeller
Principal Heritage Consultant

Figure 1: Avoca Tank project area (8.7km²) shown in thick blue lines across part of Lots 10, 135 and 144 (DP 751315) on the Coolabah 8235 1:100,000 map sheet





Office of
Environment
& Heritage

Your reference Proposed Girilambone Avoca Tank
Project, Girilambone NSW
Our reference DOC12/11482
Contact Paul Houston 68835361

Onsite Cultural Heritage Management
PO Box 574
NAROOMA NSW 2546
Att: Gerard Niemoeller

20th March 2012

Dear Gerard,

**WRITTEN NOTIFICATION AS REQUIRED UNDER OFFICE OF ENVIRONMENT AND
HERITAGE (OEH) ABORIGINAL CULTURAL HERITAGE REQUIREMENT FOR
PROPONENTS 2010 – Proposed Girilambone Avoca Tank Project, Girilambone NSW**

I refer to your letter dated 19th March 2012 to the Office of Environment and Heritage (OEH) regarding the above matter.

A list of known Aboriginal parties that OEH feels is likely to have an interest in this development is attached as Attachment 1 (overleaf). Please note this list is not necessarily an exhaustive list of all interested Aboriginal parties and receipt of this list does not remove the requirement of a proponent/consultant to advertise in local print media and contact other bodies seeking interested Aboriginal parties, in accordance with the requirements.

If you wish to discuss any of the above matters further please contact me, at your earliest convenience, on (02) 6883 5361.

Yours sincerely

Paul Houston
Aboriginal Heritage Planning Officer
OEH

The Department of Environment Climate Change and Water is now known as
The Office of Environment and Heritage.

PO Box 2111, Dubbo NSW 2830
48-52 Wingewarra St Dubbo NSW
Tel: (02) 6883 5330 Fax: (02) 6884 9382
www.environment.nsw.gov.au

ATTACHMENT 1

OEH'S LIST OF ABORIGINAL STAKEHOLDER GROUPS WITHIN THE BOGAN LGA - THAT MAY HAVE AN INTEREST IN THE PROJECT; PROVIDED AS PER THE "OEH ABORIGINAL CULTURAL HERITAGE REQUIREMENT FOR PROPONENTS 2010".

Organisation/Affiliation	Name/Title	Address
Bogan Aboriginal Corporation		PO Box 345 NYNGAN NSW 2825
John Shipp		79 Thompson Street Dubbo
NYNGAN LALC	Chairperson	PO Box 43 NYNGAN NSW 2825

The Department of Environment Climate Change and Water is now known as
The Office of Environment and Heritage

PO Box 2111, Dubbo NSW 2830
48-52 Wingewarra St Dubbo NSW
Tel: (02) 6883 5330 Fax: (02) 6884 9382
www.environment.nsw.gov.au

NYNGAN LOCAL ABORIGINAL LAND COUNCIL

PO Box 43
NYNGAN NSW 2825
EMAIL: nynganlalc@bigpond.com

ABN: 67 669 167 656
PII: (02) 6832 2639
FAX: (02) 6832 2878

28th March 2012

On Site
Cultural Heritage Management
Attention: Gerard Niemoeller
PO BOX 574
NAROOMA NSW 2546

Dear Gerard

Re: Girilambone Avoca Tank Project 2831

Nyngan Local Aboriginal Land Council would like to register an interest in the Girilambone Avoca Tanks Project.

Another Aboriginal Organisation in the Nyngan Community is Bogan Aboriginal Corporation. Their contact details are:

Bogan Aboriginal Corporation
CEO: Lesly Ryan
46 Nymagee St
Nyngan NSW 2825
Ph: 02 68 321 750
M: 0419 418 851
E: boganac@netxp.com.au

Looking forward to working with you in the future. Thankyou

Yours faithfully



Veneta Dutton
CEO
Nyngan LALC

**NYNGAN LOCAL
ABORIGINAL
LAND COUNCIL**



26 March 2012

Gerard Niemoeller
Principal Heritage Consultant
Onsite Cultural Heritage Management
PO Box 574
Narooma NSW 2546

South-East & Central Registry
Sydney Office
Level 25, 25 Bligh Street
Sydney NSW 2000
GPO Box 9973
Sydney NSW 2000
Telephone (02) 9227 4000
Facsimile (02) 9227 4030

Our Reference: 4815/12nt
Your Reference: A015

Dear Mr Niemoeller

Native Title Search Results of Girilambone within Bogan Shire Council Local Government Area

Thank you for your search request of 19 March 2012 in relation to the above area.

Search Results

The results provided are based on the information you supplied and are derived from a search of the following Tribunal databases:

Register Type	NNTT Reference Numbers
Schedule of Applications (unregistered claimant applications)	NC12/1
Register of Native Title Claims	Nil.
National Native Title Register	Nil.
Register of Indigenous Land Use Agreements	Nil.
Notified Indigenous Land Use Agreements	Nil.

I have included an application summary, map attachment and a NNTT Registers fact sheet to help you understand the search result.

Please note that there may be a delay between a native title determination application being lodged in the Federal Court and its transfer to the Tribunal. As a result, some native title determination applications recently filed in the Federal Court may not appear on the Tribunal's databases.

Resolution of native title issues over land and waters.

Freecall 1800 640 501
www.nntt.gov.au

The search results are based on analysis against external boundaries of applications only. Native title applications commonly contain exclusions clauses which remove areas from within the external boundary. To determine whether the areas described are in fact subject to claim, you need to refer to "Area covered by claim" section of the relevant Register Extract or Application Summary and any maps attached.

Search results are the existence of native title

Please note that the enclosed information from the Register of Native Title Claims and/or the Schedule of Applications is **not** confirmation of the existence of native title in this area. This cannot be confirmed until the Federal Court makes a determination that native title does or does not exist in relation to the area. Such determinations are registered on the National Native Title Register.

Tribunal accepts no liability for reliance placed on enclosed information

The enclosed information has been provided in good faith. Use of this information is at your sole risk. The National Native Title Tribunal makes no representative, either express or implied, as to the accuracy or suitability of the information enclosed for any particular purpose and accepts no liability for use of the information or reliance placed on it.

If you have any further queries, please contact me on 1800 640 501.

Yours sincerely



Nakari Thorpe
Senior Case Management Assistant

Telephone (02) 9227 4004
Facsimile (02) 9227 4030
Email Nakari.thorpe@nntt.gov.au

Encl



NATIONAL NATIVE TITLE TRIBUNAL

Claimant Application Summary

Application numbers	Federal Court number: NSD415/12 NNTT number: NC12/1
Application name	Ngemba/Ngiyampaa People
Name of body where application filed	Federal Court of Australia
Date application filed	14/03/2012
Current stage(s)	Currently Identified for Registration Testing, Pre Notification
Registration information	<i>Please refer to the Register of Native Title Claims / National Native Title Register (as appropriate) for registered details of this application.</i> Registration test status: Currently identified for Reg. Test
Applicants	Mrs Elaine Ohlsen, Mr Peter Williams, Mr Brett Smith, Ms Danielle Flakeler-Carney, Mr Neville Merritt, Mr Edward Shipp, Mr John Shipp, Ms Grace Gordon, Mr Jason Ford
Address for service	NTSCORP Ltd Unit 1a Suite 2.02, 44-70 Roschill Street REIDFERN NSW 2016 Phone: (02) 9310 3188 Fax: (02) 9310 4177
Persons claiming to hold native title	The Ngemba/Ngiyampaa People are the native title claim group on whose behalf the Applicant makes this application. The native title claim group comprises all the descendants of the following apical ancestors: Caroline Hilt (who was born on the Barwon River around 1847); Thomas Sullivan (who was born in Brewarrina about 1860); Nellie Colless (who was born in Brewarrina around 1868); Billy Coleman (who was born in Cobar in 1840); Mary Ann Allen (who was born in 1844); Moses Biggs (who was born in 1837); Polly Parkes (who was born in 1846); Anne Brandy (who was born in Colane in 1874); Caroline Brandy (who was born on Duck Creek in 1869); Wadna Boe (who was born in 1848); Richard King (who was born in 1827); Jimmy Keewong (who was born in 1849); Kitty Nacrangie; Tom Dennis (who was born in Brewarrina in 1864); Winnie Pierce (who was born in Brewarrina in 1878); Jack Dennis (who was born on the Barwon River in around 1855); Kate Baker (who was born in Boorooma in 1874); Francis "Tracker" Williams (who was born in Gundahooka in 1883); William Johnson (who was born in Big Willandra in 1876); Henry Parkes (who was born in 1863); Topsy Harris also known as Topsy Scotty (who was born in Marfield in 1866); Jack Redbank; Thomas Williams also known as Thomas Broughton (who was born in Roto); Maggie Redbank (who was born in Keewong in 1868);

	<p>Ada Amott (who was born in Nyngan in 1865); Moses Divine; Jack Smith (who was born in Mossiel in 1869); Ellen Sprowl also known as Ellen McHughes (who was born in Brewarrina in 1867); Fanny Hippi also known as Fanny Williams; Millie Wells also known as Millie Shearer (who was born in Brewarrina in 1874); Pluto Williams (who was born in Tida/Mossiel in 1873); Steve Shaw (who was born in Coronga Peak in 1855); Fanny Brown also known as Tiltagara Fanny (who was born in Hillston in 1862); David Brown (who was born on the Macquarie River in 1850); Janey Brown (who was born on the Macquarie River in 1853); Betsy Gwen (who was born in Haddon Rigg near Warren in 1849); Louise Hinton (who was born on the Macquarie River in 1843); Cissy Lee (who was born in 1852); Boorooma Murphy (who was born in Boorooma in 1832); Harry Murphy (who was born in Brewarrina around 1871); Thomas Nixon (who was born in Buttaborne in 1843); Colaine Lumpy (who was born in 1864); Charlotte Wilson; Tilly Riley (who was born in 1863); Geordie Murray (who was born in 1851 in Ivanhoe).</p>
Native title rights and interests claimed	<p>1. Where exclusive native title can be recognised (such as areas where there has been no prior extinguishment of native title or where s.238 and/or ss.47, 47A, 47B apply), the Ngemba/Ngiyampaa People as defined in Schedule A of this application, claim the right to possession, occupation, use and enjoyment of the lands and waters of the application area to the exclusion of all others subject to the valid laws of the Commonwealth and the State of New South Wales.</p> <p>2. Where exclusive native title cannot be recognised, the Ngemba/Ngiyampaa People as defined in Schedule A of this application, claim the following non-exclusive rights and interests including the right to conduct activities necessary to give effect to them:</p> <ul style="list-style-type: none"> (a) the right to access the application area; (b) the right to use and enjoy the application area; (c) the right to move about the application area; (d) the right to camp on the application area; (e) the right to erect shelters and other structures on the application area; (f) the right to live being to enter and remain on the application area; (g) the right to hold meetings on the application area; (h) the right to hunt on the application area; (i) the right to fish in the application area; (j) the right to have access to and use the natural water resources of the application area; (k) the right to gather and use the natural resources of the application area (including food, medicinal plants, timber, tubers, charcoal, wax, stone, ochre and resin as well as materials for fabricating tools, hunting implements, making artwork and musical instruments); (l) the right to share and exchange resources derived from the land and waters within the application area; (m) the right to participate in cultural and spiritual activities on the application area; (n) the right to maintain and protect places of importance under traditional laws, customs and practices in the application area; (o) the right to conduct ceremonies on the application area; (p) the right to transmit traditional knowledge to members of the native title claim group including knowledge of particular sites on the application area; (q) the right to speak for and make non-exclusive decisions about the application area in accordance with traditional laws and customs; (r) the right to speak authoritatively about the application area among other Aboriginal People in accordance with traditional laws and customs; and (s) the right to control access to or use of the lands and waters within the application area by other Aboriginal People in accordance with traditional laws and customs. <p>3. The native title rights and interests referred to in paragraph 2 do not confer possession, occupation, use or enjoyment of the lands and waters of the application area to the exclusion of all others.</p> <p>4. The native title rights and interests are subject to and exercisable in accordance with:</p> <ul style="list-style-type: none"> (a) the laws of the State of New South Wales and the Commonwealth of Australia including the common law; (b) the rights (past or present) conferred upon persons pursuant to the laws of the Commonwealth and the laws of the State of New South Wales; and

	(c) the traditional laws and customs of the Ngemba/Ngiyampaa People for personal, domestic and communal purposes (including social, cultural, religious, spiritual and ceremonial purposes).
Area	<p>Jurisdiction: New South Wales</p> <p>Location: The application covers an area of 95,125sq km over northern-central NSW. It covers Brewarrina to the north, Gilgandra to the east, Hillston to the south and Ivanhoe to the west.</p> <p>Local government region(s): Bogan Shire Council, Bourke Shire Council, Brewarrina Shire Council, Carrathool Shire Council, Central Darling Shire Council, Cobar Shire Council, Coonamble Shire Council, Gilgandra Shire Council, Lachlan Shire Council, Walgett Shire Council, Warren Shire Council</p> <p>Representative A/TSI body(s): NTSCORP Limited</p> <p>Approximate size: 95,125sq km (Note: There may be areas within the external boundary of the application that are not claimed.)</p> <p>Land/water and/or sea: Land/Water</p> <p>Area covered by the claim (as detailed in the application):</p> <p>(A) Area covered by application The area covered by the application ("the Application Area") comprises all of the land and waters within the external boundaries described in Attachment B and depicted in the map at Attachment C.</p> <p>The Application Area description and map have been prepared with the assistance of the Geo-Spatial Unit of the National Native Title Tribunal. The area covered by this application does not include the areas described at point B below.</p> <p>(B) Areas within the external boundaries not covered by the application</p> <ol style="list-style-type: none"> 1. The area covered by the application excludes any land and waters covered by past or present freehold title or by previous valid exclusive possession acts as defined by section 23B of the Native Title Act (1993) (Cth). 2. The area covered by the application excludes any land and waters which are: <ol style="list-style-type: none"> a) a Scheduled interest; b) a freehold estate; c) a commercial lease that is neither an agricultural lease nor a pastoral lease; d) an exclusive agricultural lease or exclusive pastoral lease; e) a residential lease; f) a community purpose lease; g) a lease dissected from a mining lease and referred to in s.23B(2)(c)(vii) of the Native Title Act 1993 (Cth); h) any lease (other than a mining lease) that confers a right of exclusive possession over particular land or waters. 3. Subject to paragraphs 5 and 6, the area covered by the application excludes any land or waters covered by the valid construction or establishment of any public work, where the construction or establishment of the public work commenced on or before 23 December 1996. 4. Subject to paragraphs 5 and 6, exclusive possession is not claimed over areas which are subject to valid previous non-exclusive possession acts done by the Commonwealth, State or territory. 5. Subject to paragraph 7 below, where the act specified in paragraphs 2, 3 and 4 falls within the provisions of: <ol style="list-style-type: none"> a) s.23B(9) - Exclusion of acts benefiting Aboriginal Peoples or Torres Strait Islanders; b) s.23B(9A) - Establishment of a national park or state park; c) s.23B(9B) - Acts where legislation provides for non-extinguishment; d) s.23B(9C) - Exclusion of Crown to Crown grants; and e) s.23B(10) - Exclusion by regulation the area covered by the act is not excluded from the application. 6. Where an act specified in paragraphs 2, 3 and 4 affects or affected land or waters referred to in: <ol style="list-style-type: none"> a) s.47 - Pastoral leases etc covered by claimant application; b) s.47A - Reserves covered by claimant application;

	<p>c) s.47B - Vacant Crown land covered by claimant application the area covered by the act is not excluded from the application.</p> <p>7. The area covered by the application excludes land or waters where native title rights and interests claimed have been otherwise extinguished.</p> <p>8. The area covered by the application excludes the land and waters covered by the Barkandji People's native title determination application NSD6084/1998 (Barkandji Traditional Owners #8 v Attorney General of NSW) (NC97/32).</p>
Attachments	<p>1. A map showing the boundaries of the area covered by the application , Attachment C of the Application, 1 page - A3, Attached 14/03/2012.</p> <p>2. Description of the area covered by the application, Attachment B of the Application, 4 pages - A4 , Attached 14/03/2012.</p>
NNTT contact details	<p>Case manager: Nicole Maher</p> <p>Address: National Native Title Tribunal Level 25 25 Bligh Street SYDNEY NSW 2000</p> <p>GPO Box 9973 SYDNEY NSW 2001</p> <p>Phone: (02) 9227 4000 Freecall 1800 640 501</p> <p>Fax: (02) 9227 4030</p> <p>Web page: www.nntt.gov.au</p>



Searching the NNTT Registers in New South Wales

Search service

On request the National Native Title Tribunal will search its public registers for you. A search may assist you in finding out whether any native title applications (claims), determinations or agreements exist over a particular area of land or water.

In New South Wales native title cannot exist on privately owned land including family homes or farms.

What information can a search provide?

A search can confirm whether any applications, agreements or determinations are registered in a local government area. Relevant information, including register extracts and application summaries, will be provided.

In NSW because we cannot search the registers in relation to individual parcels of land we search by local government area.

Most native title applications do not identify each parcel of land claimed. They have an external boundary and then identify the areas not claimed within the boundary by reference to types of land tenure e.g., freehold, agricultural leasehold, public works.

What if the search shows no current applications?

If there is no application covering the local government area this only indicates that at the time of the search either the Federal Court had not received any claims in relation to the local government area or the Tribunal had not yet been notified of any new native title claims.

It does not mean that native title does not exist in the area.

Native title may exist over an area of land or water whether or not a claim for native title has been made.

Where the information is found

The information you are seeking is held in three registers and on an applications database.

National Native Title Register

The National Native Title Register contains determinations of native title by the High Court, Federal Court and other courts.

Register of Native Title Claims

The Register of Native Title Claims contains applications for native title that have passed a registration test.

Registered claims attract rights, including the right to negotiate about some types of proposed developments.

Register of Indigenous Land Use Agreements

The Register of Indigenous Land Use Agreements contains agreements made with people who hold or assert native title in an area.

The register identifies development activities that have been agreed by the parties.

Application summaries

An application summary contains a description of the location, content and status of a native title claim.

This information may be different to the information on the Register of Native Title Claims, e.g., because an amendment has not yet been tested.

How do you request a search?

A search request form is available on the Tribunal's web site at:
<http://www.nntt.gov.au/registers/search.html>
Mail, fax or email your request to the Tribunal's Sydney registry, identifying the local government area/s you want searched.

Email: SydneySearch@nntt.gov.au
Fax: (02) 9227 4030
Address: GPO Box 9973, Sydney NSW 2001
Phone: (02) 9227 4000

Application Summary Attachment:
NSD415/2012 (NC12/1),
External boundary description
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External boundary description

The application area covers all the land and waters within the external boundary described as:

Commencing at the southernmost point of the application at the intersection of the centrelines of the Roto Road reserve and the Lachlan River at Hillston and extending generally north westerly along the centreline of that road reserve to Mossgiel Trunk Road; then generally westerly along the centreline of that road reserve to the Cobb Highway; then generally north westerly along the centreline of that road reserve to the Ivanhoe – Menindee Road; then generally westerly along the centreline of that road reserve to the eastern boundary of native title determination application NSD6084/98 Barkandji Traditional Owners 8 (NC97/32) at Longitude 144.206842° East; then continuing along the boundaries of that native title determination application, also described as:

From the centreline of the Ivanhoe – Menindee Road reserve at Longitude 144.206842° East; and extending northerly to the western boundary of Lot 4594 on DP767758 at Latitude 32.301343° South; then generally northerly along the western boundaries of that lot to the easternmost corner of Lot 776 on DP762100; then north westerly along the boundaries of that lot to the easternmost corner of Lot 775 on DP762082; then continuing north westerly and south westerly along the boundaries of that lot to the southernmost corner of Lot 774 on DP762102; then south westerly, north westerly, north easterly and south easterly along the boundaries of that lot to the southernmost corner of Lot 1979 on DP763987; then generally north easterly and north westerly along the boundaries of that lot to the westernmost corner of Lot 4595 on DP767759; then generally north easterly along the north western boundaries of that lot and Lot 1130 on DP762534 to the easternmost corner of Lot 939 on DP762071; then north westerly along the boundary of that lot to the southern boundary of the Barrier Highway road reserve; then north easterly and generally easterly along the southern boundaries of that road reserve to Longitude 144.803043° East; then generally north easterly through Longitude 144.804560° East, Latitude 31.576881° South to a point on the western boundary of Lot 1282 on DP762978 at Latitude 31.429323° South; then north westerly to the westernmost corner of that lot; then generally north easterly along the north western

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boundaries of that lot, Lot 1283 on DP762979 and Lot 4176 on DP766743 to the easternmost corner of Lot 5412 on DP768323, being the point at where it leaves the boundary of native title determination application NSD6084/98 Barkandji Traditional Owners 8 (NC97/32).

Then continuing generally north easterly along the north western boundaries of Lot 4176 on DP766743, Lot 4177 on DP766744, Lot 4857 on DP769170 and onwards across Louth Road to the western boundary of Lot 2 on DP803696; then generally northerly along the south western boundary of that lot, south western and north western boundaries of Lot 964 on DP762132, south western boundary of Lot 3610 on DP765962, south western and north western boundaries of Lot 3609 on DP765961, western boundary of Lot 933 on DP762220, south western and north western boundaries of Lot 625 on DP761643 to its northernmost corner; then continuing north easterly across Gunderbooka Kings Cross Road to the western boundary of Lot 1394 on DP763061; then generally northerly along the western and northern boundaries of that lot to the western most corner of Gundabooka National Park; then generally north easterly along the northern boundaries of that national park to the northernmost boundary of Lot 3147 on DP765352; then north easterly along the boundary of that lot to the western boundary of Lot 2250 on DP764515; then north westerly and easterly along the boundaries of that lot and onwards to the centreline of the Kidman Way road reserve; then generally northerly along the centreline of that road reserve to the prolongation westerly of the southern boundary of Lot 4678 on DP767842; then easterly to and along the southern boundary of that lot and Lot 263 on DP760955; then generally northerly along the eastern boundaries of that lot to the eastern boundary of an unnamed road reserve located between Lot 4291 on DP767038 and Lot 61 on DP751841; then northerly to centreline of that unnamed road reserve; then generally north easterly along the centreline of that road reserve to the western boundary of the Mitchell Highway; then continuing north easterly across that highway to the westernmost corner of Lot 52 on DP751841; then generally north easterly along the western boundary of that lot, eastern boundary of Lot 4133 on DP766638, western boundaries of Lot 40 on DP751867, Lot 42 on DP751867, Lot 6830 on DP43320 and Lot 6829 on DP43320 to the Kamilaroi Highway; then continuing north easterly across that highway to the centreline of an unnamed road reserve located parallel to the western boundary of Lot 39 on DP751867; then generally northerly along that road reserve to the prolongation southerly of the easternmost boundary of Lot 59 on DP751867, then generally northerly to and along the eastern boundary of that lot and the eastern

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boundary of Lot 4357 on DP767194 to the Darling River and onwards to its centreline; then generally northerly, generally easterly and generally south easterly along the centreline of that river, the Barwon River, the Macquarie River and the Castlereagh River to the centreline of the Newell Highway at Gilgandra; then north westerly along the centreline of that highway road reserve to the Oxley Highway; then north easterly and generally westerly along the centreline of that highway road reserve to Nancarrow Road; then generally southerly along the centreline of that road reserve to Boothaguy Creek; then generally westerly along the centreline of that creek to again the Oxley Highway; then generally south westerly along the centreline of that highway road reserve to the Gunningbar Creek; then generally north westerly along the centreline of that creek to the Albert Priest Channel; then generally westerly along the centreline of that channel to an unnamed road reserve which bisects Lot 2 on DP232612; then generally south westerly along the centreline of that road reserve to the Mitchell Highway at Mullengudgerly; then generally north westerly along the centreline of that highway road reserve to the Bogan River at Nyngan; then generally southerly along the centreline of that river to Bulbodney Creek; then generally southerly along the centreline of that creek to Tigers Creek; then generally south westerly along the centreline of that creek to Yarra Yarra Creek; then generally south westerly along the centreline of that creek to Longitude 146.921830° East, then westerly to an unnamed watercourse at approximately Longitude 146.911275° East, Latitude 32.558960° South; then generally westerly along the centreline of that watercourse to Fiveways Road; then westerly approximately 500 metres to an unnamed watercourse at Latitude 32.557767° South; then generally south westerly along the centreline of that unnamed watercourse to Tinda Creek; then generally southerly along the centreline of that creek to Morumbil Swamp; then generally south westerly along the centreline of that swamp, Crowie Creek, Booberoi Creek and the Lachlan River back to the commencement point.

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Application Summary Attachment:
NSD415/2012 (NC12/1),
External boundary description
Attachment B of the Application
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Data Reference and source

- Application boundary data compiled by National Native Title Tribunal based on data provided by NTSCORP.
- Native title determination application NSD6084/98 Barkandji Traditional Owners 8 (NC97/32) as accepted for registration on 2 November 2006.
- Cadastre data sourced from Public Sector Mapping Agency (November 2010).
- Roads based on easement data sourced from LPM Authority, NSW.
- Rivers / Creeks based on easement data, 1:100,000 topographic data which is © Commonwealth of Australia and is supplied by Geomage Pty Ltd under licence from Geoscience Australia and information supplied by NTSCORP (based on 2007 LPI topographic data).

Reference datum

Geographical coordinates have been provided by the NNTT Geospatial Services and are referenced to the Geocentric Datum of Australia 1994 (GDA94), in decimal degrees and are based on the spatial reference data acquired from the various custodians at the time.

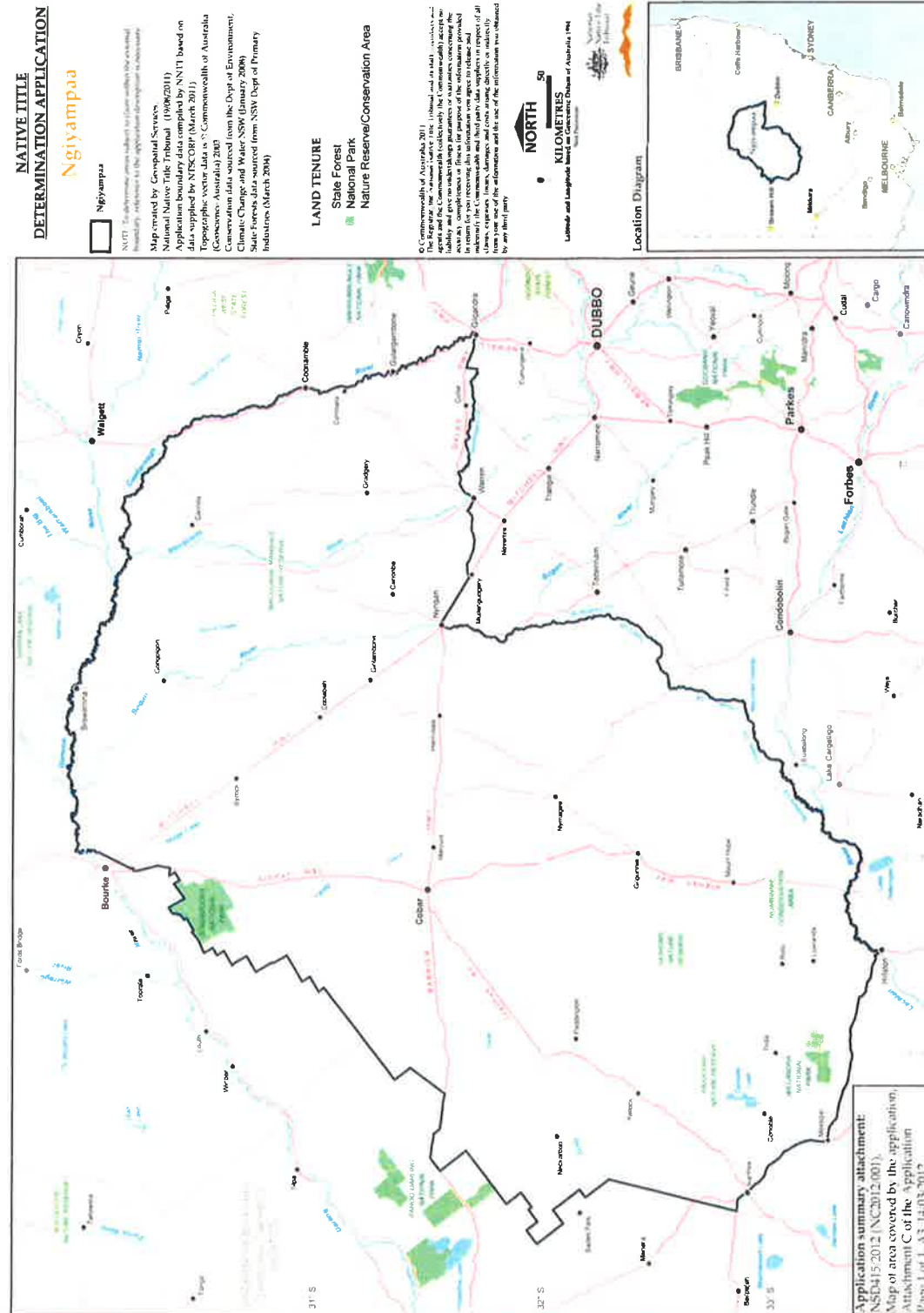
Use of Coordinates

Where coordinates are used within the description to represent cadastral or topographical boundaries or the intersection with such, they are intended as a guide only. As an outcome to the custodians of cadastral and topographic data continuously recalculating the geographic position of their data based on improved survey and data maintenance procedures, it is not possible to accurately define such a position other than by detailed ground survey.

Prepared by Geospatial Services, National Native Title Tribunal (19 August 2011)

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Attachment C – Map of the Area covered by the application





11-13 Mansfield Street
Glebe NSW 2037
PO Box 113, Glebe NSW 2037
02 9562 6327 02 9562 6350

Gerard Niemoeller
On Site Cultural Heritage Management
PO Box 574
NAROOMA NSW 2546

Dear Gerard

Re: Request - Search for Registered Aboriginal Owners

I refer to your letter dated 19th March 2012 regarding an Aboriginal Stakeholders within Girilambone area, NSW.

I have searched the Register of Aboriginal Owners and the project area described does not have Registered Aboriginal Owners pursuant to Division 3 of the *Aboriginal Land Rights Act 1983* (NSW).

I suggest you contact the Nyngan Local Aboriginal Land Council. They may also be able to assist you in identifying other Aboriginal stakeholders for this project.

