

Aboriginal Heritage Due Diligence Assessment

PART COOLAWIN, PLANNING PROPOSAL



JUNE 2016



Document Verification



Project Title: PART Coolawin, PLANNING PROPOSAL Due Diligence

Project Number: 16-045

Project File Name: 16-045 Coolawin Due Dil report v2

Revision	Date	Prepared by (name)	Reviewed by (name)	Approved by (name)
Final	10/06/16	Matthew Barber	Kirsten Bradley	Matthew Barber
Final	07/04/20	T Hastings (minor updates)	Matthew Barber	Matthew Barber

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ACRONYMS AND ABBREVIATIONS

AHIMS	Aboriginal heritage information management system
BCD	Biodiversity and Conservation Division (formerly OEH)
Km	kilometres
LALC	Local Aboriginal Land Council
M	Metres
NPW Act	<i>National Parks And Wildlife Act 1974</i> (NSW)
NSW	New South Wales
OEH	(NSW) Office of Environment and Heritage, formerly Department of Environment, Climate Change and Water
PAD	Potential Archaeological Deposit
REF	Review of Environmental Factors

EXECUTIVE SUMMARY

BACKGROUND ASSESSMENT

No sites are registered with AHIMS within the proposed project area for the rezoning of land for a proposed subdivision at Gundaroo. There have been 23 sites recorded in the local district. The terrain features within the project area have been identified as having potential to contain Aboriginal heritage objects.

FIELD ASSESSMENT

The field inspection of the project area identified the presence of one Aboriginal artefact scatter and two areas of potential archaeological deposit. Each of the locations has potential to contain additional artefacts and subsurface deposits.

IMPACT ASSESSMENT CONCLUSION

It will be possible to avoid the sites, thus negating the need to conduct further archaeological assessments. Should the sites be impacted by the development an Aboriginal Heritage Impact Permit from BCD would be required.

RECOMMENDATIONS

The following recommendations are based on the results of this Due Diligence assessment. The proposed work could *proceed with caution*, provided the following recommendations were followed.

1. Any impacts to Aboriginal objects would require an AHIP from BCD. This would require undertaking an Aboriginal Cultural Heritage Assessment (ACHA) including consultation with the Aboriginal community.
2. As part of any ACHA, subsurface investigations should be undertaken to determine the nature and significance of any subsurface deposits. This must be carried out by a qualified archaeologist following the BCD Code of Practice for archaeological investigations. This would also require consultation with the Aboriginal community following the BCD Consultation requirements.
3. If during any construction outside the areas of archaeological sites identified, objects suspected of being Aboriginal in origin are found, work should cease in the immediate area and BCD notified. The objects would then be assessed.

1 INTRODUCTION

NGH Environmental was commissioned by Austin Goodfellow to undertake a Due Diligence level assessment for Aboriginal heritage sites for the rezoning of land for a proposed subdivision on the Coolawin property at Gundaroo, NSW (Figure 1).

The area of investigation is approximately 18 Ha, on the north western boundary of the village Gundaroo. The area is bounded by Gundaroo Road on the east, Coolawin homestead area on the north, a paddock fenceline near the Yass River on the west and the village property boundary on the south. The draft proposal is to develop this area into 5 large lots.

1.1 PROJECT PARTICIPANTS

The Due Diligence assessment was carried out by qualified archaeologist Matthew Barber of NGH Environmental. This included background research, field inspection and the completion of this report.

The Due Diligence process does not formally require consultation with Aboriginal community groups. No Aboriginal groups were contacted for this due diligence level assessment. The area is within the boundaries of the Ngambri Local Aboriginal Land Council.

1.2 FORMAT OF THIS REPORT

This report has been drafted in keeping with the sequence of steps identified in the NSW Office of Environment and Heritage's (OEH 2011) *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW*. The Code of Practice provides a five step approach to determine if an activity is likely to cause harm to an Aboriginal object, as defined by the *NSW National Parks and Wildlife Act* (1974). The steps follow a logical sequence of questions, the answer to each question determines the need for the next step in the process.

