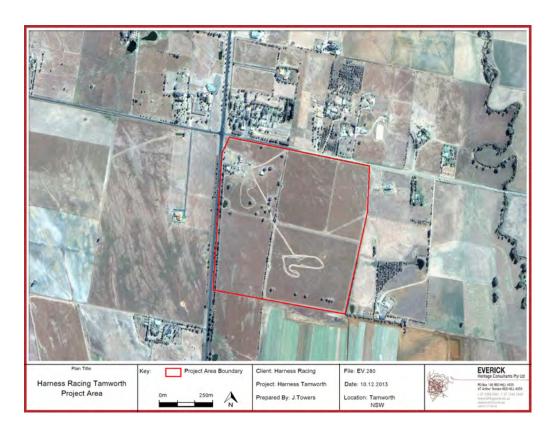


Heritage Consultants Pty Ltd

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JANUARY 2014





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EXECUTIVE SUMMARY

The following is a report detailing the Cultural Heritage Due Diligence Assessment of Aboriginal cultural heritage for the proposed re-zoning of Lot 5 DP1048585 in preparation for the development of the proposed Harness Racing Track, located on Bergmann's Lane, Hillvue, Tamworth, N.S.W. The lands subject to assessment are identified in Figure 2.

The brief for this project was to undertake a due diligence assessment of suitable standard to be submitted as a standalone report in support of a Development Application for the re-zoning of lands for the Harness Racing Track to the Tamworth Regional Council.

The methods used for this assessment involved:

- a) a search of relevant Aboriginal heritage registers;
- b) a review of cadastral mapping and tenure;
- a review of historic aerial photography and resources relating to past land uses and associated disturbances of the Project Area;
- d) a review of photographs taken from a recent site visit.

As part of a desktop study, Everick undertook a search of the OEH Aboriginal Heritage Information Management System ('AHIMS'). The search was conducted on O3 December 2013 and identified no recorded sites for the search area. Further searches of other heritage registers listed no other Indigenous places within the Project Area.

RESULTS

- No Aboriginal Objects or Places were identified within the Project Area.
- The Project Area has been disturbed in a manner which constitute 'disturbance' within the
 meaning of the Due Diligence Code. Consistent with the Due Diligence Code, no further
 archaeological assessment required.
- No intangible heritage values were noted to exist within the Project Area.

RECOMMENDATIONS

As there were no recorded Aboriginal heritage sites and no areas deemed likely to contain significant

Aboriginal cultural heritage located within the Project Area, the final use of the Project Area for racecourse

facilities would be unlikely to impact on significant Aboriginal heritage. There are no constraints on heritage

grounds to the proposed rezoning.

The following recommendations are made for the ongoing management of potential impacts to Aboriginal

cultural heritage.

Recommendation 1: Cultural Heritage Inspection

It is recommended that the Tamworth LALC is invited to undertake an inspection of the Project Area prior to

submission of any Development Applications in relation to the Project. In the event that any Aboriginal cultural

heritage is identified, and it will be impacted by the Project, the Find Procedure should apply.

Recommendation 2: Aboriginal Objects Find Procedure

It is recommended that if it is suspected that Aboriginal material has been uncovered as a result of

development activities within the Project Area:

a) work in the surrounding area is to stop immediately;

b) a temporary fence is to be erected around the site, with a buffer zone of at least 10 metres around

the known edge of the site;

c) an appropriately qualified archaeological consultant is to be engaged to identify the material; and

d) if the material is found to be of Aboriginal origin, the Aboriginal community is to be consulted in a

manner as outlined in the OEH guidelines: Aboriginal Cultural Heritage Consultation Requirements for

Proponents (2010).

Recommendation 3: Aboriginal Human Remains

Although it is unlikely that Human Remains will be located at any stage during earthworks within the Project

Area, should this event arise it is recommended that all works must halt in the immediate area to prevent any

further impacts to the remains. The Site should be cordoned off and the remains themselves should be left

untouched. The nearest police station (Tamworth), the Tamworth Local Aboriginal Land Council and the OEH

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Regional Office are all to be notified as soon as possible. If the remains are found to be of Aboriginal origin and the police do not wish to investigate the Site for criminal activities, the Aboriginal community and the OEH should be consulted as to how the remains should be dealt with. Work may only resume after agreement is reached between all notified parties, provided it is in accordance with all parties' statutory obligations.

It is also recommended that in all dealings with Aboriginal human remains, the Proponent should use respectful language, bearing in mind that they are the remains of Aboriginal people rather than scientific specimens.

Recommendation 4: Notifying the OEH

It is recommended that if Aboriginal cultural materials are uncovered as a result of development activities within the Project Area, they are to be registered as Sites in the Aboriginal Heritage Information Management System (AHIMS) managed by the OEH. Any management outcomes for the site will be included in the information provided to the AHIMS.

Recommendation 5: Conservation Principles

It is recommended that all effort must be taken to avoid any impacts on Aboriginal Cultural Heritage values at all stages during the development works. If impacts are unavoidable, mitigation measures should be negotiated between the Proponent, OEH and the Aboriginal community.



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DEFINITIONS

The following definitions apply to the terms used in this report:

Aboriginal Object means any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or

concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes

Aboriginal remains.

Aboriginal Place means any place declared to be an Aboriginal place (under s. 84 of the NPW Act) by the

Minister administering the NPW Act, by order published in the NSW Government Gazette, because the Minister

is of the opinion that the place is or was of special significance with respect to Aboriginal culture. It may or

may not contain Aboriginal Objects.

ACHCR Guidelines means the OEH Aboriginal Cultural Heritage Consultation Requirements for Proponents

(2010).

Archaeological Code of Practice means the OEH Code of Practice for Archaeological Conduct in New South

Wales (2010).

Due Diligence Code means the OEH Due Diligence Code of Practice for the Protection of Aboriginal Objects

in New South Wales (2010).

NPW Act means the National Parks and Wildlife Act 1974 (NSW).

NPW Regulations means the National Parks and Wildlife Regulations 2009 (NSW).

OEH means the New South Wales Office of Environment and Heritage.

Project Area means the land subject to this assessment, and is situated at Burgmanns Lane, Hillvue,

Tamworth, N.S.W, and is identified as: Lot 5 DP 1048585. These lands subject to assessment are identified

in Figure 2.

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Proposed Works means all activities associated with construction and landscaping within the Project Area (Figure 2), including activities undertaken by subsequent landholders.

Proponent means Harness Racing NSW, and all associated employees and contractors and subcontractors of the same.

The Project means the proposed Harness Racing Track development within the lands as described under Project Area, and as identified in Figure 2.

The Consultant means qualified archaeological staff and/or contractors of Everick Heritage Consultants Pty Ltd.

PART A: PROJECT CONTEXT

1. INTRODUCTION

1.1 Purpose of the Archaeological Investigation

The following is a report detailing the Cultural Heritage Due Diligence Assessment of Aboriginal cultural

heritage for the proposed Tamworth Harness Racing Track, located on Burgmanns Lane, Hillvue, Tamworth,

N.S.W (the Project). The lands subject to assessment are identified in Figure 2 and comprise Lot 5

DP1048585 (the Project Area). The Project Area is approximately 42 ha. in area.

The intent of this investigation is to identify the potential for the Project to impact on any Aboriginal cultural

heritage which may reside within the Project Area.

1.2 Proponent, Project Brief & Methodology

Harness Racing NSW has embarked on a redevelopment program for a number of existing harness racing

tracks in NSW. This redevelopment program will see a number of new tracks being developed in country areas

of NSW. Three towns were selected for redevelopment, given existing horse and trainer populations. In

addition, these three towns represent strong areas of public participation at race meetings. Strategically, the

three towns are centres of strong population growth.

The three towns are Bathurst, Wagga Wagga and Tamworth. Each track would be similar in size (1000m)

and would enable country horses to 'graduate' to metropolitan tracks, particularly Menangle Park. All three

tracks would be on new selected sites and not redevelopment of existing facilities. The vision for developing

new track facilities at these centres is now reaching reality. The Tamworth site is the last of the three tracks to

be developed. However, to develop the new site at the corner of Burgmanns Lane and New England Highway,

the land must be rezoned to permit the development.

GHD Pty Ltd has been engaged by Michael Brown Planning Strategies Pty Ltd to undertake a range of

investigations to support the Planning Proposal for the rezoning of the Tamworth site. Everick Heritage

Consultants (the Consultant) were commissioned by GHD on behalf of Harness Racing NSW (the Proponent)

to undertake this assessment.

