View southeast at a shearing shed and stockyard within the northern portion of the study area.

ABORIGINAL HERITAGE DUE DILIGENCE ASSESSMENT REPORT

BECTIVE POULTRY FARM

2432 OXLEY HIGHWAY BECTIVE, NSW

DECEMBER 2024

Report prepared by

OzArk Environment & Heritage

for PSA Consulting Pty Ltd

on behalf of

AAM Investment Group Pty Ltd

OzArk
Environment & Heritage

145 Wingewarra St
(PO Box 2069)
Dubbo NSW 2830

Phone: (02) 6882 0118
Fax: (02) 6882 0630
enquiry@ozarkehm.com.au
www.ozarkehm.com.au

This page has intentionally been left blank.

DOCUMENT CONTROLS

Proponent	AAM Investment Group Pty Ltd
Client	PSA Consulting Pty Ltd
Document Description	Aboriginal Heritage Due Diligence Assessment: Bective Poultry Farm at 2432 Oxley Highway Bective, NSW.
File Location	OzArk Job No.
Clients \ PSA Consulting \ Bective Poultry Farm – AAM_Heritage_May 2024	4500

Document Status: V3.0 FINAL	Date: 17 December 2024
Draft V1: OzArk internal edits	V1.0 EM author 22/10/24 V1.1 SR review 28/10/24 V1.2 EM edit 29/10/24
Draft V2: OzArk and client edits	V2.0 OzArk to client 29/10/24
Final V3: Final document	V3.0 OzArk finalised 17/12/2024
Prepared for	Prepared by
Rebecca Lees Senior Development Assessment Planner PO BOX 10824 Adelaide Street Brisbane QLD 4000 Rebecca.lees@psaconsult.com.au 0438 758 532	Eleanore Martin Archaeologist OzArk Environment & Heritage 145 Wingewarra Street (PO Box 2069) Dubbo NSW 2830 P: 02 6882 0118 eleanore@ozarkehm.com.au

Acknowledgement

OzArk acknowledge the Traditional Custodians of the area on which this assessment took place and pay respect to their beliefs, cultural heritage, and continuing connection with the land. We also acknowledge and pay respect to the post-contact experiences of Aboriginal people with attachment to the area and to the Elders, past and present, as the next generation of role models and vessels for memories, traditions, culture and hopes of local Aboriginal people.

EXECUTIVE SUMMARY

OzArk Environment & Heritage (OzArk) has been engaged by PSA Consulting Pty Ltd (PSA), on behalf of AAM Investment Group Pty Ltd (AAM; the proponent) to complete an Aboriginal heritage due diligence assessment for the proposed construction of a poultry farm at 2432 Oxley Highway Bective, NSW (the proposal). The proposal is in the Tamworth Regional Local Government Area (LGA).

AAM is seeking development consent under Part 4 of the Environment Planning and Assessment Act 1979 (EPA Act) to develop a poultry broiler farm which will comprise 18 poultry sheds. Other ancillary buildings and supporting infrastructure will include grain storage silos, staff amenities, access roads, power supply, gas storage infrastructure, water pipes and pump, and two caretaker residences.

The study area comprises of approximately 174 hectares (ha) of cropped and grazed agricultural land at Lot 161 DP755319, Lots 1 -3 DP127958, Lot 5 DP755319, and Lot 147 DP755319.

A search of the Aboriginal Heritage Information Management System (AHIMS) database was completed on 25 September 2024 over a 10 km by 10 kilometres (km) search area centred around the study area (GDA 2020 Zone 56; Eastings: 275938 – 295938, Northings: 6558851 – 6578851). The search returned 32 previously recorded Aboriginal sites, none of which are situated within or near the study area.

The visual inspection of the study area was undertaken by OzArk Archaeologist, Eleanore Martin, on 26 and 27 September 2024. Tamworth Local Aboriginal Land Council (LALC) representative Barega Knox assisted with the visual inspection on 27 September 2024.

No Aboriginal sites were identified or recorded within the study area. The lack of Aboriginal objects can likely be attributed to several factors including distance from a permanent or semi-permanent watercourse, a lack of landforms with archaeological potential, and the severity of disturbances through long-term agricultural practices.

The undertaking of the due diligence process resulted in the conclusion that the proposed works will have an impact on the ground surface, however, no Aboriginal objects or intact archaeological deposits will be harmed by the proposal. This moves the proposal to the following outcome:

> *Aboriginal Heritage Impact Permit (AHIP) application not necessary. Proceed with caution. If any Aboriginal objects are found, stop work, and notify Heritage NSW (02) 9873 8500 (heritagemailbox@environment.nsw.gov.au). If human remains are found, stop work, secure the site, and notify NSW Police and Heritage NSW.*

To ensure the greatest possible protection to the area's Aboriginal cultural heritage values, the following recommendations are made:

1. The proposed work may proceed at the study area without further archaeological investigation under the following conditions:
    a. All land and ground disturbance activities must be confined to within the study area, as this will eliminate the risk of harm to potential Aboriginal objects that may be in adjacent landforms. Should the parameters of the proposal extend beyond the assessed areas, then further archaeological assessment may be required.
    b. All staff and contractors involved in the proposed work should be made aware of the legislative protection requirements for all Aboriginal sites and objects.
2. This assessment has concluded that there is a low likelihood that the proposed work will adversely harm Aboriginal cultural heritage items or sites. If during works, however, Aboriginal artefacts or skeletal material are noted, all work should cease and the procedures in the *Unanticipated Finds Protocol* (**Appendix 2**) should be followed.
3. Inductions for work crews should include a cultural heritage awareness procedure to ensure they recognise Aboriginal artefacts (see **Appendix 3**) and are aware of the legislative protection of Aboriginal objects under the *National Parks & Wildlife Act 1974* (NPW Act) and the contents of the *Unanticipated Finds Protocol.*
4. The information presented here meets the requirements of the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*. It should be retained as shelf documentation for five years as it may be used to support a defence against prosecution in the event of unanticipated harm to Aboriginal objects.