The progress through the steps in the Code of Practice is aimed at providing an assessment of the potential for an activity to impact either a known Aboriginal object, or whether it is likely that unrecorded Aboriginal objects are present that may be impacted. The result of the process is aimed at providing the proponent with information about the likelihood that their activity will impact an Aboriginal object and whether an Aboriginal Heritage Impact Permit may be required.

Each section below follows the relevant step outlined in the Code of Practice.

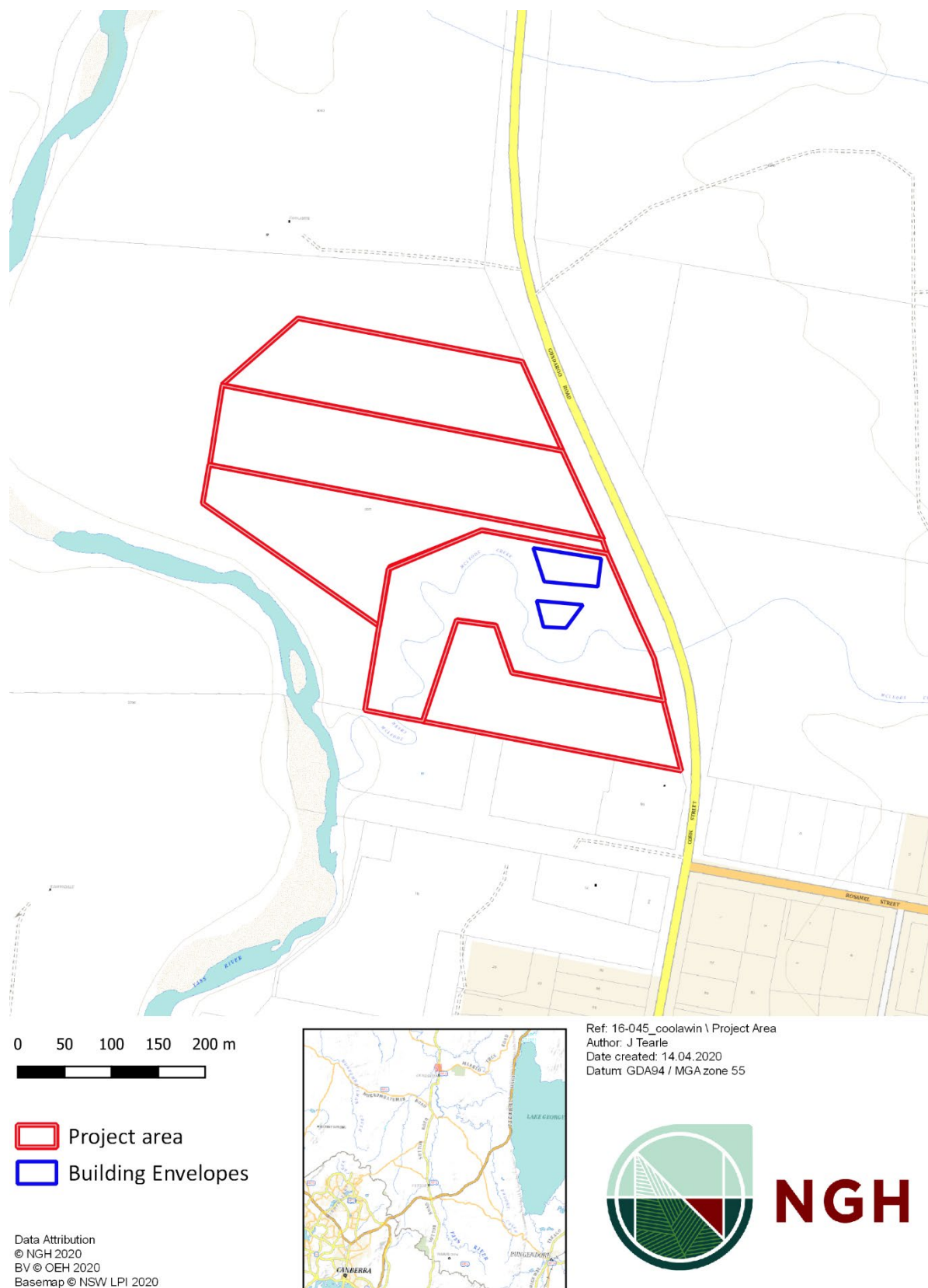


Figure 1. Location of project area.