Yours sincerely

Tabatha Dantoine
Administration Officer
Office of the Registrar, *Aboriginal Land Rights Act* (1983)

23 March 2012



PO Box 574 NAROOMA NSW 2546

gerard@onsitechm.com.au

ABN: 43 329 728 630

Ph: 0414441896

www.onsitechm.com.au

Our Ref: A015

4 April 2012

Registering Interest for an Aboriginal Cultural Heritage Assessment and Aboriginal Heritage Impact Permit application – Girilambone Avoca Tank Project, Bogan Shire Council NSW 2831

I am writing to you in accordance with Section 4.1.3 of the ***Aboriginal cultural heritage consultation requirements for proponents***.

Tritton Resources Limited Pty is in the early stages of exploration of a newly identified resource to the north of its Girilambone Copper Mine, currently referred to as the Avoca Tank Project. The Avoca Tank Project area covers approximately 8.7km² across part of Lots 10, 135 and 144 (DP 751315) on the Coolabah 8235 1:100,000 map sheet. The project area is approximately 4 kilometres northwest of the town of Girilambone NSW 2831 along the Mitchell Highway within the Bogan Shire. A map showing the location of the subject area is attached.

On Site Cultural Heritage Management has been engaged to conduct an Aboriginal Cultural Heritage Assessment of the subject land. The assessment may result in an application for an Aboriginal Heritage Impact Permit (AHIP) pursuant to the *NSW National Parks and Wildlife Act*.

Purpose of this letter

The preparation of an AHIP requires the proponent to establish a ***Register of Interest*** for the project and undertake community consultation as outlined in the Office of Environment and Heritage (formerly DECCW) ***Aboriginal cultural heritage consultation requirements for proponents***. These requirements set out and establish a 4 stage consultation process.

Your details were provided to me in response to correspondence to those organisations listed in Section 4.1.2 of the consultation requirements. I am now writing to you in accordance with Section 4.1.3 of those requirements. A list of organisations and individuals corresponded with as part of this process is also attached for your information.

More specifically the proponent has engaged the services of **On Site Cultural Heritage Management** to:

- undertake the community consultation process as per the *Aboriginal cultural heritage consultation requirements for proponents*
- undertake an Aboriginal Cultural Heritage Assessment of the Avoca Tank Project and
- prepare Aboriginal Heritage Impact Permit applications (if required)

The purpose of establishing the Register of Interest is to formally identify and undertake community consultation with Aboriginal people who hold cultural knowledge relevant to determining the significance of the Avoca Tank project area or Aboriginal objects within the subject land (Lots 10, 135 and 144 (DP 751315) on the Coolabah 8235 1:100,000 map sheet and within the Bogan Shire).

The purpose of Aboriginal community consultation is to assist the proponent in the preparation of an application for an Aboriginal Heritage Impact Permit (AHIP) and to assist the Director General of the Office of Environment and Heritage in his or her consideration and determination of that application.

Should you decide to register your interest you will be provided with further information consisting of a proposed methodology for the project (in accordance with Stage 2 of the consultation requirements) and a list of questions to assist in understanding whether cultural values occur within the project area (to assist with Stage 3).

I am also required to inform you that should you decide to register your interest your details will be forwarded to Office of Environment and Heritage, Dubbo and the Nyngan Local Aboriginal Land Council unless you specify that you do not want your details released.

If you hold cultural knowledge relevant to determining the cultural significance of the Aboriginal objects located within the Avoca Tank project area or Aboriginal objects within the subject land (Lots 10, 135 and 144 (DP 751315) on the Coolabah 8235 1:100,000 map sheet and within the Bogan Shire) then I invite you to register your interest for this project. You can register your interest by writing a letter, email or telephoning me by 19 April 2012. My contact details are provided above. If you are registering your organisation then please provide the name and details of a nominated contact person.

Please note that any registrations of interest received after 19 April 2012 will not be included on the register. A notice inviting registrations of interest and participation in the community consultation process also appeared in the Public Notices of the Nyngan Observer on Wednesday 4 April 2012.

Please contact me should you require any further information or wish to discuss this proposal.

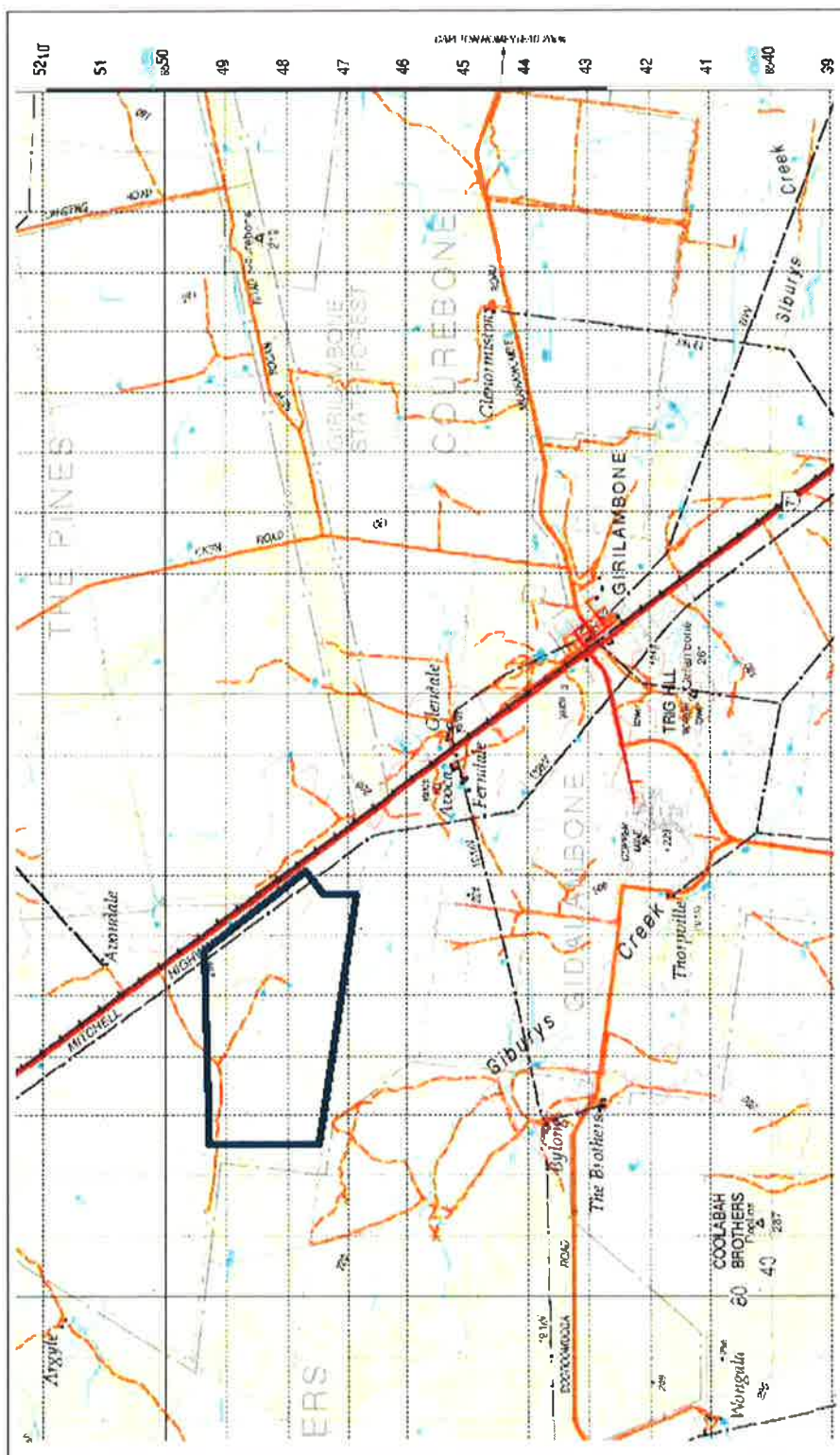
Regards

Gerard Niemoeller
Principal Heritage Consultant

List of Aboriginal organisations / individuals identified during Stage 4.1.2 of *Aboriginal cultural heritage consultation requirements for proponents* and invited to register to interest as part of this assessment

Aboriginal Organisation / Individual Name	Address	Contact Details
Bogan Aboriginal Corporation CEO Lesly Ryan	46 Nymagee St NYNGAN NSW 2825	boganac@netxp.com.au Ph: (02) 6832 1750 M: 0419418851
Nyngan Local Aboriginal Land Council / Vaneta Dutton CEO	PO Box 43 NYNGAN NSW 2825	nynganlalc@bigpond.com
Mr John Shipp	79 Thompson Street DUBBO NSW 2830	
NTS Corp Ltd on behalf of Native Title application for the Ngemba/Ngiyampaa People (Federal Court number: NSD415/12, NNTT number: NC12/1) and Native Title applicants: Mrs Elaine Ohlsen Mr Peter Williams Mr Brett Smith Ms Danielle Flakeler-Carney Mr Neville Merritt Mr Edward Shipp Mr John Shipp Ms Grace Gordon Mr Jason Ford (identified by National Native Title Tribunal)	NTSCORP Ltd Unit 1a Suite 2.02, 44-70 Rosehill Street REDFERN NSW 2016	Phone: (02) 9310 3188 Fax: (02) 9310 4177 tlawrence@ntscorp.com.au

Figure 1: Avoca Tank project area (8.7km²) shown in thick blue lines across part of Lots 10, 135 and 144 (DP 751315) on the Coolabah 8235 1:100,000 map sheet



**Aboriginal Cultural
Heritage Assessment**

Tritton Resources Limited Pty proposes to undertake mineral exploration within part of Lots 10, 135 and 144 (DP 751315) on the Coolabah 8235 1:100,000 map sheet. The project area is approximately 4 kilometres northwest of the town of Girilambone NSW 2831 along the Mitchell Highway within the Bogan Shire.

Pursuant to Aboriginal cultural heritage consultation requirements for proponents and National Parks & Wildlife Act 1974, Aboriginal people holding cultural knowledge relevant to determining the significance of the subject land or Aboriginal objects within are invited to register interest and participate in a community consultation process.

The purpose of this consultation is to assist the proponent undertake an Aboriginal cultural heritage assessment, prepare an Aboriginal Heritage Impact Permit application if required and assist the Director General of OEH consider and make a determination of the application. Please register your interest by 19 April 2012.

Gerard Niemoeller

On Site Cultural Heritage Management

PO Box 574 NAROOMA NSW 2546

gerard@onsitechm.com.au

Ph: 0414 441 896



PO Box 574 NAROOMA NSW 2546
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Ph: 0414441896
www.onsitechm.com.au
ABN: 48 089 066 744

Our Ref: A015

24 April 2012

ABORIGINAL CULTURAL HERITAGE ASSESSMENT - Methodology and Significance

Avoca Tank Project (Tritton Resources) Girilambone, Bogan Shire NSW 2831

REGISTERED ABORIGINAL PARTIES: Bogan Aboriginal Corporation - Lesly Ryan, CEO
Nyngan Local Aboriginal Land Council - Vaneta Dutton CEO
Marra Wallan Pty Ltd – John Shipp, CEO
Native Title Services for Ngemba/Ngiyampaa Claimants

1.0 INTRODUCTION

This document is provided to the 'Registered Aboriginal Parties' in accordance with the Stage 2 and Stage 3 (sections 4.2 and 4.3) of the ***Aboriginal cultural heritage consultation requirements for proponents 2010*** and to present information about the proposed project currently subject to an Aboriginal Cultural Heritage Assessment. The purpose of the community consultation outlined in these requirements is to:

- consult with Aboriginal people who hold cultural knowledge relevant to determining the significance of the subject place and Aboriginal objects that may be within.
- assist the proponent prepare an Aboriginal Heritage Impact Assessment and Permit application (if required)
- assist the Director General of the Office of Environment and Heritage consider and make a determination of that application.

This document is provided to those persons and organisations who registered their interest in response to correspondence of 4 April 2012 and in accordance with Stage 1 (Section 4.1.3). The names of those persons and organisations who registered their interest are listed above. Contact details of all the Aboriginal parties who registered their interest is also attached to this document.

On Site CHM - A015 Avoca Tank Project, Girilambone, Bogan Shire NSW

1

1.1 The Project

Tritton Resources Limited Pty is in the early stages of exploration of a newly identified resource to the north of its Girilambone Copper Mine, currently referred to as the Avoca Tank Project. The Avoca Tank Project area covers approximately 8.7km² across part of Lots 10, 135 and 144 (DP 751315) on the Coolabah 8235 1:100,000 map sheet. The project area is approximately 4 kilometres northwest of the town of Girilambone NSW 2831 along the Mitchell Highway within the Bogan Shire. A map showing the location of the subject area is attached.

On Site Cultural Heritage Management has been engaged by Tritton Resources to undertake the community consultation process as per the *Aboriginal cultural heritage consultation requirements for proponents* and conduct an Aboriginal Cultural Heritage Assessment of the subject land. The assessment may result in an application for an Aboriginal Heritage Impact Permit (AHIP) pursuant to the *NSW National Parks and Wildlife Act*.

2.0 CONSULTING WITH ABORIGINAL PEOPLE ABOUT THE SIGNIFICANCE OF THE PROJECT AREA

Stage 3 (Section 4.3) of the *Aboriginal cultural heritage consultation requirements for proponents 2010* requires the proponent to seek information about the cultural significance of the project area land and the Aboriginal objects or places that may be within. This purpose of this stage is also to facilitate a process whereby the registered Aboriginal parties can:

- a) contribute to culturally appropriate information gathering and the research methodology
- b) provide information that will enable the cultural significance of Aboriginal objects and/or places on the proposed project area to be determined
- c) have input into the development of any cultural heritage management options.

A list of questions about the proposed project and assessment is provided below. These questions are only suggestions and you may provide any additional information you feel is necessary to inform the proponent and OEH about the Aboriginal cultural significance or values of the project area.

1. Are there any objects or places of cultural value in the project area or in the immediate proximity? If so how will the proposed development affect those values?
2. Do you have any cultural concerns or perspectives about this project or assessment?
3. Do you think there is the potential for burials to occur at the site? If so why?
4. Are there any particular research questions you would like to see answered through the archaeological assessment process?

5. Have you got any views about the management of the lands within the Avoca Tank Project Area that may not be impacted?
6. Is any of the information you have provided culturally sensitive and is it OK to print your views in a report?

3.0 METHODOLOGY FOR THIS ABORIGINAL CULTURAL HERITAGE ASSESSMENT

The methodology for the current assessment is proposed to include:

- Consultation with the Aboriginal Community to: identify Aboriginal traditional owners, elders and custodians who can speak about this place (*Stage 1 - completed*); ascertain their views about the cultural significance of the Aboriginal objects; identify whether there are particular research themes or questions of interest that could be incorporated into any research design or addressed through archaeological assessment (*Stage 2 and 3 – this document*)
- An AHIMS database search to identify previously recorded sites within or within proximity to the study area. *An AHIMS database search has identified that there are 4 previously recorded Aboriginal sites within the identified area. All of these places are recorded as being earth mounds and or hearths.*
- Review of AHIMS Site cards to provide a archaeological context for the assessment of the study area
- Review of other relevant heritage registers (such as the Register of the National Estate, NSW State Heritage Register, Bogan Local Heritage Register). *A search of these databases has not identified any historic places or objects within the Avoca Tank Project Area.*
- Review relevant cultural heritage and archaeological reports to provide a regional and local context for the assessment of this Aboriginal place and associated objects
- Conduct a site assessment to record and document information about the site and Aboriginal objects relevant to determining and assessing the cultural heritage significance. *An attempt to relocate AHIMS sites discussed above will be made as part of the survey.*
- Preparation of a report documenting the results of the above processes, assessment of the places significance and the formulation of appropriate heritage management strategies
- Preparation of an Aboriginal Heritage Impact Permit application (if required)

This assessment is being conducted in accordance with relevant DECCW policy and regulations and specifically:

- *Aboriginal cultural heritage consultation requirements for proponents 2010*
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*

On Site CHM - A015 Avoca Tank Project, Girilambone, Bogan Shire NSW

3

- *Supporting Information Requirements for AHIP Applications*

This assessment has also considered relevant OEH internal policy and specifically:

- *Operational Policy: Protecting Aboriginal Cultural Heritage*
- *Guide to Determining and Issuing Aboriginal Heritage Impact Permits*

4.0 WHERE TO FROM HERE?

Registered Aboriginal parties have 28 days to review this document and provide information about the assessment methodology and significance of the project area. Your views and any written submissions you make and will be incorporated into the assessment and report and provided to OEH.

If you would like to review this document and provide further comment please do so by Wednesday 23 May 2012.

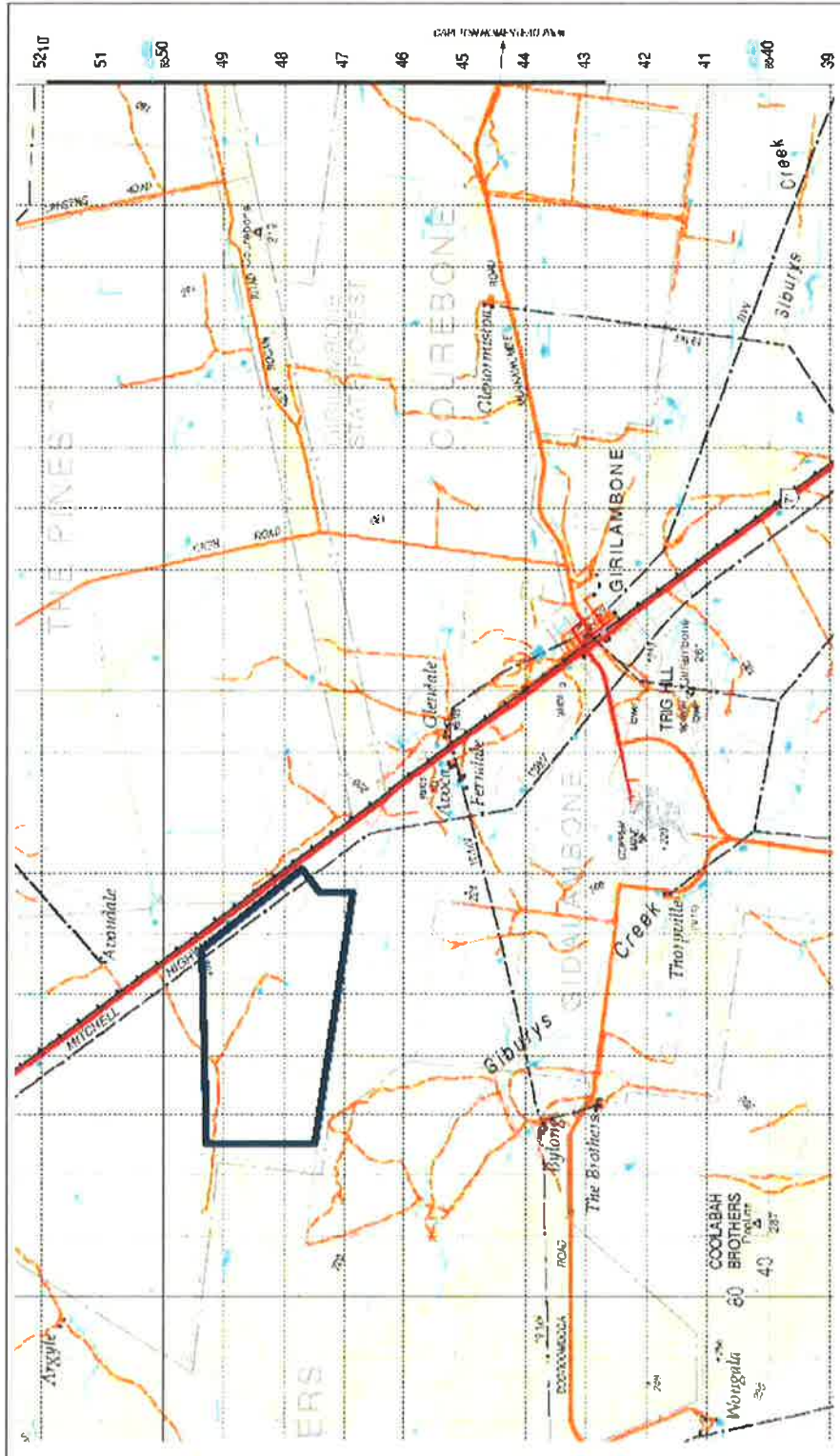
Registered Aboriginal parties will also have a further 28 days to review the final Aboriginal Cultural Heritage Assessment report.

Please contact On Site Cultural Heritage Management should you require any further information or wish to discuss this proposal.

List of Aboriginal organisations / individuals identified during Stage 4.1.2 of *Aboriginal cultural heritage consultation requirements for proponents* and invited to register to interest as part of this assessment

Aboriginal Organisation / Individual Name	Address	Contact Details
Bogan Aboriginal Corporation CEO Lesly Ryan	46 Nymagee St NYNGAN NSW 2825	boganac@netxp.com.au Ph: (02) 6832 1750 M: 0419418851
Nyngan Local Aboriginal Land Council / Vaneta Dutton CEO	PO Box 43 NYNGAN NSW 2825	nynganlalc@bigpond.com
Marra Wallan Pty Ltd Mr John Shipp CEO	PO BOX 6088 Dubbo NSW 2830	John@marrawallan.com.au john.shipp@bigpond.com
NTS Corp Ltd on behalf of Native Title application for the Ngemba/Ngiyampaa People (Federal Court number: NSD415/12, NNTT number: NC12/1) and Native Title applicants: Mrs Elaine Ohlsen Mr Peter Williams Mr Brett Smith Ms Danielle Flakeler-Carney Mr Neville Merritt Mr Edward Shipp Mr John Shipp Ms Grace Gordon Mr Jason Ford (identified by National Native Title Tribunal)	NTSCORP Ltd Unit 1a Suite 2.02, 44-70 Rosehill Street REDFERN NSW 2016	Phone: (02) 9310 3188 Fax: (02) 9310 4177 tlawrence@ntscorp.com.au

Figure 1: Avoca Tank project area (8.7km²) shown in thick blue lines across part of Lots 10, 135 and 144 (DP 751315) on the Coolabah 8235 1:100,000 map sheet



APPENDIX 2



PO Box 574 NAROOMA NSW 2546

gerard@onsitechm.com.au

ABN: 48 089 066 744

Ph: 0414441896

www.onsitechm.com.au

Our Ref: A018

12 September 2012

Establishing a Register of Interest for an Aboriginal Cultural Heritage Assessment and Aboriginal Heritage Impact Permit application – Avoca Tank Project (Stage 2) Girilambone NSW 2831

I am writing to you in accordance with Section 4.1.2 of the ***Aboriginal cultural heritage consultation requirements for proponents*** and specifically to initiate Stage 1 of the Aboriginal consultation process.

Tritton Resources Limited Pty is in the early stage of exploring a newly identified resource to the north of its Girilambone Copper Mine, currently referred to as the Avoca Tank Project. The Avoca Tank Project land is divided into two stages and situated across 18.62km². The land is located approximately 4 kilometres north west of Girilambone NSW 2831 along the Mitchell Highway.

The Avoca Tank **Stage 1** project land covers approximately 8.7km² across part of Lots 10, 135 and 144 (DP 751315) on the Coolabah 8235 1:100,000 map sheet. The Stage 1 land was the subject of a previous Aboriginal Cultural Heritage Assessment by On Site Cultural Heritage Management between April and August (2012).

On Site Cultural Heritage Management has now been contracted to conduct an Aboriginal Cultural Heritage Assessment of the adjoining Avoca Tank **Stage 2** project land. The assessment may result in an application for an Aboriginal Heritage Impact Permit (AHIP) pursuant to the *NSW National Parks and Wildlife Act*. A map showing the location of the Avoca Tank project area (Stages 1 and 2) is attached.

In accordance with Section 4.1.2, Stage 1 of the *Aboriginal cultural heritage consultation requirements for proponents*, I am writing to you to identify Aboriginal persons who may hold cultural knowledge relevant to determining the significance of Aboriginal objects that may be located within the project area.

Could you please conduct relevant database or register searches and provide the names of Aboriginal people you consider may be affected by this proposal. The names of Aboriginal persons you provide will be invited to register an interest in the project and participate in the consultation process.

Your assistance in this process would be much appreciated and ensure that the proponent and OEH consider the views of Aboriginal people affected by this proposal.

Could you please forward the names of those Aboriginal persons you consider may be affected by this proposal to me by Thursday 27 September 2012.

Please note that this correspondence has been sent to the following organisations in accordance with Section 4.1.2 of the consultation requirements:

- a) Office of Environment and Heritage EPRG regional office, North West Dubbo
- b) Nyngan Local Aboriginal Land Council
- c) the Registrar, *Aboriginal Land Rights Act 1983* for a list of Aboriginal owners
- d) the National Native Title Tribunal for a list of registered native title claimants, native title holders and registered Indigenous Land Use Agreements
- e) Native Title Services Corporation Limited (NTSCORP Limited)
- f) Bogan Shire Council, Nyngan
- g) Central West Catchment Management Authority, Nyngan for contact details of any established Aboriginal reference group

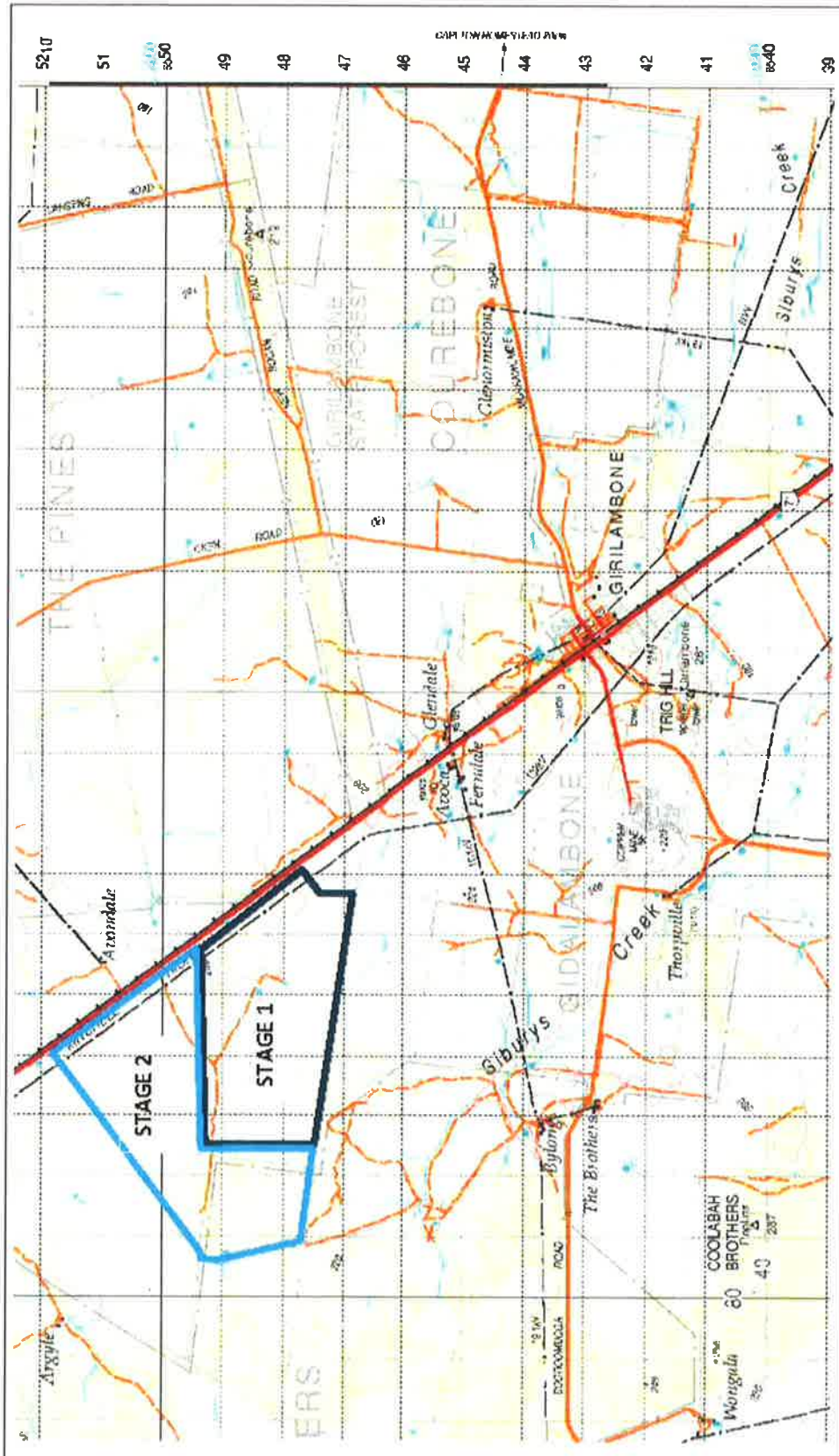
Please contact me should you require any further information or wish to discuss this proposal.

Regards



Gerard Niemoeller
Principal Heritage Consultant

Figure 1: Avoca Tank project area (Stage 2) shown in light blue polygon (9.90 km²), part of Lot 3 (DP 751342), Lots 10 and 135 (DP 751315) on the Coolabah 8235 1:100,000 map sheet. The adjoining Stage 1 area (8.72km²) across part of Lots 10, 135 and 144 (DP 751315) is shown in the dark blue polygon and was the subject of a previous Aboriginal Cultural Heritage Assessment by On Site CHM (2012).





Office of
Environment
& Heritage

Your reference Proposed Girilambone Avoca Tank
Project Stage 2, Girilambone NSW
Our reference DOC12/38580
Contact Paul Houston 68835361

Onsite Cultural Heritage Management
PO Box 574
NAROOMA NSW 2546
Att: Gerard Niemoeller

13th September 2012

Dear Gerard,

**WRITTEN NOTIFICATION AS REQUIRED UNDER OFFICE OF ENVIRONMENT AND
HERITAGE (OEHS) ABORIGINAL CULTURAL HERITAGE REQUIREMENT FOR
PROPOSERS 2010 – Proposed Girilambone Avoca Tank Project Stage 2, Girilambone NSW**

I refer to your letter dated 12th September 2012 to the Office of Environment and Heritage (OEHS)
regarding the above matter.

A list of known Aboriginal parties that OEHS feels is likely to have an interest in this development is
attached as Attachment 1 (overleaf). Please note this list is not necessarily an exhaustive list of
all interested Aboriginal parties and receipt of this list does not remove the requirement of a
proponent/consultant to advertise in local print media and contact other bodies seeking interested
Aboriginal parties, in accordance with the requirements.

If you wish to discuss any of the above matters further please contact me, at your earliest
convenience, on (02) 6883 5361.

Yours sincerely

A handwritten signature in black ink, appearing to read "Paul Houston".