CONTENTS

FIGURES

TABLES

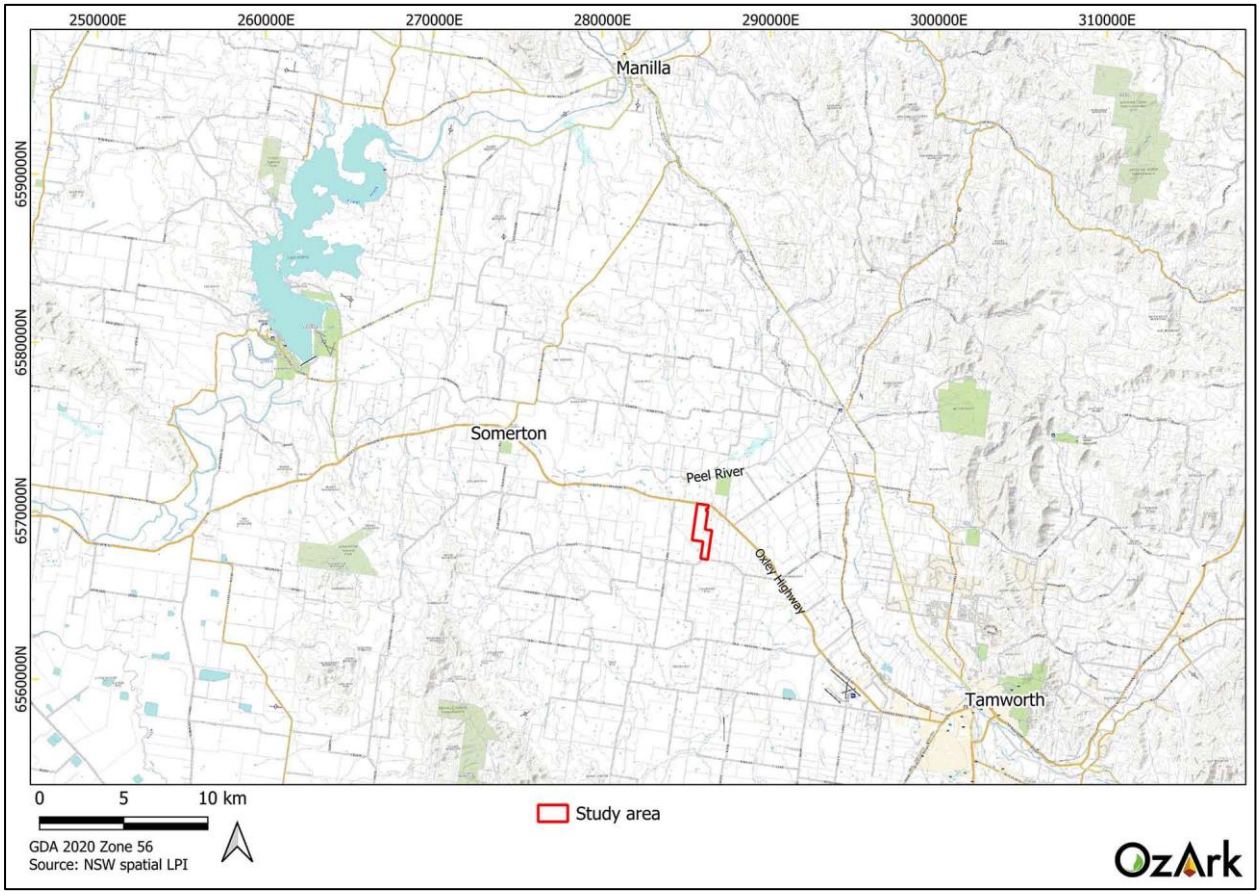
PLATES

1 INTRODUCTION

1.1 BRIEF DESCRIPTION OF THE PROPOSAL

OzArk Environment & Heritage (OzArk) has been engaged by PSA Consulting Pty Ltd (PSA), on behalf of AAM Investment Group Pty Ltd (AAM; the proponent) to complete an Aboriginal heritage due diligence assessment for the proposed construction of a poultry farm at 2432 Oxley Highway Bective, NSW (the proposal). The proposal is in the Tamworth Regional Local Government Area (LGA) (**Figure 1-1**).

Figure 1-1: Map showing the location of study area for the proposal.



1.2 PROPOSED WORK

AAM is seeking development consent under Part 4 of the *Environment Planning and Assessment Act 1979* (EPA Act) to develop a poultry broiler farm which will comprise 18 poultry sheds. The proposed sheds will be constructed in two rows running east west across the site. Each shed will be ~152 metres (m) long, ~22.19 m wide with a floor area of ~3,350 metres squared (m²). Other ancillary buildings and supporting infrastructure will include grain storage silos, staff amenities, access roads, power supply, gas storage infrastructure, water pipes and pump, and two caretaker residences.

A conceptual layout of the proposal is shown on **Figure 1-2**.

Figure 1-2: Aerial showing the conceptual layout and the study area.

1.3 STUDY AREA

The study area comprises of approximately 174 hectares (ha) of cropped and grazed agricultural land at Lot 161 DP755319, Lots 1 -3 DP127958, Lot 5 DP755319, and Lot 147 DP755319, as shown on **Figure 1-2**. The study area is located at 2432 Oxley Highway, Bective NSW, approximately 20 kilometres (km) northwest of Tamworth.

1.4 ASSESSMENT APPROACH

The desktop and visual inspection component for the study area follows the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (due diligence; DECCW 2010). The field inspection followed the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales* (OEH 2011).

2 ABORIGINAL DUE DILIGENCE ASSESSMENT

2.1 INTRODUCTION

Section 57 of the National Parks and Wildlife Regulation 2019 (NPW Regulation) made under the *National Parks and Wildlife Act 1974* (NPW Act) advocates a due diligence process to determining likely impacts on Aboriginal objects. Carrying out due diligence provides a defence to the offence of harming Aboriginal objects and is an important step in satisfying Aboriginal heritage obligations in NSW.

2.2 DEFENCES UNDER THE NPW REGULATION

2.2.1 Low impact activities

The first step before application of the due diligence process itself is to determine whether the proposed activity is a “low impact activity” for which there is a defence in the NPW Regulation. The exemptions are listed in Section 58 of the NPW Regulation (DECCW 2010: 6).

The activities of AAM are not considered a ‘low impact activity’ as the construction of the proposed facilities will impact the ground surface and do not meet the requirements of exemption set out in the Due Diligence Code of Practice. As such, the due diligence process must be applied.

2.2.2 Disturbed lands

Relevant to this process is the assessed levels of previous land-use disturbance.

The NPW Regulation Section 58 (DECCW 2010: 18) define disturbed land as follows:

> *Land is disturbed if it has been the subject of a human activity that has changed the land’s surface, being changes that remain clear and observable.*
>
> *Examples include ploughing, construction of rural infrastructure (such as dams and fences), construction of roads, trails and tracks (including fire trails and tracks*

and walking tracks), clearing vegetation, construction of buildings and the erection of other structures, construction or installation of utilities and other similar services (such as above or below ground electrical infrastructure, water or sewerage pipelines, stormwater drainage and other similar infrastructure) and construction of earthworks.

The proposal is situated on landforms where there have been clear and observable changes to the landscape at a desktop level, including vegetation clearing, ploughing, and cropping. Therefore, it could be considered that the proposed works are occurring in 'disturbed land'. However, some portions of land within and nearby the study area have not been modified in a clear and observable manner and therefore the due diligence process must be applied.

In summary, it is determined that the proposal must be assessed under the Due Diligence Code of Practice. The reasoning for this determination is set out in **Table 2-1**.

Table 2-1: Determination of whether Due Diligence Code of Practice applies.

Item	Reasoning	Answer
Is the activity to be assessed under Division 4.7 (state significant development) or Division 5.2 (state significant infrastructure) of the EP&A Act?	The proposal will be assessed under Part 4 of the EP&A Act.	No
Is the activity exempt from the NPW Act or NPW Regulation?	The proposal is not exempt under this Act or Regulation.	No
Do either or both apply: Is the activity in an Aboriginal place? Have previous investigations that meet the requirements of this Code identified Aboriginal objects?	The activity will not occur in an Aboriginal place. No previous investigations have been undertaken for this proposal.	No
Is the activity a low impact one for which there is a defence in the NPW Regulation?	The proposal is not a low impact activity for which there is a defence in the NPW Regulation.	No
Is the activity occurring entirely within areas that are assessed as 'disturbed lands'?	The proposal is not entirely within areas of high modification.	No
Due Diligence Code of Practice assessment is required		

2.3 APPLICATION OF THE DUE DILIGENCE CODE OF PRACTICE TO THE PROPOSAL

To follow the generic due diligence process, a series of steps in a question/answer flowchart format (DECCW 2010: 10) are applied to the proposed impacts and the study area, and the responses documented.