2 GROUND DISTURBANCE

Step 1. Will the activity disturb the ground surface or any culturally modified trees?

The proposed subdivision will involve the following elements:

- Construction of roads, installation of services and fences;
- House construction, and
- Rehabilitation of the creekline through native plantings.

These activities clearly involve significant ground disturbance and therefore have the potential to impact on any Aboriginal cultural objects that may occur. The affirmation that ground disturbance will occur requires the next step in the Due Diligence process.

3 REGISTER SEARCH AND LANDSCAPE ASSESSMENT

Step 2a. Search the AHIMS Database and other information sources

A search of relevant heritage registers for Aboriginal sites and places provides an indication of the presence of previously recorded sites. A register search is not conclusive however, as it requires that an area has been inspected and any sites are provided to the relevant body to add to the register. However, as a starting point, the search will indicate whether any sites are known within or adjacent to the investigation area.

The Aboriginal Heritage Information Management System (AHIMS) provides a database of previously recorded Aboriginal heritage sites. A search provides basic information about any sites previously identified within a search area. The results of the search are able to be relied upon for 12 months for the purposes of a due diligence level assessment.

A search of the AHIMS database of an area approximately 7km east-west by 7km north-south, centred on the Coolawin, was undertaken on the 30th of May 2016. The coordinates for the search area were Lat. Long. from: -35.0602, 149.2042 – Lat. Long to: -34.9775, 149.3352 with a buffer of 50 meters. The AHIMS Client Service Number was: 227656. There were 23 Aboriginal sites recorded within this search area. Table 1 shows the breakdown of site types.

Table 1 Breakdown of previously recorded Aboriginal sites in the region.

Site Type	Number
Artefact scatter/Isolated Finds	14
Modified Tree	1
Potential Archaeological Deposit	8
TOTAL	23

The closest recorded recordings were three areas of potential archaeological deposit (PAD), situated about 700m to the east of the current project area (see below).

It is clear from these search results that the dominant site type in the area is artefact scatters, either as single stone artefacts, known as isolated finds or scatters of up to 200 artefacts.

3.1 LOCAL ARCHAEOLOGICAL STUDIES

No archaeological surveys or assessments have previously occurred within the project area. However, a number of archaeological surveys have occurred within the wider Gundaroo area in general proximity to the Coolawin property.

In 1986 Packard surveyed areas proposed for sand, gravel and topsoil mining on the Glencoe and Rutherford properties along the Yass River and Gundaroo Creek to the north of Gundaroo (1986a). Four stone artefact sites and an isolated find were recorded with the majority of sites located on elevated areas in red sandy deposits in close proximity to water. When Packard returned to undertake test pit excavations, two sites previously noted with surface artefacts close to the river bank were unable to be relocated. It was suggested that this was the result of flooding events that had occurred since the initial recording. Packard excavated eight test pits in red sandy deposits near the Yass River across three areas (RYR1, GYR1 and GYR2) where there was no surface artefacts visible. He recovered a total of 103 artefacts from seven pits between 5cm and 45cm below the surface. The majority of the artefact recovered were manufactured from quartz with lesser numbers of silcrete and other materials. All three sites excavated were noted to contain artefacts produced using bipolar techniques. A single quartz retouched artefact was also noted. Packard (1986a) noted that the sites excavated on slopes tended to have a lower artefact densities than those excavated on the level terrace area and he suggested that sandy deposits in close proximity to the Yass River were a more attractive a camping area than previously thought.