Paul Houston
Aboriginal Heritage Planning Officer
OEHS

The Department of Environment Climate Change and Water is now known as
The Office of Environment and Heritage

PO Box 2111, Dubbo NSW 2830
48-52 Wingewarra St Dubbo NSW
Tel (02) 6883 5330 Fax (02) 6884 9382
www.environment.nsw.gov.au

ATTACHMENT 1

OEHS LIST OF ABORIGINAL STAKEHOLDER GROUPS WITHIN THE BOGAN LGA -
THAT MAY HAVE AN INTEREST IN THE PROJECT; PROVIDED AS PER THE "OEHS
ABORIGINAL CULTURAL HERITAGE REQUIREMENT FOR PROPONENTS 2010"

Organisation/Affiliation	Name/Title	Address
Bogan Aboriginal Corporation		PO Box 345 NYNGAN NSW 2825
John Shipp		79 Thompson Street Dubbo
NYNGAN LALC	Chairperson	PO Box 43 NYNGAN NSW 2825
Trevor Robinson		Po Box 73, Peak Hill NSW 2869
Wiradjuri Interim Working Party		Po Box 73, Peak Hill NSW 2869

The Department of Environment Climate Change and Water is now known as
The Office of Environment and Heritage

PO Box 2111, Dubbo NSW 2830
48-52 Wingewarra St Dubbo NSW
Tel: (02) 6883 5330 Fax: (02) 6884 9382
www.environment.nsw.gov.au

From: Nyngan LALC
To: gerard@onsitechm.com.au
Subject: Site work for Avoca tanks
Date: Wednesday, 19 September 2012 1:13:21 PM

Hi Gerard

As previous Sheila Couley Nyngan LALC & Lesly Ryan Bogan Aboriginal Corporation
would be the people to contact for site work
Kind Regards

Veneta Dutton
Chief Executive Officer

NYNGAN Local Aboriginal Land Council
PO BOX 43
102 Pangee Street.
Nyngan, NSW, 2825

p: 02 68 322 639
f: 02 68 322878
PO BOX 43 Nyngan NSW
nynganlalc@bigpond.com

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National
Native Title
Tribunal



13 September 2012

Gerard Niemoeller
Principal Heritage Consultant
Onsite Cultural Heritage Management
PO Box 574
Narooma NSW 2546

Sydney Office, Operations East

Level 16, Law Courts Building,
Queens Square
Sydney NSW 2000
GPO Box 9973
Sydney NSW 2000
Telephone (02) 9227 4000
Facsimile (02) 9227 4030

Our Reference: 5118/12jd

Your Reference: A018

Dear Mr Niemoeller

Native Title Search Results of town of Girilambone

Thank you for your search request of 12 September 2012 in relation to the above area.

Search Results

The results provided are based on the information you supplied and are derived from a search of the following Tribunal databases:

Register Type	NNTT Reference Numbers
Schedule of Applications (unregistered claimant applications)	Nil.
Register of Native Title Claims	NC12/1
National Native Title Register	Nil.
Register of Indigenous Land Use Agreements	Nil.
Notified Indigenous Land Use Agreements	Nil.

I have included a register extract, map attachment and a NNTT Registers fact sheet to help you understand the search result.

Please note that there may be a delay between a native title determination application being lodged in the Federal Court and its transfer to the Tribunal. As a result, some native title determination applications recently filed in the Federal Court may not appear on the Tribunal's databases.

The search results are based on analysis against external boundaries of applications only. Native title applications commonly contain exclusions clauses which remove areas from within the

Resolution of native title issues over land and waters.

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www.nntt.gov.au

external boundary. To determine whether the areas described are in fact subject to claim, you need to refer to "Area covered by claim" section of the relevant Register Extract or Application Summary and any maps attached.

Search results and the existence of native title

Please note that the enclosed information from the Register of Native Title Claims and/or the Schedule of Applications is **not** confirmation of the existence of native title in this area. This cannot be confirmed until the Federal Court makes a determination that native title does or does not exist in relation to the area. Such determinations are registered on the National Native Title Register.

Tribunal accepts no liability for reliance placed on enclosed information

The enclosed information has been provided in good faith. Use of this information is at your sole risk. The National Native Title Tribunal makes no representative, either express or implied, as to the accuracy or suitability of the information enclosed for any particular purpose and accepts no liability for use of the information or reliance placed on it.

If you have any further queries, please contact me on 1800 640 501.

Yours sincerely



Jessica Di Blasio | EXECUTIVE ASSISTANT/CLIENT SERVICES OFFICER
National Native Title Tribunal | Sydney office, Operations East
Level 16, Law Courts Building, Queens Square, Sydney, New South Wales 2000
Telephone (02) 9227 4000 | Facsimile (02) 9227 4030 | Email jessica.diblasio@nntt.gov.au
Freecall 1800 640 501 | www.nntt.gov.au

Facilitating timely and effective outcomes.



NATIONAL NATIVE TITLE TRIBUNAL

Application Information and Extract from the Register of Native Title Claims

Application Information

Application numbers:	Federal Court number: NSD415/12 NNTT number: NC12/1
Application name:	Ngemba, Ngiyampaa, Wangaaypuwan and Wayihwan native title determination application
Registration history:	Registered from 12/04/2012.

Register Extract (pursuant to s.186 of the *Native Title Act 1993*)

Application filed with:	Federal Court of Australia
Date application filed:	14/03/2012
Date claim entered on Register:	12/04/2012
Applicants:	Mrs Elaine Ohlsen, Mr Peter Williams, Mr Brett Smith, Ms Danielle Flakeler-Carney, Mr Neville Merritt, Mr Edward Shipp, Mr John Shipp, Ms Grace Gordon, Mr Jason Ford
Address for service:	NTSCORP Ltd Unit 1a Suite 2.02, 44-70 Roschill Street RIEDFERN NSW 2016 Phone: (02) 9310 3188 Fax: (02) 9310 4177

Additional Information:

Not Applicable

Area covered by the claim:

(A) Area covered by application

The area covered by the application ("the Application Area") comprises all of the land and waters within the external boundaries described in Attachment B and depicted in the map at Attachment C.

The Application Area description and map have been prepared with the assistance of the Geo-Spatial Unit of the National Native Title Tribunal. The area covered by this application does not include the areas described at point B below.

(B) Areas within the external boundaries not covered by the application

1. The area covered by the application excludes any land and waters covered by past or present freehold title or by previous valid exclusive possession acts as defined by section 23B of the Native Title Act (1993) (Cth).
2. The area covered by the application excludes any land and waters which are:
 - a) a Scheduled interest;
 - b) a freehold estate;
 - c) a commercial lease that is neither an agricultural lease nor a pastoral lease;
 - d) an exclusive agricultural lease or exclusive pastoral lease;
 - e) a residential lease;
 - f) a community purpose lease;
 - g) a lease dissected from a mining lease and referred to in s.23B(2)(c)(vii) of the Native Title Act 1993 (Cth);
 - h) any lease (other than a mining lease) that confers a right of exclusive possession over particular land or waters.
3. Subject to paragraphs 5 and 6, the area covered by the application excludes any land or waters covered by the valid construction or establishment of any public work, where the construction or establishment of the public work commenced on or before 23 December 1996.
4. Subject to paragraphs 5 and 6, exclusive possession is not claimed over areas which are subject to valid previous non-exclusive possession acts done by the Commonwealth, State or territory.
5. Subject to paragraph 7 below, where the act specified in paragraphs 2, 3 and 4 falls within the provisions of:
 - a) s.23B(9) - Exclusion of acts benefiting Aboriginal Peoples or Torres Strait Islanders;
 - b) s.23B(9A) - Establishment of a national park or state park;
 - c) s.23B(9B) - Acts where legislation provides for non-extinguishment;
 - d) s.23B(9C) - Exclusion of Crown to Crown grants; and
 - e) s.23B(10) - Exclusion by regulationthe area covered by the act is not excluded from the application.
6. Where an act specified in paragraphs 2, 3 and 4 affects or affected land or waters referred to in:
 - a) s.47 - Pastoral leases etc covered by claimant application;
 - b) s.47A - Reserves covered by claimant application;
 - c) s.47B - Vacant Crown land covered by claimant applicationthe area covered by the act is not excluded from the application.
7. The area covered by the application excludes land or waters where native title rights and interests claimed have been otherwise extinguished.
8. The area covered by the application excludes the land and waters covered by the Barkandji People's native title determination application NSD6084/1998 (Barkandji Traditional Owners #8 v Attorney General of NSW) (NC97/32).

Persons claiming to hold native title:

The Ngemba/Ngiyampaa People are the native title claim group on whose behalf the Applicant makes this application. The native title claim group comprises all the descendants of the following apical ancestors:

Caroline Hilt (who was born on the Barwon River around 1847);
Thomas Sullivan (who was born in Brewarrina about 1860);
Nellie Colless (who was born in Brewarrina around 1868);
Billy Coleman (who was born in Cobar in 1840);

Mary Ann Allen (who was born in 1844);
Moses Biggs (who was born in 1837);
Polly Parkes (who was born in 1846);
Anne Brandy (who was born in Colane in 1874);
Caroline Brandy (who was born on Duck Creek in 1869);
Wadna Boe (who was born in 1848);
Richard King (who was born in 1827);
Jimmy Keewong (who was born in 1849);
Kitty Narrangie;
Tom Dennis (who was born in Brewarrina in 1864);
Winnie Pierce (who was born in Brewarrina in 1878);
Jack Dennis (who was born on the Barwon River in around 1855);
Kate Baker (who was born in Boorooma in 1874);
Francis "Tracker" Williams (who was born in Gundabooka in 1883);
William Johnson (who was born in Big Willandra in 1876);
Henry Parkes (who was born in 1863);
Topsy Harris also known as Topsy Scotty (who was born in Marfield in 1866);
Jack Redtank;
Thomas Williams also known as Thomas Broughton (who was born in Roto);
Maggie Redtank (who was born in Keewong in 1868);
Ada Arnott (who was born in Nyngan in 1865);
Moses Divine;
Jack Smith (who was born in Mossgiel in 1869);
Ellen Sprowl also known as Ellen McHughes (who was born in Brewarrina in 1867);
Fanny Hippi also known as Fanny Williams;
Millie Wells also known as Millie Shearer (who was born in Brewarrina in 1874);
Pluto Williams (who was born in Trida/Mossgiel in 1873);
Steve Shaw (who was born in Coronga Peak in 1855);
Fanny Brown also known as Tiltagara Fanny (who was born in Hillston in 1862);
David Brown (who was born on the Macquarie River in 1850);
Janey Brown (who was born on the Macquarie River in 1853);
Betsy Gwen (who was born in Haddon Rigg near Warren in 1849);
Louise Hinton (who was born on the Macquarie River in 1843);
Cissy Lee (who was born in 1852);
Boorooma Murphy (who was born in Boorooma in 1832);
Harry Murphy (who was born in Brewarrina around 1871);
Thomas Nixon (who was born in Buttabone in 1843);
Colaine Lumpy (who was born in 1864);
Charlotte Wilson;
Tilly Riley (who was born in 1863);
Geordie Murray (who was born in 1851 in Ivanhoe).

Registered native title rights and interests:

The following Native Title Rights & Interests were entered on the Register on 12/04/2012:

1. Where exclusive native title can be recognised (such as areas where there has been no prior extinguishment of native title or where s.238 and/or ss.47, 47A, 47B apply), the Ngemba/Ngiyampaa People as defined in Schedule A of this application, claim the right to possession, occupation, use and enjoyment of the lands and waters of the application area to the exclusion of all others subject to the valid laws of the Commonwealth and the State of New South Wales.
2. Where exclusive native title cannot be recognised, the Ngemba/Ngiyampaa People as defined in Schedule A of this application, claim the following non-exclusive rights and interests including the right to conduct activities necessary to give effect to them:
 - (a) the right to access the application area;
 - (b) the right to use and enjoy the application area;
 - (c) the right to move about the application area;
 - (d) the right to camp on the application area;

- (e) the right to erect shelters and other structures on the application area;
- (f) the right to live being to enter and remain on the application area;
- (g) the right to hold meetings on the application area;
- (h) the right to hunt on the application area;
- (i) the right to fish in the application area;
- (j) the right to have access to and use the natural water resources of the application area;
- (k) the right to gather and use the natural resources of the application area (including food, medicinal plants, timber, tubers, charcoal, wax, stone, ochre and resin as well as materials for fabricating tools, hunting implements, making artwork and musical instruments);
- (l) the right to share and exchange resources derived from the land and waters within the application area;
- (m) the right to participate in cultural and spiritual activities on the application area;
- (n) the right to maintain and protect places of importance under traditional laws, customs and practices in the application area;
- (o) the right to conduct ceremonies on the application area;
- (p) the right to transmit traditional knowledge to members of the native title claim group including knowledge of particular sites on the application area;
- (q) the right to speak for and make non-exclusive decisions about the application area in accordance with traditional laws and customs;
- (r) the right to speak authoritatively about the application area among other Aboriginal People in accordance with traditional laws and customs; and
- (s) the right to control access to or use of the lands and waters within the application area by other Aboriginal People in accordance with traditional laws and customs.

3. The native title rights and interests referred to in paragraph 2 do not confer possession, occupation, use or enjoyment of the lands and waters of the application area to the exclusion of all others.

4. The native title rights and interests are subject to and exercisable in accordance with:

- (a) the laws of the State of New South Wales and the Commonwealth of Australia including the common law;
- (b) the rights (past or present) conferred upon persons pursuant to the laws of the Commonwealth and the laws of the State of New South Wales; and
- (c) the traditional laws and customs of the Ngemba/Ngiyampaa People for personal, domestic and communal purposes (including social, cultural, religious, spiritual and ceremonial purposes).

Register attachments:

- 1. A map showing the boundaries of the area covered by the application , Attachment C of the Application, 1 page - A3, Attached 14/03/2012.
- 2. Description of the area covered by the application, Attachment B of the Application, 4 pages - A4 , Attached 14/03/2012.

Note: *The Register may, in accordance with s.188 of the Native Title Act 1993, contain confidential information that will not appear on the Extract.*



Searching the NNTT Registers in New South Wales

Search service

On request the National Native Title Tribunal will search its public registers for you. A search may assist you in finding out whether any native title applications (claims), determinations or agreements exist over a particular area of land or water.

In New South Wales native title cannot exist on privately owned land including family homes or farms.

What information can a search provide?

A search can confirm whether any applications, agreements or determinations are registered in a local government area. Relevant information, including register extracts and application summaries, will be provided.

In NSW because we cannot search the registers in relation to individual parcels of land we search by local government area.

Most native title applications do not identify each parcel of land claimed. They have an external boundary and then identify the areas not claimed within the boundary by reference to types of land tenure e.g., freehold, agricultural leasehold, public works.

What if the search shows no current applications?

If there is no application covering the local government area this only indicates that at the time of the search either the Federal Court had not received any claims in relation to the local government area or the Tribunal had not yet been notified of any new native title claims.

It does not mean that native title does not exist in the area.

Native title may exist over an area of land or waters whether or not a claim for native title has been made.

Where the information is found

The information you are seeking is held in three registers and on an applications database.

National Native Title Register

The National Native Title Register contains determinations of native title by the High Court, Federal Court and other courts.

Register of Native Title Claims

The Register of Native Title Claims contains applications for native title that have passed a registration test.

Registered claims attract rights, including the right to negotiate about some types of proposed developments.

Register of Indigenous Land Use Agreements

The Register of Indigenous Land Use Agreements contains agreements made with people who hold or assert native title in an area.

The register identifies development activities that have been agreed by the parties.

Application summaries

An application summary contains a description of the location, content and status of a native title claim.

This information may be different to the information on the Register of Native Title Claims, e.g., because an amendment has not yet been tested.

How do you request a search?

A search request form is available on the Tribunal's web site at:
<http://www.nntt.gov.au/registers/search.html>
Mail, fax or email your request to the Tribunal's Sydney registry, identifying the local government area/s you want searched.

Email: NSWEnquiries@nntt.gov.au

Fax: (02) 9227 4030

Address: GPO Box 9973, Sydney NSW 2001

Phone: (02) 9227 4000

Application Summary Attachment:
NSD415/2012 (NC12/1),
External boundary description
Attachment B of the Application
Page 1 of 4, A4, 14/03/2012

Page 1 of 4

External boundary description

The application area covers all the land and waters within the external boundary described as:

Commencing at the southernmost point of the application at the intersection of the centrelines of the Roto Road reserve and the Lachlan River at Hillston and extending generally north westerly along the centreline of that road reserve to Mossiel Trunk Road; then generally westerly along the centreline of that road reserve to the Cobb Highway; then generally north westerly along the centreline of that road reserve to the Ivanhoe – Menindee Road; then generally westerly along the centreline of that road reserve to the eastern boundary of native title determination application NSD6084/98 Barkandji Traditional Owners 8 (NC97/32) at Longitude 144.206842° East; then continuing along the boundaries of that native title determination application, also described as:

From the centreline of the Ivanhoe – Menindee Road reserve at Longitude 144.206842° East; and extending northerly to the western boundary of Lot 4594 on DP767758 at Latitude 32.301343° South; then generally northerly along the western boundaries of that lot to the easternmost corner of Lot 776 on DP762100; then north westerly along the boundaries of that lot to the easternmost corner of Lot 775 on DP762082; then continuing north westerly and south westerly along the boundaries of that lot to the southernmost corner of Lot 774 on DP762102; then south westerly, north westerly, north easterly and south easterly along the boundaries of that lot to the southernmost corner of Lot 1979 on DP763987; then generally north easterly and north westerly along the boundaries of that lot to the westernmost corner of Lot 4595 on DP767759; then generally north easterly along the north western boundaries of that lot and Lot 1130 on DP762534 to the easternmost corner of Lot 939 on DP762071; then north westerly along the boundary of that lot to the southern boundary of the Barrier Highway road reserve; then north easterly and generally easterly along the southern boundaries of that road reserve to Longitude 144.803043° East; then generally north easterly through Longitude 144.804560° East, Latitude 31.576881° South to a point on the western boundary of Lot 1282 on DP762978 at Latitude 31.429323° South; then north westerly to the westernmost corner of that lot; then generally north easterly along the north western

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Application Summary Attachment:
NSD415/2012 (NC12/1),
External boundary description
Attachment B of the Application
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boundaries of that lot, Lot 1283 on DP762979 and Lot 4176 on DP766743 to the easternmost corner of Lot 5412 on DP768323, being the point at where it leaves the boundary of native title determination application NSD6084/98 Barkandji Traditional Owners 8 (NC97/32).

Then continuing generally north easterly along the north western boundaries of Lot 4176 on DP766743, Lot 4177 on DP766744, Lot 4857 on DP769170 and onwards across Louth Road to the western boundary of Lot 2 on DP803696; then generally northerly along the south western boundary of that lot, south western and north western boundaries of Lot 964 on DP762132, south western boundary of Lot 3610 on DP765962, south western and north western boundaries of Lot 3609 on DP765961, western boundary of Lot 933 on DP762220, south western and north western boundaries of Lot 625 on DP761643 to its northernmost corner; then continuing north easterly across Gunderbooka Kings Cross Road to the western boundary of Lot 1394 on DP763061; then generally northerly along the western and northern boundaries of that lot to the western most corner of Gundabooka National Park; then generally north easterly along the northern boundaries of that national park to the northernmost boundary of Lot 3147 on DP765352; then north easterly along the boundary of that lot to the western boundary of Lot 2250 on DP764515; then north westerly and easterly along the boundaries of that lot and onwards to the centreline of the Kidman Way road reserve; then generally northerly along the centreline of that road reserve to the prolongation westerly of the southern boundary of Lot 4678 on DP767842; then easterly to and along the southern boundary of that lot and Lot 263 on DP760955; then generally northerly along the eastern boundaries of that lot to the eastern boundary of an unnamed road reserve located between Lot 4291 on DP767038 and Lot 61 on DP751841; then northerly to centreline of that unnamed road reserve; then generally north easterly along the centreline of that road reserve to the western boundary of the Mitchell Highway; then continuing north easterly across that highway to the westernmost corner of Lot 52 on DP751841; then generally north easterly along the western boundary of that lot, eastern boundary of Lot 4133 on DP766638, western boundaries of Lot 40 on DP751867, Lot 42 on DP751867, Lot 6830 on DP43320 and Lot 6829 on DP43320 to the Kamilaroi Highway; then continuing north easterly across that highway to the centreline of an unnamed road reserve located parallel to the western boundary of Lot 39 on DP751867; then generally northerly along that road reserve to the prolongation southerly of the easternmost boundary of Lot 59 on DP751867, then generally northerly to and along the eastern boundary of that lot and the eastern

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Application Summary Attachment:
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boundary of Lot 4357 on DP767194 to the Darling River and onwards to its centreline; then generally northerly, generally easterly and generally south easterly along the centreline of that river, the Barwon River, the Macquarie River and the Castlereagh River to the centreline of the Newell Highway at Gilgandra; then north westerly along the centreline of that highway road reserve to the Oxley Highway; then north easterly and generally westerly along the centreline of that highway road reserve to Nancarrow Road; then generally southerly along the centreline of that road reserve to Boothaguy Creek; then generally westerly along the centreline of that creek to again the Oxley Highway; then generally south westerly along the centreline of that highway road reserve to the Gunningbar Creek; then generally north westerly along the centreline of that creek to the Albert Priest Channel; then generally westerly along the centreline of that channel to an unnamed road reserve which bisects Lot 2 on DP232612; then generally south westerly along the centreline of that road reserve to the Mitchell Highway at Mullengudgerly; then generally north westerly along the centreline of that highway road reserve to the Bogan River at Nyngan; then generally southerly along the centreline of that river to Bulbodney Creek; then generally southerly along the centreline of that creek to Tigers Creek; then generally south westerly along the centreline of that creek to Yarra Yarra Creek; then generally south westerly along the centreline of that creek to Longitude 146.921830° East, then westerly to an unnamed watercourse at approximately Longitude 146.911275° East, Latitude 32.558960° South; then generally westerly along the centreline of that watercourse to Fiveways Road; then westerly approximately 500 metres to an unnamed watercourse at Latitude 32.557767° South; then generally south westerly along the centreline of that unnamed watercourse to Tinda Creek; then generally southerly along the centreline of that creek to Morumbil Swamp; then generally south westerly along the centreline of that swamp, Crowie Creek, Booberoi Creek and the Lachlan River back to the commencement point.

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Application Summary Attachment:
NSD415/2012 (NC12/1),
External boundary description
Attachment II of the Application
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Data Reference and source

- Application boundary data compiled by National Native Title Tribunal based on data provided by NTSCORP.
- Native title determination application NSD6084/98 Barkandji Traditional Owners 8 (NC97/32) as accepted for registration on 2 November 2006.
- Cadastre data sourced from Public Sector Mapping Agency (November 2010).
- Roads based on easement data sourced from LPM Authority, NSW.
- Rivers / Creeks based on easement data, 1:100,000 topographic data which is © Commonwealth of Australia and is supplied by Geomage Pty Ltd under licence from Geoscience Australia and information supplied by NTSCORP (based on 2007 LPI topographic data).

Reference datum

Geographical coordinates have been provided by the NNTT Geospatial Services and are referenced to the Geocentric Datum of Australia 1994 (GDA94), in decimal degrees and are based on the spatial reference data acquired from the various custodians at the time.

Use of Coordinates

Where coordinates are used within the description to represent cadastral or topographical boundaries or the intersection with such, they are intended as a guide only. As an outcome to the custodians of cadastral and topographic data continuously recalculating the geographic position of their data based on improved survey and data maintenance procedures, it is not possible to accurately define such a position other than by detailed ground survey.

Prepared by Geospatial Services, National Native Title Tribunal (19 August 2011)

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Attachment C – Map of the Area covered by the application



11-13 Marrsfield Street
Glebe NSW 2037
PO Box 112, Glebe NSW 2037
02 9562 6337 02 9562 6350

Gerard Niemoeller
On Site Cultural Heritage Management
PO Box 574
NAROOMA NSW 2546

Dear Gerard

Re: Request - Search for Registered Aboriginal Owners

I refer to your letter dated 12 September 2012 regarding Aboriginal Stakeholders within Girilambone area, NSW.

I have searched the Register of Aboriginal Owners and the project area described does not have Registered Aboriginal Owners pursuant to Division 3 of the *Aboriginal Land Rights Act 1983* (NSW).

I suggest you contact the Nyngan Local Aboriginal Land Council. They may also be able to assist you in identifying other Aboriginal stakeholders for this project.

Yours sincerely

Shannon Williams
Project Officer
Office of the Registrar, *Aboriginal Land Rights Act* (1983)

18 September 2012



18 September 2012 ref: oeh 18-9-12/1cor

Mr G. Niemoeller
OnSite Cultural Heritage Management Pty Ltd
PO Box 574
NAROOMA NSW 2546

Dear Mr. Niemoeller

ACHA / AHIP : Avoca Tank Project (Stage 2) - Girilambone

I refer to your letter/notice dated 12/9/2012 received 17/9/2012.

Please refrain from forwarding notices of the subject nature via email – it is requested that you please send via Australia Post to: **Notifications Officer – PO Box 2105 STRAWBERRY HILLS NSW 2012.**

I acknowledge that section 4.1.2 of the Office of Environment & Heritage's Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 require you to contact Ntscorp in order to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining the cultural significance of Aboriginal objects and/or places. However, NTSCORP's privacy guidelines restrict us from providing proponents with contact details of traditional owners who may have such an interest or hold such knowledge.

In response to your notification, NTSCORP will forward your correspondence to any individuals, groups and organisations whom NTSCORP is aware assert traditional interests within or hold cultural knowledge about the relevant area. Recipients of our correspondence will be invited to register their interest in the project directly with you as soon as possible.

Please be aware that NTSCORP cannot make a guarantee or undertaking that the recipients of our correspondence represent the entirety of traditional owners for the relevant area. In order to undertake the said process, a time frame of 21 days is required. The subject notice will be processed as soon as possible.

You might wish to note that my attempts to contact you via email on each of gniemoeller@skymesh.com.au and gerard@onsitechm.com.au were returned as "undeliverable".

Yours faithfully

A handwritten signature in black ink, appearing to read 'Peter Schultz'.

Peter Schultz
Senior Land Tenure & Notifications Officer

012 9310 3188

012 9310 3177

71 098 971 209
www.ntscorp.com.au



Pty Ltd

PO Box 574 NAROOMA NSW 2546

gerard@onsitechm.com.au

ABN: 43 329 728 630

Ph: 0414441896

www.onsitechm.com.au

Our Ref: A018

9 October 2012

Registering Interest for an Aboriginal Cultural Heritage Assessment and Aboriginal Heritage Impact Permit application – Girilambone Avoca Tank Project (Stage 2), Bogan Shire Council NSW 2831

I am writing to you in accordance with Section 4.1.3 of the ***Aboriginal cultural heritage consultation requirements for proponents***.

Tritton Resources Limited Pty is in the early stage of exploring a newly identified resource to the north of its Girilambone Copper Mine, currently referred to as the Avoca Tank Project. The Avoca Tank Project land is divided into two stages and situated across 18.62km². The land is located approximately 4 kilometres north west of Girilambone NSW 2831 along the Mitchell Highway.

The Avoca Tank **Stage 1** project land covers approximately 8.7km² across part of Lots 10, 135 and 144 (DP 751315) on the Coolabah 8235 1:100,000 map sheet. The Stage 1 land was the subject of a previous Aboriginal Cultural Heritage Assessment by On Site Cultural Heritage Management between April and August (2012).

On Site Cultural Heritage Management has now been contracted to conduct an Aboriginal Cultural Heritage Assessment of the adjoining Avoca Tank **Stage 2** project land across 9.90 km², part of Lot 3 (DP 751342), Lots 10 and 135 (DP 751315) on the Coolabah 8235 1:100,000 map sheet). The assessment may result in an application for an Aboriginal Heritage Impact Permit (AHIP) pursuant to the *NSW National Parks and Wildlife Act*. A map showing the location of the Avoca Tank project area (Stages 1 and 2) is attached.

Purpose of this letter

The preparation of an AHIP requires the proponent to establish a ***Register of Interest*** for the project and undertake community consultation as outlined in the Office of Environment and Heritage ***Aboriginal cultural heritage consultation requirements for proponents***. These requirements set out and establish a 4 stage consultation process.

Your details were provided to me in response to correspondence to those organisations listed in Section 4.1.2 of the *Aboriginal cultural heritage consultation requirements for proponents*. I am now writing to you in accordance with Section 4.1.3 of those requirements. A list of organisations and individuals corresponded with as part of this process is also attached for your information.

More specifically the proponent has engaged the services of **On Site Cultural Heritage Management** to:

- undertake the community consultation process as per the *Aboriginal cultural heritage consultation requirements for proponents*
- undertake an Aboriginal Cultural Heritage Assessment of the Avoca Tank Project (Stage 2) and
- prepare Aboriginal Heritage Impact Permit application (if required)

The purpose of establishing the Register of Interest is to formally identify and undertake community consultation with Aboriginal people who hold cultural knowledge relevant to determining the significance of the Avoca Tank project area (Stage 2) or Aboriginal objects within the subject land (9.90 km² across part of Lot 3 (DP 751342), Lots 10 and 135 (DP 751315) on the Coolabah 8235 1:100,000 map sheet and within the Bogan Shire).

The purpose of Aboriginal community consultation is to assist the proponent in the preparation of an application for an Aboriginal Heritage Impact Permit (AHIP) and to assist the Director General of the Office of Environment and Heritage in his or her consideration and determination of that application.

Should you decide to register your interest you will be provided with further information consisting of a proposed methodology for the project (in accordance with Stage 2 of the consultation requirements) and a list of questions to assist OEH in understanding the cultural value of the project area (to assist with Stage 3).

I am also required to inform you that should you decide to register your interest your details will be forwarded to Office of Environment and Heritage, Dubbo and the Nyngan Local Aboriginal Land Council unless you specify that you do not want your details released.

If you hold cultural knowledge relevant to determining the cultural significance of the Aboriginal objects located within the Avoca Tank project area or Aboriginal objects within the subject land (9.90 km², part of Lot 3 (DP 751342), Lots 10 and 135 (DP 751315) on the Coolabah 8235 1:100,000 map sheet and within the Bogan Shire then I invite you to register your interest for this project. You can register your interest by writing a letter, email or telephoning me by 24 October 2012. My contact details are provided above. If you are registering your organisation then please provide the name and details of a nominated contact person.

Please note that any registrations of interest received after 24 October 2012 will not be included on the register. A notice inviting registrations of interest and participation in the community consultation process also appeared in the Public Notices of the Nyngan Observer on Wednesday 10 October 2012.

Please contact me should you require any further information or wish to discuss this proposal.