2.3.1 Step 1

Will the activity disturb the ground surface or any culturally modified trees?

Yes, the proposal will impact the ground surface and may impact culturally modified trees.

The proposal, as outlined in **Section 1.2**, will involve the construction of 18 poultry sheds and other ancillary buildings including grain storage silos, staff amenities, access roads, power supply,

gas storage infrastructure, water pipes and pump, and two caretaker residences The earthworks associated with the construction of foundations and access tracks will impact the ground surface.

Culturally modified trees may be harmed by the proposal as scattered vegetation remains within the study area.

2.3.2 Step 2a

Are there any relevant confirmed site records or other associated landscape feature information on AHIMS?

No, there are no previously recorded sites within the study area.

A search of the Aboriginal Heritage Information Management System (AHIMS) database was completed on 25 September 2024 over a 10 km by 10 km search area centred around the study area (GDA 2020 Zone 56; Eastings: 275938 – 295938, Northings: 6558851 – 6578851; **Appendix 1**). The search returned 32 previously recorded Aboriginal sites, none of which are situated within or near the study area. **Figure 2-1** shows all previously recorded sites in relation to the study area and **Table 2-2** shows the types of sites that are close to the study area.

Stone artefact sites (quantity unspecified, isolated finds, artefact scatters, and artefact scatters with quarry) together are the most commonly recorded site type, contributing to 65.6% (n= 21) of site types, within the search area. **Figure 2-1** shows these site types have been predominantly recorded on river terraces and creek banks, along named watercourses including the Peel River, Attunga Creek, Tangaratta Creek, and Bottons Creek. The nearest named watercourse to the study area is the Peel River, situated approximately 1.6 km to the north. Due to the distance between the study area and any named watercourses, it is unlikely that this site type would be present.

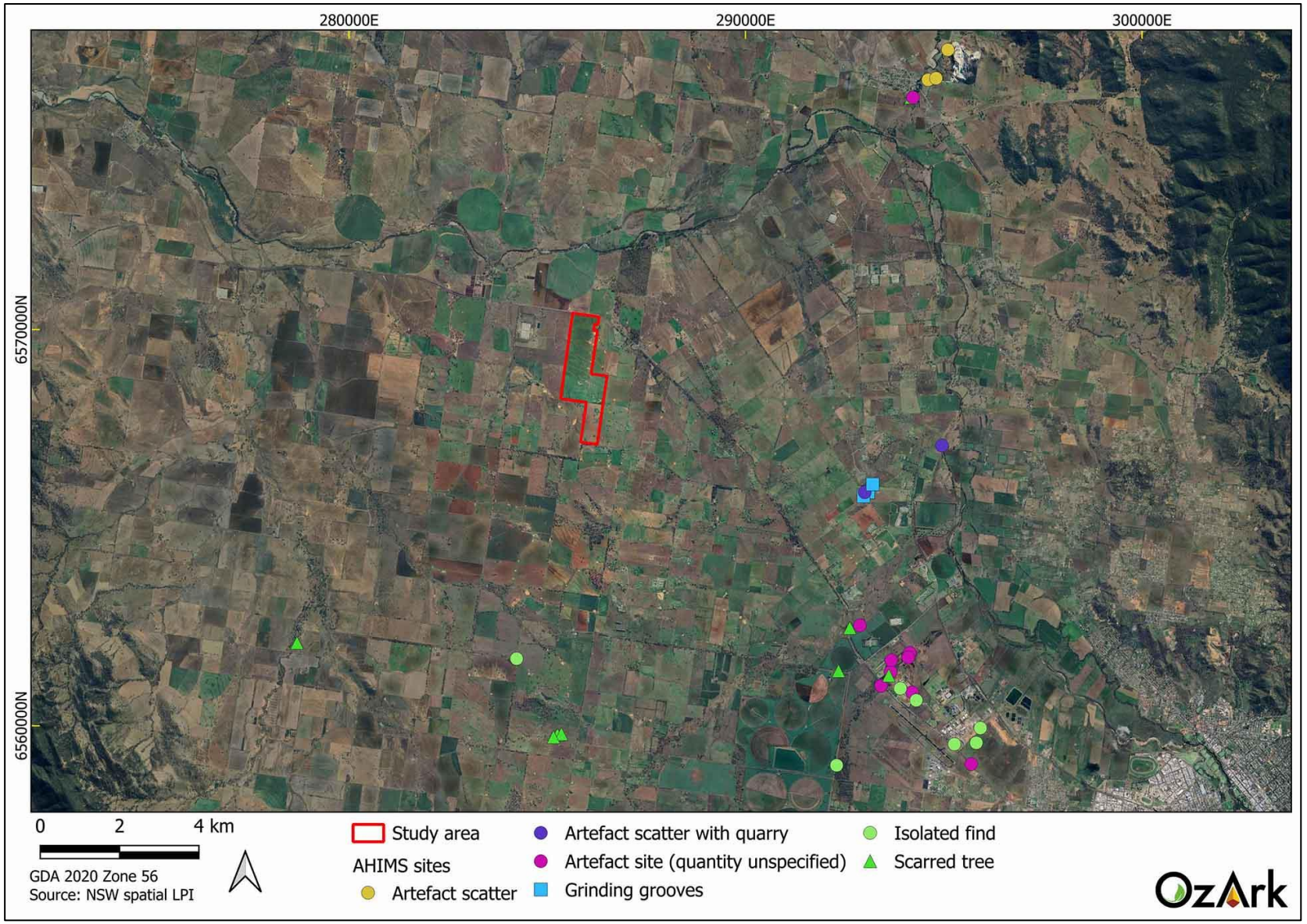
Culturally modified trees are the second most commonly recorded site type, contributing to 25% (n=8) of sites, within the search area. **Figure 2-1** shows these site types have primarily been recorded on named creek flats where extant mature vegetation is present. Most of the study area and surrounds have been subject to historic vegetation clearing, as such, few mature trees remain. The study area contains scattered paddock trees, suggesting this site type may be present.

Grinding grooves can only be recorded where appropriate outcropping rock, predominately sandstone, exists. There are three grinding groove sites within the search area, all are situated approximately 7 km east of the study area and 2 km west of the Peel River. As the study area has been subject to long-term ploughing and contour banking, it is unlikely to contain the appropriate rock outcropping required for these site types.

Table 2-2: Site types and frequencies of AHIMS sites near the study area.

Site Type	Number	% Frequency
Artefact site (quantity unspecified)	9	28.1
Scarred tree/s	8	25.0
Isolated finds	7	21.9
Artefact scatter	3	9.4
Grinding grooves	3	9.4
Artefact scatter with quarry	2	6.3
Total	**32**	**100**

Figure 2-1: Previously recorded sites in relation to the study area.



2.3.3 Step 2b

Are there any other sources of information of which a person is already aware?

No, there are no other sources of information that would indicate the presence of Aboriginal objects in the study area.