Packard (1986b) also surveyed an area approximately 6.5km along the Yass River and Brooks Creek, downstream of Gundaroo for a proposed sand, gravel and topsoil extraction development. No sites were identified during this survey despite sites being located in areas with similar topographic features to the north of Gundaroo. Packard suggested that this might be due to the extensive disturbance in the area from previous soil mining and that there was no distinct level, sandy, well-drained areas that might have been a focus for Aboriginal activities and occupation.

Oakley did not identify any sites while surveying land in 2006 adjacent to the Gundaroo Bridge and Sutton Road, 1km south of Gundaroo. The area was assessed as to have extremely low archaeological potential due to the level of disturbance in the area (as cited in Saunders 2007:13)

In 2006 Saunders (2007) surveyed approximately 83 ha for a proposed rural subdivision along the Yass River and Back Creek Roads, approximately 5.5km north-west of Gundaroo. A small low density artefact scatter and an isolated artefact were the only two sites located. Both sites had grey silcrete artefacts that were located on either the basal slope of a low spur or a spur crest. Saunders concluded that along the Yass River and its tributaries areas of gentle slope within 100m of a water source and level elevated areas within 150m of the Yass River have the highest archaeological sensitivity

Bowen conducted two surveys in Gundaroo during 2014 (Bowen 2014a and 2014b). While surveying an area proposed for subdivision along Gundaroo Road, opposite the Coolawin property, Bowen (2014a) identified three areas that had potential archaeological deposits (PADs). These three PADs were located on elevated areas near a marsh zone close to McLeod's Creek.

Bowen's survey for the proposed rezoning of land at Sutton Road and Faithfull Street in Gundaroo identified five PADs. These were all located on elevated areas in close proximity to a water source, in this instance Harrow Creek (Bowen 2014b).

Based on a review of the results of previous archaeological surveys in the district, in particular the identification of stone artefacts and PADs in close proximity to water sources including the Yass River, it is reasonable to predict that sites in the current assessment area would likely share similar attributes and characteristics with those previously identified. Based on the reviewed reports, there is potential that stone artefacts and PADS will occur within the landscape at Coolawin.

3.2 LANDSCAPE ASSESSMENT

The project area is situated within the Yass River valley, the river itself abuts the south western corner of the project area. The Yass valley is characterised as an area of floodplain, varying in width up to two kilometres. The terrain includes the floodplain, numerous permanent and ephemeral creeks and is bounded by rolling, gently undulating hills. Within the valley floor, the floodplain is particularly characterised by the presence of terraces, with the older terraces extending some distance from the Yass River.

The underlying geology of the region is varied, comprising Late Ordovician greywacke, sandstone, chert, slate, limestone and quartzite in the surrounding hills, while the floodplain consists of Quaternary deposits of sands, silts, clays and gravels (Gilligan 1974).

The project area is within the Gundaroo soil landscape, as defined by Jenkins (2000). The Gundaroo unit is characterised by a narrow floodplain and associated terraces with a low local relief (<30m) and low slope gradients. The streams are generally deeply incised and there is no outcropping bedrock present.

Terraces are present within the unit that represent periods of cut and fill of the river. The higher terraces are older and further away from the river, with the current floodplain the youngest deposits (Jenkins 2000).

Within the project area on Coolawin, the terrain is generally characterised as undulating rising from a flood plain, with the ephemeral McLeods Creek meandering through the southern end of the property and joining the Yass River on the south west corner of the property, but just outside the proposed development area. The terrain either side of this creek, within the project area, is generally flat, with a very small rise within a large meander bend. Soils are exposed in the eroded creek bank and show a typically shallow brown loam, overlying a yellow clay loam over a more massive yellow to orange clay.

In summary therefore, the project area contains generally level ground, elevated sandy terraces and creek and river banks. All of these features would be considered to have been suitable for Aboriginal occupation.