Regards

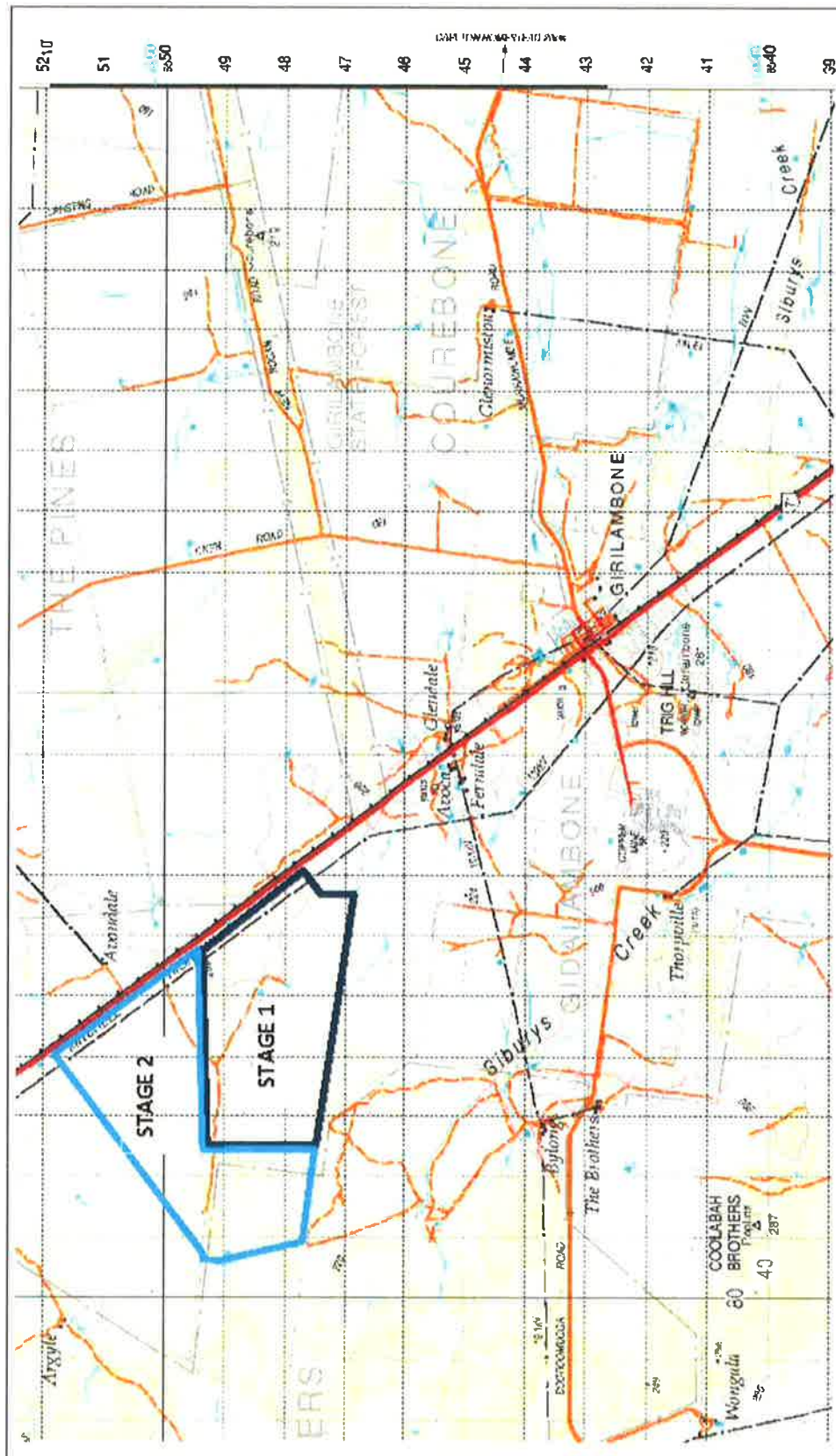


Gerard Niemoeller
Principal Heritage Consultant

List of Aboriginal organisations / individuals identified during Stage 4.1.2 of Aboriginal cultural heritage consultation requirements for proponents and invited to register interest as part of this assessment

Aboriginal Organisation / Individual Name	Address	Contact Details
Bogan Aboriginal Corporation CEO Lesly Ryan	46 Nymagee St PO Box 345 NYNGAN NSW 2825	boganac@netxp.com.au Ph: (02) 6832 1750 M: 0419418851
Nyngan Local Aboriginal Land Council / Vaneta Dutton CEO	PO Box 43 NYNGAN NSW 2825	nynganlalc@bigpond.com
Marra Wallan Pty Ltd Mr John Shipp CEO	79 Thompson Street / PO BOX 6088 Dubbo NSW 2830	John@marrawallan.com.au john.shipp@bigpond.com
NTS Corp Ltd on behalf of Native Title application for the Ngemba/Ngiyampaa People (Federal Court number: NSD415/12, NNTT number: NC12/1) and Native Title applicants: Mrs Elaine Ohlsen Mr Peter Williams Mr Brett Smith Ms Danielle Flakeler-Carney Mr Neville Merritt Mr Edward Shipp Mr John Shipp Ms Grace Gordon Mr Jason Ford (identified by National Native Title Tribunal)	NTSCORP Ltd Notifications Officer PO Box 2105 STRAWBERRY HILLS NSW 2012. Unit 1a Suite 2.02, 44-70 Rosehill Street REDFERN NSW 2016	Phone: (02) 9310 3188 Fax: (02) 9310 4177
Trevor Robinson	PO Box 73, Peak Hill NSW 2869	
Wiradjuri Interim Working party	PO Box 73, Peak Hill NSW 2869	

Figure 1: Avoca Tank project area (Stage 2) shown in light blue polygon (9.90 km²), part of Lot 3 (DP 751342), Lots 10 and 135 (DP 751315) on the Coolabah 8235 1:100,000 map sheet. The adjoining Stage 1 area (8.72km²) across part of Lots 10, 135 and 144 (DP 751315) is shown in the dark blue polygon and was the subject of a previous Aboriginal Cultural Heritage Assessment by On Site CHM (2012).





Pty Ltd

PO Box 574 NAROOMA NSW 2546

gerard@onsitechm.com.au

Ph: 0414441896

www.onsitechm.com.au

ABN: 48 089 066 744

Our Ref: A018

26 October 2012

ABORIGINAL CULTURAL HERITAGE ASSESSMENT - Methodology and Significance

Avoca Tank Project – Stage 2 (Tritton Resources) Girilambone, Bogan Shire NSW 2831

TO THE REGISTERED ABORIGINAL PARTIES:

Bogan Aboriginal Corporation - Lesly Ryan, CEO
Nyngan Local Aboriginal Land Council - Vaneta Dutton CEO
Native Title Services for Ngemba/Ngiyampaa Claimants – c/o Neville Kim

1.0 INTRODUCTION

This document is provided to the 'Registered Aboriginal Parties' in accordance with Stage 2 and Stage 3 (Sections 4.2 and 4.3) of the ***Aboriginal cultural heritage consultation requirements for proponents 2010 (Requirements)***.

The Registered Aboriginal Parties are those persons and organisations who registered their interest as part of Stage 1 (Section 4.1.3) of the Requirements and in response to:

- Correspondence of 9 October 2012 or
- The notice inviting registrations of interest and participation in the community consultation process that appeared in the Public Notices of the Nyngan Observer on Wednesday 10 October 2012.

The names of the Registered Aboriginal Parties are listed above at the top of this correspondence their contact details are included at the end of this document. Information about the project is provided below in Section 2.0.

According to Section 1.1 (pg 1), the purpose of the *Aboriginal cultural heritage consultation requirements for proponents* document is to establish the requirements for consultation with the Registered Aboriginal Parties as part of the heritage assessment process, to determine potential impacts of proposed activities on Aboriginal objects and places and to inform decision making for any application for an AHIP.

The aim is to facilitate positive Aboriginal cultural heritage outcomes by (Section 1.1, pg 1):

- affording an opportunity for Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects(s) and/or place(s) in the area of the proposed project to be involved in consultation so that information about cultural significance can be provided to OEH to inform decisions regarding applications for an AHIP
- providing Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects (s) and/or place(s) in the area of the proposed project with the opportunity to participate in decision making regarding the management of their cultural heritage by providing proponents information regarding cultural significance and inputting into management options.

2.0 THE PROJECT – AVOCA TANK (STAGE 2)

Tritton Resources Limited Pty is in the early stage of exploring a newly identified resource to the north of its Girilambone Copper Mine, currently referred to as the Avoca Tank Project. The Avoca Tank Project land is divided into two stages and situated across 18.62km². The land is located approximately 4 kilometres north west of Girilambone NSW 2831 along the Mitchell Highway.

The Avoca Tank **Stage 1** project land covers approximately 8.7km² across part of Lots 10, 135 and 144 (DP 751315) on the Coolabah 8235 1:100,000 map sheet. The Stage 1 land was the subject of a previous Aboriginal Cultural Heritage Assessment by On Site Cultural Heritage Management between April and August (2012).

On Site Cultural Heritage Management has been engaged to conduct an Aboriginal Cultural Heritage Assessment of the adjoining Avoca Tank **Stage 2** project land across 9.90 km², part of Lot 3 (DP 751342), Lots 10 and 135 (DP 751315) on the Coolabah 8235 1:100,000 map sheet). As part of the assessment process On Site CHM is also conducting community consultation as per the process in the *Aboriginal cultural heritage consultation requirements for proponents*.

The exploration proposed to be undertaken by Tritton Resources involves an exploratory drilling program across the area of 200+ drill holes. The majority of this program is intended to be air core drilling which is performed and launched from the back of a small specially modified 4WD truck requiring little to no clearing of drill pads.

Some further exploratory drilling using truck mounted rigs and requiring clearing of drill pads may also be undertaken in some localised areas within exploration area. The results of the exploratory drilling program will influence whether any future proposed mining will be proposed and the overall footprint of the project and mine layout (above ground open cut mining or underground mining).

The assessment may result in an application for an Aboriginal Heritage Impact Permit (AHIP) pursuant to the *NSW National Parks and Wildlife Act*. A map showing the location of the Avoca Tank project area (Stages 1 and 2) is attached.

3.0 METHODOLOGY FOR THIS ABORIGINAL CULTURAL HERITAGE ASSESSMENT

The aim of Stage 2 (Section 4.2) of the requirements is to provide registered Aboriginal parties with information about the scope of the proposed project and the proposed cultural heritage assessment process. Information about the project is provided above in Section 2.0

The methodology for the current assessment is proposed to include:

- Consultation with the Aboriginal Community to: identify Aboriginal traditional owners, elders and custodians who can speak about this place (*Registered Aboriginal Parties*); ascertain their views about the cultural significance of the Aboriginal objects; identify whether there are particular research themes or questions of interest that could be incorporated into any research design or addressed through archaeological assessment (*Stage 2 and 3 of the requirements – this document*)
- An AHIMS database search to identify previously recorded sites within or within proximity to the study area. *An AHIMS database search has identified that there are no previously recorded Aboriginal sites within the identified area.*
- Review of other relevant heritage registers (such as the Register of the National Estate, NSW State Heritage Register, Bogan Local Heritage Register). *A search of these databases has not identified any historic places or objects within the project Area.*
- Review relevant cultural heritage and archaeological reports to provide a regional and local context for the assessment of this Aboriginal place and associated objects
- Conduct a site assessment (survey) to identify, record and document information about Aboriginal objects relevant to determining and assessing the cultural heritage significance.
- Preparation of a report documenting the results of the above processes, assessment of the places significance and the formulation of appropriate heritage management strategies
- Preparation of an Aboriginal Heritage Impact Permit application (if required)

This assessment is being conducted in accordance with relevant DECCW policy and regulations and specifically:

- *Aboriginal cultural heritage consultation requirements for proponents 2010*
- *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*
- *Guide to investigation, assessing and reporting on Aboriginal Cultural heritage in NSW*
- *Applying for an Aboriginal Heritage Impact Permit: Guide for applicants*

4.0 CONSULTING WITH ABORIGINAL PEOPLE ABOUT THE SIGNIFICANCE OF THE PROJECT AREA

Stage 3 (Section 4.3) of the *Aboriginal cultural heritage consultation requirements for proponents 2010* requires the proponent to seek information about the cultural significance of the project area land and the Aboriginal objects or places that may be within. The purpose of this stage is also to facilitate a process whereby the registered Aboriginal parties can:

- a) contribute to culturally appropriate information gathering and the research methodology
- b) provide information that will enable the cultural significance of Aboriginal objects and/or places on the proposed project area to be determined
- c) have input into the development of any cultural heritage management options.

A list of questions about the proposed project and assessment is provided below. These questions are only suggestions and you may provide any additional information you feel is necessary to inform the proponent and OEH about the Aboriginal cultural significance or values of the project area.

1. Are there any objects or places of cultural value in the project area or in the immediate proximity? If so how do you think the proposed development might affect those values?
2. Do you have any cultural concerns or perspectives about this assessment or project?
3. Do you think there is the potential for burials to occur at the site? If so why?
4. Are there any particular research questions you would like to see answered through the archaeological assessment process?
5. Have you got any views about the management of the lands within the Avoca Tank Project Area that may not be impacted?
6. Is any of the information you have provided culturally sensitive and is it OK to print your views in a report?

5.0 PRELIMINARY ASSESSMENT

An AHIMS site search has been conducted for the Stage 2 area and reveals that there are no previously recorded Aboriginal objects or sites within the project area. An examination of topographic maps and aerial photography shows that the Stage 2 land is relatively flat, undifferentiated and there are no obvious features (such as sources of water, hills) that may have acted as foci points for Aboriginal occupation in the past.

Based on previous studies in the region the most likely Aboriginal sites types present in the project area will be stone artefacts, hearths/earth mounds and scarred trees. Given the potential absence (on maps) of potable water in the project and wider area these occurrences are predicted to be infrequent and isolated.

6.0 WHERE TO FROM HERE?

Registered Aboriginal parties have 28 days to review this document and provide information about the assessment methodology and significance of the project area. Your views and any written submissions you make will be incorporated into the assessment and report and provided to OEH.

If you would like to review this document and provide further comment please do so by Saturday 24 November 2012.

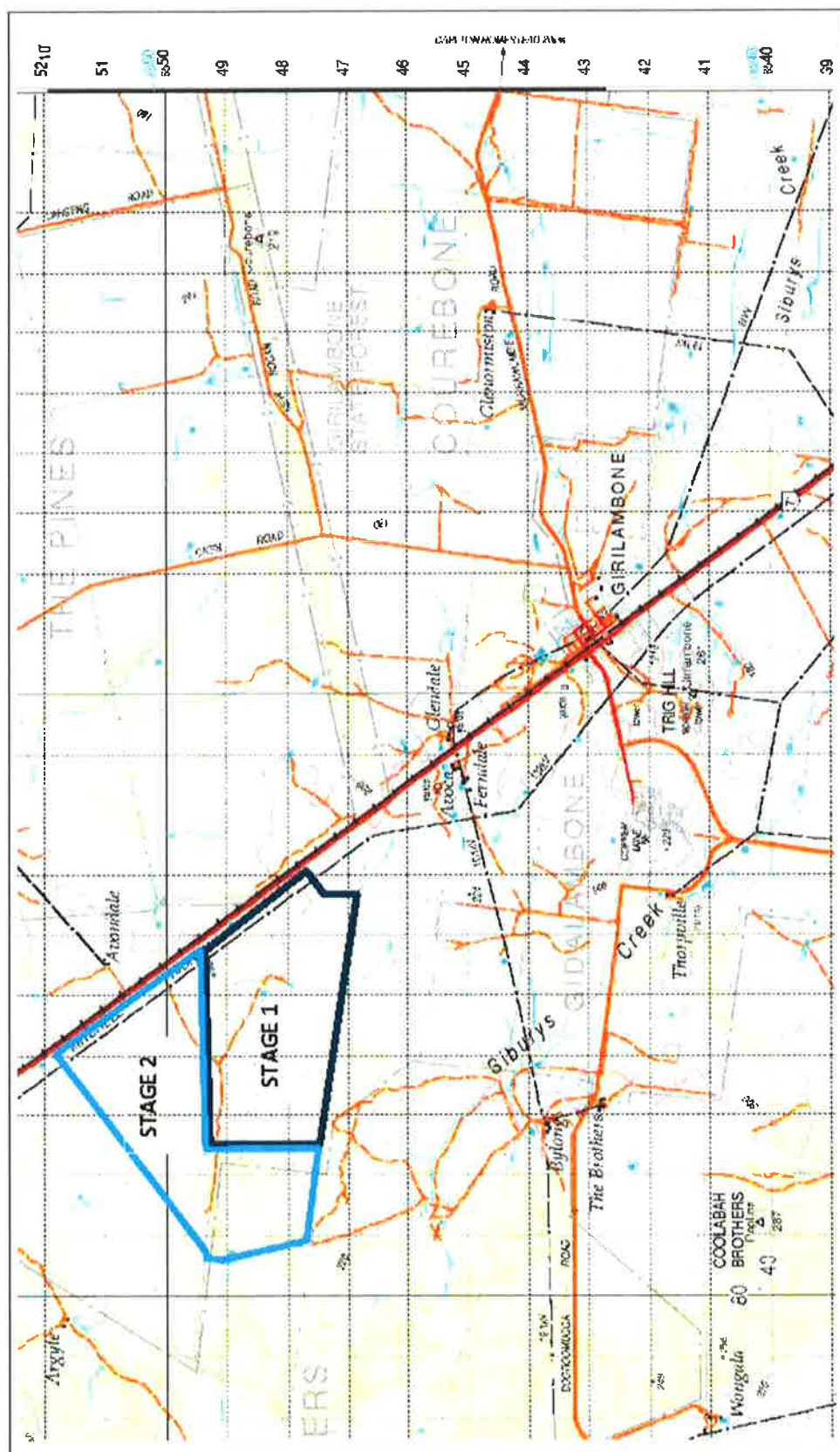
Registered Aboriginal parties will also have a further 28 days to review the final Aboriginal Cultural Heritage Assessment report.

Please contact Gerard Niemoeller of On Site Cultural Heritage Management on 0414441896 should you require any further information or wish to discuss this proposal.

List of Aboriginal organisations / individuals who registered their interest during Stage 4.1.3 of Aboriginal cultural heritage consultation requirements for proponents and as part of this assessment

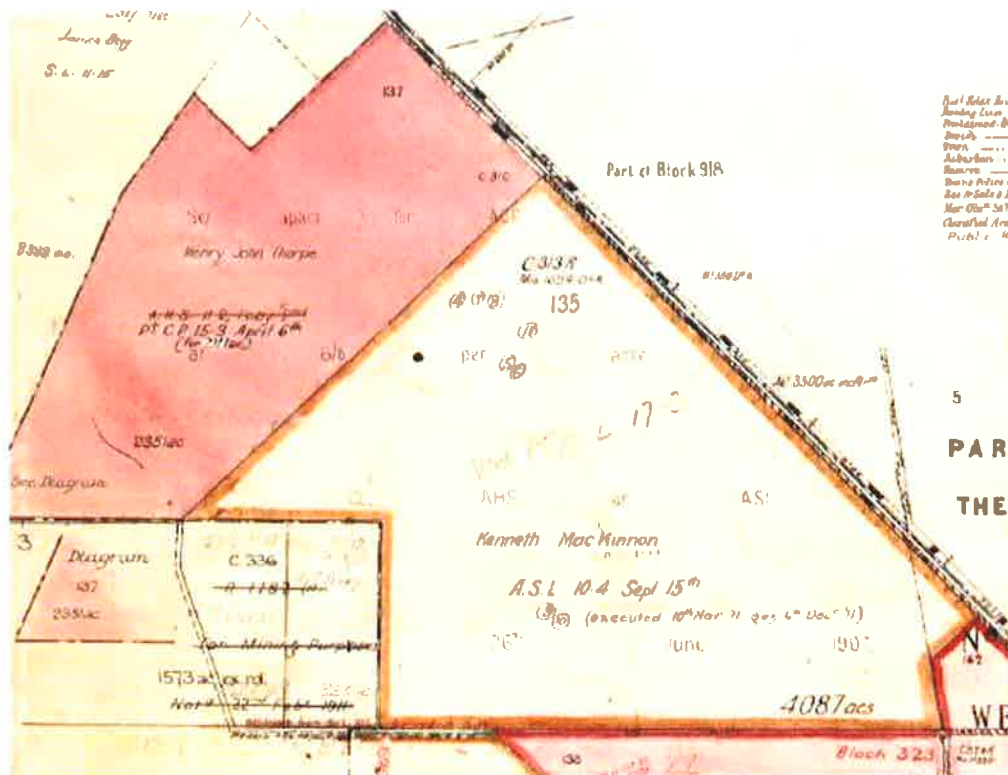
Aboriginal Organisation / Individual Name	Address	Contact Details
Bogan Aboriginal Corporation CEO Lesly Ryan	46 Nymagee St PO Box 345 NYNGAN NSW 2825	boganac@netxp.com.au Ph: (02) 6832 1750 M: 0419418851
Nyngan Local Aboriginal Land Council / Vaneta Dutton CEO	PO Box 43 NYNGAN NSW 2825	nynganlalc@bigpond.com
NTS Corp Ltd on behalf of Native Title application for the Ngemba/Ngiyampaa People (Federal Court number: NSD415/12, NNTT number: NC12/1) and Native Title applicants: Mrs Elaine Ohlsen Mr Peter Williams Mr Brett Smith Ms Danielle Flakeler-Carney Mr Neville Merritt Mr Edward Shipp Mr John Shipp Ms Grace Gordon Mr Jason Ford (identified by National Native Title Tribunal)	NTSCORP Ltd Notifications Officer PO Box 2105 STRAWBERRY HILLS NSW 2012. Unit 1a Suite 2.02, 44-70 Rosehill Street REDFERN NSW 2016	Phone: (02) 9310 3188 Fax: (02) 9310 4177

Figure 1: Avoca Tank project area (Stage 2) shown in light blue polygon (9.90 km²), part of Lot 3 (DP 751342), Lots 10 and 135 (DP 751315) on the Coolabah 8235 1:100,000 map sheet. The adjoining Stage 1 area (8.72km²) across part of Lots 10, 135 and 144 (DP 751315) is shown in the dark blue polygon and was the subject of a previous Aboriginal Cultural Heritage Assessment by On Site CHM (2012).

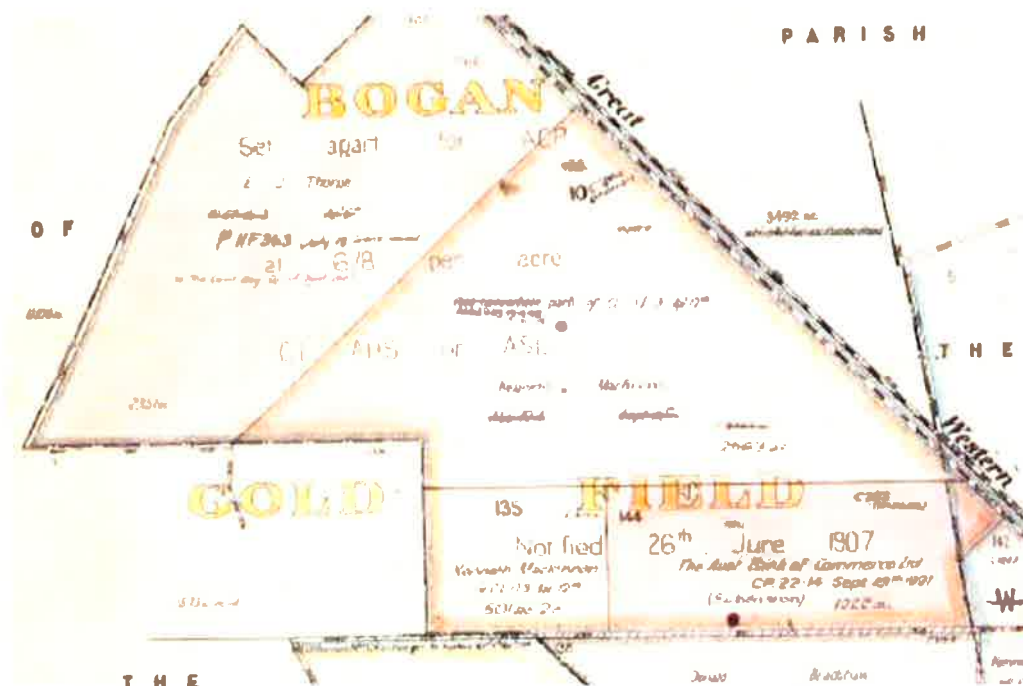


APPENDIX 3

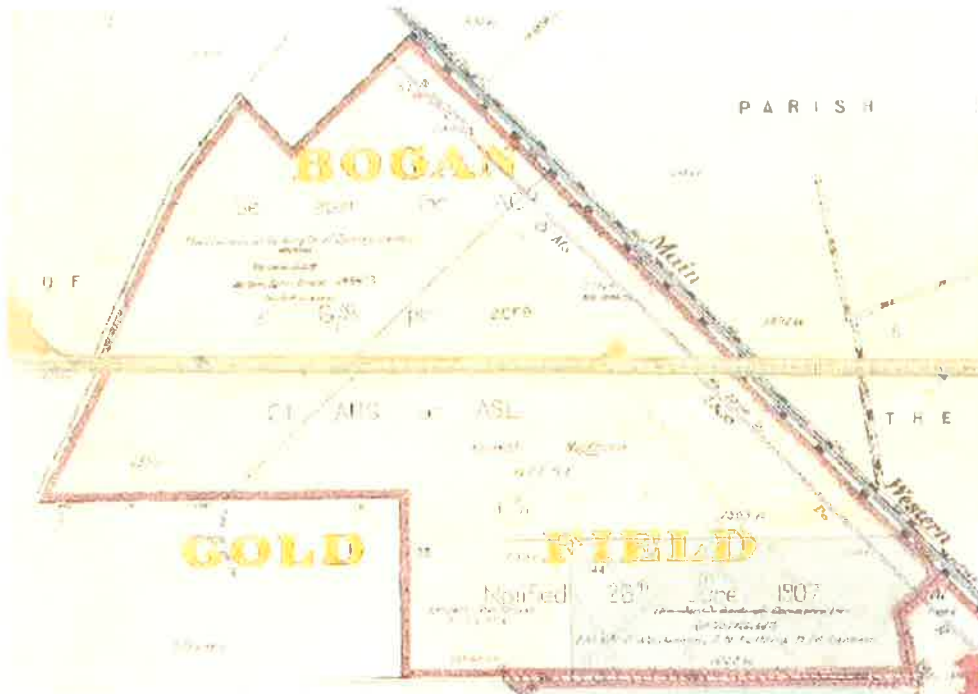
Appendix 3.1: Parish of Gidalmabone 1910 Map



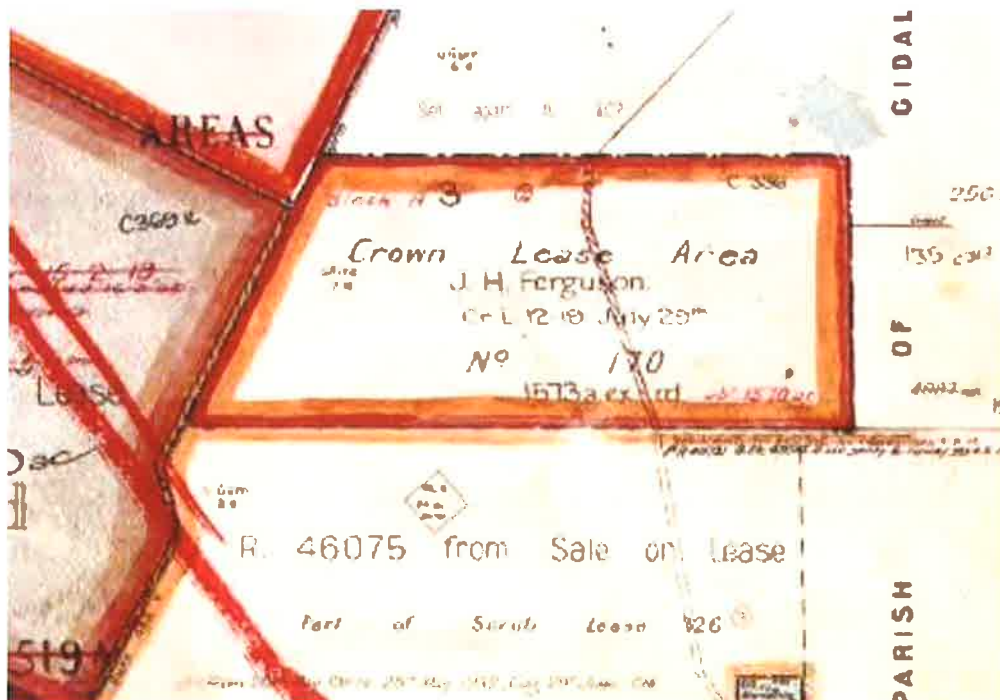
Appendix 3.2: Parish of Gidalmabone 1916 Map



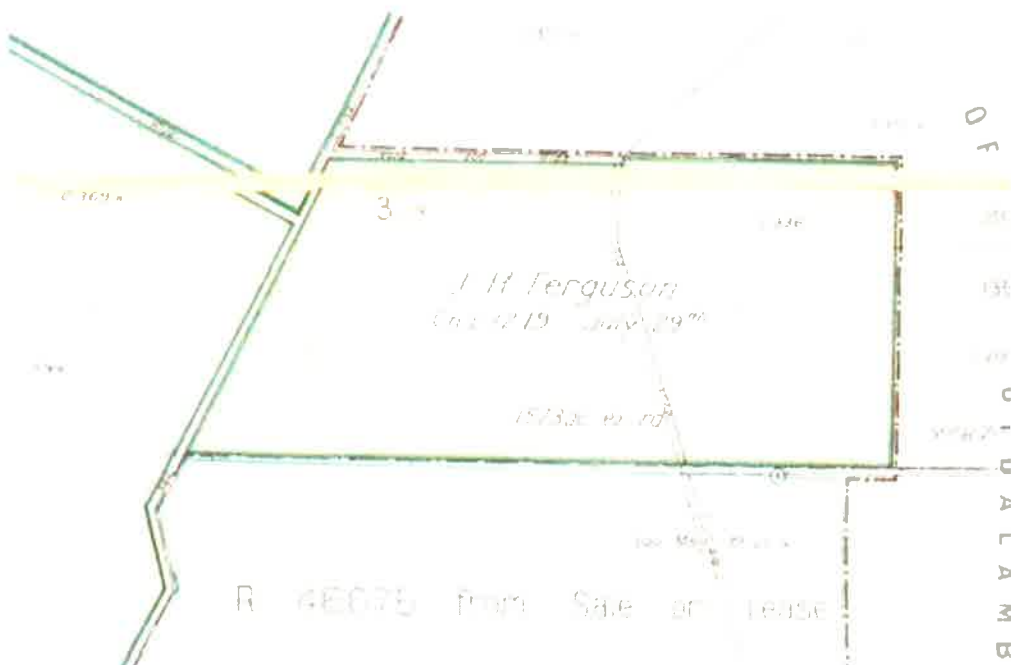
Appendix 3.3: Parish of Gidambone 1937 Map



Appendix 3.4: Parish Map of The Brothers 1911



Appendix 3.5: Parish Map of The Brothers 1926



Appendix 3.6: Parish Map of The Brothers 1957



APPENDIX 4



Office of
Environment
& Heritage

AHIMS Web Services (AWS) Search Result

Your Ref Number : A018

Client Service ID : 81416

Onsite Cultural Heritage Management - Narooma

Date: 26 September 2012

PO Box 574

Narooma New South Wales 2546

Attention: Gerard Niemoeller

Email: gerard@onsitechm.com.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum : GDA, Zone : 55, Eastings : 478000 - 488000, Northings : 6545000 - 6555000 with a Buffer of 0 meters, conducted by Gerard Niemoeller on 26 September 2012

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

57	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.