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The brief for this project was to undertake a due diligence assessment of suitable standard to be submitted as a standalone report in support of a Planning Proposal for the harness racing track lands re-zoning to the Tamworth Regional Council. In accordance with the relevant administrative and legislative standards for New South Wales (see Section 2 below), the methods employed in this assessment included:

- a) a search of relevant Aboriginal heritage registers;
- b) a review of cadastral mapping and land tenure;
- a review of historic aerial photography and resources relating to past land uses and associated disturbances of the Project Area;
- d) review contemporary photographs of the Project Area;
- e) assess the potential for the Project Area to contain significant Aboriginal heritage and the impact on the Project may have on said heritage, consistent with the Office of Environment and Heritage *Due Diligence Code for the Protection of Aboriginal Objects in NSW* (2010)

1.3 Report Authorship

The desktop study was undertaken by qualified Archaeologist Jordan Towers and Senior Archaeologist Adrian Piper. The field inspection was conducted by senior archaeologist Adrian Piper. This report was written by Jordan Towers and Tim Robins.

1.4 Methodology used during this assessment

The methods used for this assessment are in compliance with the OEH 'Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales' 2010 and all relevant legislation as described in Section 2 of this Report. The following report complies with the accepted methodology for undertaking a Due Diligence Assessment under the National Parks and Wildlife Act 1974.



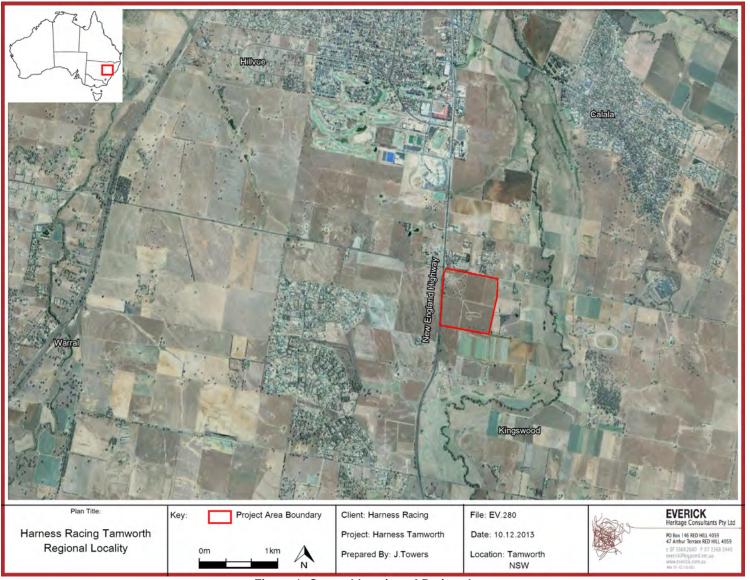


Figure 1: General location of Project Area



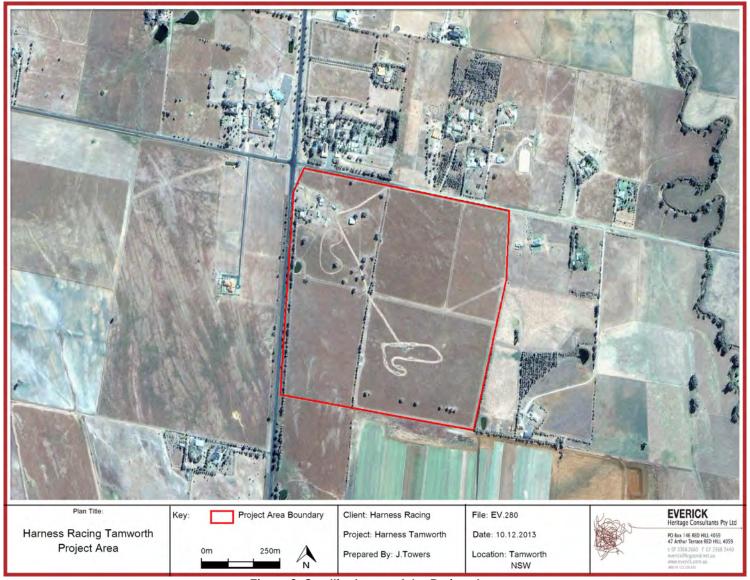


Figure 2: Satellite Image of the Project Area





LEGISLATIVE AND PLANNING CONTEXT

The following legislation provides the context for cultural heritage in NSW: the *National Parks and Wildlife Act* 1974 (NSW), the *Environmental Planning and Assessment Act* 1979 (NSW) and the *Heritage Act* 1977 (NSW) and local council Environmental Plans and Development Control Plans. The Commonwealth also has a role in the protection of nationally significant cultural heritage through the *Environmental Protection and Biodiversity Conservation Act* 1999 (Cth), *The Protection of Movable Cultural Heritage Act* 1986 (Cth) and the *Historic Shipwrecks Act* 1976 (Cth).

For the purposes of this assessment it is the State and local legislation that are most relevant. The consent authorities will be the Tamworth Regional Council and, where a referral agency is required, the OEH. Approval from the OEH will also be required should the Project impact on identified Aboriginal Objects. The information below lists the legislative and policy framework within which this assessment is set.

2.1 The National Parks and Wildlife Act 1974 (NSW) and the National Parks and Wildlife Regulations 2009 (NSW)

The *National Parks and Wildlife Act 1974* (NSW) (NPW Act) is the primary legislation concerning the identification and protection of Aboriginal cultural heritage. It provides for the management of both Aboriginal Objects and Aboriginal Places. Under the NPW Act, an Aboriginal Object is any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area, regardless of whether the evidence of habitation occurred before or after non-Aboriginal settlement of the land. This means that every Aboriginal Object – regardless of its size or seeming isolation from other Objects – is protected under the Act.

An Aboriginal Place is an area of particular significance to Aboriginal people which has been *declared* an Aboriginal Place by the Minister. The drafting of this legislation reflects the traditional focus on Objects, rather than on areas of significance such as story places and ceremonial grounds. However, a gradual shift in cultural heritage management practices is occurring towards recognising the value of identifying the significance of areas to Indigenous peoples beyond their physical attributes. With the introduction of the *National Parks and Wildlife Amendment Act 2010* (NSW) the former offence provisions under Section 86 of 'disturbing', 'moving', 'removing' or 'taking possession' of Aboriginal Objects or Places have been replaced by the new

offence of 'harming or desecrating'. The definition of 'harm' is 'destroying, defacing or damaging an Object'.

Importantly in the context of the management recommendations in this assessment, harm to an Object that is 'trivial or negligible' will not constitute an offence.

The new amendments also significantly strengthen the penalty provisions. The issue of intent to harm Aboriginal cultural heritage has been formally addressed by separating it from inadvertent harm. The penalty for individuals who inadvertently harm Aboriginal Objects has been set at up to \$55,000, while for corporations it is \$220,000. Also introduced is the concept of 'circumstances of aggravation' which allows for harsher penalties (up to \$110,000) for individuals who inadvertently harm Aboriginal heritage in the course of undertaking a commercial activity or have a record for committing similar offences. For those who knowingly harm Aboriginal cultural heritage, the penalty will rise substantially. The maximum penalty will be set at \$275,000 or one year imprisonment for individuals, while for corporations it will rise to \$1,100,000.

Where a land user has or is likely to undertake activities that will harm Aboriginal Objects, the Director General (OEH) has a range of enforcement powers, including stop work orders, interim protection orders and remediation orders. The amended regulations also allow for a number of penalties in support of these provisions. The NPWA also now includes a range of defense provisions for unintentionally harming Aboriginal Objects:

- a) Undertaking activities that are prescribed as 'Low Impact'.
- b) Acting in accordance with the new Due Diligence Code of Practice for the Protection of Aboriginal
 Objects in New South Wales (2010) ('Due Diligence Code');
- c) Using a consulting archaeologist who correctly applies the OEH *Code of Practice for Archaeological Conduct in New South Wales* (2010) ("Archaeological Code of Practice") (see Appendix A); and
- d) Acting in accordance with an Aboriginal Heritage Impact Permit (AHIP).