Step 2b. Are there undisturbed landscape features likely to contain Aboriginal objects?

As outlined above, Aboriginal heritage sites have been recorded in the Gundaroo area, although not within the current project area. The results of these surveys and the landforms of the area would indicate that there is some archaeological potential for Aboriginal artefacts, possibly isolated finds or small artefact scatters to occur. The *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* outlines a range of landscape features that have higher potential to contain Aboriginal objects. It is also necessary to consider whether there are landscape features of undisturbed land that may contain Aboriginal objects. These include land that is:

- within 200m of water,
- located within a sand dune system,
- located on a ridge top, ridge line or headland,
- located within 200m below or above a cliff face, or

- within 20m of a cave, rock shelter or cave mouth.

The landscapes within the project area have been partially disturbed by clearing and ploughing for crops. However, as shown in previous archaeological surveys across all environments in NSW, ploughing and clearing does not remove the artefacts from the landscape, although it does potentially displace and may damage them and can affect their scientific significance.

The desktop and landscape assessment of the project area therefore indicates that there are landscapes present that have the potential to contain Aboriginal sites. The next step in the due diligence process is therefore required.

4 IMPACT AVOIDANCE

Step 3. Can any AHIMS listed objects, or landscape features be avoided?

The broad area proposed for the development is unlikely to be able to be revised to avoid all landscape features identified above. The necessary fencing, roads, infrastructure and houses are likely to cause some impact to the landscape.

The desktop assessment alone is not sufficient to conclusively appraise the archaeological potential of the landscape or the location of any sites, the next step in the process, a visual inspection must be conducted to properly appraise the presence and potential for Aboriginal sites to occur.

5 DESKTOP ASSESSMENT AND VISUAL INSPECTION

Step 4. Does the desktop assessment and visual inspection confirm that there are likely to be Aboriginal objects present or below the ground surface?

The assessment process is primarily a desktop exercise, using available information such as the AHIMS search results and relevant archaeological reports that have been previously completed in the area. Visual inspection is also required where undisturbed landscape features are present that may contain sites.

A visual inspection of the project area was undertaken on the 31st of May 2016. The inspection was carried out by qualified archaeologist, Matthew Barber. The due diligence level field assessment is not designed to be a comprehensive survey to the same degree as required for an Aboriginal Cultural Heritage Assessment (ACHA). The purpose and aim of the due diligence is to identify the presence of Aboriginal sites or the likelihood of their presence in a development area.

The following provides a summary of the landscape and project area in relation to the archaeological potential for Aboriginal objects to occur.

Survey area 1.

Survey area 1 comprised the southern paddock, associated with McLeod's Creek and where some larger house blocks are proposed. This survey area was dominated by the creekline, with extensive flats either side. The creek consists of a main, narrow inner channel varying in width from 1-3m within a broader, incised outer channel meander containing flats either side of the main water carrying channel. The creek has been dammed upstream and so modern flows are limited. The broad creek bank has suffered historical erosion and consists of near vertical banks of between 2 and 4m deep.

Either side of the creek is a broad flat, which was well grassed at the time of the inspection, reducing visibility to about 2%, mainly from stock tracks along the top of the high creek bank. There was a subtle low rise, elevated only 0.5m extending from inside a wide meander of McLeod's Creek south. This area was identified as a potential archaeological deposit (PAD) and is considered to have moderate archaeological potential.

Two artefacts were recorded within this survey unit and they have been recorded as Coolawin AS1, see table 2 for details and plate 2.

Survey Area 2.

Survey area 2 comprised the flats adjacent to the Yass River and between McLeod's Creek and the raised terraces. This section was variable in its visibility, with the area within the recently cropped paddock offering excellent visibility of about 60%. The soils within the cropped paddock were a brown loam. The section adjacent to the river had poorer visibility but there was also one sandy rise present. The origin of this feature was difficult to discern as it was generally oval in shape and raised up to 2m above the flood plain, the crest contained sandy gravels that appeared to have been placed there some time ago. The remainder of the rise was a sandy loamy deposit. Visibility on this mound was fair at about 25% reducing to about 10% on the adjacent floodplain. No artefacts were observed survey area 2 but the raised sandy ground is considered to have potential archaeological deposit.