PO BOX 1967 Hurstville NSW 2220
43 Bridge Street HURSTVILLE NSW 2220
Tel: (02)9585 6345 (02)9585 6741 Fax: (02)9585 6094

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

AHIMS Web Services (AWS) Extensive search - Site list report										Your Ref Number : A01B Client Service ID : 81416	
SiteID	SiteName	Date	Zone	Easting	Northing	Contact	Site Status	Site Features	Site Types	Reports	
26-3-0067	GM-HS-28 (Hearth);Girilambone Copper Mine;	AGD	55	484710	6547330	Open site	Valid	Earth Mound : -; Hearth : -	Mound (Open)		
26-3-0068	GM-HS-29 (Hearth);Girilambone Copper Mine;	AGD	55	484680	6547340	Open site	Valid	Earth Mound : -; Hearth : -	Mound (Open)		
26-3-0070	GM-OS/HS-1 (Hearth);Girilambone Copper Mine;	AGD	55	484760	6548100	Open site	Valid	Earth Mound : -; Hearth : -; Artefact : -	Mound (Open), Open Camp Site		
26-3-0071	GC-OS/HS-2 (Hearth);Girilambone Copper Mine;	AGD	55	484760	6548100	Open site	Valid	Earth Mound : -; Hearth : -; Artefact : -	Mound (Open), Open Camp Site		
26-3-0017	GC-ST-11;Girilambone Copper Mine;	AGD	55	485880	6545950	Open site	Valid	Modified Tree (Carved or Scarred) :	Scarred Tree		
26-3-0018	GC-ST-12;Girilambone Copper Mine;	AGD	55	485880	6545950	Open site	Valid	Modified Tree (Carved or Scarred) :	Scarred Tree		
26-3-0019	GC-ST-13;Girilambone Copper Mine;	AGD	55	485860	6546010	Open site	Valid	Modified Tree (Carved or Scarred) :	Scarred Tree		
26-3-0020	GC-ST-14;Girilambone Copper Mine;	AGD	55	485860	6546010	Open site	Valid	Modified Tree (Carved or Scarred) :	Scarred Tree		
26-3-0021	GC-ST-15;Girilambone Copper Mine;	AGD	55	485860	6546010	Open site	Valid	Modified Tree (Carved or Scarred) :	Scarred Tree		
26-3-0022	GC-ST-16;Girilambone Copper Mine;	AGD	55	485830	6545730	Open site	Valid	Modified Tree (Carved or Scarred) :	Scarred Tree		
26-3-0023	GC-ST-17;Girilambone Copper Mine;	AGD	55	485830	6545730	Open site	Valid	Modified Tree (Carved or Scarred) :	Scarred Tree		

Report generated by AHIMS Web Service on 26/09/2012 for Gerard Niemoller for the following area at Datum : GDA, Zone : 55, Eastings : 478000 - 488000, Northings : 6545000 - 6555000 with a Buffer of 0 meters. Additional Info : Used to provide context for archaeological study. Number of Aboriginal sites and Aboriginal objects found is 57. This information is not guaranteed to be free from error, omission, Office of Environment and Heritage (NSW) and its employees do not accept liability for any act done or omission made on the information and consequences of such acts or omissions.

AHIMS Web Services (AWS)



Your Ref Number : A01B
Client Service ID : 81416

SiteID	SiteName	Datum	Zone	Easting	Northing	Contact	Site Status	SiteFeatures	SiteTypes	Remarks
26-3-0023	GC-ST-17;Girilambone Copper Mine;	AGD	55	486390	6545590	Open site	Valid	Modified Tree (Carved or Scarred) :	Scarred Tree	
26-3-0024	GC-ST-18;Girilambone Copper Mine;	Recorders	Central West Archaeological and Heritage Services Pty Ltd					Permits	Scarred Tree	
		AGD	55	486390	6545590	Open site	Valid	Modified Tree (Carved or Scarred) :		
26-3-0025	GC-ST-19;Girilambone Copper Mine;	Recorders	Central West Archaeological and Heritage Services Pty Ltd					Permits	Scarred Tree	
		AGD	55	486390	6545470	Open site	Valid	Modified Tree (Carved or Scarred) :		
26-3-0026	GC-ST-20;Girilambone Copper Mine;	Recorders	Central West Archaeological and Heritage Services Pty Ltd					Permits	Scarred Tree	
		AGD	55	486680	6545530	Open site	Valid	Modified Tree (Carved or Scarred) :		
26-3-0027	GC-ST-21;Girilambone Copper Mine;	Recorders	Central West Archaeological and Heritage Services Pty Ltd					Permits	Carved Tree,Scarred Tree	
		AGD	55	486650	6545500	Open site	Valid	Modified Tree (Carved or Scarred) :		
26-3-0028	GC-ST-22;Girilambone Copper Mine;	Recorders	Central West Archaeological and Heritage Services Pty Ltd					Permits	Carved Tree,Scarred Tree	
		AGD	55	486650	6545500	Open site	Valid	Modified Tree (Carved or Scarred) :		
26-3-0029	GC-ST-23;Girilambone Copper Mine;	Recorders	Central West Archaeological and Heritage Services Pty Ltd					Permits	Scarred Tree	
		AGD	55	487690	6545130	Open site	Valid	Modified Tree (Carved or Scarred) :		
26-3-0030	GC-ST-24;Girilambone Copper Mine;	Recorders	Central West Archaeological and Heritage Services Pty Ltd					Permits	Scarred Tree	
		AGD	55	487700	6545510	Open site	Valid	Modified Tree (Carved or Scarred) :		
26-3-0031	GC-ST-25;Girilambone Copper Mine;	Recorders	Central West Archaeological and Heritage Services Pty Ltd					Permits	Scarred Tree	
		AGD	55	485990	6545590	Open site	Valid	Modified Tree (Carved or Scarred) :		
	GC-ST-26;Girilambone Copper Mine;	Recorders	Central West Archaeological and Heritage Services Pty Ltd					Permits		

Report generated by AHIMS Web Service on 26/09/2012 for Gerard Niemoeller for the following area at Datum : GDA, Zone : 55, Eastings : 478000 - 488000, Northings : 6545000 - 6555000 with a Buffer of 0 meters. Additional Info : Used to provide context for archaeological study. Number of Aboriginal sites and Aboriginal objects found is 57. This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act or omission made on the information and consequences of such acts or omissions.

A5-170

AHIMS Web Services (AWS) Extensive search - Site list report									
StateID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	Site Features	Site Types
26-3-0032	GC-ST-26;Girilambone Copper Mine;	AGD	55	485760	6546080	Open site	Valid	Modified Tree (Carved or Scarred) :	Scarred Tree
26-3-0033	Context GC-ST-27;Girilambone Copper Mine;	Records AGD	55	484900	6545900	Open site	Valid	Modified Tree (Carved or Scarred) :	Scarred Tree
26-3-0034	Context GC-OS-1;Girilambone Copper Mine;	Records AGD	55	484760	6548100	Open site	Valid	Permits Artifact : -	Open Camp Site
26-3-0065	Context GM-HS-26;(Hearth);Girilambone Copper Mine	Records AGD	55	486680	6545530	Open site	Valid	Permits Earth Mound : ; Hearth : -	Mound (Oven)
26-3-0066	Context GM-HS-27;(Hearth);Girilambone Copper Mine	Records AGD	55	484630	6547340	Open site	Valid	Permits Earth Mound : ; Hearth : -	Mound (Oven)
26-3-0011	Context GC-ST-7;Girilambone Copper Mine;	Records AGD	55	485780	6544830	Open site	Valid	Permits Modified Tree (Carved or Scarred) :	Scarred Tree
26-3-0012	Context GC-ST-6;Girilambone Copper Mine;	Records AGD	55	485780	6544830	Open site	Valid	Permits Modified Tree (Carved or Scarred) :	Scarred Tree
26-3-0013	Context GC-ST-8;Girilambone Copper Mine;	Records AGD	55	486150	6545810	Open site	Valid	Permits Modified Tree (Carved or Scarred) :	Scarred Tree
26-3-0014	Context GC-ST-10;Girilambone Copper Mine;	Records AGD	55	485980	6546000	Open site	Valid	Permits Modified Tree (Carved or Scarred) :	Scarred Tree
26-3-0016	Context GC-ST-9;Girilambone Copper Mine;	Records AGD	55	485980	6546000	Open site	Valid	Permits Modified Tree (Carved or Scarred) :	Scarred Tree
26-3-0119	Context GC-OS-1	Records AGD	55	484760	6548100	Open site	Valid	Permits Artifact : 1	


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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	Site Features	Site Types	Reports
26-3-0144	GC-HS-26	Records	AGD	55 486680	6545530	Open site	Valid	Hearth : 1	Permits	
26-3-0145	GC-HS-27	Records	AGD	55 484630	6547340	Open site	Valid	Hearth : 1	Permits	
26-3-0146	GC-HS-28	Records	AGD	55 484710	6547330	Open site	Valid	Hearth : 1	Permits	
26-3-0147	GC-HS-29	Records	AGD	55 484680	6547340	Open site	Valid	Hearth : 1	Permits	
26-3-0149	GC-OS-HS-1	Records	AGD	55 484760	6548100	Open site	Valid	Hearth : 1	Permits	
26-3-0155	GC-ST-6	Records	AGD	55 485780	6544830	Open site	Valid	Modified Tree (Carved or Scarred) : 1	Permits	
26-3-0156	GC-ST-7	Records	AGD	55 485780	6544830	Open site	Valid	Modified Tree (Carved or Scarred) : 1	Permits	
26-3-0157	GC-ST-8	Records	AGD	55 486150	6545180	Open site	Valid	Modified Tree (Carved or Scarred) : 1	Permits	
26-3-0158	GC-ST-9	Records	AGD	55 485930	6546000	Open site	Valid	Modified Tree (Carved or Scarred) : 1	Permits	
26-3-0159	GC-ST-10	Records	AGD	55 485930	6546000	Open site	Valid	Modified Tree (Carved or Scarred) : 1	Permits	
26-3-0160	GC-ST-11	Records	AGD	55 485880	6545950	Open site	Valid	Modified Tree (Carved or Scarred) : 1	Permits	
		Records				Central West Archaeological and Heritage Services Pty Ltd			Permits	

Report generated by AHIMS Web Service on 26/09/2012 for Gerard Niemöller for the following area at Datum: GDA, Zone: 55, Eastings: 478000 - 488000, Northings: 6545000 - 6555000 with a Buffer of 0 meters. Additional Info: Used to provide context for archaeological study. Number of Aboriginal sites and Aboriginal objects found is 57. This information is not guaranteed to be free from error or omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omissions.


AHIMS Web Services (AWS) Extensive search - Site list report									
SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	Site Features	Reports
26-3-0161	GC-ST-12	AGD	55	485880	6545950	Open site	Valid	Modified Tree (Carved or Scarred) : 1	Permits
26-3-0162	GC-T-13	Records AGD	Central West Archaeological and Heritage Services Pty Ltd	55	485960	6546010	Open site	Modified Tree (Carved or Scarred) : 1	Permits
26-3-0163	GC-ST-14	Records AGD	Central West Archaeological and Heritage Services Pty Ltd	55	485960	6546010	Open site	Modified Tree (Carved or Scarred) : 1	Permits
26-3-0164	GC-ST-15	Records AGD	Central West Archaeological and Heritage Services Pty Ltd	55	485960	6546010	Open site	Modified Tree (Carved or Scarred) : 1	Permits
26-3-0165	GC-ST-16	Records AGD	Central West Archaeological and Heritage Services Pty Ltd	55	485930	6545730	Open site	Modified Tree (Carved or Scarred) : 1	Permits
26-3-0166	GC-ST-17	Records AGD	Central West Archaeological and Heritage Services Pty Ltd	55	486390	6545590	Open site	Modified Tree (Carved or Scarred) : 1	Permits
26-3-0167	GC-ST-18	Records AGD	Cathy Kaman	55	486390	6545590	Open site	Modified Tree (Carved or Scarred) : 1	Permits
26-3-0168	GC-ST-19	Records AGD	Central West Archaeological and Heritage Services Pty Ltd	55	486390	6545470	Open site	Modified Tree (Carved or Scarred) : 1	Permits
26-3-0169	GC-ST-20	Records AGD	Central West Archaeological and Heritage Services Pty Ltd	55	486680	6545530	Open site	Modified Tree (Carved or Scarred) : 1	Permits
	GC-ST-20	Records AGD	Central West Archaeological and Heritage Services Pty Ltd						

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AHIMS Web Services (AWS) Extensive search - Site list report									
									
SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	Site Features	Reports
26-3-0170	GC-ST-21	AGD	55	486650	6545500	Open site	Valid	Modified Tree (Carved or Scarred) : 1	Your Ref Number : A018 Client Service ID : 81416
Records									
26-3-0171	GC-ST-22	AGD	55	486650	6545500	Open site	Valid	Modified Tree (Carved or Scarred) : 1	
Records									
26-3-0173	GC-ST-24	AGD	55	487700	6545510	Open site	Valid	Modified Tree (Carved or Scarred) : 1	
Records									
26-3-0174	GC-ST-25	AGD	55	485990	6545590	Open site	Valid	Modified Tree (Carved or Scarred) : 1	
Records									
26-3-0175	GC-ST-26	AGD	55	485760	6546080	Open site	Valid	Modified Tree (Carved or Scarred) : 1	
Records									
26-3-0176	GC-ST-27	AGD	55	484900	6545900	Open site	Valid	Modified Tree (Carved or Scarred) : 1	
Records									
26-3-0172	GC-ST-23	AGD	55	487690	6545180	Open site	Valid	Modified Tree (Carved or Scarred) : 1	
Records									
Records									

Report generated by AHIMS Web Service on 26/09/2012 for Gerard Niemeuller for the following area at Datum : GDA, Zone : 55, Eastings : 478000 - 488000, Northings : 6545000 - 6555000 with a buffer of 0 meters. Additional Info : Used to provide context for archaeological study. Number of Aboriginal sites and Aboriginal objects found is 57.
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[☒] New recording [☐] Additional Info



National Parks and Wildlife Service
Box 1967, Hurstville NSW 2220. Tel: (02) 585 6444
Standard Site Recording Form Revised 5/88


26-3-0070

1:250,000 map sheet: _____ NPWS Code _____

250K

AMG Grid reference

Full reference - please include leading digits

4 8 4 7 6 0 mE

25K 5/8 25K

250K

6 5 4 8 1 0 0 mN

25K

Scale of map used for grid reference [] 25K, 50K (preferred) ☒ 100K [] 250K
Please use largest scale available.

125K, 50K, 100K map name: Coalabah 8235

Site name: GC-05/HS-1 Locality/property name: Girilambone Copper Mine

NPWS District: Coar Region: Coonabrawran

Reason for investigation: Arch. Survey - EIS

HEAD OFFICE USE ONLY:

NPWS Site no: 26-3-70

Site types: open Campsite

Accessioned by: _____ Date: _____

Data entered by: th Date: 5 APR 95

Owner/Manager: Girilambone Copper Co.

Address: P.O. Box 12 Girilambone

Portion no: _____

Parish: Girilambone

Photos taken? ☒ No

How many attached? +

How to get to the site (refer to permanent features; give best approach to site eg. from above, below, along cliff. (Draw diagram on separate sheet))

From Booroomugga Rd, site is located approx 5.5 km along main access track i N. East prospect, approx 50 m. from dam & 500 m.

Other sites in locality? Yes

Are sites in NPWS Register? Yes

Have artefacts been removed from site? No

By whom? _____

Is site important to local Aborigines? Yes

Give contact(s) name(s) + address(es) Buddy Weldon, Nyngan LAKE

Contacted for this recording? Yes

(Attach additional information separately) If not, why not?

Site Types include: Open Artefact Scatter

When? _____

Deposited where? _____

Verbal/written reference sources (including full title of accompanying report): Arch. Survey of Girilambone Copper Mine, N. East Prospect

NPWS Report Catalogue # _____

Checklist:

surface visibility

damage/disturbance/

threat to site

Condition of site: Disturbed

Eroded


Recommendations for management & protection (attach separate sheet if necessary):

As Per Report


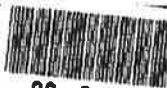
Site recorded by: J. Kelton


Address/institution: Coar

Date: 16/12/1994



SITE POSITION & ENVIRONMENT		OFFICE USE ONLY: NPWS site no:
1. Land form a. beach/hill slope/ridge top, etc: <i>Slope</i>		b. site aspect: <i>East</i> c. slope: <i><10°</i>
d. mark on diagram provided or on your own sketch the position of the site:		e. Describe briefly:
		
f. Local rock type: <i>Quartzite / Shale</i>		g. Land use/effect: <i>Grazing / Mining</i>
2. Distance from drinking water: <i>20 km</i>		Source: <i>Bogan River</i>
3. Resource Zone associated with site (estuarine, riverine, forest etc): <i>Open Woodland</i>		
4. Vegetation: <i>Euc. Dry sclerophyll</i>		
5. Edible plants noted:		
6. Faunal resources (include shellfish):		
7. Other exportable resources (river pebbles, ochre, etc):		
<p>Site type: <i>Heath Site</i> <i>(Ternite Nest)</i></p> <p>CHECKLIST TO HELP: length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock. DEPOSIT: colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density & distribution of these, stone types, artefact types. ART: area of surface decorated, motifs, colours, wet, dry pigment, technique of engraving, no. of figures, sizes, petination. BURIALS: number & condition of bone, position, age, sex, associated artefacts. TREES: number, alive, dead, likely age, scar shape, position, size, patterns, axe marks, regrowth. QUARRIES: rock type, debris, recognisable artefacts, percentage quarried. OTHER SITES EG. structures (fish traps, stone arrangements, bora rings, mounds), mythological sites, rock holes, engraved grooves channels, contact sites (massive massacres cemeteries) as appropriate</p>	<p>DESCRIPTION OF SITE & CONTENTS. Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents.</p> <p><i>As per attached sheet</i></p> <p><i>PART OF OPEN HEATH SITE</i></p> <p><i>Scatter Site</i></p> <p><i>GC-05-1</i></p> <p>Attach sketches etc. eg. plan & section of shelter, show relation between site contents, indicate north, show scale. Attach annotated photos (stereo where useful) showing scale, particularly for art sites.</p>	

[x] New recording [] Additional Info

 National Parks and Wildlife Service Box 1967, Hurstville NSW 2220. Tel: (02) 585 6444 Standard Site Recording Form Revised 5/88		 26-3-0071																														
1:250,000 map sheet: _____ NPWS Code _____ AMG Grid reference: <table border="1"> <tr> <td>4</td><td>8</td><td>4</td><td>7</td><td>6</td><td>0</td> <td>mE</td> <td>6</td><td>5</td><td>4</td><td>8</td><td>1</td><td>0</td><td>0</td> <td>mN</td> </tr> <tr> <td colspan="3">25K</td> <td colspan="3">25K</td> <td colspan="3">5/6</td> <td colspan="3">25K</td> <td colspan="3">25K</td> </tr> </table>		4	8	4	7	6	0	mE	6	5	4	8	1	0	0	mN	25K			25K			5/6			25K			25K			HEAD OFFICE USE ONLY: NPWS Site no: <u>26-3-71</u> Site types: <u>Open Camp Site</u> Accessioned by: _____ Date: _____ Data entered by: <u>BK</u> Date: <u>5 APR 95</u> Owner/Manager: _____ Address: _____
4	8	4	7	6	0	mE	6	5	4	8	1	0	0	mN																		
25K			25K			5/6			25K			25K																				
Scale of map used for grid reference: [] 25K, 50K (preferred) [x] 100K [] 250K Please use largest scale available 1:25K, 50K, 100K map name: <u>Coalabah 8235</u>																																
Site name: <u>GC-OS-1/H5-2</u> Locality/property name: _____ NPWS District: <u>Cobar</u> Region: <u>Coorabrah</u> Reason for investigation: <u>Arch. Survey</u>																																
Portion no: _____ Parish: <u>Girilambone</u>		Photos taken? <u>No</u> How many attached? _____																														
How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff. (Draw diagram on separate sheet.) <u>As for OS-1</u>																																
Other sites in locality? <u>Yes</u> Site Types include: <u>Open Artefact Scatter</u> Are sites in NPWS Register? <u>Yes</u>																																
Have artefacts been removed from site? <u>No</u> When? _____ By whom? _____ Deposited where? _____																																
Is site important to local Aborigines? <u>Yes</u> Give contact(s) name(s) + address(es) <u>Buddy Weldon, Nyngan LAKE</u>																																
Contacted for this recording? <u>Yes</u> (Attach additional information separately) If not, why not? _____																																
Verbal/written reference sources (including full title of accompanying report): <u>Copper Mine, N. East Prospect</u>		NPWS Report Catalogue # _____																														
Checklist: surface visibility, damage/disturbance/ threat to site	Condition of site: <u>Eroded</u>																															
Recommendations for management & protection (attach separate sheet if necessary) <u>As Per Report</u>																																
Site recorded by: <u>J. Ketton</u> Address/institution: <u>COWRA</u>		Date: <u>16/12/1994</u>																														

SITE POSITION & ENVIRONMENT		OFFICE USE ONLY: NPWS site no:
1. Land form a. beach/hill slope/ridge top, etc: <i>Lower Slope</i>		b. site aspect: <i>East</i> c. slope: <i><5°</i>
d. mark on diagram provided or on your own sketch the position of the site:		e. Describe briefly:
		
f. Local rock type: <i>Quartzite/Slab</i>		g. Land use/effect: <i>Grazing/Mining</i>
2. Distance from drinking water: <i>20km</i>		Source: <i>Bogan River</i>
3. Resource Zone associated with site (estuarine, riverine, forest etc): <i>Open Woodland</i>		
4. Vegetation: <i>Euc. dry sclerophyll</i>		
5. Edible plants noted: <i>-</i>		
6. Faunal resources (include shellfish): <i>-</i>		
7. Other exploitable resources (river pebbles, ochre, etc): <i>-</i>		
<p>Site type: <i>Hearth Site</i> <i>(Termite Nest)</i></p> <p>CHECKLIST TO HELP: length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock. DEPOSIT: colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density & distribution of these, stone types, artefact types. ART: area of surface decorated, motifs, colours, wet, dry pigment, technique of engraving, no. of figures, sizes, petrification. BURIALS: number & condition of bone, position, age, sex, associated artefacts. TREES: number, alive, dead, likely age, scar shape, position, size, patterns, ear marks, regrowth QUARRIES: rock type, debris, recognisable artefacts, percentage quarried. OTHER SITES EG. structures (fish traps, stone arrangements, bora rings, mǝ mǝ), mythological sites, rock holes, engraved grooves channels, contact sites (massive massacres cemeteries) as appropriate</p>	<p>DESCRIPTION OF SITE & CONTENTS. Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents.</p> <p><i>Tamara Port Hearth Site</i> <i>Associated with Open Antepast Scatter Site</i> <i>LL-05-1</i></p> <p>Attach sketches etc. eg. plan & section of shelter, show relation between site contents. Indicate north, show scale. Attach annotated photos (stereo where useful) showing scale, particularly for art sites.</p>	

☒ New recording ☐ Additional Info

 National Parks and Wildlife Service Box 1967, Hurstville NSW 2220. Tel: (02) 585 6444 Standard Site Recording Form Revised 5/88	
1:250,000 map sheet: _____ NPWS Code: _____ AMG Grid reference: <u>484760</u> mE <u>6548100</u> mN Full reference - please include leading digits Scale of map used for grid reference: <input type="checkbox"/> 25K, 50K (preferred) <input checked="" type="checkbox"/> 100K <input type="checkbox"/> 250K Please use largest scale available 1:25K, 50K, 100K map name: <u>Cookabak</u> <u>8235</u>	HEAD OFFICE USE ONLY: NPWS Site no: <u>26-3-24</u> Site types: <u>open Campsite</u> Accessioned by: _____ Date: _____ Data entered by: <u>BJE</u> Date: <u>5 APR 95</u> Owner/Manager: <u>Girilambone Copper Mine</u> Address: <u>P.O. Box 12</u> <u>Girilambone</u>
Site name: <u>GC-OS-1</u> Locality/property name: <u>Girilambone Copper Mine</u> NPWS District: <u>Cobar</u> Region: <u>Coonababran</u> Reason for investigation: <u>Arch Survey</u>	 26-3-0034
Portion no: _____ Parish: <u>Girilambone</u>	Photos taken? <u>Yes</u> How many attached? <u>1</u>
How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along creek) (Draw diagram on separate sheet.) <u>Site 5.4 km from Boorremugga Rd. i.e. N. East Prospect</u> <u>See Report for location.</u>	
Other sites in locality? <u>Yes</u> Are sites in NPWS Register? <u>Yes</u>	Site Types include: <u>Open Antefact Scatter</u>
Have artefacts been removed from site? <u>No</u> By whom? _____	When? _____ Deposited where? _____
Is site important to local Aborigines? <u>Yes</u> Give contact(s) name(s) + address(es): <u>Burkly Weldon, Nyngan LALC</u>	
Contacted for this recording? <u>Yes</u> (Attach additional information separately) If not, why not? _____	
Verbal/written reference sources (including full title of accompanying report): <u>Arch. Survey of Girilambone Copper Mine N/East extension</u>	
Checklist: surface visibility, damage/disturbance/threat to site	Condition of site: <u>Exposed, low integrity</u> <u>Visible on exposed track</u>
Recommendations for management & protection (attach separate sheet if necessary): <u>As Per Report</u>	
Site recorded by: <u>J. Kellon</u> Address/institution: <u>CoWRA</u>	Date: <u>16/12/1994</u>

SITE POSITION & ENVIRONMENT		OFFICE USE ONLY: NPWS site no:
1. Land form a. beach/hill slope/ridge top, etc: <i>lower slope</i>		b. site aspect: <i>east</i> c. slope: <i><10°</i>
d. mark on diagram provided or on your own sketch the position of the site:		e. Describe briefly:
f. Local rock type: <i>Quartzite/Slate</i>		g. Land use/effect: <i>Grazing / Mowing</i>
2. Distance from drinking water: <i>20km</i>		Source: <i>Doyen / River</i>
3. Resource Zone associated with site (estuarine, riverine, forest etc): <i>Open Woodland</i>		
4. Vegetation: <i>Cus. - Dry sclerophyll</i>		
5. Edible plants noted:		
6. Faunal resources (include shellfish):		
7. Other exploitable resources (river pebbles, ochre, etc):		
Site type: <i>Open Artefact Scatter</i>	DESCRIPTION OF SITE & CONTENTS. Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents. <i>As Per Attached Sheets</i>	
CHECKLIST TO HELP: length, width, depth. height of site, shelter. deposit, structure, element eg. tree scar, grooves in rock. DEPOSIT: colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density & distribution of these, stone types, artefact types. ART: area of surface decorated, motifs, colours, wet, dry pigment, technique of engraving, no. of figures, sizes, palmation. BURIALS: number & condition of bone, position, age, sex, associated artefacts. TREES: number, alive, dead, likely age, scar shape, position, size, patterns, scar marks, regrowth. QUARRIES: rock type, debris, recognisable artefacts, percentage quarried. OTHER SITES EG. structures (fish traps, stone arrangements, bone rings, mounds), mythological sites, rock holes, engraved groove channels, contact sites (massacre, massacres, cemeteries) as appropriate.		
Attach sketches etc, eg. plan & section of shelter, show relation between site contents, indicate north, show scale. Attach annotated photos (stereo where useful) showing scale, particularly for art sites.		