2.1.1 'Low Impact Activities'

The new regulations allow for a range of low impact activities to be undertaken without the need to consult the OEH or a consulting archaeologist. Generally, those who undertake activities of this nature will not be committing an offence, even if they inadvertently harm Aboriginal Objects. These activities include:

 Maintenance – For example on existing roads and tracks, or on existing utilities such as underground power cables and sewage lines.

b) Farming and Land Management – for land previously disturbed, activities such as cropping, grazing, bores, fencing, erosions control etc. *

c) Removal of dead or dying vegetation - only if there is minimal ground disturbance.

d) Environmental rehabilitation – weed removal, bush regeneration.

e) Development in accordance with a Development Certificate issued under the EPA Act 1979 (provided

the land is previously disturbed). *

f) Downhole logging, sampling and coring using hand held equipment.

g) Geochemical surveying, seismic surveying, costeaning or drilling. *

* This defense is only available where the land has been disturbed by previous activity. Disturbance is defined

as a clear and observable change to the land's surface, including but not limited to land disturbed by the

following: soil ploughing; urban development; rural infrastructure (such as dams and fences); roads, trails and

walking tracks; pipelines, transmission lines; and storm water drainage and other similar infrastructure.

2.2 Due Diligence Code of Practice for the Protection of Aboriginal Objects

The Due Diligence Code has been applied in Section 7 of this assessment. It operates by posing a series of

questions for land users before they commence development. These questions are based around assessing

previous ground disturbance. An activity will generally be unlikely to harm Aboriginal Objects where it:

a) will cause no additional ground disturbance; or

b) is in a developed area; or

c) is in a significantly disturbed area.

Where these criteria are not fulfilled, further assessment for Aboriginal cultural heritage will typically be

required prior to commencing the activity.

2.3 The ACHCR (2010)

The OEH has recently published the Aboriginal Cultural Heritage Consultation Requirements for Proponents

(2010) (ACHCR). These requirements replaced the former Interim Community Consultation Requirements for

Applicants (2004) (ICCR) as of 12 April 2010. The ACHCR provide an acceptable framework for conducting

Aboriginal community consultation in preparation for Aboriginal Heritage Impact Permits. Proponents are also

required to follow the ACHCR where undertaking a project that is likely to impact on cultural heritage and/or

where required by the consent authority.

2.4 The Tamworth Local Environmental Plan 2010

The Tamworth LEP 2010 provides statutory protection for items already listed as being of heritage significance

(Schedule 5), items that fall under the ambit of the Heritage Act 1977 (NSW) and Aboriginal Objects under

the National Parks and Wildlife Act 1974 (NSW). It aims to ensure best practice components of the heritage

decision making process are followed.

For listed heritage items, or building, work, relic or tree and heritage conservation areas, the following action

can only be carried out with the consent of the Tamworth Regional Council:

a) demolishing or moving a heritage item or a building, work, relic or tree within a heritage conservation

area,

b) altering a heritage item or a building, work, relic, tree or place within a heritage conservation area,

including (in the case of a building) making changes to the detail, fabric, finish or appearance of its

exterior,

c) altering a heritage item that is a building by making structural changes to its interior,

d) disturbing or excavating an archaeological site while knowing, or having reasonable cause to suspect

that the disturbance or excavation will or is likely to result in a relic being discovered, exposed,

moved, damaged or destroyed,

e) disturbing or excavating a heritage conservation area that is a place of Aboriginal heritage

significance,

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f) erecting a building on land on which a heritage item is located or that is within a heritage conservation area,

g) subdividing land on which a heritage item is located or that is within a heritage conservation area.

In addition, Council may not grant development consent without considering the effect the proposed development will have on the heritage significance of heritage item or heritage conservation area concerned.

Furthermore, in regards to Aboriginal heritage significance (Part 5.8) the consent authority must, before granting consent under this clause to the carrying out of development in a place of Aboriginal heritage significance:

a) consider the effect of the proposed development on the heritage significance of the place and any Aboriginal object known or reasonably likely to be located at the place, and

b) notify the local Aboriginal communities (in such way as it thinks appropriate) about the application and take into consideration any response received within 28 days after the notice is sent.

DESCRIPTION OF DEVELOPMENT PROPOSAL

Site Details: The subject site is referred to as Lot 5 DP 1048585, Burgmanns Lane, South Tamworth. The site has a total area of 41.32 hectares. The site is located on the south eastern corner of the Burgmanns Lane and Gonoo Gonoo Road (New England Highway) intersection. The site generally slopes to the east from about 419 metres Australian Height Datum (AHD), adjacent to Goonoo Gonoo Road, towards the eastern boundary at 398m AHD. The site has been predominantly cleared with only limited vegetation, in the form of isolated trees, remaining.

The site has previously been used for agricultural purposes in the past and contains infrastructure related to agricultural use including fencing, tracks and accessways, dam, sheds and shelters. A dwelling has also been constructed on the site but has been abandoned for some time.

Proposal: Harness Racing NSW propose to construct a 1,000 metre harness racing track and associated facilities on the site. The proposed development is detailed below:

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Site Facilities: The proposed development would include the construction of:

- 1,000 metre harness racing track, located in the eastern portion of the site;
- Clubhouse;
- Marquee;
- Stables; and
- Parade ring.

A site plan illustrating the layout of the proposed development is contained in Appendix A.

Access and Car Parking: The proposed development will be accessed from Burgmanns Lane via a roadway through the site. The intersection between the proposed access point and Burgmanns Lane would be located over 200 metres east of the Burgmanns Lane and Gonoo Gonoo Road (New England Highway) intersection.

The proposed development would provide 238 standard car parking spaces together with 42 truck and trailer parking spaces, located in the central portion of the site. All parking spaces would be located adjacent to the proposed clubhouse, stables and parade ring.

Landscaping: The proposed development would involve landscaping in and around the trotting track, the parking areas and in and around the clubhouse and parade ring.

This report relates to a rezoning application for the above mentioned works.



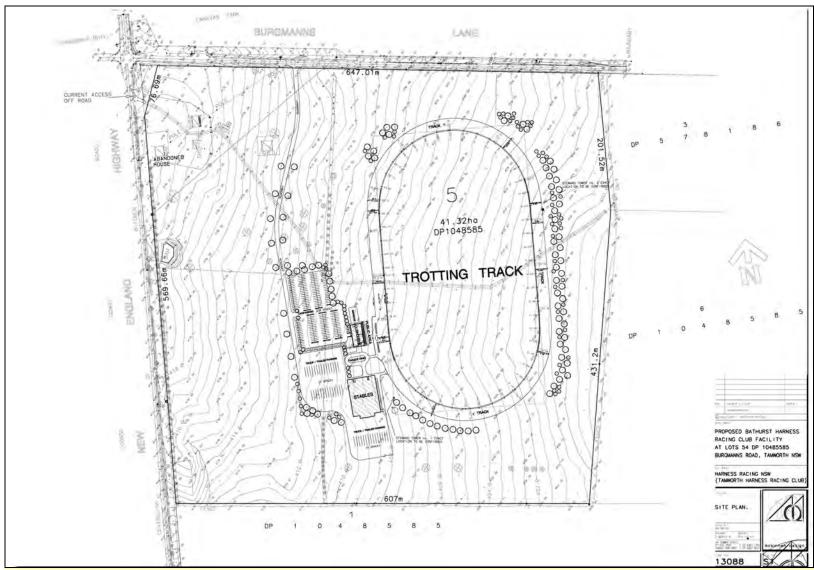


Figure 3: Project Area Site



PART B: DESKTOP REVIEW

4. ABORIGINAL CULTURAL HERITAGE

4.1 The OEH Aboriginal Heritage Information Management System (AHIMS)

Care should be taken when using the AHIMS database to reach conclusions about site prevalence or distribution. For example, a lack of sites in a given area should not be seen as evidence that the area was not occupied by Aboriginal people. It may simply be an indication that it has not been surveyed, or that the survey was undertaken in areas of poor surface visibility. Further to this, care needs to be taken when looking at the classification of sites. For example, the decision to classify a site an Open Campsite containing shell rather than a Midden can be a highly subjective exercise, the threshold for which may vary between archaeologists. A search was conducted on O3 December, 2013 of the OEH Aboriginal Heritage Information Management System (AHIMS service number 118508) over a 1km zone surrounding the Project Area. The search returned no listings for Aboriginal Cultural Heritage sites within the search zone (Figure 4).