2.3.3.1 Ethnohistoric context

According to Tindale's (1974) and Horton's (1994) mapping of linguistic groups, the study area falls in the southeastern boundary of Gamilaraay country. Gamilaraay country is bound by Nganyaywana country to the east. The Gamilaraay (also spelt Gomeroi, Kamilaroi) country, as defined by the limits of the Gamilaraay language groups, refers to the language or dialect spoken around the Namoi, Gwydir and Barwon Rivers in north to central NSW.

The area of the Gamilaraay was rich in both flora and fauna resources. The Gamilaraay caught fish, eels, freshwater crayfish, yabbies, tortoises, and freshwater mussels in the rivers, creeks, and wetlands in the region (O'Rourke 1997). Watercraft were manufactured from large slabs of bark cut from river red gum trees. Fish were caught using fishing lines and nets made from reed fibre. Nets were used to catch waterbirds, whose eggs were also collected. Some of the other animals that Aboriginal people of the northwest slopes hunted include kangaroos, wallabies, koalas, possums, emus, echidnas, lizards, snakes, and frogs (Fison and Howitt 1880; O'Rourke 1997). Plant foods included grass seeds, wild orange, emu apple, melons, tubers, yams, and roots (O'Rourke 1997).

The toolkit used by Gamilaraay people is likely to have included: bark containers for holding water and gathering food; throwing sticks for hunting; cloaks of kangaroo skin; wooden clubs for fighting; hafted stone axes; nets for catching fish and birds; spears and spear throwers; and fish traps constructed in major creeks and rivers (Balme 1986).

2.3.3.2 Regional archaeological context

Unlike many other regions in NSW, the study of the archaeological record within the Tamworth LGA has benefited from its inclusion in academic regional archaeological studies due to its proximity to the University of New England (UNE). Sections of the Tamworth LGA have been included in large-scale archaeological studies dating back to the 1960s. However, it is noted that these studies have tended to focus on the New England Tablelands (the Tablelands), which is only one fifth of the Tamworth LGA (equivalent to the 'Eastern Nandewars' sub-bioregion).

Early archaeological research by UNE indicated that Aboriginal occupation of the Tablelands was seasonal and transitory. In the 1970s, McBryde emphasized the harshness of the Tablelands, suggesting that it would have been a major obstacle to year-round occupation, resulting in a sparse distribution of sites in this zone compared with other more temperate climates. Some

argued that instead, the Tablelands were mainly used for ceremonial purposes which was supported by the rich archaeological record of Bora rings, art sites, stone arrangements, and carved trees along with Aboriginal knowledge of intangible sites (Flood 2010: 238–239).

The initial hypotheses of seasonal occupation in the Tablelands were challenged by further research at UNE. Luke Godwin argued that the Tablelands were not abandoned in winter at all but occupied all year round by small mobile groups (Godwin 1990). His evidence, based on ethno-history, climate, and surface archaeology, suggests that the cold winter climate of the Tablelands was not a barrier to year-round settlement. Goodwin identified that the Tablelands had varying resources zones of woodland, grassland, and wetlands.

A study by Beck, Haworth and Appleton published in 2015 built upon the theory of year-round settlement, with a specific focus on the resources of lagoons in the upland wetlands (Beck et al. 2015). The researchers found that during the later Holocene, Aboriginal occupation in this area became more visible, including a high number of ceremonial sites in association with areas of greatest lagoon concentration. They hypothesise that the drier, more uncertain climate of the late Holocene would have concentrated game around larger lagoons which became the focus of consumption and exchange for Aboriginal people. They argue that the concentration of resources would have supported larger numbers of people than often associated with predominantly ceremonial activities.

Eras of Australian archaeological habitation as derived from stone tool typology include the ‘Australian Core Tool and Scraper’ tradition (Pleistocene dates, 40,000 – 10,000 years ago) and the ‘Small Tool and Scraper’ tradition (Holocene dates, 10,000 – 5,000 years ago). Some key examples of the Small Tool and Scraper tradition, which includes chisels and axes, are associated with the Tamworth Regional LGA (Binns and McBryde 1972, McBryde 1974). One ground-edge axe identified at Graman was dated to 4,000 years before present (BP) and the Moore Creek quarry (approximately 170 km to the south, within the Tamworth Regional LGA) was determined to be the source (Binns and McBryde 1972). More importantly, analysis of the distribution of andesite greywacke tools sourced from Moore Creek was the basis of McBryde’s consideration that these trade networks were more than just resource procurement routes. McBryde traced and explained the ‘ritual cycles of exchange’ that form the social, cultural and mythological links between Aboriginal groups across the landscape of northern NSW (Griffiths 2008: 47, Binns and McBryde 1972: 5).

For many years, the oldest dates for Aboriginal occupation within the Tamworth LGA were obtained from the Bendemeer site complex first excavated by McBryde in 1965 (McBryde 1974). The earliest phase of occupation at the site is dated to 4 300 BP, although older dates have since been investigated.

The western sections of the Tamworth Regional LGA are part of the Liverpool Plains where Aboriginal history spans many thousands of years, with archaeological research to date demonstrating 20,000 years of occupation (Gorecki et al. 1984, Gaynor 1997). Older archaeological sites may still to be found in the region, with research in other areas demonstrating that Aboriginal people have occupied the NSW landscape for more than 42,000 years (Bowler et al 2003).

In this context, it is understood that the earliest generations of Aboriginal people living on the Liverpool Plains may have come into contact with Australia's megafauna; although the extent of this overlap (the number of years people and megafauna shared the same lands), and the ways in which people and megafauna interacted, are still subject to ongoing research and debate.

The Liverpool Plains contains some of the earliest known megafauna fossil sites recorded by Europeans in Australia, and along with Wellington Caves and the Darling Downs, was one of Australia's three main fossil fields throughout the nineteenth century (Douglas 2004: 247). Its importance in understanding Australia's megafauna history, and understanding potential megafauna and human interactions, is still recognised today.

While megafauna sites are more common, archaeological sites of this age are not yet known in the Liverpool Plains, although three archaeological sites do show Aboriginal history extending back 20,000 years, being the Crazyman Rockshelter near Coonabarabran (with cultural deposits dated to 20 310 BP; Gaynor 1997) and two spring fed swamps, Lime Springs and Trinkey, near Gunnedah (with cultural deposits dated to 22 000 BP; Gorecki et al. 1984). As the region is subject to further archaeological investigation, more Pleistocene sites may be found, which may push back the known dates of Aboriginal history at a local level. However, evidence of direct interaction between megafauna and Aboriginal people is incredibly rare, only being known at Cuddie Springs in NSW where megafauna bones found in a clay pan (the bed of an ancient lake) included amongst them a stone tool lodged between a Diprotodon mandible and a Genyornis femur, and butchering cut marks have been found on megafauna bones (Dodson et al. 1993; Field et al. 2011:2).

2.3.3.3 Local Archaeological Context

In 1999, Wilson and McAdam (2000) undertook an archaeological study of Aboriginal sites across the Tamworth Regional LGA. The purpose of the study was to identify sites of Aboriginal and archaeological significance within the Tamworth area. The study was undertaken in three stages. The first stage aimed to produce a preliminary predictive model for Aboriginal archaeological site locations. Stage 2 tested the predictive model during 20 days of site survey across the Project Area. Stage 3 focused on revising the predictive model based on results from Stage 2 and allocating Aboriginal and archaeological significance to the newly recorded sites.