Table 2. Site details

Site Name	Location	Content	Comments
Coolawin AS1	On top of outer bank of McLeod's Creek, adjacent to flats.	2 artefacts over area of 30x5m. 1 quartz, 1 silcrete backed artefact.	Some previous disturbance from grazing, moderate potential for subsurface deposits.
PAD 1	Adjacent to McLeod's Creek, inside wide meander.		Area of slightly raised ground with moderate archaeological potential.
PAD 2	Adjacent to Yass River.		Area of slightly raised ground with moderate archaeological potential.



Plate 1. View south to Coolawin AS1 , artefacts at scale in foreground and at arrow.



Plate 2. View south to PAD1, slightly elevated ground.



Plate 3. View north west to raised ground adjacent to Yass River, PAD2.

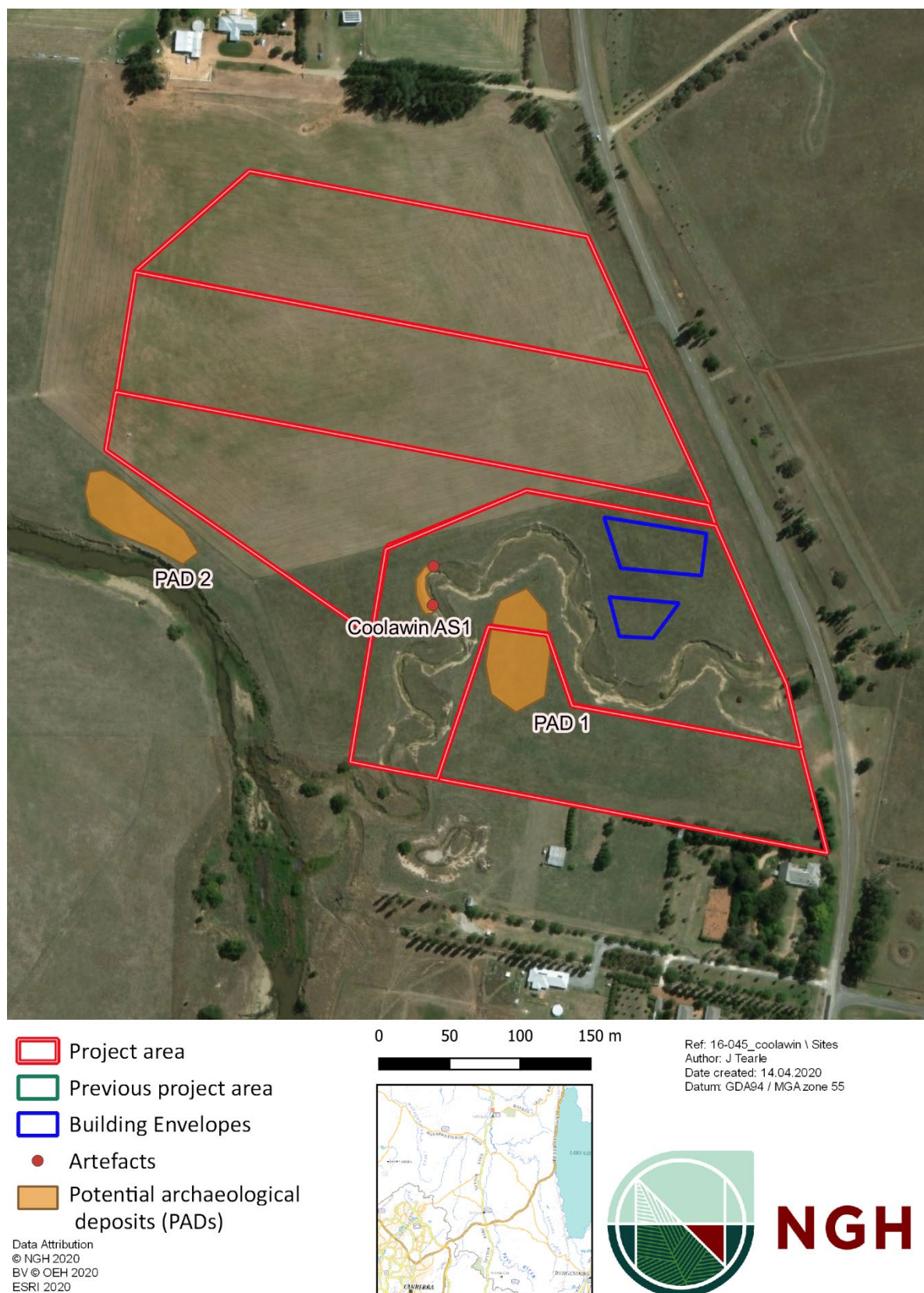


Figure 2. Sites in project area

6 FURTHER ASSESSMENT

Step 5. Is further investigation or impact assessment required?

If, after the desktop research and visual inspection is completed, it is evident that harm would occur to Aboriginal objects or heritage places then further and more detailed assessment is required. If however, the research and inspection conclude that there are no or unlikely to be any objects impacted by the work, then the work can proceed with caution.

The field assessment identified the presence of an Aboriginal artefact scatter and two area of PAD within the proposed subdivision area. These locations have potential to contain additional artefacts and it is likely that avoidance of the artefacts would be possible with the current proposal.

If there was to be any development within the areas of the sites an Aboriginal Heritage Impact Permit from BCD would be required in order to impact the Aboriginal object. This would require undertaking an Aboriginal Cultural Heritage Assessment (ACHA) for the project.

7 RECOMMENDATIONS

The following recommendations are based on the results of this Due Diligence assessment. The proposed development could *proceed with caution*, provided the following recommendations were followed.