4.2 Other Heritage Registers: Aboriginal & Historic Cultural Heritage

The following heritage registers were accessed on O3 December 2013::

- The National Heritage List (Australian Heritage Council): Contains no Aboriginal heritage listings within close proximity to the Project Area.
- Commonwealth Heritage List (Australian Heritage Council): Contains no Aboriginal heritage listings within close proximity to the Project Area.
- Register of the National Estate (Australian Heritage Council): Contains two Indigenous place listings for Moore Creek and Tamworth, both of which are restricted.
- The State Heritage Register (NSW Heritage Office): Contains no Aboriginal heritage listings within close proximity to the Project Area.
- The State Heritage Inventory: Contains no Aboriginal heritage listings within close proximity to the Project Area.
- The Register of the National Trust of Australia: Contains no Aboriginal heritage listings within close proximity to the Project Area.
- Tamworth Regional Local Environment Plan 2010 (LEP): Contains no Aboriginal heritage listings within close proximity to the Project Area.



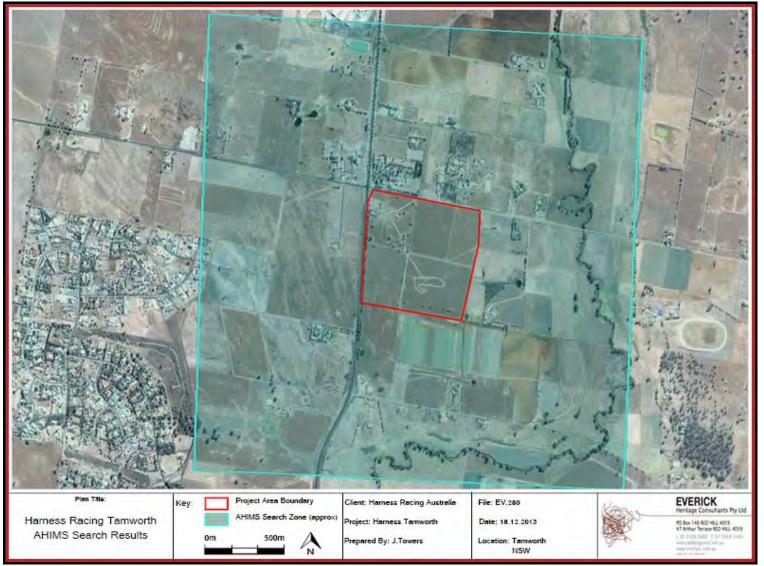


Figure 4: AHIMS search area (green shading) around Project Area (red outline) (Aerial underlay courtesy of Google Maps 2013).





LANDSCAPE CONTEXT

5.1 Environment Locality

The Project Area is located south of Tamworth and is bounded to the west by the New England Highway/Goonoo Goonoo Road and to the north by Burgmanns Lane. Goonoo Goonoo Creek, a tributary of the Peel River running in a north-south is located approximately 600 metres to the east of the Project Area. The township and rural lands of Kingswood surrounds the Project Area to the south and west, while Hillvue is located to the north and east.

The Project Area is situated within a landscape described as undulating to low rolling hills with long gently waning side slopes (Banks 2001). The environments range from cleared open woodlands through to heavily cultivated open grasslands (Banks 2001). The Project Area, being relatively flat, is subject to sheet flow type drainage pattern easterly toward the Goonoo Goonoo Creek (Banks 2001).

5.2 Geology & Soils

The Project Area is located within the Duri Geological landscape, a complex geological setting being a mixture of the Devovian sedimentary rocks of the Tamworth belt and interdigitated carboniferous geological units (Banks 2001). The distribution of soils is highly variable as a result of the underlying geology (Banks 2001: 33). Soils range from Chromosols, Rudosols, Vertosols and Sodosols, all of which vary from red through to brown in colouration (Banks 2001:33). The Lithology of the Duri includes arenite, polymictic conglomerate, greywacke and mudstone (Banks, 2001:32) — some of which are known to be resources utilised by Aboriginal people for the manufacture of stone artefacts.

5.3 Vegetation

Original vegetation within the Duri landscape was assessed by Banks (2001) to have been open woodland and closed grasslands. The woodlands consisted mainly of various Eucalypt species, but also included acacia species and other moderated growth bushes and shrubs. The closed grasslands were mainly plains grass (*Stripa aristigulumis*). The current landscape has since been heavily cleared and extensively cultivated. Currently the Project Area has thick grass coverage.





REVIEW OF HISTORIC IMAGERY AND MAPPING

6.1 Historic Aerial Photography

Historic aerial photographs of the Project Area were reviewed to ascertain the level of past ground disturbance.

This information is used to assist in developing a predictive model for potential cultural heritage site locations.

Aerial photographs from 1953, 1968, 1976, 1984 and 1993 were reviewed as part of this assessment

(Appendix B).

The 1953 Historic Aerial shows the Project Area has been cleared of vegetation (Figure 6). Mitchell (1831)

noted the Peel area as generally thinly wooded, it is likely then that the initial clearing of this area was

undertaken by hand. The New England Highway is well-formed at this time, and dwellings are clearly visible

within the north of the Project Area, as are a number of large trees, situated to the east of the dwellings. It

must also be noted that while not visible in Figure 6, the Consultant can confirm that the banks of Goonoo

Goonoo creek line to the east of the Project Area appear to be extensively cleared. The property seems to be

set up for rural uses, likely pastoral or for cultivation purposes stemming from the Australian Agricultural

Company Grant (Section 6.2 and Section 7), both of which were common land use practices throughout the

region.

The 1968 aerial photograph is of poor quality (Figure 7) but does shows the same basic yard configuration,

although the extent of tracks/drainage gulleys are far more visible. The tree configuration is relatively

unchanged and a few more outbuildings have been constructed. Disturbance is more extensive in the north-

western area of the property, where the main dwellings are located.

By 1976 (Figure 8), further vegetation clearing has commenced on the western boundary to reveal a small

dam. Again, there is little change to the general configuration of the property, with the main infrastructure and

associated disturbance located in the north western section. The eastern paddocks show evidence of tracks

and/or drainage gulley's which flow west to east toward Goonoo Goonoo Creek.

The 1984 (Figure 9) photograph illustrates that the lands remain virtually unchanged, indicating a uniformity in

land use. There is a degree of disturbance visible in the central area of the south eastern paddock, likely

related to erosion. A track has also been established running north south between the south eastern and south

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western paddocks. There appears to be little change in the degree of disturbance through time. This consistency suggest that land practices were relatively consistent.

The 1993 aerial photograph is of better quality than its predecessors (Figure 10) and further illustrates the extent of land disturbance activities across the Project Area. More significant disturbance appears to have impacted the eastern paddocks, and the track between the south eastern and south western properties is well established at this time. Further disturbance has been noted in the north east section and the south west sections of the Project Area. It is likely that this disturbance is associated with the same land use practices identified in previous images.

Conclusions: From the historic aerial photography, it is clear that initial vegetation clearing activities took place prior to the 1950's. This clearing may have caused significant ground disturbance and may have had a impact to the integrity of any Aboriginal Objects within the Project Area, however this cannot be demonstrated through analysis of the historic aerial photographs. Other disturbance likely to have impacted on the integrity of any Aboriginal sites, should they be located within the Project Area, may come as a result of intensive historic use of the Project Area for mustering of stock or cultivation under the Australian Agricultural Company Grant (Section 6.2 and Section 7). With the lack of vegetation clearly evident over this area, and having regard to the soil type, periods of rain would have seen ground disturbance up to half a metre deep. That being said, the lands remain virtually unchanged over the last >30 years. The potential for undisturbed artefacts to be located well below the ground surface within the Project Area cannot be completely ruled out.

6.2 Parish Mapping

Parish Maps were sources for the analysis of land disturbance and tenure of history of the Project Area. This information is used to assist in developing a predictive model for potential cultural heritage site locations. The consulted maps date from 1909, 1921, 1932, 1946 and 1971 and have been included in Appendix B of this report. The 1909 Parish map (Figure 12) indicates that the Project Area and the surrounding lands were part of the Australian Agricultural Company's Grant for lands in the Peel District (Section 7). The Project Area lands was held by the Australian Agricultural Company throughout the 1900's (Figure 13 - Figure 16) until 1976. At this time, it was noted by the consultant that then DP578186, now the Project Area, was registered in the Register of Deposited Plans by H.M. Allen and Co.





7. PREVIOUS ARCHAEOLOGICAL AND CULTURAL HERITAGE ASSESSMENTS

Although a review of previous archaeological and/or cultural heritage assessments is not a requirement of the OEH guidelines for a standard Due Diligence assessment, it is the view of the Consultant that such a review assist in the accurate formulation of archaeological models and associated recommendations.