The survey focused on three sectors: northern, south-eastern, and south-western. The study found that the number of sites located was directly related to the size of the area surveyed and not to the degree of exploitation of that area by Aboriginal people in pre-contact times (Wilson & McAdam 2000).

Prior to the assessment, 28 Aboriginal archaeological sites were registered on the AHIMS database for this area. As a result of the 20 days of fieldwork during Stage 2, 38 previously unrecorded sites were recorded. Site types included isolated finds (n=8), artefact scatters (n=27), and scarred trees (n=3). Wilson and McAdam (2000) note that many of the recorded sites could be grouped together into site complexes and were given high archaeological significance.

Two “Places” with high significance to the Aboriginal community were also documented by the study. The two “Places” include the site of an artefact scatter in the Coledale area and the North Tamworth Aboriginal Reserve (known as the “Camp”) which was located on Forest Road.

As a result of the study, Wilson and McAdams (2000) provided the following predictions:

- Artefact scatters can be expected both north and south of the Peel River
- Artefact scatters are likely to vary in the raw material types they contain and the percentages of the raw material types they contain, depending on whether they are located to the north of the south of the Peel River
- The Peel River appears to have been a shared but rarely crossed resource zone
- The largest artefact scatters are most likely to be found on the creek terraces and lower slopes on red brown soils and above flood level. Artefact scatters will also be found on level areas associated with saddles, ridgetops, and crests, especially in areas that provide good views across wide areas. Occasionally artefact scatters will be in areas of steep gradient, but these will normally be found to be eroding and washing downslope from level areas upslope
- The size of the artefact scatters will be dependent on the availability of water. The largest sites will be in areas close to large waterholes on the major watercourses, the next largest sites will be near a spring or swamp. The smallest sites will generally be located on intermittent watercourses
- Artefact scatters are likely to be in areas close to ecotones
- The most common artefact types in scatters will be flakes, retouched flakes, flaked pieces, and cores. Axes, anvils, hammerstones, and grindstones will be extremely rare and when found, will generally be in the larger sites close to a watercourse that supplied permanent water (i.e., waterholes, springs, swamps)
- Artefacts in areas that have been subject to cultivation and treadage by hard-hoofed animals will be more likely to be broken than those not subject to cultivation and only subject to treadage by soft-footed animals.
- The most likely tree species in the Tamworth City area to have scars will be white box, yellow box, and river red gum

- Scarred trees can be in any topographic zone but are most likely within a short distance of a water course. This may be a major watercourse or a minor feeder tributary
- Scarred trees located on the floodplain of the major watercourses will often have had bark removed to manufacture a canoe
- Scarred trees away from the major watercourses and on the minor tributary systems are more likely to have had bark removed to manufacture coolamons or shields
- Scarred trees are likely to be near other sites especially artefact scatters.

In 2021, OzArk completed an Aboriginal heritage due diligence assessment at 123 Browns Lane in North Tamworth, approximately 16 km north of the current study area. The assessment was conducted on mostly cleared south to north sloping landform. There were two previously recorded isolated artefact sites within the assessment area, both within 200 m of an unnamed, non-perennial drainage feature. These two isolated finds were unable to be located during the site survey due to thick grass cover. Additionally, it was concluded that these sites were in a secondary context, deposited within the assessment area through colluvial slope wash. No previously un-recorded sites were identified within the assessment area. The lack of Aboriginal sites identified in this assessment was attributed to poor ground surface visibility, the overall degrading nature of the landscape, and the absence of landforms ideal for long term occupation.

A cultural heritage assessment of approximately 200 ha of land 7 km south of Sommerton, around 15 km west of the study area, was conducted by AREA in 2019. The landscape within the area assessed consisted of a cleared, gentle, west–east slope within a spur landform. Twenty-two Aboriginal sites were recorded during the archaeological survey (AREA 2019: 47). These sites consist of eight open camp sites, eleven isolated finds and three culturally modified trees. The isolated finds were scattered throughout the assessed area and consisted of 10 simple flakes (i.e. not tools) and one hammer stone. Five isolated finds were recorded in the southern-most portion of the area, directly associated with a drainage feature, and all but two of the remaining sites were clustered on a raised landform in the south-western corner of the study area. The modified trees were all recorded on white box trees and two of the three sites were recorded on raised landforms. The open sites consist of low-density, simple, stone flakes and cores. Like the isolated finds, this site type was predominantly recorded in association with a drainage feature or an elevated landform, with a couple of exceptions which were identified in transport corridors for the project. Raw materials across the assessed areas include silcrete, quartzite, hornfels, chert, fine-grained siliceous material, tuff (mudstone), and quartz, although predominantly the artefacts were manufactured from quartzite. It was determined that there was little to no potential for other site types or subsurface archaeological deposits within the assessed area as significant disturbance had allowed for the disruption and erosion of topsoils.

OzArk (2022) undertook an archaeological assessment for a proposed land rezoning project at the Stretheden Horse Stud in Tamworth, approximately 12.4 km northeast of the current study

area. The assessment was conducted in a cleared and partially cropped, undulating slopes landform used for agricultural operations. Two previously unrecorded Aboriginal sites, a 'scarred tree' and an isolated find, were noted within the assessment area. These sites were over 200 m from a watercourse, although were still within 500 m of a watercourse, supporting the site distribution pattern identified in **Section 2.3.2**. The isolated find consisted of a chert core, displaced from its primary context through slope wash erosion. Meanwhile, the 'scarred tree' was assessed by OzArk staff as being non-cultural as it did not meet the criteria set out in the NSW Scarred Tree Manual (Long 2005). However, the site was registered on AHIMS as requested by the Tamworth Local Aboriginal Land Council (LALC) and is considered a community interest tree.

2.3.3.4 Implications for this report

The above review of archaeological investigations surrounding the study area indicate that:

- Stone artefacts are the most dominant site types in the region which are frequently recorded in association with watercourses, alluvial flat landforms, knolls, and spurs. Due to the absence of watercourses and these landform types in the study area, the likelihood of this site type being recorded is considered to be low.
- Artefacts recorded in the region are manufactured from siliceous and metamorphic materials, dominantly siliceous materials (i.e. silcrete, quartzite, quartz, etc).
- Few scarred trees are recorded reflecting the high degree of tree clearing in the region, but if present, they are likely to be identified of Box Gums or River Red Gums.

2.3.4 Step 2c

Are there any landscape features that are likely to indicate presence of Aboriginal objects?

No, the study area does not contain landforms with identified archaeological sensitivity.

The due diligence Code of Practice (DECCW 2010) refers to several landscape features which have higher potential to contain Aboriginal objects. These include:

- Within 200 m of 'waters'
- Located within a sand dune system
- Located on a ridge top, ridge line or headland
- Located within 200 m below or above a cliff face
- Within 20 m of or in a cave, rock shelter, or a cave mouth
- On land that is not disturbed land.

Parts of the study area are located within 200 m of highly ephemeral drainage lines however all land in these areas is disturbed. These drainage features appear to primarily consist of run-off channels modified through the construction of contour banking and agricultural dams. The

nearest named watercourse is Peel River located 1.6 km north of the study area, with the closest major tributary of the river located 360 m to the northeast.