OS-1
Site • located 50 m south of soak
• along gas mining grid line No's

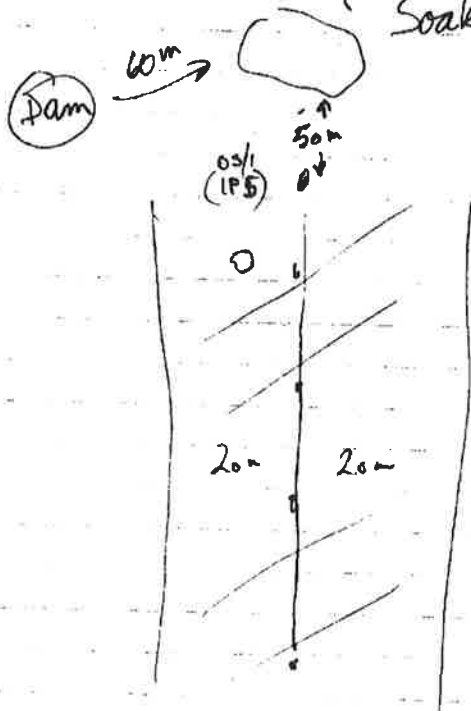
Dimensions 200 m X 50 m

7 heath sites average 75m dia
> 20 quartz flakes

5/5 25 (5) Flakes

Flake #	Dimensions	Flake #	Dimensions
1	28 x 23 x 10	11	13 x 6 x 3
2	28 x 20 x 10	12	10 x 9 x 2
3	28 x 15 x 8	13	18 x 12 x 2
4	27 x 8 x 10	14	10 x 7 x 3
5	18 x 10 x 8	15	12 x 8 x 4
6	22 x 13 x 6	16	9 x 9 x 5
7	20 x 12 x 3	17	8 x 7 x 3
8	19 x 8 x 5	18	11 x 8 x 6
9	12 x 7 x 4	19	10 x 8 x 5
10	8 x 5	20	7 x 5 x 3

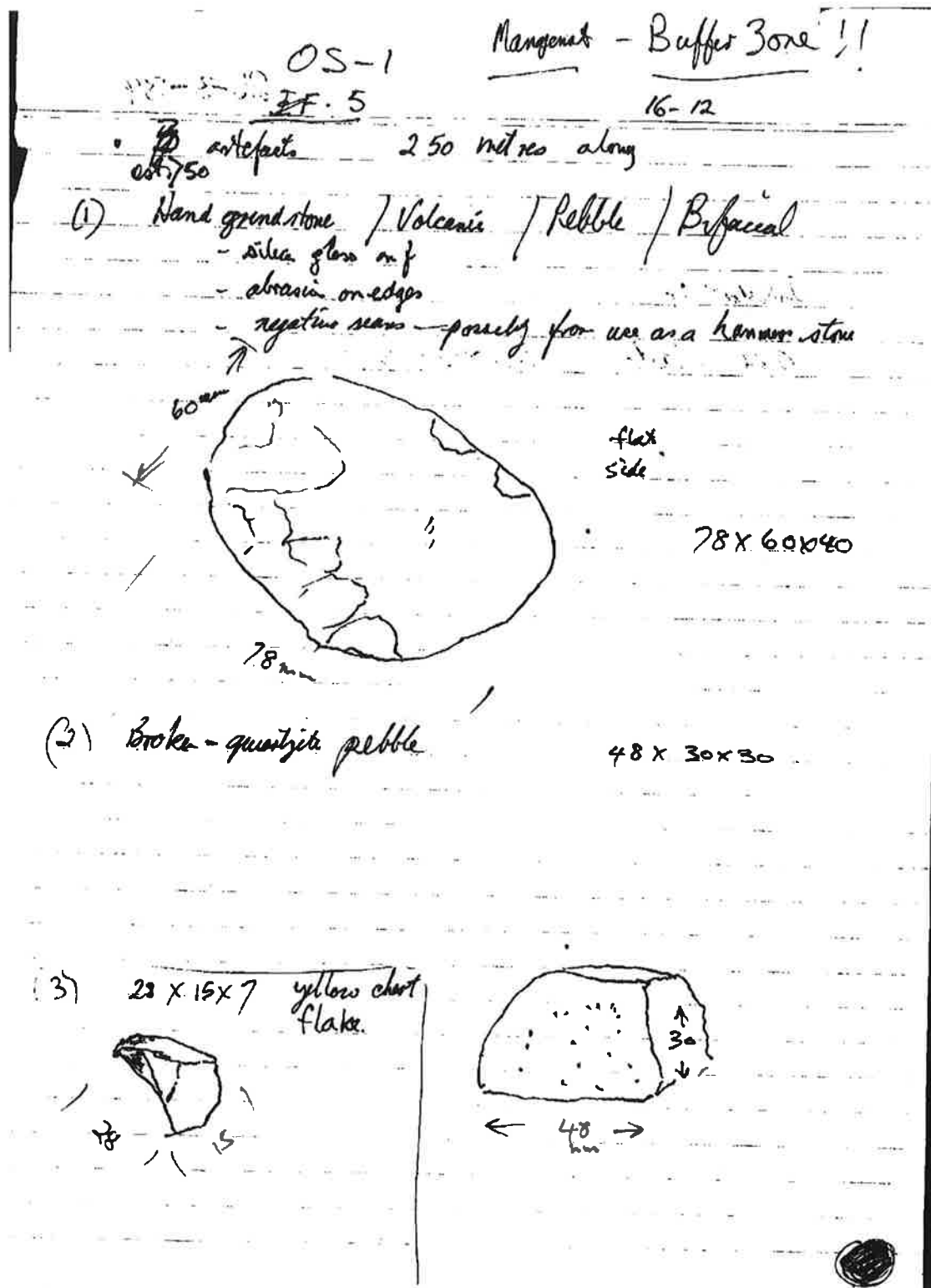
Soak



Amorphous stone frags



Sandstone/quartzite X 10

1	70 x 28 x 10
2	55 x 30 x 20
3	60 x 25 x 30
4	52 x 40 x 34
5	40 x 27 x 16
6	12 x 11 x 10
7	23 x 18 x 18
8	32 x 14 x 10
9	40 x 28 x 26
10	20 x 14 x 12







[✓] New recording [] Additional Info


 National Parks and Wildlife Service Box 1967, Hurstville NSW 2220. Tel: (02) 585 6444 Standard Site Recording Form Revised 5/88		 26-3-0119
1:250,000 map sheet: _____ NPWS Code: _____		HEAD OFFICE USE ONLY: NPWS Site no: <u>26-3-0119</u> Site types: _____ Accessed by: _____ Date: _____ Data entered by: _____ Date: _____ Owner/Manager: <u>Girilambone Copper Mine</u> Address: <u>P.O. Box 12</u> <u>Girilambone</u>
AMG Grid reference: <u>484760</u> mE <u>6548100</u> mN Full reference - please include leading digits Scale of map used for grid reference: [] 25K, 50K (preferred) [✓] 100K [] 250K Please use largest scale available 1:25K, 50K, 100K map name: <u>Cookah 8235</u>		
Site name: <u>GC-OS-1</u> Locality/property name: <u>Girilambone Copper Mine</u> NPWS District: <u>Cobar</u> Region: <u>Coonababran</u>		
Reason for investigation: <u>Arch Survey</u>		
Portion no: _____ Parish: <u>Girilambone</u>		Photos taken? <u>Yes</u> How many attached? <u>1</u>
How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff. (Draw diagram on separate sheet.) <u>Site 5.4km from Barreraugga Rd. in N. East Prospect</u> <u>See Report for location.</u>		
Other sites in locality? <u>Yes</u> Are sites in NPWS Register? <u>Yes</u>		Site Types include: <u>Open Antefact Scatter</u>
Have artefacts been removed from site? <u>No</u> By whom? _____		When? _____ Deposited where? _____
Is site important to local Aborigines? <u>Yes</u> Give contact(s) name(s) + address(es): <u>Buckley Weldon, Nyngan ARLC</u>		
Contacted for this recording? <u>Yes</u> (Attach additional information separately) If not, why not? _____		
Verbal/written reference sources (including full title of accompanying report): <u>Arch. Survey of Girilambone Copper Mine N/East extension</u>		NPWS Report Catalogue # _____
Checklist: surface visibility, damage/disturbance/ threat to site	Condition of site: <u>Exposed, low integrity</u> <u>Visible on exposed track.</u>	
Recommendations for management & protection (attach separate sheet if necessary): <u>As Per Report</u>		
Site recorded by: <u>J. Kellon</u> Address/institution: <u>CowRA</u>		Date: <u>16/12/1994</u>


[✓] New recording [] Additional Info

 National Parks and Wildlife Service Box 1967, Hurstville NSW 2220. Tel: (02) 585 0444 Standard Site Recording Form Revised 5/88		
One Site: 26-3-0149		
1:250,000 map sheet: NPWS Code		HEAD OFFICE USE ONLY: NPWS Site no: <u>GC-OS-43-1</u> Site types: <u>GC-OS-43-1 (26-3-0149)</u> Accessioned by: _____ Date: _____ Data entered by: _____ Date: _____ Owner/Manager: <u>Gidilambone Copper Co.</u> Address: <u>P.O. Box 12</u> <u>Gidilambone</u>
AMG Grid reference: <u>484760</u> mE <u>6548100</u> mN Full reference - please include leading digits Scale of map used for grid reference: <input type="checkbox"/> 25K, <input type="checkbox"/> 50K, <input checked="" type="checkbox"/> 100K, <input type="checkbox"/> 250K Please use largest scale available. (preferred) 1:25K, 50K, 100K map name: <u>Coalabah 8235</u>		
Site name: <u>GC-OS-43-1</u> Locality/property name: <u>Gidilambone Copper Mine</u> NPWS District: <u>Colar</u> Region: <u>Coonababran</u> Reason for investigation: <u>Arch. Survey - EIS</u>		
Portion no: _____ Parish: <u>Gidilambone</u>		Photos taken? <u>Yes</u> <u>No</u> How many attached? <u>1</u>
How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff. (Draw diagram on separate sheet.) <u>From Booroomugga Rd, site is located approx 5.5 km along main access track in N. East prospect, approx 50m. from a dam & soak.</u>		
Other sites in locality? <u>Yes</u> Are sites in NPWS Register? <u>Yes</u>		Site Types include: <u>Open Artefact Scatter</u>
Have artefacts been removed from site? <u>No</u> By whom? _____ When? _____ Deposited where? _____		
Is site important to local Aborigines? <u>Yes</u> Give contact(s) name(s) + address(es): <u>Buddy Weldon, Nyngan LAKK</u>		
Contacted for this recording? <u>Yes</u> (Attach additional information separately) if not, why not? _____		
Verbal/written reference sources (including full title of accompanying report): <u>Arch. Survey of Gidilambone</u> <u>Copper Mine, N. East Prospect</u>		NPWS Report Catalogue # _____
Checklist: surface visibility, damage/disturbance/ threat to site	Condition of site: <u>Too Disturbed - Eroded</u>	
Recommendations for management & protection (attach separate sheet if necessary): <u>As Per Report</u>		
Site recorded by: <u>J. Kelton</u> Address/institution: <u>Coura</u>		Date: <u>16/12/1994</u>

SITE POSITION & ENVIRONMENT		OFFICE USE ONLY: NPWS site no:
1. Land form a. beach/hill slope/ridge top, etc: <i>Slope</i>		b. Site aspect: <i>East</i> c. slope: <i><10°</i>
d. mark on diagram provided or on your own sketch the position of the site:		e. Describe briefly:
1. Local rock type: <i>Quartzite / Shale</i>		g. Land use/effect: <i>Grazing / Mining</i>
2. Distance from drinking water: <i>20 km</i>		Source: <i>Dogan River</i>
3. Resource Zone associated with site (estuarine, riverine, forest etc): <i>Open Woodland</i>		
4. Vegetation: <i>Euc. Dry sclerophyll</i>		
5. Edible plants noted:		
6. Faunal resources (include shellfish):		
7. Other exploitable resources (river pebbles, ochre, etc).		
<p>Site type: <i>Heath Site</i> <i>(Ternite Nest)</i></p> <p>CHECKLIST TO HELP: length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock. DEPOSIT: colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal density & distribution of these, stone types artefact types. ART: area of surface decorated, motifs, colours, wet, dry pigment, technique of engraving, no. of figures, sizes, patterning. BURIALS: number & condition of bone, position, age, sex, associated artefacts. TREES: number, alive, dead, likely age, scar shape, position, size, patterns, axe marks, regrowth. QUARRIES: rock type, debris, recognisable artefacts, percentage quarried. OTHER SITES EG. structures (kiah traps, stone arrangements, bone rings, mla mias), mythological sites, rock holes, engraved groove channels, contact sites (massive massacres cemetaries) as appropriate</p>	<p>DESCRIPTION OF SITE & CONTENTS. Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents.</p> <p><i>As per Attached Sheet</i></p> <p><i>PART OF Open Woodland</i></p> <p><i>Scattered</i></p> <p><i>GC-OS-1</i></p> <p>Attach sketches etc. eg. plan & section of shelter, show relation between site contents, indicate north, show scale. Attach annotated photos (stereo where useful) showing scale, particularly for art sites.</p>	

[☒] New recording [☐] Additional Info

 National Parks and Wildlife Service Box 1967, Hurstville NSW 2220. Tel: (02) 585 6444 Standard Site Recording Form Revised 5/88	
1:250,000 map sheet: _____ NPWS Code _____	
AMG Grid reference Full reference - please include leading digits Scale of map used for grid reference [] 25K, 50K (preferred) [<input checked="" type="checkbox"/>] 100K [] 250K Please use largest scale available. 1:25K, 50K, 100K map name: <u>Coorabrah 8235</u>	HEAD OFFICE USE ONLY: NPWS Site no: _____ Site types: _____ Accessioned by: _____ Date: _____ Data entered by: _____ Date: _____ Owner/Manager: _____ Address: _____
Site name: <u>GC-OS-1/Hs-2</u> Locality/property name: _____ NPWS District: <u>Cobar</u> Region: <u>Coorabrah</u> Reason for investigation: <u>Arch. Survey</u>	
Portion no: _____ Parish: <u>Girilambone</u>	Photos taken? <u>No</u> How many attached? _____
How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff. (Draw diagram on separate sheet.) <u>As per OS-1</u>	
Other sites in locality? <u>Yes</u> Site Types include: <u>Open Archaeological Scattered</u> Are sites in NPWS Register? <u>Yes</u> Have artefacts been removed from site? <u>No</u> When? _____ By whom? _____ Deposited where? _____	
Is site important to local Aborigines? <u>Yes</u> Give contact(s) name(s) + address(es) <u>Buddy Weldon, Nyngan LALC</u> Contacted for this recording? <u>Yes</u> (Attach additional information separately) If not, why not? _____	
Verbal/written reference sources (including full title of accompanying report). <u>Copper Mine, N. East Prospect</u> <u>Arch. Survey of Girilambone</u> NPWS Report Catalogue # _____	
Checklist: surface visibility, damage/disturbance/ threat to site	Condition of site: <u>Eroded.</u>
Recommendations for management & protection (attach separate sheet if necessary): <u>As Per Report</u>	
Site recorded by: <u>J. Ketton</u> Date: <u>16/12/1994</u> Address/institution: <u>COWRA</u>	

SITE POSITION & ENVIRONMENT		OFFICE USE ONLY: NPWS site no:
<p>1. Land form a. beach/hill slope/ridge top, etc: <u>Lower Slope</u></p> <p>b. site aspect: <u>East</u> c. slope: <u><5°</u></p> <p>d. mark on diagram provided or on your own sketch the position of the site:</p> <div style="text-align: center; margin: 10px 0;">  </div> <p>f. Local rock type: <u>Quartzite/Slate</u> g. Land use/effect: <u>Grazing/Mining</u></p> <p>2. Distance from drinking water: <u>20km</u> Source: <u>Bogan River</u></p> <p>3. Resource Zone associated with site (estuarine, riverine, forest etc): <u>Open Woodland</u></p> <p>4. Vegetation: <u>Euc. dry sclerophyll</u></p> <p>5. Edible plants noted:</p> <p>6. Faunal resources (include shellfish):</p> <p>7. Other exploitable resources (river pebbles, ochre, etc):</p>	<p>Site type: <u>Hearth Site</u> <u>(Termite Nest)</u></p> <p>CHECKLIST TO HELP: length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock. DEPOSIT: colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density & distribution of these, stone types, artefact types. ART: area of surface decorated, motifs, colours, wet, dry pigment, technique of engraving, no. of figures, sizes, patination. BURIALS: number & condition of bone, position, age, sex, associated artefacts. TREES: number, alive, dead, likely age, scar shape, position, size, patterns, axe marks, regrowth. QUARRIES: rock type, debris, recognisable artefacts, percentage quarried. OTHER SITES EG. structures (fish traps, stone arrangements, bora rings, mva mias), mythological sites, rock holes, engraved groove channels, contact sites (missions massacres cemeteries) as appropriate</p>	
<p>DESCRIPTION OF SITE & CONTENTS. Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents.</p> <p style="text-align: center; margin: 20px 0;"> <u>Termite Nest Hearth Site</u> <u>Associated with Open Artefact Scatter Site</u> <u>HL-OS-1</u> </p>		<p>Attach sketches etc. eg. plan & section of shelter, show relation between site contents, indicate north, show scale. Attach annotated photos (stereo where useful) showing scale, particularly for art sites.</p>

OS-1

- located 50 m south of soak
- along gas mining grid line No's

Dimensions 200 m x 50 m

7 heap sites average 75m diam

> 20 quartz flakes

5/5 2.5

(5)

F/pig

N

7

Flake

Soak

1.

55 x 28 x 10

2.

38 x 26 x 10

3.

28 x 15 x 8

4.

27 x 8 x 10

5.

18 x 10 x 8

6.

22 x 13 x 6

7.

20 x 12 x 3

8.

13 x 27 x 5

9.

12 x 7 x 2

10.

11 x 8 x 5

11.

13 x 6 x 3

12.

10 x 9 x 7

13.

18 x 12 x 2

14.

10 x 7 x 3

15.

12 x 8 x 4

16.

9 x 9 x 5

17.

8 x 7 x 3

18.

11 x 8 x 6

19.

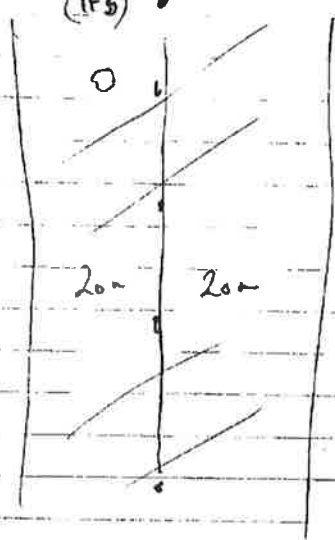
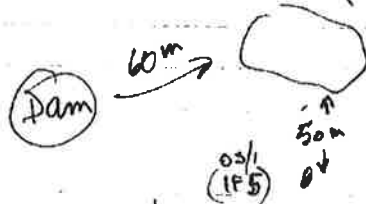
10 x 8 x 5

20.

7 x 5 x 3

Flakes

non specific



Amorphous stone frags

Sandstone/quartzite x 10

1. 70 x 28 x 10

2. 55 x 30 x 20

3. 60 x 25 x 30

4. 32 x 40 x 38

5. 40 x 27 x 16

6. 12 x 11 x 10

7. 25 x 18 x 18/14

8. 32 x 14 x 10

9. 40 x 28 x 26

10. 20 x 14 x 12

OS-1

IF. 5

Plangena - Duffer JONE ; !

16-12

3 artefacts 250 metres along
est. 750

- (1) Hand ground stone / Volcanic / Pebble / Bifacial
- silica glass on f
 - abrasion on edges
 - negative scars - possibly from use as a hammer stone



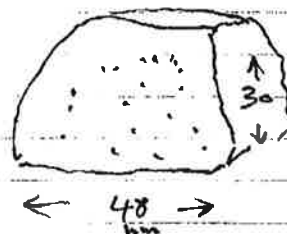
flat
side

78 x 60 x 40


- (2) Broken - quartzite pebble

48 x 30 x 30


- (3) 28 x 15 x 7 yellow chert
flake



[☒] New recording [☐] Additional Info



National Parks and Wildlife Service
Box 1967, Hurstville NSW 2220. Tel: (02) 585 6444
Standard Site Recording Form Revised 5/88


26-3-0067

1:250,000 map sheet: _____ NPWS Code _____

250K

AMG Grid reference

Full reference - please include leading digits

4 8 4 7 1 0 mE

25K 50K 100K 250K

250K

6 5 4 7 3 3 0 mN

25K 50K 100K 250K

Scale of map used for grid reference: [] 25K, 50K (preferred) [x] 100K [] 250K
Please use largest scale available

1:25K, 50K, 100K map name: Coolabah 8235

HEAD OFFICE USE ONLY:

NPWS Site no: 26-3-67

Site types: Open Camp Site

Accessioned by: _____ Date: _____

Date entered by: BLK Date: 5 APR 95

Owner/Manager: Girilambone Copper Co.

Address: P.O. Box 12 Girilambone

Site name: GC-45-28 Locality/property name: Girilambone Copper mine. NORTH EAST PROSPECT

NPWS District: Cobar Region: Coonabarabran

Reason for investigation: ARCH SURVEY.

Portion no: _____

Parish: Girilambone

Photos taken? yes
How many attached? 1

How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff. (Draw diagram on separate sheet.)

Site located approx 5.4 km north of Booroomingga Rd on west side of main access track.
Located with GPS - No Land markers

Other sites in locality? yes Site Types include: Open Scatter

Are sites in NPWS Register? yes

Have artefacts been removed from site? No When? _____
By whom? _____ Deposited where? _____

Is site important to local Aborigines? yes
Give contact(s) name(s) + address(es): Buddy Weldon. Nyngan. LALC.

Contacted for this recording? yes
(Attach additional information separately) If not, why not?

Verbal/written reference sources (including full title of accompanying report): An archaeological Survey of Girilambone Copper Mine. North East Prospect proposed Extension NPWS Report Catalogue # _____

Checklist:
surface visibility
damage/disturbance
threat to site

Condition of site: Poor
Eroded & Scattered

Recommendations for management & protection (attach separate sheet if necessary):
As per Report.

Site recorded by: J. KELTON Date: 16/12/94
Address/institution: 92 Darling St Cobar. 2796

HS-28

16/12/94

- Ant Nest
- Poor
- Eroded / Scattered
- Ridge line = bare ground.

26-3-67

(28)

(29)

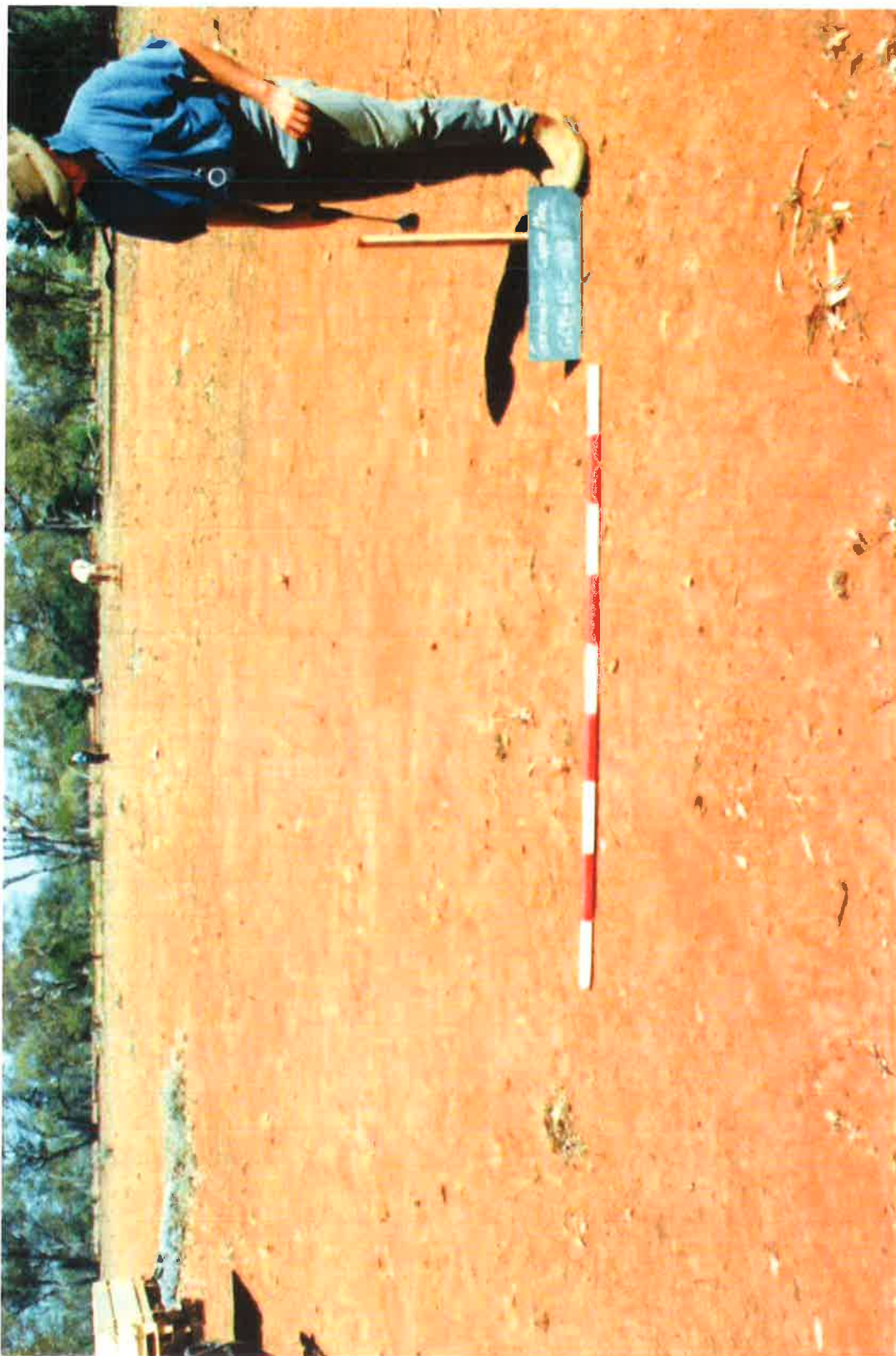


150mm




0.95m

✓ 101°
42 paces to
HS-29




[☒] New recording [☐] Additional Info




National Parks and Wildlife Service

Box 1967, Hurstville NSW 2220. Tel: (02) 585 6444
Standard Site Recording Form Revised 5/88


26-3-0146

1:250,000 map sheet: _____		NPWS Code _____	
AMG Grid reference	250K 484710 mE	250K 6547330 mN	HEAD OFFICE USE ONLY:
Full reference - please include leading digits	25K 5K 25K		NPWS Site no: <u>26-3-0146</u>
Scale of map used for grid reference [] 25K, 50K (preferred) [x] 100K [] 250K			Site types:
Please use largest scale available			Accessioned by: _____ Date: _____
1:25K, 50K, 100K map name: <u>Coolabah 8235</u>			Data entered by: _____ Date: _____
Site name: <u>GC-45-28</u>	Locality/property name: <u>Girilambone Copper mine - NORTH EAST PROSPECT</u>		
NPWS District: <u>Cobar</u>	Region: <u>Coonabarabran</u>		
Reason for investigation: <u>ARCH SURVEY.</u>			
Portion no: _____		Photos taken? <u>yes</u>	
Parish: <u>Girilambone</u>		How many attached? _____	
How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff. (Draw diagram on separate sheet)) <u>Site located approx 5.4 km north of Booroomigga Rd on west side of main access track.</u> <u>located with GPS - No Land marks</u>			
Other sites in locality? <u>yes</u>		Site Types include: <u>open Scatter</u>	
Are sites in NPWS Register? <u>yes</u>			
Have artefacts been removed from site? <u>No</u>		When? _____	
By whom? _____		Deposited where? _____	
Is site important to local Aborigines? <u>yes</u>			
Give contact(s) name(s) + address(es): <u>Buddy Weldon, Nyngan, LALC.</u>			
Contacted for this recording? <u>yes</u> (Attach additional information separately) If not, why not?			
Verbal/written reference sources (including full title of accompanying report): <u>an archaeological Survey of Girilambone Copper mine - North East Prospect</u> <u>Proposed Extension</u>			
Checklist: surface visibility, damage/disturbance/ threat to site	Condition of site: <u>Pool</u> <u>Eroded Scatter</u>		
Recommendations for management & protection (attach separate sheet if necessary): <u>As per Report.</u>			
Site recorded by: <u>J. KERTON</u>		Date: <u>16/12/94</u>	
Address/institution: <u>92 Darling St</u> <u>Cowra. 2794</u>			

SITE POSITION & ENVIRONMENT		OFFICE USE ONLY: NPWS site no:
1. Land form a. beach/hill slope/ridge top, etc: <i>Ridge Top</i>		b. site aspect: <i>360</i> c. slope: <i>45°</i>
d. mark on diagram provided or on your own sketch the position of the site:		e. Describe briefly: <i>Single termite</i>
		
f. Local rock type: <i>Quartzite / Shale</i>		g. Land use/effect: <i>Grazing / Mining</i>
2. Distance from drinking water: <i>20 km</i>		Source: <i>Bogan River</i>
3. Resource Zone associated with site (estuarine, riverine, forest etc): <i>Open Woodland</i>		
4. Vegetation: <i>Euc. dry sclerophyll</i>		
5. Edible plants noted: <i>Yes</i>		
6. Faunal resources (include shellfish): <i>-</i>		
7. Other exploitable resources (river pebbles, ochre, etc): <i>-</i>		
<p>Site type: <i>Heart Site</i> <i>(Termite Nest)</i></p> <p>CHECKLIST TO HELP: length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock. DEPOSIT: colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density & distribution of these, stone types, artefact types ART: area of surface decorated, motifs, colours, wet, dry pigment, technique of engraving, no. of figures, sizes, patination. BURIALS: number & condition of bone, position, age, sex, associated artefacts. TREES: number, alive, dead, likely age, scar shape, position, size, patterns, axe marks, regrowth. QUARRIES: rock type, debris, recognisable artefacts, percentage quarried. OTHER SITES EG. structures (fish traps, stone arrangements, bone rings, mounds), mythological sites, rock holes, engraved groove channels, contact sites (missions massacres cemeteries) as appropriate</p>	<p>DESCRIPTION OF SITE & CONTENTS. Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents.</p> <p><i>(As Per Attached Sheet)</i></p> <p>Attach sketches etc, eg. plan & section of shelter, show relation between site contents, indicate north, show scale. Attach annotated photos (stereo where useful) showing scale, particularly for art sites.</p>	

HS-28

16/12/04

- Ant Nest
- Poor
- Eroded / Scattered
- Ridge line = bare ground.

(28)

(29)


N
↑



← 0.95m →


✓ 101°
42 paces to
HS-29

[☒] New recording [☐] Additional Info



National Parks and Wildlife Service

Box 1967, Hurstville NSW 2220. Tel: (02) 585 6444
Standard Site Recording Form Revised 5/88



26-3-0068

1:250,000 map sheet: _____ NPWS Code _____

250K

AMG Grid reference

Full reference - please include leading digits

Scale of map used for grid reference
Please use largest scale available

1:25K, 50K, 100K map name: Coolabah 8235

250K

25K

5/6

25K

250K

25K

100K

250K

HEAD OFFICE USE ONLY:

NPWS Site no: 26-3-68

Site types: Open Camp Site

Accessioned by: _____ Date: _____

Date entered by: RP Date: 5 APR 95

Owner/Manager: Girilambone Copper Co.