Very few detailed analysis of the material culture of the Aboriginal occupants of the Tamworth region exist. The most notable records come from the accounts of Surveyor-General of NSW, Major Thomas Livingstone Mitchell who in 1839 recorded the Aboriginal groups he encountered during his expeditions of inland New South Wales. Catherine (Katie) Langloh Parker also extensively documented aboriginal culture in New South Wales in her numerous publications dating from c.1895. Other records come from Balme(1986); Purcell (200;2002) and O'Rouke (1995; 1997).

7.1 Synthesis of Archaeology and Ethnohistory

7.1.1 Settlement

The Aboriginal people of the greater New England region, the Kamilaroi, were part of a larger population which extended from the Hunter Valley westward to Coonabarabran and north of the township of Moree into southwestern Queensland (Carey 2006:5). As a linguistic group, the Kamilaroi people spoke a range of dialects throughout the New England region. For the purposes of this report, Carey (2006:5) identifies two subcommunities of the Kamilaroi which occupied the area now known as Tamworth: the Mooni people and the Goonoo Goonoo people. The Goonoo Goonoo people are said to have occupied the Peel River flatlands, including the lands which comprise Project Area (Carey 2005).

7.1.2 Movement

Hobden et al (2005) describes the Kamilaroi Aboriginals as having strict laws based on the intricate relationship with the landscape around them. Early population estimates made by European settlers record that 12,000 Aboriginal peoples inhabited camps located in the Peel River valley, south of modern day Tamworth. Groups would gather and move across the landscape, participating in trading practices with other groups throughout the region (Carey 2006). However, it was a way of life that rapidly disappeared under the impacts of disease and restrictions on Aboriginal groups by 'authorities' on the movement of Aboriginal people.

The few eyewitness accounts of the Aboriginal occupation of the Tamworth region come from early settlers who entered the region as part of John Oxley's 1818 expedition (Carey 2006). Oxley recorded the Peel River flatlands as an extensive grassed vale ideal for settlement (Carey 2006:8). It was this recommendation that spurred an influx of European settlement north of Liverpool plains through to what is now Tamworth as part of the ambitions of Australian Agricultural Company.

Established in 1824, Australia Agricultural Company was provided unoccupied lands by the crown for the purposes of "cultivation and improvement of wastelands in the colony of New South Wales and other purposes amongst which was the production of fine merino wool as an article of export to Great Britain" (Carey 2006:12). The Peel river flatlands was selected as an area suitable for these purposes.

Increasing presence of Europeans from the 1830's had detrimental impacts for the Komilaroi peoples inhabiting the Peel River region south of Tamworth (Carey 2006), with conflict and disease decimating the population (Carey 2006). The increasing agricultural cultivation forced groups to extend their subsistence practices further from the Peel River in pursuit of plant resources and game which had been driven further from the valley as a result of the expanding European settlements (Carey 2006).

7.1.3 Economy

A range of materials utilised by the Komilaroi groups have been recorded by Parker (1909); Mitchell (1839) and O'Rouke (1997). The stone tool element in the material culture included axes, though was small and unspecialised flakes were also commonly noted (Balme 1986; Parker 1909; O'Rouke 1997), though to the Consultant's knowledge, little analysis of assemblages from this region has been conducted in any great deal. The resources of the Pilliga forests were used extensively in the technology of the Peel River region, which is heavily dependent on wood and bark fibre (Parker 1909). Timbers were used to manufacture spears, a variety of clubs, shields and boome+rangs. Bark was also used for shelter. Parker (1909) Also documented the fashioning of bone into fine needle like points which were used to craft water canteens from the skins of possum and kangaroo species.

Subsistence practices of the Aboriginals of the Tamworth area were based on the exploitation of both terrestrial and freshwater resources located within the landscape (Mitchell 1839; Parker 1909; O'Rouke 1997). Parker (1909) records the methods used to trap smaller game such as bird species, possums and pademelons

included the crafting of netting from Kurrajong bark and Burraungah grass. Netting was used both actively and as part of snares (Parker 1909). For larger species such as Kangaroo and Wallaby were often stalked and herded in groups and taken by spears once surrounded by men (Parker 1909).

Ethnohistorical records are largely directed towards descriptions of hunting techniques which employed large groups of people and obvious types of technology requiring demonstrable physical skills: the use of spears, clubs, boomerangs, the 'tow-row' (net) etc. The role of plant foods in the local economy is often understated or overlooked entirely. Parker (1909) accounts gathering activities including the raiding of emu nests, sourcing of honey from native bees and procuring thistle tops, pigweed and crowfoot, all of which were eaten raw. Parker also notes extensive seed exploitation and grinding activities (1909), where the seeds of *Sterculia* and other similar species were ground and made into cakes. She describes the grinding stones as similar to the "saddle-stone querns' occasionally found in ancient British sites" (Parker 1909).

7.2 Previous Archaeological Assessments

Byrne (1989) provided one of the first broad examinations of Aboriginal Sites and Cultural Resources in Northern New South Wales in a report to the National Parks and Wildlife Service. Byrne noted that archaeological studies in the Tamworth region were largely generated by heritage consultants which would impact the patterning of the distribution of archaeological sites across the region.

Balme (1986) also provided an examinations of the regional archaeological character in her report on the Northern-Central Rivers Region to the NPWS. Balme (1986) noted the most common site throughout the region as artefact scatters and scarred trees. It must be noted here that while these are the most commonly recorded Aboriginal sites, it is partially due to their survivability and visibility within the landscape, and also within the current frameworks of archaeological investigation in the region which are generally targeted cultural heritage assessments. The raw materials recorded ranges from more course grained materials such as quartzite through to finer grained cherts and silcretes.

An artefact scatter was recorded in a survey of the Tamworth Botanic Gardens site by Gaynor and Wilson in 1995 (Gaynor and Wilson 1995). Two isolated stone artefacts were also recorded by Gaynor and Wilson (1997) during the survey for Baiada Pty Ltd. The artefacts, and an additional one, were salvaged during works conducted in 1999 (Gaynor and Wilson 1999).

A cultural heritage assessment of the Dubbo to Tamworth natural gas pipeline was conducted in McDonald

(1998:3), who recorded a total of 98 Aboriginal sites across the 226.2km survey area. The majority of

recorded sites were open camps (40) and scarred trees (36). A total of 65 would not be impacted by the

pipeline, mitigation measures were required for the 33 recorded sites which included realignment of the

pipeline for sites of high significance.

Wilson and McAdam (2000) in conjunction with the Tamworth Local Aboriginal Land Council, surveyed a

number of areas across the Tamworth region as part of the Tamworth Aboriginal and Archaeological Study.

The study identified numerous sites across the region, the majority of which being artefact scatters of varying

densities and raw materials including chert, cherty argillite, hornfels, quartz, andesitic greywacke tuff and

chalcedony. Scarred trees were also noted and Kamilaroi walking tracks were identified (Wilson and McAdam

2000). Gaynor (2004b) notes however that one of the sites recorded in this study was not able to be

relocated during a survey conducted of the Mt Falcon estate off Armidale Road. Gaynor (2004b) cites Wilson

and McAdam's (2000) notes on site formation processes, and suggested that the artefacts that had been

visible during the 2000 survey had likely been washed away during heavy rains onto adjacent lands.

Gaynor (2002) also recorded an abundance of scarred trees in the region in an archaeological survey of the

Doona state forest. Further investigations by Umwelt (2010) for BHP in this region located artefact scatters

and grinding grooves.

Purcell (2000; 2002) conducted a regional cultural heritage assessment for the Brigalow Belt South

Bioregion, which was presented as a report for NPWS. The report was conducted in two stages over a

52,409sq km survey area. On completion, 1,110 aboriginal sites were identified, and variety of landforms

associated with the location of sites, recognised edible plants and other recognised resources were mapped.

The large scale assessment provided the basis for most of the recorded aboriginal sites in the region.

In 2004, Archaeological Surveys and Report Pty Limited ('ASR') were commissioned to conduct a cultural

heritage assessment for the Werris Creek Mine site, in Werris Creek, NSW situated south-west of the

Development Area. The assessment located an extensive grinding groove site (Narrwolga axe grinding

grooves) situated on sandstone outcrops. After consultation with the Aboriginal community, ASR (2008) were

again commissioned to salvage and relocate the objects.