The study area is entirely within the Tamworth Keepit Slopes and Plains landscape unit which is characterised by undulating to rolling slopes and plains with a general elevation between 500 to 800 m above sea level (asl; Mitchell 2002: 77). Soils across the landscape unit typically comprise of red brown texture contrast soils on the upper slopes to yellow texture contrast soils with harsh subsoils on the lower slopes (Mitchell 2002: 77). The geological profile of the area includes folded and faulted sedimentary and metamorphic materials with minor imbedded volcanics (Mitchell 2002: 77). Vegetation within the landscape unit includes white box (*Eucalyptus albens*) grassy woodlands, yellow box (*Eucalyptus melliodora*), Blakely's red gum (*Eucalyptus blakelyii*), cooba (*Acacia implexa*), rough barked apple (*Angophora floribunda*), river oak (*Casuarina cunninghamiana*), river red gum (*Eucalyptus camaldulensis*), red stringybark (*Eucalyptus macrohyncha*), and red ironbark (*Eucalyptus sideroxylon*).

The study area itself consists of a rolling hill, with a long northeast-southwest slope across the southern portion of the study area, a small hillcrest along the southeastern boundary, and a moderate south-northeast slope across the northern portion of the study area. Contrary to the general elevation of the landscape unit, the study area has a maximum elevation of 400 m asl in the northeastern-most corner and a minimum elevation of 350 m asl in the northeastern-most corner. Soils within the study area are consistent with the landscape unit, comprising of red-brown earths. Native vegetation within the study area is scarce, consisting of scattered paddock trees.

A 'no' answer for Question 2 a-c, results in the outcome that the proposal can proceed with caution without further assessment.

> *Aboriginal Heritage Impact Permit (AHIP) application not necessary. Proceed with caution. If any Aboriginal objects are found, stop work, and notify Heritage NSW (02) 9873 8500 (heritagemailbox@environment.nsw.gov.au). If human remains are found, stop work, secure the site, and notify NSW Police and Heritage NSW.*

Although not required by the due diligence process, the proponent has elected to apply the precautionary principle and proceed to visual inspection of the study area (**Section 2.3.6**) in order to ground-truth the findings of the above desktop level assessment.

2.3.5 Step 3

Can harm to Aboriginal objects or disturbance of archaeologically sensitive landscape features be avoided?

Known Aboriginal objects and landforms with identified archaeological sensitivity will not be harmed by the proposal.

No AHIMS registered sites were recorded within or nearby the study area. Additionally, no landforms with heightened archaeological potential were identified within the study area. Therefore, there is low risk of harm to Aboriginal objects or archaeologically sensitive landscape features.

2.3.6 Step 4

Does a desktop assessment and visual inspection confirm that there are Aboriginal objects or that they are likely?

A desktop assessment and visual inspection confirm that there are no Aboriginal objects within the study area.

The visual inspection of the study area was undertaken by OzArk Archaeologist, Eleanore Martin, on 26 and 27 September 2024. Tamworth Local Aboriginal Land Council (LALC) representative Barega Knox assisted with the visual inspection on 27 September 2024.

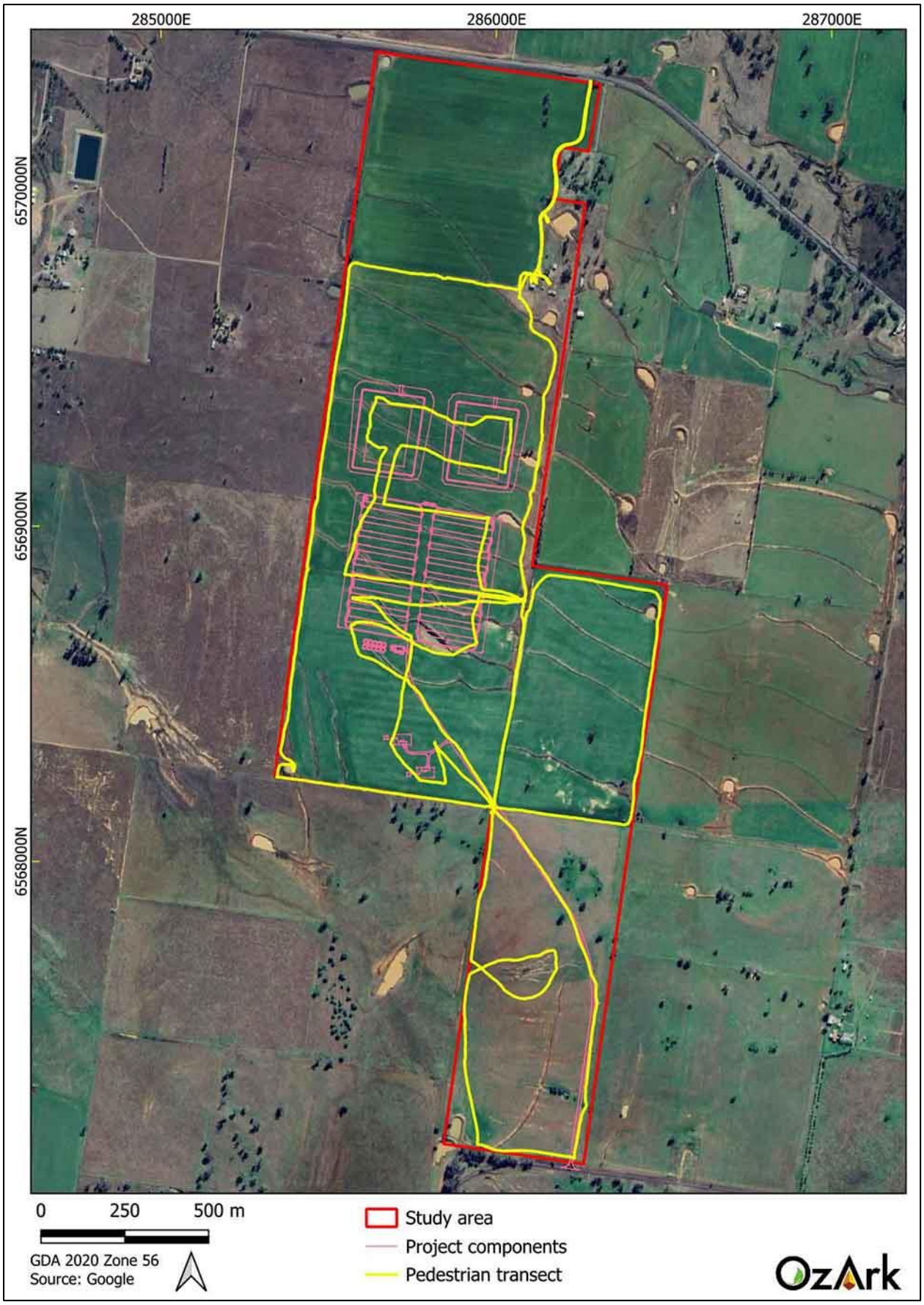
Standard archaeological field survey and recorded methods were employed. The study area was inspected on foot to ground-truth levels of disturbance and assess the archaeological potential of landforms (**Figure 2-2**). Disturbances identified at a desktop level, including ploughing (**Plate 1** and **Plate 2**, grazing (**Plate 3**), contour banking and construction of several dams (**Plate 4**), and the establishment of unsealed vehicle tracks (**Plate 5**) were confirmed during the visual inspection. In addition to the disturbances identified at a desktop level, several agricultural structures were noted, these include paddock fencing, shearing sheds, stockyards, and sheep ramps (**Plate 6** to **Plate 9**).