Address: P.O. Box 12
Girilambone

Site name: GC-HS-29. Locality/property name: Girilambone Copper
mine. North East prospect.
NPWS District: Cobar Region: Coonabarabran

Reason for investigation: ARCH SURVEY. - EIS

Portion no: _____
Parish: Girilambone

Photos taken? yes
How many attached? 1

How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff.
(Draw diagram on separate sheet.) Site located approx 5.3 km north of Booroomugga Rd
on Western Side of main track. - No Land marks
- Located with GPS

Other sites in locality? yes Site Types include: open Scatter
Are sites in NPWS Register? yes

Have artefacts been removed from site? No When? _____
By whom? _____ Deposited where? _____

Is site important to local Aborigines? yes
Give contact(s) name(s) + address(es): Buddy Weldon. Nyngan. LALC.
Contacted for this recording? _____
(Attach additional information separately) If not, why not? _____

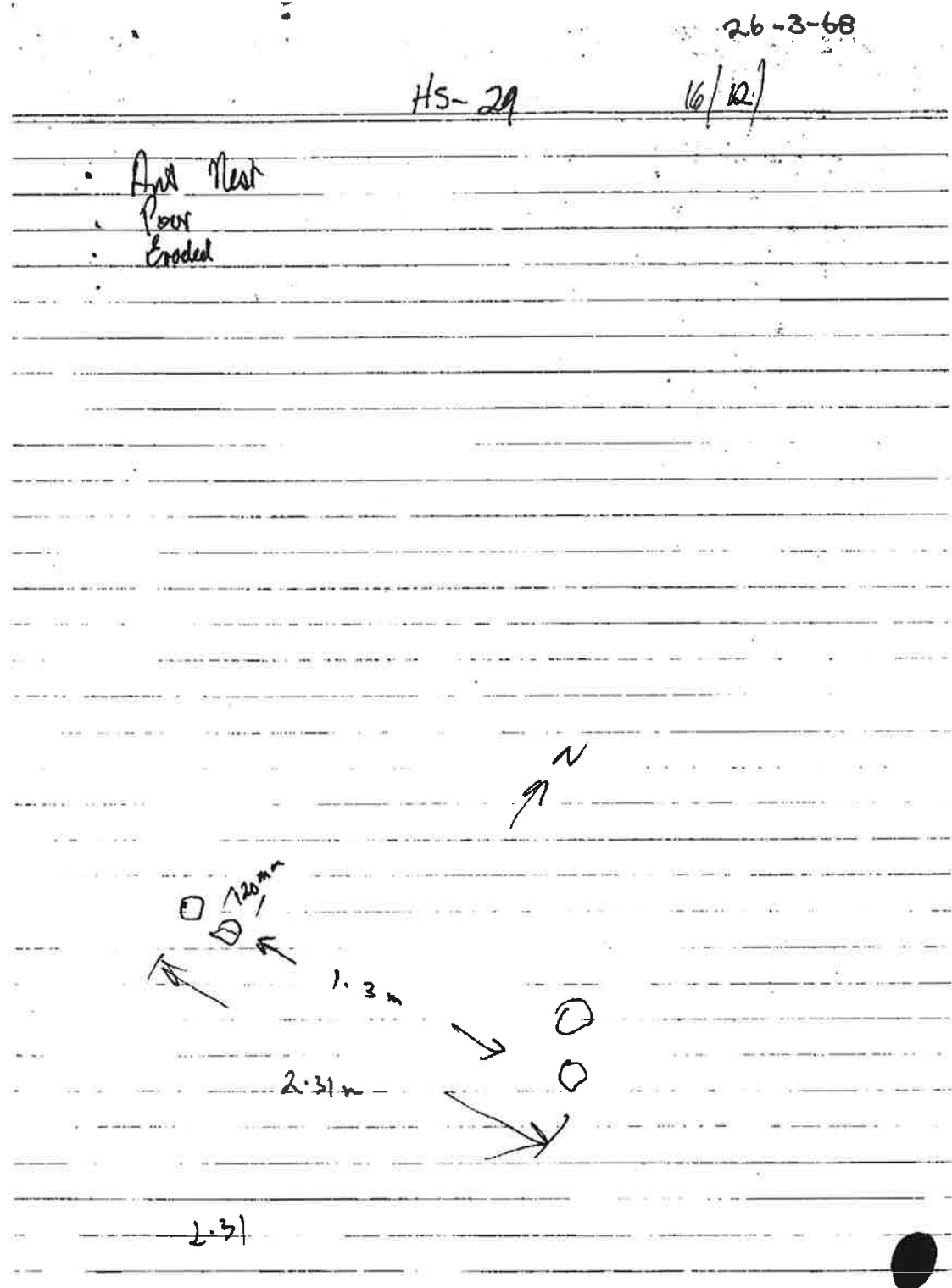
Verbal/written reference sources (including full title of accompanying report): An Archaeological Survey NPWS Report
of Girilambone Copper Mine, North East prospect Catalogue # _____
proposed Extension

Checklist:
surface visibility,
damage/disturbance/
threat to site

Condition of site: Pool
Eroded



Recommendations for management & protection (attach separate sheet if necessary):
RS per Report


Site recorded by: S. KRITON Date: 16/12/94
Address/institution: 92 DARRING ST
COWRA 2794

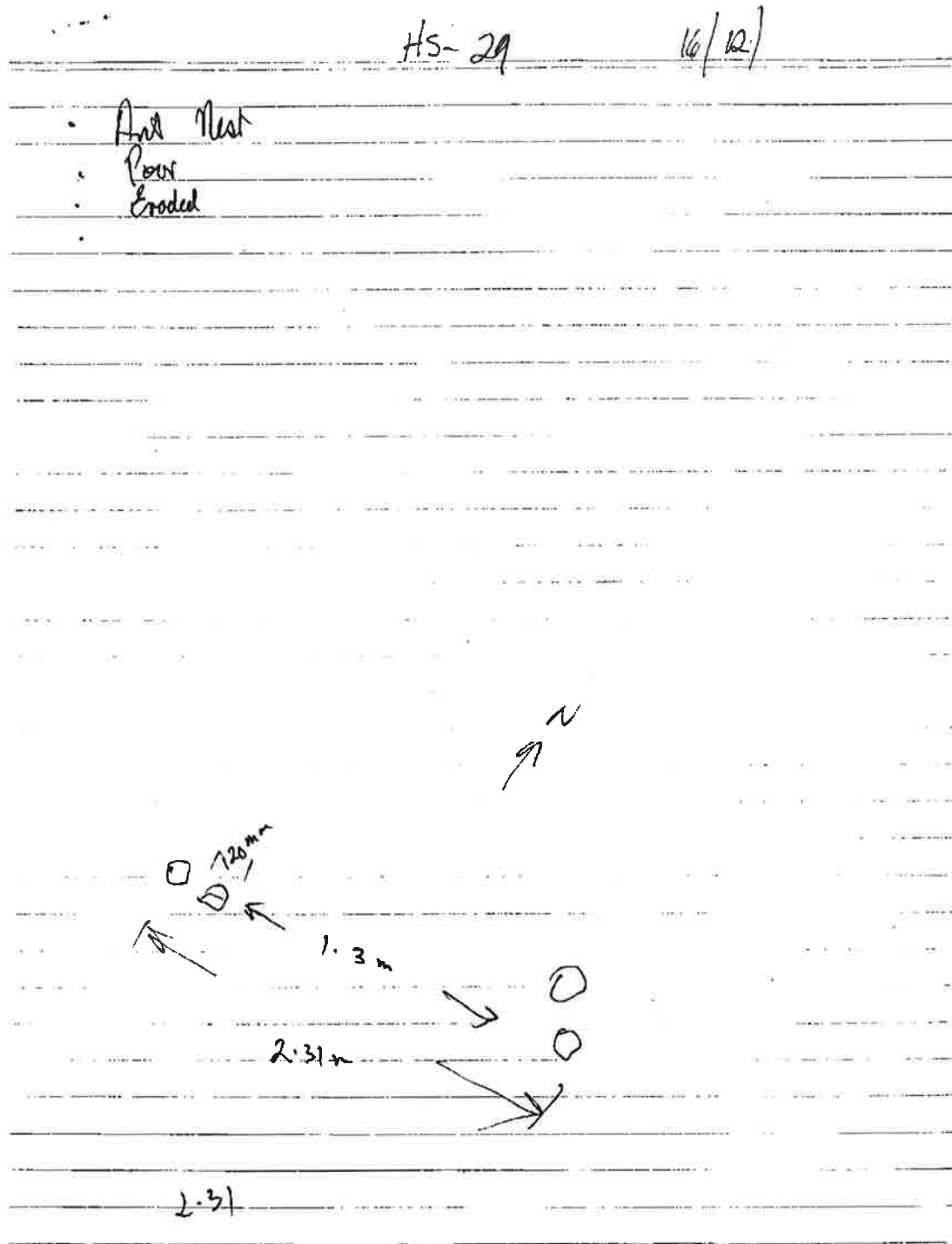





[X] New recording [] Additional Info

 National Parks and Wildlife Service Box 1967, Hurstville NSW 2220. Tel: (02) 585 6444 Standard Site Recording Form Revised 5/88		 26-3-0147																																											
1:250,000 map sheet: _____ NPWS Code _____ AMG Grid reference <table border="1"> <tr> <td>4</td><td>8</td><td>4</td><td>6</td><td>8</td><td>0</td> <td>mE</td> <td>6</td><td>5</td><td>4</td><td>7</td><td>3</td><td>4</td><td>0</td> <td>mN</td> </tr> <tr> <td colspan="5">250K</td> <td colspan="5">250K</td> <td colspan="4"></td> </tr> <tr> <td colspan="5">25K</td> <td colspan="5">5/8</td> <td colspan="4">25K</td> </tr> </table> Full reference - please include leading digits Scale of map used for grid reference [] 25K, 50K (preferred) [X] 100K [] 250K Please use largest scale available 1:25K, 50K, 100K map name: <u>Coolabah 8235</u>		4	8	4	6	8	0	mE	6	5	4	7	3	4	0	mN	250K					250K									25K					5/8					25K				HEAD OFFICE USE ONLY: NPWS Site no: <u>26-3-0147</u> Site types: _____ Accessioned by: _____ Date: _____ Data entered by: _____ Date: _____ Owner/Manager <u>Girilambone Copper Co.</u> Address: <u>P.O. Box 12 Girilambone</u>
4	8	4	6	8	0	mE	6	5	4	7	3	4	0	mN																															
250K					250K																																								
25K					5/8					25K																																			
Site name: <u>GC-HS-Q9</u> NPWS District: <u>Cobar</u> Reason for investigation: <u>ARCH SURVEY - EIS</u>		Locality/property name: <u>Girilambone Copper Mine - North East Prospect</u> Region: <u>Coonabarabran</u>																																											
Portion no: _____ Parish: <u>Girilambone</u>		Photos taken? <u>yes</u> How many attached? <u>1</u>																																											
How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff. (Draw diagram on separate sheet.) <u>Site located approx 5.3 km north of Booroomugga Rd on Western Side of main track. - No Land markers - Located with GPS</u>																																													
Other sites in locality? <u>yes</u> Are sites in NPWS Register? <u>yes</u> Have artefacts been removed from site? <u>No</u> By whom? _____ Is site important to local Aborigines? <u>yes</u> Give contact(s) name(s) + address(es): <u>Buddly Weldon. Nyngan. LALC.</u> Contacted for this recording? _____ (Attach additional information separately) if not, why not? _____		Site Types include: <u>open Scatter</u> When? _____ Deposited where? _____																																											
Verbal/written reference sources (including full title of accompanying report): <u>An Archaeological Survey of Girilambone Copper Mine, North East prospect proposed Extension</u> NPWS Report Catalogue # _____																																													
Checklist: surface visibility damage/disturbance/ threat to site	Condition of site: <u>Poor</u> <u>Eroded</u>																																												
Recommendations for management & protection (attach separate sheet if necessary): <u>AS per Report</u>																																													
Site recorded by: <u>J. KERTON</u> Address/institution: <u>92 DARLING ST COWRA 2794</u>		Date: <u>16/12/94</u>																																											

SITE POSITION & ENVIRONMENT		OFFICE USE ONLY: NPWS site no:
1. Land form a. beach/hill slope/ridge top, etc: <i>Ridge</i>		b. site aspect: <i>360°</i> c. slope: <i><10°</i>
d. mark on diagram provided or on your own sketch the position of the site:		e. Describe briefly:
		
f. Local rock type: <i>Quartzite/Shale</i>	g. Land use/effect: <i>Grazing/Mining</i>	
2. Distance from drinking water: <i>20 km</i>	Source: <i>Bogan River</i>	
3. Resource Zone associated with site (estuarine, riverine, forest etc): <i>Open Woodland</i>		
4. Vegetation: <i>Euc. dry sclerophyll.</i>		
5. Edible plants noted: <i>Yes - Kurrajong - Wild Orange</i>		
6. Faunal resources (include shellfish):		
7. Other exploitable resources (river pebbles, ochre, etc):		
<p>Site type: <i>Hearth Site</i> <i>(Termite Nest)</i></p> <p>CHECKLIST TO HELP: length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock. DEPOSIT: colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density & distribution of these, stone types, artefact types. ART: area of surface decorated, motifs, colours, wet, dry pigment, technique of engraving: no. of figures, sizes, patination. BURIALS: number & condition of bone, position, age, sex, associated artefacts. TREES: number, alive, dead, likely age, scar shape, position, size, patterns, axe marks, regrowth. QUARRIES: rock type, debris, recognisable artefacts, percentage quarried. OTHER SITES EG. structures (fish traps, stone arrangements, bora rings, mia mias), mythological sites, rock holes, engraved groove channels, contact sites (massacres, massacres sometimes) as appropriate</p>	<p>DESCRIPTION OF SITE & CONTENTS. Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents.</p> <p style="text-align: center; font-size: 1.2em;"><i>As Per Attached Sheet</i></p> <p>Attach sketches etc. eg. plan & section of shelter, show relation between site contents, indicate north, show scale. Attach annotated photos (stereo where useful) showing scale, particularly for art sites.</p>	




[X] New recording [] Additional Info



National Parks and Wildlife Service

Box 1967, Hurstville NSW 2220. Tel: (02) 585 6444
Standard Site Recording Form Revised 5/88



26-3-0066

1:250,000 map sheet: _____

AMG Grid reference: 484630 mE 6547340 mN

Scale of map used for grid reference: 1:25K, 50K (preferred) 1:100K 1:250K

1:25K, 50K, 100K map name: Coolabah 8235

HEAD OFFICE USE ONLY:

NPWS Site no: 26-3-66

Site types: Open Camp Site

Accessioned by: _____ Date: _____

Date entered by: 86 Date: 5 APR 95

Owner/Manager: Girilambone Copper

Address: P.O. Box 12
Girilambone

Site name: GC-HS-27 Locality/property name: Girilambone Copper
 NPWS District: Cobar Region: Coonababran

Reason for investigation: ARCH SURVEY - EIS

Portion no: _____
 Parish: Girilambone

Photos taken? yes
 How many attached? 1

How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff)
 (Draw diagram on separate sheet.) Site located approx 5.4 km north of Bootoomugga Rd
to west of main central access track - located with GPS - No landmarks

Other sites in locality? yes Site Types include: open Scatter
 Are sites in NPWS Register? yes

Have artefacts been removed from site? No When? _____
 By whom? _____ Deposited where? _____

Is site important to local Aborigines? yes
 Give contact(s) name(s) + address(es): Buddely Weldons Nyngan. LALC.

Contacted for this recording? yes
 (Attach additional information separately) If not, why not? _____

Verbal/written reference sources (including full title of accompanying report): An Archaeological Survey of Girilambone Copper Mine - North East Prospect
Proposed Extensions.

NPWS Report Catalogue # _____

Checklist:
surface visibility
damage/disturbance
threat to site

Condition of site: Pool
Eroded / Scattered

Recommendations for management & protection (attach separate sheet if necessary):
As per Report.

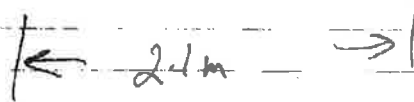
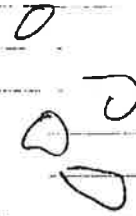
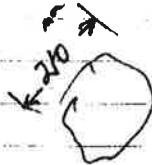
Site recorded by: J. KELTON Date: 16/12/94
 Address/institution: 92 DARRING ST.
COWRA 2794

HS-~~26~~-27



16/12/


- Ant Nest
- Root End
- Eroded / Scattered
- Western side of gentle slope

26-3-66



☒ New recording ☐ Additional Info

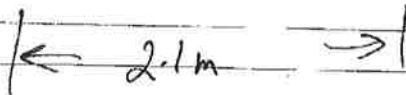
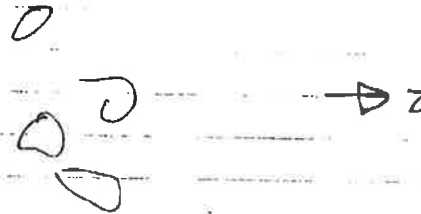
 National Parks and Wildlife Service Box 1967, Hurstville NSW 2220. Tel: (02) 585 6444 Standard Site Recording Form Revised 5/88		 26-3-0145
1:250,000 map sheet: _____ NPWS Code _____ AMG Grid reference: <u>484630</u> mE <u>6547340</u> mN Full reference - please include leading digits Scale of map used for grid reference: <input type="checkbox"/> 25K, <input type="checkbox"/> 50K, <input checked="" type="checkbox"/> 100K, <input type="checkbox"/> 250K Please use largest scale available. 1:25K, 50K, 100K map name: <u>Coolabah 8235</u>		HEAD OFFICE USE ONLY: NPWS Site no: <u>26-3-0145</u> Site types: _____ Accessioned by: _____ Date: _____ Data entered by: _____ Date: _____ Owner/Manager: <u>Girilambone Copper Co.</u> Address: <u>P.O. Box 12</u> <u>Girilambone</u>
Site name: <u>GG-HS-27</u> Locality/property name: <u>Girilambone Copper mine NORTH EAST PROSPECT</u> NPWS District: <u>COBAR</u> Region: <u>Coonabarabran</u>		
Reason for investigation: <u>ARCH SURVEY - G15</u>		
Portion no: _____ Parish: <u>Girilambone</u>		Photos taken? <u>yes</u> How many attached? <u>1</u>
How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff). (Draw diagram on separate sheet) <u>Site located approx 5.4 km north of Booroomugga Rd to west of main central access track. Located with GPS - No landmarks</u>		
Other sites in locality? <u>yes</u> Are sites in NPWS Register? <u>yes</u>		Site Types include: <u>open Scatter</u>
Have artefacts been removed from site? <u>No</u> By whom? _____		When? _____ Deposited where? _____
Is site important to local Aborigines? <u>yes</u> Give contact(s) name(s) + address(es): <u>Buddely Weldon, Nyngan, L.A.K.</u> Contacted for this recording? <u>yes</u> (Attach additional information separately) If not, why not? _____		
Verbal/written reference sources (including full title of accompanying report): <u>AN Archaeological Survey of Girilambone Copper mine NORTH EAST PROSPECT Proposed Extensions.</u> NPWS Report Catalogue # _____		
Checklist surface visibility, damage/disturbance/ threat to site	Condition of site: <u>Pool</u> <u>Eroded / Scattered</u>	
Recommendations for management & protection (attach separate sheet if necessary): <u>AS per Report.</u>		
Site recorded by: <u>D. KEATON</u> Address/institution: <u>92 DARLING ST.</u> <u>COWRA 2794</u>		Date: <u>16/12/94</u>

SITE POSITION & ENVIRONMENT		OFFICE USE ONLY: NPWS site no:
1. Land form a. beach/hill slope/ridge top, etc: <i>Slope</i>		b. site aspect: <i>West</i> c. slope: <i><10°</i>
d. mark on diagram provided or on your own sketch the position of the site:		e. Describe briefly: <i>Single Hearth</i>
		
1. Local rock type: <i>Basaltic / Shale</i>	g. Land use/effect: <i>Grazing / Mining</i>	
2. Distance from drinking water: <i>20 km</i>	Source: <i>Bogan River</i>	
3. Resource Zone associated with site (estuarine, riverine, forest etc): <i>Open Woodland</i>		
4. Vegetation: <i>Euc. dry sclerophyll</i>		
5. Edible plants noted: <i>Yes</i>		
6. Faunal resources (include shellfish):		
7. Other exploitable resources (river pebbles, ochre, etc):		
<p>Site type: <i>Hearth Site</i> <i>(Tomite Nest)</i></p> <p>CHECKLIST TO HELP: length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock. DEPOSIT: colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density & distribution of these, stone types, artefact types. ART: area of surface decorated, motifs, colours, wet, dry pigment, technique of engraving, no. of figures, sizes, patination. BURIALS: number & condition of bone, position, age, sex, associated artefacts. TREES: number, alive, dead, likely age, scar shape, position, size, patterns, axe marks, regrowth. QUARRIES: rock type, debris, recognisable artefacts, percentage quarried. OTHER SITES EG. structures (fish traps, stone arrangements, bone rings, mis miss), mythological sites, rock holes, engraved groove channels, contact sites (missions massacres cemeteries) as appropriate</p>	<p>DESCRIPTION OF SITE & CONTENTS. Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents.</p> <p><i>As Per Attached Sheet</i></p>	
<p>Attach sketches etc. eg. plan & section of shelter, show relation between site contents, indicate north, show scale. Attach annotated photos (stereo where useful) showing scale, particularly for art sites.</p>		

HS-~~25~~-27

16/12/

- Ant Nest
- Root Cond.
- Eroded / Heavily
- Western side of gentle slope



APPENDIX 5

Details of Transects for Avoca Tank project area (Stage 1)

Transect	Slope ⁰	Average visibility %	Exposures %	Exposure types	Sites or objects	Length (m)
A	0 - 2	30	10	gravel lags, anthills, sheetwash deflations	no	1750
B	0 - 2	30	10	gravel lags, anthills, sheetwash deflations	no	1700
C	0 - 2	20	10	gravel lags, anthills, sheetwash deflations	no	1950
D	0 - 2	30	10	gravel lags, anthills, sheetwash deflations	no	1800
E	0 - 2	30	15	gravel lags, anthills, sheetwash deflations	no	1850
F	0 - 2	20	15	gravel lags, anthills, sheetwash deflations	no	1850
G	0 - 2	20	10	gravel lags, anthills, sheetwash deflations	no	1850
H	0 - 2	30	20	gravel lags, anthills, sheetwash deflations	no	1900
I	0 - 2	20	15	gravel lags, anthills, sheetwash deflations	yes	1900
J	0 - 2	15	10	gravel lags, anthills, sheetwash deflations	yes	1950
K	0 - 2	10	10	gravel lags, anthills, sheetwash deflations	no	2000
L	0 - 2	30	25	gravel lags, anthills, sheetwash deflations	no	2000
M	0 - 2	30	20	gravel lags, anthills, sheetwash deflations	no	2200
N	0 - 2	30	20	gravel lags, anthills, sheetwash deflations	no	2000
O	0 - 2	25	15	gravel lags, anthills, sheetwash deflations	no	1500
P	0 - 2	25	15	gravel lags, anthills, sheetwash deflations	no	800
Q	0 - 2	20	15	gravel lags, anthills, sheetwash deflations	no	500

Details of Transects for Avoca Tank project area (Stage 2)

Transect	Slope ⁰	Average visibility %	Exposures %	Exposure types	Sites or objects	Length (m)
1	0 - 2	30	10	gravel lags, anthills, sheetwash deflations	no	700
2	0 - 2	35	20	gravel lags, anthills, sheetwash deflations	no	900
3	0 - 2	30	10	gravel lags, anthills, sheetwash deflations	no	1100
4	0 - 2	25	15	gravel lags, anthills, sheetwash deflations	no	2000
5	0 - 2	20	10	gravel lags, anthills, sheetwash deflations	no	1000
6	0 - 2	25	15	gravel lags, anthills, sheetwash deflations	no	1200
7	0 - 2	30	15	gravel lags, anthills, sheetwash deflations	no	1500
8	0 - 2	30	20	gravel lags, anthills, sheetwash deflations	no	2100
9	0 - 2	25	15	gravel lags, anthills, sheetwash deflations	no	1400
10	0 - 2	20	15	gravel lags, anthills, sheetwash deflations	no	1500
11	0 - 2	15	10	gravel lags, anthills, sheetwash deflations	no	2900
12	0 - 2	20	15	gravel lags, anthills, sheetwash deflations	no	3200
13	0 - 2	20	20	gravel lags, anthills, sheetwash deflations	no	2400
14	0 - 2	35	25	gravel lags, anthills, sheetwash deflations	yes	2200
15	0 - 2	35	15	gravel lags, anthills, sheetwash deflations	no	1800
16	0 - 2	30	15	gravel lags, anthills, sheetwash deflations	no	1700

Stone artefact attributes recorded at Avoca Tank 1, 2 and 5

Site	Artefact No	Raw Material	Artefact Type	Platform surface	Termination	Length (mm)	Width (mm)	Thickness (mm)	Comments
Avoca Tank 1	1	quartzite	retouched flake	flake scar	feather	33.8	20.8	12.1	cortex on dorsal
Avoca Tank 1	2	quartzite	flake	crushed	feather	22.5	21.6	7.8	
Avoca Tank 1	3	grannodiorite	ground fragment			52.9	36.8	23.2	
Avoca Tank 1	4	quartz	retouched flake	flake scar		24.2	30.8	8.6	distal retouch
Avoca Tank 1	5	quartzite	retouched flake	cortex		38.8	28.0	19.4	proximal flake
Avoca Tank 1	6	quartz	flake	flake scar	feather	21.8	26.6	2.6	overhang removal
Avoca Tank 1	7	porphyritic	hammerstone			80.8	71.1	36.1	cortex
Avoca Tank 1	8	basalt	flake	indeterminate		17.0	11.6	1.8	proximal flake
Avoca Tank 1	9	quartz	flake	flake scar	feather	23.8	28.1	6.6	
Avoca Tank 1	10	quartz	flake	indeterminate	step	36.3	21.1	9.5	
Avoca Tank 1	11	quartzite	retouched flake	flake scar		31.2	32.5	12.2	overhang removal & distal retouched
Avoca Tank 2	1	silcrete	flake	flake scar	feather	24.0	10.9	8.8	
Avoca Tank 5	1	quartz	flake	flake scar	feather	24.5	19.1	7.2	
Avoca Tank 5	2	quartz	flake	indeterminate	feather	18.8	19.4	4.2	

APPENDIX 6



ABORIGINAL CULTURAL HERITAGE ASSESSMENT - Avoca Tank Project

STRAITS RECOMMENDATIONS:

1. That all areas identified as sites are cordoned off and are classified as **"no go zone areas"** until an AHIP has been granted (see **Plates 1 & 2**)
2. That all Straits employees and contractors working in this area are made aware that certain areas have been identified as no go zones and they are reminded of the financial consequences they can face
3. That the areas are monitored on a regular basis until an AHIP has been approved
4. That Straits Community and Heritage Manager work closely with staff to ensure these messages are relayed and to work closely with Nyngan Local Aboriginal Land Council or Bogan Aboriginal Corporation to apply for custodianship of Aboriginal objects
5. That photographic monitoring points outside the **no go zone area** of each site is established for the purpose of auditing the sites until an AHIP has been granted

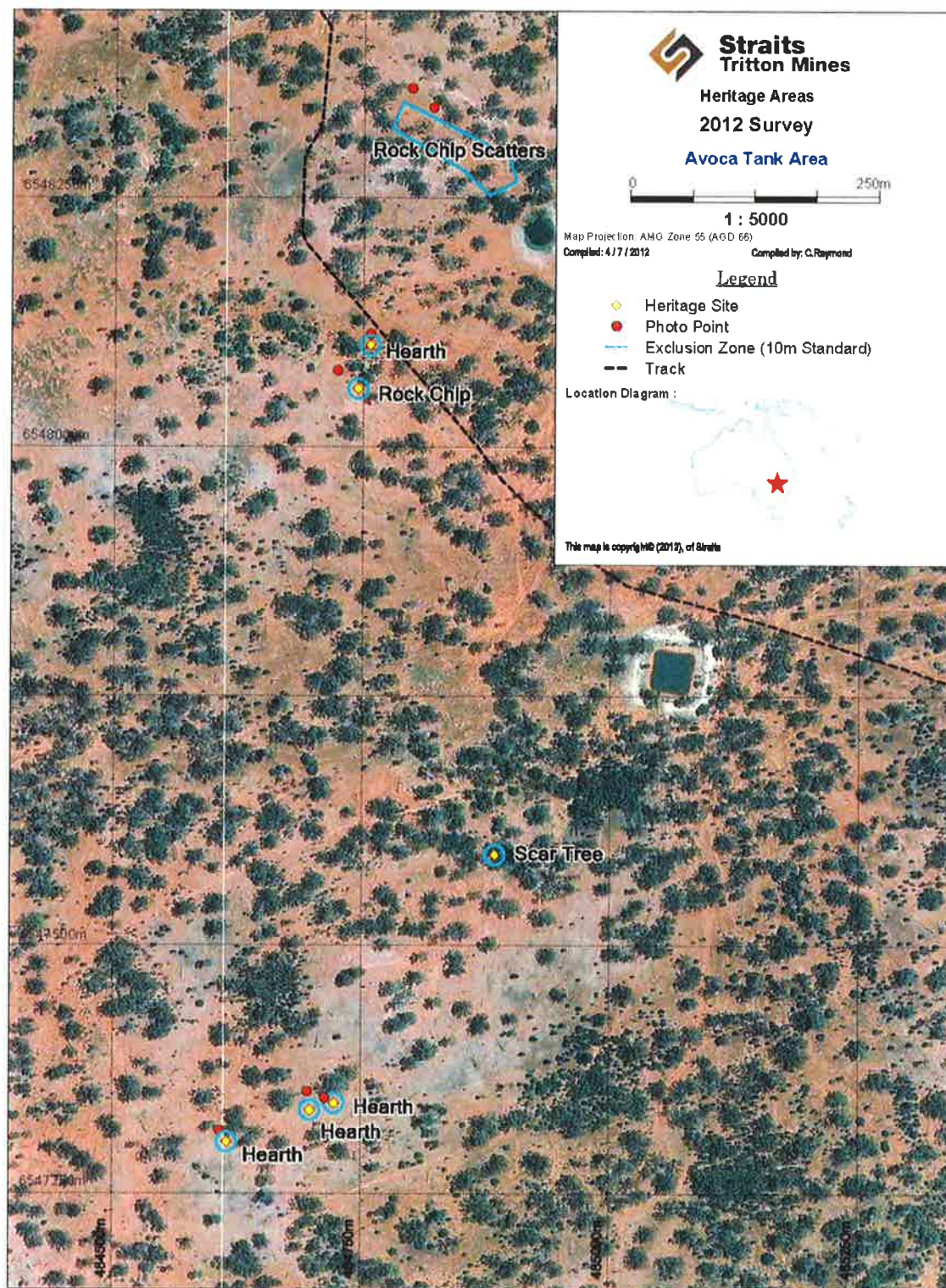
Paul W Calvin
Community and Heritage Manager



Plate 1 (above): (from left) Aboriginal Representatives Lesly Ryan (Bogan Aboriginal Corporation), Sheila Couley (Nyngan Local Aboriginal Land Council), Kate Duca (OnSite CHM), Neville Merritt (Ngemba/Ngiyampaa Native Title claim group) discuss site protection with Paul Calvin (Straits Resources).