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Gaynor (2004a; 2005a; 2005b and 2005c) has conducted a number of assessments across the Tamworth

region. A single stone artefact at the base of a tree was located during a survey of the proposed Taminda

Levee Bank Route (Gaynor 2004a). As a mitigation measure the Tamworth Regional Council ensured that the

Levee Bank Route avoided impact to the tree, thus protecting the site.

Two stone artefact scatters, an isolated stone artefact and a felled scarred tree were noted on a property on

Browns Lane (Gaynor 2005a), while a further six sites were recorded on a property off Moore Creek Road

which had been previously cultivated (2005b). A further survey of another section of lands off Moore Creek

Road located twenty stone axes (2005c).

Gaynor (2006) conducted further cultural heritage works in the region through an archaeological survey of an

area selected for a proposed equine and livestock complex on the southern approaches to Tamworth. The

survey was conducted across an approximately 52 hectare area with only two isolated stone artefacts

identified. Lack of ground surface visibility was cited as a factor influencing the results of the survey. Gaynor

(2006) recommended that the stone artefacts be salvaged so that the Project continue without further

disruption.

A survey of a property identified as 'Redbank' was also conducted by Gaynor (2008a). No artefacts were

located within the survey area, though known sites were recorded nearby. Stone artefacts were also located in

a later survey of a nearby property identified as 'Meadowbank' (Gaynor 2008b). At the request of the

Tamworth Regional Council, Gaynor (2008c) registered five scarred trees previously identified by the

Tamworth Local Aboriginal Land Council. The trees were then relocated for display in the Tamworth Botanic

Gardens, in an area still containing stone artefacts.

Landskape (2010) conducted a Cultural Heritage Assessment of the proposed extension of the Werris Creek

Coal Mine, located at Werris Creek NSW by Whitehaven Coal. The assessment re-located the Narrwolga axe

grinding grooves which had been relocated during a previous assessment, to be reinstalled at their original

position during rehabilitation on close of Project Activities (Landskape 2010:2-21-22). No other Aboriginal

sites were recorded, but recommendations were made to involve the Aboriginal community and update the

cultural heritage management plan for the Werris Creek Mine to that effect (Landskape 2010:6-61).

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In 2011, Susan R Hudson Consulting completed an archaeological survey of a proposed cattle feeding lot for Pegela Pastoral Company, located at Gunyerwarildi, Warialda NSW. The survey identified the locations of five artefact scatters and a further three isolated artefacts within the survey area. Hudson's recommendations were such that the feedlot may still proceed after the collection of the located artefacts by the Moree Local

Aboriginal Land Council.

Gaynor (2011) surveyed a section of land located near Calala Creek did not locate any Aboriginal Objects within the Development Area, though a number of sites were noted in close proximity to the Development Area.

Everick (2013) conducted a cultural heritage due diligence assessment for a residential subdivision at Denman Avenue, Kootingal NSW. Everick did not locate any aboriginal objects or places though placed cautionary recommendations for a 10 m exclusion zone around old growth trees on the eastern boundary of the development. While these trees had not showed signs of cultural modification, the area was recognised as having low-moderate potential for subsurface, undisturbed aboriginal objects.

Everick (2014) undertook a cultural heritage survey for the Tamworth Regional Council of lands immediately north of the Project Area, in preparation for a rezoning application. Whilst the assessment area was approximately 700 ha., a sampling strategy was adopted, resulting in a survey coverage of approximately 100 ha. of the assessment area. A total of 18 Aboriginal sites were identified. Most were found adjacent to creeks or on ridgelines. Three — all isolated artefacts or small artefact scatters - were found in flat open woodland environments away from semi-permanent water.

7.3 Potential Site Types: Aboriginal Archaeological Sites in the Tamworth Region

From the review of previous archaeological and cultural heritage assessments in the Tamworth and broader regional locality noted specific environment contexts including low lying flood plains, estuarine creek banks and low hills with immediate access estuary systems, are likely to contain evidence of Aboriginal occupation. The following site types and potential types have been identified in the above contexts.

7.3.1 Isolated Artefacts

These will consist of single stone artefacts, which may have been randomly discarded or lost. They may occur

in almost any environmental context exploited by Aboriginal people. They are commonly stone axes, single

cores, hammer stones, pebbles, flakes and grinding stones and/or grooves. Their presence may indicate that

more extensive scatters of stone artefacts exist or existed nearby, perhaps obscured by vegetation or

dispersed by mechanical means.

It is considered likely that isolated artefacts may be located within the Development Area. Care must also be

taken to differentiate between culturally and machine manufactured stone objects.

7.3.2 Open Campsites/Artefact Scatters

Open Campsites/Artefact Scatters generally consist of scatters of stone artefacts and possibly bone and

hearth features. Their exposure to the elements means that evidence of food resources used on the site (with

the exception of shellfish) is usually lacking. An open campsite containing a large component of shell refuse

may be described as a midden. They invariably consist of low or high density scatters of primary and

secondary flakes in addition to the types of artefacts found as isolated finds. Open campsites may also contain

burials when located on sand strata. Few open campsites are found on kraznozem and podozolic soils,

possibly due to the destructive impacts of land clearing and the heavy vegetation cover. Detection is usually

unlikely unless high degrees of surface visibility are present.

There is a low potential that artefacts scatters could be found within the Development Area.

7.3.3 Middens

Middens are campsites which are dominated by shellfish remains. Middens are usually situated near a source

of shellfish and comprise predominantly, mature oyster, pipi, whelk, cockle and cartrut species in addition to

terrestrial animal and fish bone, stone artefacts, charcoal and ash from fireplaces. Middens may be composed

of deep compacted debris reflecting consistent use over long periods of time, or thin scatters of shell which

reflect use on a single occasion by a small group, perhaps in transit or gathering food away from a large

campsite. As a general rule, middens have been consistently recorded in elevated positions beside estuarine

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waterways or on elevated sand substrates close to wetlands. The dominant species found in estuarine middens is oyster, while locations away from the waterways contain pipi or combinations of estuarine, open

beach and rock platform species.

The Peel River and its tributaries would have been a central landscape feature for the Aboriginal occupation of

the Tamworth Region. Although Goonoo Goonoo Creek is located some 800m from the eastern boundary of

the Project Area, it is unlikely that middens will be located within the Project Area. Small isolated scatters of

shell may be encountered but due to the level of disturbance, the overall potential of encountering these

features is low.

7.4.4 Quarry Sites

A stone quarry may occur where a source of opaline silica exists or other siliceous types of stone occur (e.g.

chert, chalcedony and silcrete). The area can be identified by a number of different types of stone tools in

various stages of production as well as refuse flakes.

Given that lack of visible suitable bedded rock outcrops or known sources of siliceous material, it is rational to

anticipate that no quarry sites will be located within the Project Area.

7.5.5 Scarred Trees

Scarred trees result from the removal of bark for use as covering, shields, containers or canoes. No doubt, as

an outcome of widespread intensive land clearing and natural causes very few have survived.

Owing to the clearing activities that occurred prior to the 1950s (see Section6), it is unlikely that trees of a

sufficient age to bear cultural scarring are located within the Project Area. However, the historical imagery does

show that the configuration of trees within the Project Area has remained relatively unchanged since the

1950's. Should a scar or modification of a tree be noted, care must be taken in assessing the origin of the

scarring/modification. Scarring of trees can occur through natural processes as well as through mechanical

damage associated with heavy earthmoving and/or agricultural machinery.

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7.3.6 Burials

Human burials are typically individual or small group internments which can be found in sandy soil substrates,

such as creek lines or within small rock crevices. Most of the known burials have been located by accidental

means through mechanical disturbance or natural erosion.

Burils can be considered of very low potential to be located within the Project Area given the location of the

Project Area within the Duri landscape, and in the high levels of ground disturbance.

7.3.7 Ceremonial Sites

Ceremonial grounds are typically places identified by Aboriginal groups as places of importance which were

visited by groups to mark or commemorate rites or other occasions. One such example is Bora grounds,

earthen mounds crafted in a circular formation which were used for the purposes of ceremonial practices.

No knowledge of the presence of a ceremonial site at the Project Area, within it, nor in relation to it, was

conveyed during the Cultural Heritage Survey undertaken on XXXXXX 2014.

7.3.7 Mythological Sites

These sites are natural features, which derive their significance from an association with stories of the creation

and mythological heroes.