Ground surface exposure (GSE) across the study area was 10% with the exposures limited to along fence lines, dam walls, and unsealed vehicle tracks (**Plate 5** and **Plate 10**). Ground surface visibility (GSV) within the exposures averaged 60% although was partially inhibited by poor conditions.

Native trees are limited, comprising semi-mature eucalypt species. None of the trees within the study area contain cultural modification. The study area is dominated by crop plant (possibly oat)..

No Aboriginal sites were identified or recorded within the study area. While the lack of sites may be attributed to the minimal areas of exposure present, previous archaeological assessments completed across the region and local area indicate that landforms with high archaeological potential are not present in the study area. Landforms within the study area include a low hill crest and long, gentle slopes, whereas landforms with higher archaeological potential include alluvial flat landforms, knolls, and spurs in proximity to semi-permanent or permanent watercourses. Additionally, previous ground disturbing works across the study area indicates that any deposits will not be intact.

Figure 2-2: Survey coverage within the study area.



2.4 CONCLUSION

The due diligence process has resulted in the outcome that an AHIP is not required. The reasoning behind this determination is set out in **Table 2-3**.

Table 2-3: Due Diligence Code of Practice application.

Step	Reasoning	Answer
Step 1 Will the activity disturb the ground surface or any culturally modified trees?	The proposed works will disturb the ground surface through the construction of a chicken farm, access track and associated facilities. The proposal may impact scattered paddock trees and as such may harm culturally modified trees.	Yes
If the answer to Step 1 is 'yes', proceed to Step 2		
Step 2a Are there any relevant records of Aboriginal heritage on AHIMS to indicate presence of Aboriginal objects?	AHIMS indicated that there are no Aboriginal sites within or near the study area.	No
Step 2b Are there other sources of information to indicate presence of Aboriginal objects?	There are no other sources of information to indicate that Aboriginal objects are likely in the study area. Although it is noted that Aboriginal objects have been recorded within similar landforms to those contained within the study area.	No
Step 2c Will the activity impact landforms with archaeological sensitivity as defined by the Due Diligence Code?	The study area is over 200 m from the nearest permanent or semi-permanent watercourse and no other landscape features with identified archaeological potential is present within the study area. Although not required by the due diligence process, the proponent has elected to apply the precautionary principle and proceed to visual inspection of the study area to ground-truth the findings of the above desktop level assessment.	No
If the answer to any stage of Step 2 is 'yes', proceed to Step 3		
Step 3 Can harm to Aboriginal objects listed on AHIMS or identified by other sources of information and/or can the carrying out of the activity at the relevant landscape features be avoided?	No landforms with archaeological sensitivity or AHIMS registered sites are recorded within or nearby the study area.	Yes
If the answer to Step 3 is 'no', a visual inspection is required. Proceed to Step 4.		
Step 4 Does the visual inspection confirm that there are Aboriginal objects or that they are likely?	The visual inspection recorded no Aboriginal objects in the study area. It was confirmed that landforms were of low archaeological sensitivity and that disturbances to the landforms from long-term agricultural operations were substantial.	No
Conclusion		
AHIP not necessary. Proceed with caution.		

3 MANAGEMENT RECOMMENDATIONS

The undertaking of the due diligence process resulted in the conclusion that the proposed works will have an impact on the ground surface, however, no Aboriginal objects or intact archaeological deposits will be harmed by the proposal. This moves the proposal to the following outcome:

> *AHIP application not necessary. Proceed with caution. If any Aboriginal objects are found, stop work, and notify Heritage NSW (02) 9873 8500 (heritagemailbox@environment.nsw.gov.au). If human remains are found, stop work, secure the site, and notify NSW Police and Heritage NSW.*

To ensure the greatest possible protection to the area's Aboriginal cultural heritage values, the following recommendations are made:

1. The proposed work may proceed at the study area without further archaeological investigation under the following conditions:
    a. All land and ground disturbance activities must be confined to within the study area, as this will eliminate the risk of harm to potential Aboriginal objects that may be in adjacent landforms. Should the parameters of the proposal extend beyond the assessed areas, then further archaeological assessment may be required.
    b. All staff and contractors involved in the proposed work should be made aware of the legislative protection requirements for all Aboriginal sites and objects.
2. This assessment has concluded that there is a low likelihood that the proposed work will adversely harm Aboriginal cultural heritage items or sites. If during works, however, Aboriginal artefacts or skeletal material are noted, all work should cease and the procedures in the *Unanticipated Finds Protocol* (**Appendix 2**) should be followed.
3. Inductions for work crews should include a cultural heritage awareness procedure to ensure they recognise Aboriginal artefacts (see **Appendix 3**) and are aware of the legislative protection of Aboriginal objects under the NPW Act and the contents of the *Unanticipated Finds Protocol.*
4. The information presented here meets the requirements of the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*. It should be retained as shelf documentation for five years as it may be used to support a defence against prosecution in the event of unanticipated harm to Aboriginal objects.

REFERENCES

AREA 2019 — AREA Environment Consultants & Communication. 2019. *Tamworth Solar Farm: Cultural Heritage Assessment*. Report to: Oriens Energy Pty Ltd.

Balme 1986 — Balme, J. 1986. *The North Central Rivers Archaeological Research Project: Volume 2.* Technical report prepared for NSW NPWS.

Beck et al 2015 — Beck, W, Haworth, R, Appleton, J. 2015. Aboriginal resources change through time in New England upland wetlands, south-east Australia. Archaeology in Oceania. Vol 50:46-56.

Binns and McBride 1972 — Binns, R. and I. McBryde. 1972. *A petrological analysis of Ground Edge Artefacts from Northern New South Wales*. AIAS, Canberra.

Bowler et al. 2003 — Bowler, J.M., Jones, R., Allen, H. and Thorne, A.G. 2003. Pleistocene human remains from Australia: a living site and human cremation from Lake Mungo, western New South Wales. *World Archaeology* 2: 39–60.

DECCW 2010 — *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW*. Department of Environment, Climate Change and Water. 2010.

Dodson et al. 1993 — Dodson, J., Furby, J., Jones, R. and Prosser, I. 1993. Humans and Megafauna in a Late Pleistocene Environment from Cuddie Springs, NorthWestern New South Wales. *Archaeology in Oceania*, Vol. 28, No. 2 (Jul., 1993), 94–99.

Douglas 2004 — Douglas, K. 2004. *Pictures of time beneath, Science, landscape, heritage and the uses of the deep past in Australia 1830-2003*. PhD Thesis, Australian National University.

Flood 2010 — Flood, J. 2010. *Archaeology of the dreamtime: the story of prehistoric Australia and its people*. Gecko Books, Marleston, South Australia.

Field et al. 2008 — Field, J., Fillios, M. and Wroe, S. 2008. Chronological overlap between humans and megafauna in Sahul (Pleistocene Australia–New Guinea): A review of the evidence. *Earth-Science Reviews*. Volume 89 (2008) 97–115.

Fison and Howitt 1880 — Fison, L. and A.W. Howitt. 1880. *Kamilaroi and Kurnai: Group-Marriage and Relationship, and Marriage by Elopement*. George Robertson, Sydney.