1. Any impacts to Aboriginal objects would require and AHIP from BCD. This would require undertaking an Aboriginal Cultural Heritage Assessment (ACHA) including consultation with the Aboriginal community.
2. As part of any ACHA, subsurface investigations should be undertaken to determine the nature and significance of any subsurface deposits. This must be carried out by a qualified archaeologist following the BCD Code of Practice for archaeological investigations. This would also require consultation with the Aboriginal community following the BCD Consultation requirements.
3. If during any construction outside the areas of archaeological sites identified, objects suspected of being Aboriginal in origin are found, work should cease in the immediate area and BCD notified. The objects would then be assessed.

8 REFERENCES

Gilligan, L.B. 1974 Canberra 1:250,000 Metallogenic Map. Geological Survey NSW, Sydney.

Jenkins, B. R. 2000 Soil Landscapes of the Canberra 1:100,000 Sheet. Department of Land and Water Conservation, Sydney.

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Packard, P. 1986b An Archaeological Assessment of Proposed Sand, Gravel and Topsoil Mining Areas, 'Bowylie', near Gundaroo, NSW. Report to Me F. Purcell and Capital Quarries Pty Ltd.

Saunders, P. 2007 Proposed Rural Subdivision Yass River and Back Creek Roads, Gundaroo, NSW, AN Aboriginal Archaeological Assessment. Report to Riverview Group.

APPENDIX A ARTEFACT RECORDS

Number	SITE	TYPE	MATERIAL	SIZE_CLASS	LENGTH	WIDTH	THICKNESS	PLAT_SURF	PLAT_TYPE	TERMINATN	COMMENT
1	AS1	flake	quartz		13	7	2	ridge	focal	feather	on eroding bank of creek photo 2474 view west;
2	AS1	asymmetric backed	chert		16	16	4	faceted	focal	feather	backing on lateral margin from ventral. not bondi shape photo 2475 76 artefact 2477 view south west 2478 view south 2479 view east;