No knowledge of the presence of a mythological site at the Project Area, within it, nor in relation to it, was

conveyed during the Cultural Heritage Survey undertaken on adjacent lands in January 2014.

7.4 Predictive Modelling of Aboriginal Cultural Heritage

The desktop review identified a generally low to moderate potential for archaeological materials to be within the

Project Area prior to European settlement. If they existed, they were likely to be limited to single artefacts

and/or scatters of stone artefacts and shell and scarred or modified trees.

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Due to the extensive ground disturbance following European settlement, evidence of *in-situ* Aboriginal occupation is now considered unlikely to occur within the Project Area. There is a low to moderate potential for a 'background scatter' of Aboriginal stone tools to remain within the Project Area.

DUE DILIGENCE ASSESSMENT

The purpose of the Due Diligence Assessment is to determine if there are areas that have a particular potential to contain Aboriginal cultural heritage and to assess whether the proposed rezoning and subsequent development will destructively impact upon known and or concealed heritage sites.

As discussed in Section 2.2 above, the Due Diligence Code recommends a staged analysis of cultural and archaeological factors. This section discusses the analysis of the Project Area when compared against these guidelines.

8.1 Step 1: Will the activity disturb the ground surface?

Yes. Refer to Section 3 for a description of the proposed Project works.

For the purposes of this assessment, it has been assumed that all parts of the Project Area planned to be modified for the construction of the race track, grandstands and structures including stables as part of the course design. The Project Area will be subject to significant surface and subsurface ground disturbance. Disturbance maybe as a result of excavations for services, building footings, fences etc. Cut and fill across these areas may also be required.

8.2 Step 2a: Search of AHIMS Database

A search was conducted on O3 December, 2013 of the OEH Aboriginal Heritage Information Management System (AHIMS service number 88809) over a 1km zone surrounding the Project Area.

The search returned no listings for Aboriginal Cultural Heritage sites within the search zone.

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8.3 Step 2b: Is the activity in an area where landscape features indicate the presence of Aboriginal cultural heritage?

Aboriginal objects are often associated with particular landscape features such as ridge-lines, waterways and wetlands. The Due Diligence Code lists a range of landscape features that are considered likely to contain Aboriginal cultural heritage. These include proximity to watercourses, ridgelines and resource areas.

Potential to Contain Aboriginal Heritage: The Project Area is within 600m of a water way (Goonoo Goonoo Creek, a tributary to the Peel River) which retains remnant potential to contain Aboriginal heritage in the form of sub-surface artefacts. The potential for lands outside of this to contain Aboriginal Objects would diminish considerably the further one moved away from the creek line. However, prior to European settlement, all parts of the Project Area contained at least the potential to contain open campsites, scarred tress and a background scatter or Aboriginal Objects.

Given the extensive cultivation of the Project Area and surrounding lands, it is unlikely that significant Aboriginal objects will be located during Project Activities. Disturbed, isolated Aboriginal Objects remain a potential.

Trees within the Project Area: As is clearly visible from the historic aerial photographs (Appendix B), there are a small number of trees (Eucalypt sp.) evident prior to the 1950's that still exist currently within the Project Area. Cultural scarring of these trees cannot be ruled out from a desktop study. However, it is of note that these trees are unlikely to be impacted by the proposed racecourse development.

8.4 Step 2c: Is there evidence of past ground disturbance?

All of the Project Area has been cleared of vegetation at least once in the past 150 years. The evidence of ground disturbance includes cultivation, intensive stock grazing, fences, sheds and other rural infrastructure. Activities such as clearing of vegetation, cultivation and grazing constitute disturbance within the meaning of the Due Diligence Code. A strict reading of the Code would see no further archaeological assessment required.

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CONCLUSIONS AND RECOMMENDATIONS

As there were no recorded Aboriginal heritage sites within the Project Area, and with no areas deemed likely to

contain significant Aboriginal cultural heritage located within the Project Area, the final use of the Project Area

for racecourse facilities would be unlikely to impact on significant Aboriginal heritage. There are no constraints

on heritage grounds to the proposed rezoning.

The following recommendations are made for the ongoing management of potential impacts to Aboriginal

cultural heritage.

Recommendation 1: Cultural Heritage Inspection

It is recommended that the Tamworth LALC is invited to undertake an inspection of the Project Area prior to

submission of any Development Applications in relation to the Project. In the event that any Aboriginal cultural

heritage is identified, and it will be impacted by the Project, the Find Procedure should apply.

Recommendation 2: Aboriginal Objects Find Procedure

It is recommended that if it is suspected that Aboriginal material has been uncovered as a result of

development activities within the Project Area:

a) work in the surrounding area is to stop immediately;

b) a temporary fence is to be erected around the site, with a buffer zone of at least 10 metres around

the known edge of the site;

c) an appropriately qualified archaeological consultant is to be engaged to identify the material; and

d) if the material is found to be of Aboriginal origin, the Aboriginal community is to be consulted in a

manner as outlined in the OEH guidelines: Aboriginal Cultural Heritage Consultation Requirements for

Proponents (2010).

Recommendation 3: Aboriginal Human Remains

Although it is unlikely that Human Remains will be located at any stage during earthworks within the Project

Area, should this event arise it is recommended that all works must halt in the immediate area to prevent any

further impacts to the remains. The Site should be cordoned off and the remains themselves should be left

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untouched. The nearest police station (Tamworth), the Tamworth Local Aboriginal Land Council and the OEH Regional Office are all to be notified as soon as possible. If the remains are found to be of Aboriginal origin and the police do not wish to investigate the Site for criminal activities, the Aboriginal community and the OEH should be consulted as to how the remains should be dealt with. Work may only resume after agreement is reached between all notified parties, provided it is in accordance with all parties' statutory obligations.

It is also recommended that in all dealings with Aboriginal human remains, the Proponent should use respectful language, bearing in mind that they are the remains of Aboriginal people rather than scientific specimens.

Recommendation 4: Notifying the OEH

It is recommended that if Aboriginal cultural materials are uncovered as a result of development activities within the Project Area, they are to be registered as Sites in the Aboriginal Heritage Information Management System (AHIMS) managed by the OEH. Any management outcomes for the site will be included in the information provided to the AHIMS.

Recommendation 5: Conservation Principles

It is recommended that all effort must be taken to avoid any impacts on Aboriginal Cultural Heritage values at all stages during the development works. If impacts are unavoidable, mitigation measures should be negotiated between the Proponent, OEH and the Aboriginal community.



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	Griffith, ACT.					
Parker, K. (1905).	The Euahlayi Tribe: a Study of Aboriginal Life in Australia. Archibald Constable,					
	London.					
Purcell, P. (2000).	Aboriginal Cultural Heritage Assessment: NSW Western Regional Assessment					
	Brigalow Belt South Bioregion (Stage 1). Resource and Conservation Assessment					
	Council, Sydney.					
Purcell, P. (2002).	Aboriginal Cultural Heritage Assessment: NSW Western Regional Assessment					
	Brigalow Belt South Bioregion (Stage 2). Resource and Conservation Assessment					
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Umwelt (2010).	Review of Environmental Factors For the Caroona Exploration Program. Trial 3D					
	Seismic Survey 2010. Report to Coal Mines Australia Limited.					



APPENDIX A: AHIMS SEARCH RESULTS

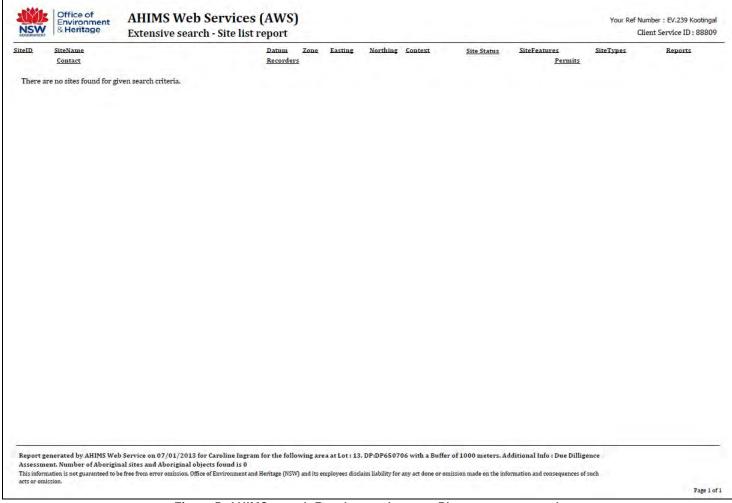


Figure 5: AHIMS search Results - no Items or Places were returned.