Gaynor 1997 — Gaynor, P. 1997. *Short accounts of the findings from the examination of Coonabarabran/Warrumbungle Aboriginal stone artefacts recovered the excavation of the Crazyman Shelter 1989, the salvage of Jack Halls Creek*

Camp Site 1991, a small excavation at Camp Pincham 1988, and the excavation of the Ukerbaerley Hayshed site 1990. Unpublished manuscript held at Gunnedah Shire Library.

Godwin 1990 — Godwin, L. 1990 *Inside Information: Settlement and Alliance in the Late Holocene of Northeastern New South Wales*. Unpublished PhD thesis, Department of Archaeology and Palaeoanthropology, University of New England, Armidale

Gorecki et al. 1984 — Gorecki, P.P., Horton, D.R., Stern, N. and Wright, R.V.S. 1984. Coexistence of Humans and Megafauna in Australia: Improved Stratified Evidence. *Archaeology in Oceania*. Volume 19, Number 3: 117–119.

Griffiths 2018 — Griffiths, Billy. 2018. *Deep Time Dreaming: Uncovering Ancient Australia.* Black inc., Carlton, Victoria.

Horton 1996 — Horton, D. 1996. *The AIATIS Map of Indigenous Australia*. The Australian Institute for Aboriginal and Torres Strait Islander Studies, Canberra.

McBryde 1974 — McBryde, I. 1974. *Aboriginal prehistory in New England*. Sydney University Press, Sydney.

Mitchell 2002 — Mitchell, Dr. Peter. 2002. *Description for NSW (Mitchell) Landscapes Version 2.* Department of Environment and Climate Change NSW.

O'Rourke 1997 — O'Rourke, M. 1997. *Kamilaroi lands: North-central New South Wales in the early 19th century*. Self-published.

OEH 2011 — *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales.* Office of Environment and Heritage. 2011.

OzArk 2021 — OzArk Environment and Heritage. 2021. *Aboriginal Due Diligence Assessment Report: 123 Browns Lane Residential Subdivision*. Report to: Bath Stewart Associates on behalf of Canisby.

OzArk 2022 — OzArk Environment and Heritage. 2022. *Archaeological Technical Report: Proposed Land Rezoning – 'Stratheden Horse Stud'*. Report to: Bath Stewart Associates.

Tindale 1974 — Tindale, N. 1974, *Aboriginal Tribes of Australia: Their Terrain, Environmental Controls, Distribution, Limits, and Proper Names*, Australian National University Press, Canberra.

Wilson and McAdam 2000 — Wilson, J. and L. McAdam. 2000. *The Tamworth Aboriginal Archaeological Site Study*. Report to: Tamworth City Council.

PLATES

Plate 1: View north across the cropped central paddock within the study area.

Plate 2: View west along a paddock fence within the study area. Note the lines of vegetation across the left side of the image which indicate that paddock has been ploughed in the past.

Plate 3: View northeast at grazing livestock.

Plate 4: View north at one of the contour banks within the study area.

Plate 5: View south down the existing unsealed vehicle track off the Oxley Highway, within the northeastern-most portion of the study area.

Plate 6: View southeast at agricultural facilities located within the northern portion of the study area, along the eastern boundary with a large area of expsoure.

Plate 7: View south at the front of the shearing shed.

Plate 8: View east from under the verandah of the shearing shed.

Plate 9: View east to the sheep ramp and stock yard.

Plate 10: View west at the exposures associated with the fence line around the perimeter of the study area.

APPENDIX 2: ABORIGINAL HERITAGE: UNANTICIPATED FINDS PROTOCOL

An Aboriginal artefact is anything which is the result of past Aboriginal activity. This includes stone (artefacts, rock engravings etc.), plant (culturally scarred trees) and animal (if showing signs of modification; i.e. smoothing, use). Human bone (skeletal) remains may also be uncovered while onsite.

Cultural heritage significance is assessed by the Aboriginal community and is typically based on traditional and contemporary lore, spiritual values, and oral history, and may also consider scientific and educational value.

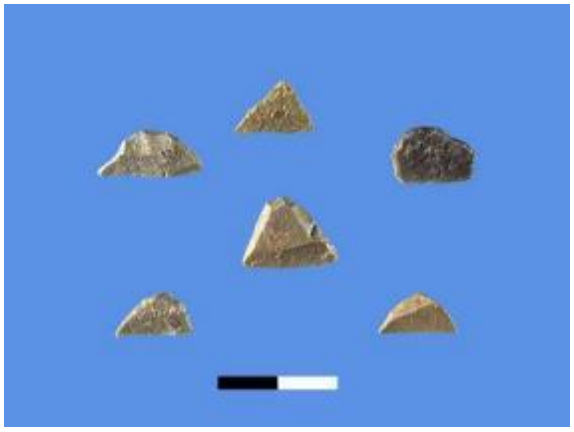
Protocol to be followed if previously unrecorded or unanticipated Aboriginal object(s) are encountered:

1. If any Aboriginal object is discovered and/or harmed in, or under the land, while undertaking the proposed development activities, the proponent must:
    a. Not further harm the object
    b. Immediately cease all work at the particular location
    c. Secure the area to avoid further harm to the Aboriginal object
    d. Notify Heritage NSW as soon as practical on (02) 9873 8500 (heritagemailbox @environment.nsw.gov.au), providing any details of the Aboriginal object and its location; and
    e. Not recommence any work at the particular location unless authorised in writing by Heritage NSW.
2. If Aboriginal burials are unexpectedly encountered during the activity, work must stop immediately, the area secured to prevent unauthorised access and NSW Police and Heritage NSW contacted.
3. Cooperate with the appropriate authorities and relevant Aboriginal community representatives to facilitate:
    a. The recording and assessment of the find(s)
    b. The fulfilment of any legal constraints arising from the find(s), including complying with Heritage NSW directions
    c. The development and implementation of appropriate management strategies, including consultation with stakeholders and the assessment of the significance of the find(s).
4. Where the find(s) are determined to be Aboriginal object(s), recommencement of work in the area of the find(s) can only occur in accordance with any consequential legal requirements and after gaining written approval from Heritage NSW (normally an Aboriginal Heritage Impact Permit).

APPENDIX 3: ABORIGINAL HERITAGE: ARTEFACT IDENTIFICATION

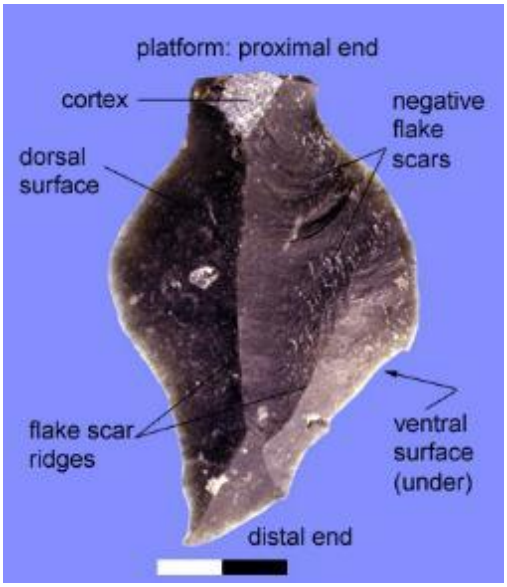
A retouched silcrete flake

A quartz flake



Microliths (scale = 1 cm)

Volcanic flakes



Flake characteristics (scale = 1 cm)

A mudstone/tuff core from which flakes have been removed