Plate 2 (below): Site protection and Compliance information for Tritton personnel





APPENDIX 7

10.0 CONCLUSIONS, MANAGEMENT AND RECOMMENDATIONS

10.1 CONCLUSIONS

1. The survey and assessment process across the Avoca Tank project area (Stages 1 and 2) has identified a total of five locations where Aboriginal objects and occupation evidence occurs. (Avoca Tank 1 to 5).
2. A review of the 11 previously recorded AHIMS sites within the Avoca Tank project area (Stage 1) has determined that there are duplicate recordings and these 11 sites actually represent 5 sites. Two of these sites have been rerecorded as part of this survey. Duplicate site recordings 26-3-0034 / 26-3-0119/ 26-3-0149 have been rerecorded as Avoca Tank 1 and duplicate site recordings 26-3-0067 / 26-3-0146, 26-3-0068 / 26-3-0147, 26-3-0066 / 26-3-0145 have been recorded as Avoca Tank 3 comprising 3 hearth locales. Hearth nodules recorded at site 26-3-0070 / 26-3-0071 were unable to be relocated as part of this survey and it is likely that these features have since eroded away.
3. The results of this assessment reveal Aboriginal occupation evidence is sparsely distributed across the Avoca Tank project area and indicative of low intensity use of the landscape by Aboriginal people characterised by a high level of mobility and relatively short term occupation or single use of these places.
4. The low intensity of Aboriginal occupation materials across the area is likely due to the paucity of reliable sources of potable water, stone outcrops suitable for the manufacture of stone tools and to some extent the disturbance upon Aboriginal occupation materials by previous land use practices.
5. Aboriginal consultation and archaeological analysis of these places within a regional context has assessed the cultural significance of these places (encompassing Aboriginal and archaeological significance). Avoca Tank 1 (an open artefact scatter), is considered to have a low to moderate level of cultural significance. Avoca Tank 2 (a single isolated stone artefact), is considered to have a low level of cultural significance. Avoca Tank 3 (three 'hearths') is considered to have a low level of cultural significance. Avoca Tank 4 (historic scar tree and Aboriginal stockman's camp) is considered to have a moderate level of cultural significance. Avoca Tank 4 has been identified by Registered Aboriginal Parties as having a moderate to high level of Aboriginal significance and also attributed with historic and aesthetic values. Avoca Tank 5 (2 x isolated stone artefacts), is considered to have a low level of cultural significance.

10.2 MANAGEMENT OPTIONS

The Aboriginal objects identified within the Avoca Tank study area are legally protected under the *National Parks and Wildlife Act 1974* (NPW Act). Part 6 of the NPW Act provides specific protection for Aboriginal objects and declared Aboriginal places by establishing offences of harm. Harm is defined to mean destroying, defacing, damaging or moving an object from the land.

There are a number of defences and exemptions to the offence of harming an Aboriginal object or place. One of the defences is that the harm was carried out under an Aboriginal Heritage Impact Permit (AHIP).

The Burra Charter advocates a cautious approach to the management of a place, cultural significance and values: do as much as necessary but as little as possible (Article 3). Within the context of development and associated assessment processes under the *Environmental Assessment and Planning Act*, the formulation of management strategies is also influenced by the level of cultural significance, the proposal and potential impacts on identified values.

A number of strategies are generally applied to the management of Aboriginal objects and their values. These strategies are conservation, mitigated impact and unmitigated impact. Conservation and mitigated impact may be interrelated. For instance places and objects might be conserved in situ, or through mitigated impact places, objects and their values might be conserved through strategies such as documentation, salvage, appropriate curation, display and interpretation. Development of management strategies should ultimately derive from a clear understanding of the cultural significance of a given place and the range of values held by different groups or individuals.

10.3 RECOMMENDATIONS

This assessment has identified five places (Avoca Tank 1 to 5) within the Avoca Tank project area (Stages 1 and 2) containing Aboriginal objects protected under the *National Parks and Wildlife Act*. Tritton has advised that all of these sites will be avoided as part of any exploratory drilling program. Recommendations for avoiding each of the identified sites during the drilling program were provided with the site descriptions (Section 7.2).

Straits (Tritton) Resources has implemented a series of management strategies to afford protection of these sites during the exploratory drilling program and from related activities. These strategies have been implemented in accordance with the Straits Community and Heritage Policy and Straits Procedures - Heritage Management Planning (Australia). Recommendations from the internal memo and photographic evidence (see Plate 10.1) of implemented site protection measures are provided in Appendix 6.

Should the exploration program within the Avoca Tank project area proceed to mining that may potentially impact on the identified sites then mitigative strategies will need to be developed and applied.

Should impacts upon identified sites (Avoca Tank 1 to 5) be unavoidable the proponent will need to apply for relevant AHIPs.

Plate 10.1 (below): (from left) Aboriginal Representatives Lesly Ryan (Bogan Aboriginal Corporation), Sheila Couley (Nyngan Local Aboriginal Land Council), Kate Duca (OnSite CHM), Neville Merritt (Ngemba/Ngiyampaa Native Title claim group) discuss site protection with Paul Calvin (Tritton / Straits Resources).



It was discussed above that management strategies should be developed with a clear understanding of the place, its values and cultural significance. On this basis and the potential impacts of proposed mining activities it is recommended that:

1. Wherever possible Tritton seek to conserve identified places in situ and develop and implement appropriate management strategies during exploration activities or construction, development and operation of an active mine.

Should impact on these places be unavoidable during the construction, development or operation of a mine it is recommended that the proponent apply for Aboriginal Heritage Impact Permits (AHIPs):

2. The stone artefacts at Avoca Tank 1 (AHIMS Sites 26-3-0034 / 26-3-0119 / 26-3-0149) should be subject to cultural collection under a care agreement with Nyngan LALC.
3. The hearth previously recorded at AHIMS sites 26-3-0070 / 26-3-0071 was unable to be relocated during this survey and is likely to have been eroded away. No further action is warranted regarding this place.
4. Avoca Tank 2, consisting of one isolated stone artefact is considered to have a low level of cultural significance and no further action is warranted regarding this site.

5. Avoca Tank 3, consisting of 3 hearths, is considered to have a low level of cultural significance and no further action is warranted regarding this site.
6. Avoca Tank 4, consisting of the historic scar tree, Aboriginal stockmen's camp and its setting has a moderate to high level of Aboriginal significance and should be conserved and managed accordingly. If this place is able to be avoided and conserved then a site specific and appropriate management plan/policy should be prepared to protect the cultural heritage values and their significance.
If conservation is not possible then Tritton should develop a methodology in consultation with the Registered Aboriginal Parties about the potential salvage, relocation and conservation of the scar tree. Preliminary discussion with the Aboriginal community representatives present during the Stage 1 and 2 survey indicated that the salvage and relocation of the tree to another location would be acceptable if this place could not be avoided. More comprehensive recording and documentation of this place should also be undertaken as part of any AHIP process.
7. Avoca Tank 5, consisting of 2 isolated stone artefacts is considered to have a low level of cultural significance and no further action is warranted regarding this site.
8. Should the project proceed to full scale mining operations, no further archaeological surveys of the Avoca Tank project area is required.

On the basis of the legal requirements of the *National Parks and Wildlife Act* it is recommended that:

9. Where impact on identified places cannot be avoided, Tritton should apply for an Aboriginal Heritage Impact Permit (s90).
10. OEH provide consent to salvage and destroy these localities and include as conditions recommendations 2 to 7 above.

A summary of sites identified within the Avoca Tank project area (Stage1), their significance and recommendations is provided below in Table 10.1.

Comments on this assessment from the Registered Aboriginal Parties are discussed below in **Section 10.4**.

Table 10.1: Summary table for identified sites within Avoca Tank project area, their significance and recommendations

Sites	Previously recorded AHIMS Sites	Site type and comments	Aboriginal Significance	Archaeological Significance	Summary of mitigation strategy
Avoca Tank 1	26-3-0034 / 26-3-0119 / 26-3-0149	Open artefact scatter –Low density scatter (11 x stone artefacts) with high raw material diversity and moderate artefact type diversity.	Moderate	Low to moderate	Apply for an AHIP if required and salvage artefacts under care agreement with Nyngan LALC
-	26-3-0070 / 26-3-0071	Hearth – unable to be relocated during this survey. Probably not extant	-	-	Apply for an AHIP if required for recorded location of site
Avoca Tank 2	-	Isolated stone artefact	Low	Low	Apply for an AHIP if required. No further action warranted.
Avoca Tank 3	26-3-0067 / 26-3-0146 / 26-3-0147 / 26-3-0066 / 26-3-0145	3 x hearths – no other cultural material in association.	Low to moderate	Low	Apply for an AHIP if required. No further action warranted.
Avoca Tank 4	-	Historic scar tree and Aboriginal stockman's camp.	Moderate to high	Moderate	Conserve tree, camp and environmental context. If impact is unavoidable then apply for an AHIP to salvage and relocate tree.
Avoca Tank 5	-	2 x isolated stone artefacts	Low	Low	Apply for an AHIP if required. No further action warranted.

10.4 COMMENTS ON THIS ASSESSMENT FROM REGISTERED ABORIGINAL PARTIES

A draft of this report was sent to the registered Aboriginal parties on 21st February 2013. The Registered Aboriginal parties were provided 28 days to review the report and provide comment. The closing date for comments was 22nd March 2013.

All of the registered parties supplied comment on the draft. Nyngan LALC and Bogan Aboriginal Corporation endorsed the assessment and resulting recommendations. A copy of these endorsement letters is included in **Appendix 7**.

Native Title Services Corporation, on behalf of the Ngemba/Ngiyampaa Native Title claim group, also provided comment on the assessment (**Appendix 7**). NTS comments on the assessment have been tabulated and a response provided below in **Table 10.2**. The table of comments was sent to NTS Corp who provided a further response also included at **Appendix 7**.

Table 10.2: Response to NTS Corp Comments on Avoca Tank Project Draft ACHAR

NTSCORP COMMENTS	RESPONSE TO NTSCORP COMMENTS
<p>Coverage of Surveys Undertaken</p> <p>At section 6.0, the Draft ACHAR states that, for the Stage 1 area, '[t]he survey consisted of a series of transects north south along the proposed drill lines'. No such statement in regards to drill-hole locations is made in respect of the Stage 2 survey area coverage. No comments are made in respect of the location of access roads and other infrastructure in relation to either survey location.</p> <p>This makes it unclear whether the surveys undertaken to inform the Draft ACHAR cover all areas which will be impacted by the Project, including all proposed drill holes, access roads and other infrastructure sites. Accordingly, NTSCORP submits that Tritton should ensure that, whether as part of a further assessment process or as part of the management processes adopted for the Project, all areas where infrastructure will be located, including access roads, be subject to further assessment surveys which includes representatives from the Claim Group.</p>	<p>At this stage of the project the proposed footprint and layout of the mine has not been finalised. The final layout will be informed by a number of factors including constraints identified as part of environmental and heritage studies and the location of the ore body as determined by drilling. The intention to plan the mine layout and avoid heritage places wherever possible is demonstrated within Recommendation 1.</p> <p>The survey strategy for the Stage 1 area was developed on the basis of the proposed drill holes locations and to achieve coverage across the entire project area. A similar survey strategy was developed and adopted for the Stage 2 area with the same aim; to achieve coverage across the entire project area.</p> <p>Section 6.0 - Avoca Tank Stage 2 (pg 50)</p> <p><i>At the time of the survey the proponent had advised that the Stage 2 area was being subject to archaeological survey to identify potential impacts on Aboriginal objects and identify constraints on the planning process for the mine footprint should the exploration program shift to full scale mining and to be considered in the EIS.</i></p> <p><i>For consistency and compatibility of results between the Stage 1 and 2 project areas a similar survey strategy was employed for the Stage 2 project area as was employed for the Stage 1 project area. The location of transects undertaken as part of Stage 2 is shown in Figure 6.1.</i></p> <p>The survey strategy employed by OSCHM achieved coverage across 34% (6.35km²) of the entire Avoca Tank (Stages 1 and 2). This level of coverage is considered sufficient to understand the potential for Aboriginal occupation evidence to occur across the landscape level. This archaeological survey has</p>

	<p>determined that Aboriginal occupation evidence is sparsely distributed across the Avoca Tank project area and despite the 63.5 kilometres of transects surveyed found to only occur at five discrete locations.</p> <p>Further archaeological surveys were not recommended due to this low density of Aboriginal occupation evidence and low potential for further evidence to occur. Subsequent and more intensive surveys are generally only warranted when a baseline survey identifies a moderate to high potential for further Aboriginal occupation evidence to occur. This is not the case within the Avoca Tank project area.</p> <p>It is also worth noting that Tritton Resources invited representatives from the Claim group to participate in both surveys. Neville Merritt participated in the Stage 2 survey and was also shown a number of sites identified during the Stage 1 survey (including Avoca Tank 1, 2 and 4 and AHIMS site 26-3-0070/26-3-0071). A range of potential management strategies were discussed with Neville (see page 27 – 28).</p> <p>The other Registered Aboriginal Parties (Nyngan LALC and Bogan Aboriginal Corporation) have also since provided their support for the recommendations in the report, including Recommendation 8 that no further archaeological surveys are required.</p>
Comments and Suggestions on Management Measures	
<p>Fencing of Identified Places and Objects</p> <p>The Claim Group have expressed concerns over the plastic fencing currently used at the Projects site to demarcate and protect identified objects and places.</p> <p>Cordon off and designating identified sites as 'no go zones' is discussed at sections 7.2.1 to 7.2.5 of the Draft ACHAR. The Claim Group request that fencing off of identified objects and places be specifically adopted as</p>	<p>The plastic fencing currently installed around the identified sites is temporary. The fencing at sites that will be conserved and managed during the development and operational phase of any proposed mine will be upgraded as part of the boundary fencing program. The fencing at these sites will be upgraded to steel pickets and wire sufficient to prevent trespassers and animals.</p> <p>Straits have also implemented protection measures in accordance with the Straits Community and Heritage Policy and Straits Procedures - Heritage Management Planning (Australia). Recommendations from the internal memo and implemented site protection measures were discussed at Section 10.3 (pg</p>

<p>one of the management measures in addition to those detailed at section 10.3 of the Draft ACHAR.</p> <p>The Claim Group requests that steel pickets and wire be used instead of plastic fencing to ensure durability and sufficient protection. The Claim Group also request that such fencing be sufficiently high to prevent animals and trespassers from entering the 'no go zones'.</p> <p>Ongoing Monitoring</p> <p>NTSCORP suggests that ongoing monitoring, including representatives from the Claim Group, be included as a management measure in addition to those detailed at section 10.3 of the Draft ACHAR. Such monitoring should be required for all activities which involve surface disturbance, and would be able to incorporate the additional assessment surveys as suggested above. The monitoring process should include mechanisms which enable Tritton and the cultural heritage monitors onsite to jointly develop protection and mitigation measures in respect of additional objects and sites which are identified as exploration proceeds.</p>	<p>83) and provided at Appendix 6.</p> <p>A recommendation (consistent with those discussed at sections 7.2.1 to 7.2.5) relating to the fencing of these sites (with steel pickets and wire) and designation as 'no go zones' will also be included within Section 10.3, Recommendation 2 of the final report.</p> <p>The below comments refer to the practice of monitoring earthworks for Aboriginal objects in a subsurface context (usually stone artefacts). These comments do not refer to the practice of cultural monitoring of identified cultural heritage places to be conserved during the construction, development and operation of an active mine. Cultural monitoring of identified and retained Aboriginal heritage places by the Aboriginal Community should be considered by Tritton as appropriate and part of the development and implementation of management strategies referred to in Recommendation 1.</p> <p>The archaeological survey determined that Aboriginal occupation evidence is sparsely distributed across the Avoca Tank project area, which is considered to have a low archaeological potential to contain further Aboriginal occupation evidence.</p> <p>Just as further survey is not considered warranted from an archaeological perspective, nor is monitoring of general earthworks. From an archaeological perspective monitoring might generally only be warranted when a survey identifies a moderate to high potential for Aboriginal occupation evidence to occur in a subsurface context. This is not the case within the Avoca Tank project area.</p> <p>Further, where areas of potential subsurface deposit are identified, current OEH policy practice favours the undertaking of test excavations over monitoring. A number of reasons are accepted for the preference of test excavation strategy to identify Aboriginal occupation evidence to occur in a subsurface context:</p>
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<ol style="list-style-type: none"> 1. The undertaking of test excavations is generally conducted during the planning and approvals phase of a project. The identification of Aboriginal cultural heritage values during this phase provides more flexibility for the project planning to develop and implement appropriate heritage conservation strategies in response to the nature and significance of those values. 2. The undertaking of test excavations is usually implemented under the framework of an AHIP or process in the Code of Practice for Archaeological Investigations. This framework provides certainty to the Aboriginal communities that Aboriginal heritage values will be identified and appropriately considered. <p>In contrast monitoring is considered a 'high risk' approach:</p> <ol style="list-style-type: none"> 3. Monitoring of project earthworks usually occurs after the project planning phase and at the commencement of activities that have the potential to <i>harm</i> Aboriginal objects (within the meaning of the NPW Act). This timing also means that the flexibility and opportunity to respond appropriately and achieve a good heritage conservation outcome to protect identified Aboriginal heritage values <i>in-situ</i> is greatly reduced. 4. In the absence of an AHIP, the identification of Aboriginal objects in a subsurface context during earthworks also requires 'a stop work approach' and necessity to apply for an AHIP supported by the necessary assessment and consultation processes. This may also lead to long and costly delays for the project and proponent and will generally not produce good heritage conservation outcomes. <p>Regardless, the paucity of Aboriginal occupation evidence across the project area and low potential for Aboriginal objects to occur within a subsurface context does not warrant the implementation of either</p>	
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	management strategy (test excavation or monitoring). Besides the paucity of Aboriginal occupation evidence to warrant monitoring, another factor relates to the low integrity of the landscape across the Avoca Tank project area. The landscape is considered degraded and eroded. These conditions are not conducive to the preservation of subsurface archaeological deposits containing Aboriginal objects. At least part of this degradation has been caused by erosion caused relating to previous land use practices. These erosive agents are considered to have impacted greatly upon the landscape. Previous land use practices, erosion and the resulting integrity of the subject land and effects on Aboriginal objects are discussed throughout the report but especially in Sections 4.1 and 4.4.
Relocation of Objects & Further Consultation Processes The potential relocation of identified objects as exploration proceeds to mining is discussed at section 9.1 and included as one of the ten management principles at section 10.3 of the Draft ACHAR. NTSCORP suggests that the Claim Group be specifically consulted with and included in any salvage and storage programmes developed in relation to this relocation. At several places in the Draft ACHAR, including as one of the management mechanisms listed at section 10.3, it is suggested that Aboriginal Heritage Impact Permits (AHIPs) may be required if impact in identified places or objects cannot be avoided. NTSCORP submits that the consultation processes which will be adopted in any AHIP processes, including both cultural heritage significance assessments and development of management mechanisms, be delineated in the Draft	<p>The relocation and salvage of any Aboriginal objects would require the development of an appropriate salvage methodology in consultation with the Registered Aboriginal Parties.</p> <p>Salvage methodologies have not been developed because, as yet, it is not understood whether the final footprint and layout may impact on identified Aboriginal cultural heritage values. Any salvage methodology would be circulated to the Registered Aboriginal Parties for their review and comment prior to the Aboriginal Heritage Impact Permit (AHIP) application.</p> <p>"The National Parks and Wildlife Act 1974 (NPW Act) allows the transfer of Aboriginal objects to an Aboriginal person or Aboriginal organisation for safekeeping. The person or organisation must enter into a care agreement with OEH."</p> <p>If required, a care agreement would also be developed as part of any salvage methodology and AHIP application. Consultation about the relocation, future storage and conservation practices for Aboriginal objects is required to be undertaken with the Registered Aboriginal Parties.</p> <p>Some discussion with the Registered Aboriginal Parties (including Neville Merritt as representative for</p>

<p>ACHAR and include specific consultation and collaboration with the Claim Group.</p>	<p>the Claim group) about salvage methodologies and care agreement for the scar tree at Avoca Tank 4 was provided at Section 3.3.2 (pgs 27-28)</p> <p>The Claim group is one of three Registered Aboriginal parties and will be consulted during the development of any proposed salvage methodologies and care agreements required to be developed for the project.</p>
<p>Further Surveys Required if Project Proceeds to Mining</p> <p>NTSCORP do not support point 8 of the proposed management measures at section 10.3 of the Draft ACHAR. If the Project proceeds to mining, it is appropriate that further cultural heritage surveys be undertaken at a greater level of intensity and coverage sufficient to reflect the increased impacts of production as compared to exploration. This is particularly pertinent given that no member of the Claim Group was involved in Stage 1 of the survey process, as noted in section 3.3.1.</p>	<p>The archaeological survey determined that Aboriginal occupation evidence is sparsely distributed across the Avoca Tank project area. Further archaeological surveys were not recommended due to the low density of Aboriginal occupation evidence and low potential for further evidence to occur.</p> <p>Subsequent and more intensive surveys are generally only warranted when a baseline survey identifies a moderate to high potential for further Aboriginal occupation evidence to occur. This is not the case within the Avoca Tank project area.</p> <p>It is also worth noting that Tritton Resources invited representatives from the Claim group to participate in both the Stage 1 and 2 surveys. Neville Merritt participated in the Stage 2 survey and was also shown a number of sites identified during the Stage 1 survey (including Avoca Tank 1, 2 and 4 and AHIMS site 26-3-0070/26-3-0071). A range of potential management strategies were discussed with Neville (see page 27 – 28).</p> <p>The other Registered Aboriginal Parties (Nyngan LALC and Bogan Aboriginal Corporation) who participated in the surveys have provided support for the recommendations in the report, including Recommendation 8 that no further archaeological surveys are required.</p> <p>Their views about the Aboriginal occupation and significance of the Avoca Tank study area are provided in Sections 8.0 and 9.1.</p>

NYNGAN LOCAL ABORIGINAL LAND COUNCIL



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8th April 2013

Mr Gerard Niemoeller
Principle Heritage Consultant
On Site Cultural Management Pty Ltd
PO BOX 574
Narooma NSW 2546

Dear Gerard,

RE: Site Assessment done on "Avoca" and "Avoca Tanks".

On behalf of the Aboriginal Site Assessment done on the above properties in which we accompanied Mr Gerard Niemoeller. Nyngan Local Aboriginal Land Council (LALC) had input and discussions on the artefacts located at both of the above properties.

We would like to endorse the recommendations that are stated in your final report.

If need for removal of any artefacts an Aboriginal Heritage Impact Permit application would be applied for to ensure the objects can be relocate and protect of the artefacts. If they need be removed it will also any prevent loss or harm to them and could be stored in a local cultural keeping place.

For further information please contact the Nyngan LALC.

Yours Faithfully

Veneta Dutton
CEO
Nyngan
Local Aboriginal Land Council (LALC)

be informed, be involved, be inspired.

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5th April 2013

Mr Gerard Niemoeller
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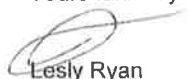
Hi Gerard

In regards to the Site assessment done on "Avoca" and "Avoca Tanks".
On behalf of the Aboriginal Site assessment done on the properties in which I
accompanied Gerard and had input and discussion on the artefacts located on the
above properties.

I would like to endorse the recommendations that are stated in your final report.
If need for the removal of any artefacts an Aboriginal Heritage Impact Permit
application would be applied for to relocate the objects if the need be.

For further information please contact me.

Yours faithfully


Lesly Ryan
CEO/Sites officer
Bogan Aboriginal Corporation

Bogan Aboriginal Corporation



9 April 2013

Gerard Niemoeller
Principal Heritage Consultant
On Site Cultural Heritage Management Pty Ltd
PO Box 574
NAROOMA NSW 2546

By Email: gerard@onsitechm.com.au

WITHOUT PREJUDICE

Dear Gerard,

Comments on Avoca Tank Project Draft ACHAR

As per your correspondence of 25 February 2013, NTSCORP Ltd (**NTSCORP**), on behalf of the Ngemba, Ngiyampaa, Wayilwan, Wangaypuwaan People native title claim group (**Claim Group**), makes the following comments on the draft Aboriginal Cultural Heritage Assessment Report (**Draft ACHAR**) prepared in respect of the Avoca Tank Project (**Project**) proposed by Tritton Resources Limited Pty (**Tritton**).

Coverage of Surveys Undertaken

At section 6.0, the Draft ACHAR states that, for the Stage 1 area, '[t]he survey consisted of a series of transects north south along the proposed drill lines'. No such statement in regards to drill-hole locations is made in respect of the Stage 2 survey area coverage. No comments are made in respect of the location of access roads and other infrastructure in relation to either survey location.

This makes it unclear whether the surveys undertaken to inform the Draft ACHAR cover all areas which will be impacted by the Project, including all proposed drill-holes, access roads and other infrastructure sites. Accordingly, NTSCORP submits that Tritton should ensure that, whether as part of a further assessment process or as part of the management processes adopted for the Project, all areas where infrastructure will be located, including access roads, be subject to further assessment surveys which includes representatives from the Claim Group.

Comments and Suggestions on Management Measures

Fencing of Identified Places and Objects

The Claim Group have expressed concerns over the plastic fencing currently used at the Projects site to demarcate and protect identified objects and places.

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Cordoning off and designating identified sites as 'no go zones' is discussed at sections 7.2.1 to 7.2.5 of the Draft ACHAR. The Claim Group request that fencing off of identified objects and places be specifically adopted as one of the management measures in addition to those detailed at section 10.3 of the Draft ACHAR. The Claim Group requests that steel pickets and wire be used instead of plastic fencing to ensure durability and sufficient protection. The Claim Group also request that such fencing be sufficiently high to prevent animals and trespassers from entering the 'no go zones'.

Ongoing Monitoring

NTSCORP suggests that ongoing monitoring, including representatives from the Claim Group, be included as a management measure in addition to those detailed at section 10.3 of the Draft ACHAR. Such monitoring should be required for all activities which involve surface disturbance, and would be able to incorporate the additional assessment surveys as suggested above. The monitoring process should include mechanisms which enable Tritton and the cultural heritage monitors onsite to jointly develop protection and mitigation measures in respect of additional objects and sites which are identified as exploration proceeds.

Relocation of Objects & Further Consultation Processes

The potential relocation of identified objects as exploration proceeds to mining is discussed at section 9.1 and included as one of the ten management principles at section 10.3 of the Draft ACHAR. NTSCORP suggests that the Claim Group be specifically consulted with and included in any salvage and storage programmes developed in relation to this relocation.

At several places in the Draft ACHAR, including as one of the management mechanisms listed at section 10.3, it is suggested that Aboriginal Heritage Impact Permits (AHIPs) may be required if impact in identified places or objects cannot be avoided. NTSCORP submits that the consultation processes which will be adopted in any AHIP processes, including both cultural heritage significance assessments and development of management mechanisms, be delineated in the Draft ACHAR and include specific consultation and collaboration with the Claim Group.

Further Surveys Required if Project Proceeds to Mining

NTSCORP do not support point 8 of the proposed management measures at section 10.3 of the Draft ACHAR. If the Project proceeds to mining, it is appropriate that further cultural heritage surveys be undertaken at a greater level of intensity and coverage sufficient to reflect the increased impacts of production as compared to exploration. This is particularly pertinent given that no member of the Claim Group was involved in Stage 1 of the survey process, as noted in section 3.3.1.



We thank you for your consideration of these comments. Please contact the undersigned on (02) 9310 3188 or at rmackay@ntscorp.com.au if you would like to discuss these comments further.

Yours Faithfully,

A handwritten signature in black ink, appearing to read "Ross Mackay".

Ross Mackay
Strategic Project Officer
NTSCORP Limited



24 May 2013

Gerard Niemoeller
Principal Heritage Consultant
On Site Cultural Heritage Management Pty Ltd
PO Box 574
NAROOMA NSW 2546

By Email: gerard@onsitechm.com.au

Dear Gerard,

Comments on Avoca Tank Project Draft ACHAR Response

As requested, NTSCORP Limited (**NTSCORP**), on behalf of the Ngemba, Ngiyampaa, Wayilwan, Wangaypuwaan People native title claim group (**Claim Group**), makes the following comments on the *Response to NTS Comments on Avoca Tank Project Draft ACHAR (Response)*.

Coverage of Surveys Undertaken

Thank you for clarifying the methodology behind the scope of the surveys undertaken.

Whilst NTSCORP are happy to concede that no further surveys need be undertaken for the purposes of the Aboriginal Cultural Heritage Assessment Report (**ACHAR**) itself, NTSCORP maintains that all areas which will be impacted by the Project, including all proposed drill-holes, access roads other infrastructure sites and eventual mine footprint must be subject to a survey prior to construction taking place. This is particularly important as there are no monitoring processes proposed. Accordingly, whether as part of a further assessment process or as part of the management processes adopted, it must be assured that all infrastructure areas which have not been subject to previous surveys informing the ACHAR, will be subject to further assessment surveys. These further assessments will include representatives from the Claim Group.

Comments and Suggestions on Management Measures

Fencing of Identified Places and Objects

Thank you for clarifying fencing and management procedures in respect of identified places and objects of cultural heritage significance. The measures detailed in this respect of your response address the concerns of the claim group in this regard.

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Ongoing Monitoring

NTSCORP continue to maintain its position that, regardless of the cultural heritage potential analysis undertaken, ongoing monitoring, including representatives from the Claim Group, be included as a management measure in addition to those detailed at section 10.3 of the Draft ACHAR for all surface disturbance activities. Although the Response indicates an informed opinion that there is 'low potential for Aboriginal objects to occur', monitoring is required to assure the Claim Group that any unidentified sites and objects will not be impacted as exploration proceeds and a mine footprint is determined.

Relocation of Objects & Further Consultation Processes

It is NTSCORP's preferred position that salvage and relocation methodologies be delineated in the Draft ACHAR, however accepts and does not oppose that, in this instance, such methodologies will be developed as exploration proceeds.

NTSCORP acknowledges the comments in the Response that the Claim Group will be included in consultation for any salvage methodologies, care agreements and AHIP processes required as exploration proceeds. NTSCORP requests that, as these consultation processes are required, the proponent meets with representatives of the Claim Group in a closed session to discuss, develop and/or confirm proposed salvage and relocation methodologies.

Further Surveys Required if Project Proceeds to Mining

NTSCORP maintain their position not to support point 8 of the proposed management measures at section 10.3 of the Draft ACHAR. If the Project proceeds to mining, it is appropriate that further cultural heritage surveys involving representatives of the Claim Group be undertaken at a greater level of intensity to include both ethnographic and archaeological surveys and coverage sufficient to reflect the increased impacts of production as compared to exploration.

We thank you for this opportunity to provide further comments in response. Please contact the undersigned on (02) 9310 3188 or at rmackay@ntscorp.com.au if you would like to discuss these comments further.

Yours faithfully,

A handwritten signature in black ink, appearing to read "Ross Mackay". Below the signature is the number "080" in a small, bold font.

Ross Mackay
Strategic Project Officer
NTSCORP Limited

cc: Paul Calvin, Community & Heritage Manager, Straits Resources

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