APPENDIX B: HISTORICAL AERIAL PHOTOGRAPHY



Figure 6:1953 historic aerial photograph (red Project Area outline is approximate only)



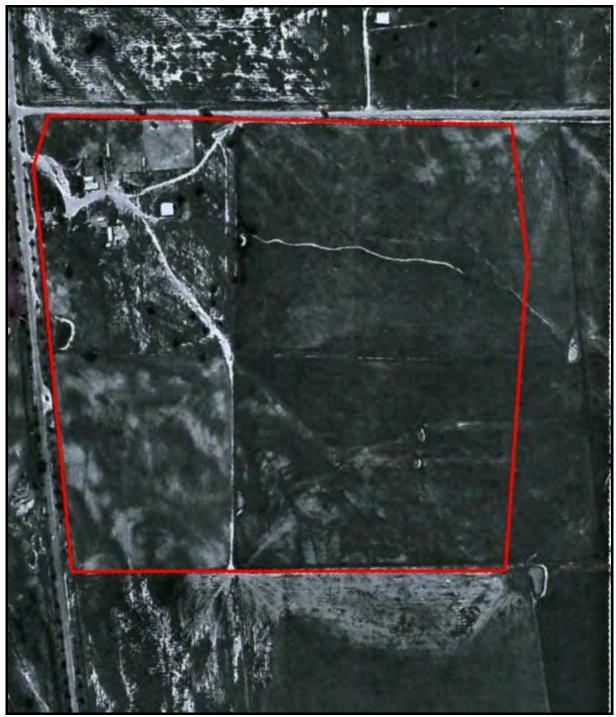


Figure 7: 1968 historic aerial photograph (red Project Area outline is approximate only)





Figure 8: 1976 historic aerial photograph (red Project Area outline is approximate only)





Figure 9: 1984 historic aerial photograph (red Project Area outline is approximate only)





Figure 10: 1993 historic aerial photograph (red Project Area outline is approximate only)





Figure 11: 1998 historic aerial photograph (red Project Area outline is approximate only)



APPENDIX C: PARISH MAPPING

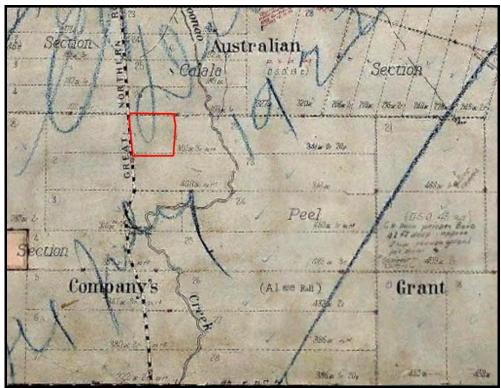


Figure 12: 1909 Calala Parish Map (red Project Area boundary is approximate only)

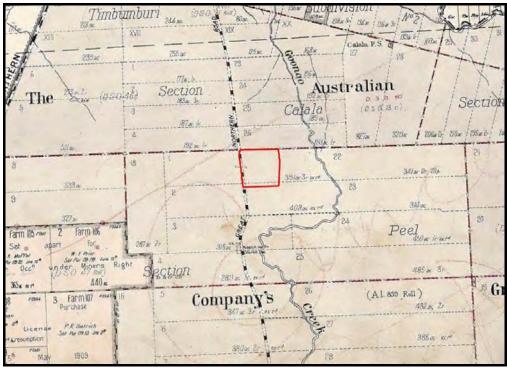


Figure 13: 1921 Calala Parish Map (red Project Area boundary is approximate only)



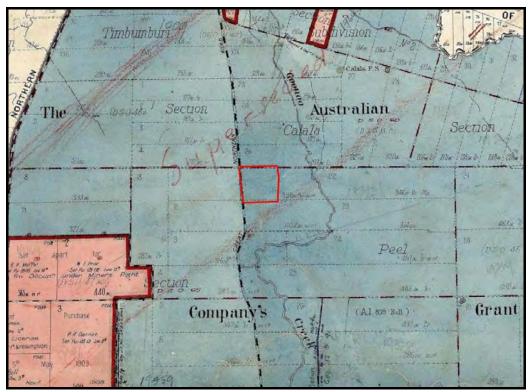


Figure 14: 1932 Calala Parish Map

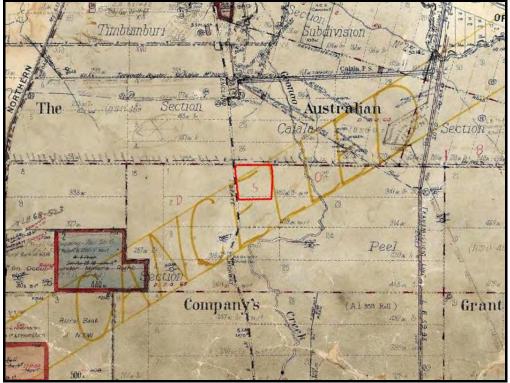


Figure 15: 1946 Calala Parish Map



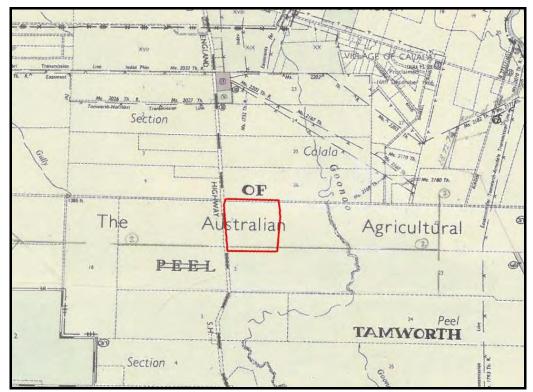


Figure 16: 1971 Calala Parish Map

REGISTER OF DEPOSITED PLANS SENSE 1,179 V. G. N. MULBERT, OPPROMISED PLANS										
Plan No.	Date of Lodgmt	Lodging Party	Surveyor	Reference to Title	Previous Plan	Council	C.A.	Date of Regn		
DP578185	13/15/	H.M. Allen a Co.	111 12'	No.101,102 BK 3125	1=101	Shire	No. 74/31	- 4		
		1 1 1 0	4.4. Ka ppner	No 373,374. 31253185	Co Parry	Jeel 1	5-2-75	15-9-7:		
		11º Donell Walker	J. y. Rx. ppner		Ph Calala	Shire				
		/	11 1 Cooper		DP 976955	Shire Stephen	NO5725	13-9-76		
DP578189	1		R.N. Scott	11943-157	17.243589	oilg stand	30-4-75			
		Hansing Com. 18,34	1 - 4.1	11380-41	1.7.542964	digg. Hand		14-8-13:		
DP578191	5-675 16	he Housing Com N.S.W. C. Taperell, Ruffedge +	1 Rglandille	1 1	1.7. 35225	ship Cash	No. 07 07	1-2-7		
Decreson		C. la perell, hulledge +	BPO'Rawke		1.7. 4526	muygong	No. 54834	1-8-7		
DP578193			DI. V Kawake		1.7. 248579	Blacktown	12-2-75			
DP578194	17-675	Lepantinen Val P. 195379	0101	4939-139	weed Shill	Theod		27-6-75		
DP578195	7-67511	Lo Elorbicky Com. Pky Ada		12668-170	1.7. 574306	ntuly on 9	No72/45	-9-77E		
Decresor	17-6-75 1		G. C. toashaw		JP. 4785 558	Hussbille	No 2293 1:04	8775		
		lallo Hall	P. J. Teerman	10601 - 224,6597-119	900179	Mith. Sydney	30-4347	51-8-75		
DPLTEADA			9 1 Bald	10145 - 89	29. 6671	Rockdale	9-8-742	316775		
Dornessa	7-6-756	Hen Allen a Hemsley	R.B. Leyer	10755-55	1.7.525475	of verpool	14 15-7314	31-4.75		
	17-6755	Lephen, Jagnesa Stephen	E. F. Hinter	3915-111	JP 67719	Shirespeel	No. 1975/2	15727		
21.378500	7-6751	- Cam Born King Co of Sydne	J. R. Markin	12726-234	17.572364	Tintenban	22-4-45			
		*								

Figure 17: Register of Deposited Plans 1975