Aboriginal Cultural Heritage Due Diligence Report for Proposed Subdivision at Lot 107 and Lot 108 DP 754923, located at the end of Irvine Drive, Yass, NSW.

Archaeological Due Diligence Report

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Executive Summary

Bowen Heritage Management Pty Ltd Australia (BHM) was commissioned by Ruth Condon – C/o Direct Project Solutions (DPS) – to prepare an Aboriginal Cultural Heritage Due Diligence Assessment Report for a proposed subdivision of the property at Lot 107 and Lot 108 DP 754923, located at the end of Irvine Drive, Yass, NSW (the study area). The property is approximately 42.9 hectares (106 acres) in size, located directly south of Yass River (see Figure 2). The subdivision is to be undertaken for the purpose of creating 4 individual rural blocks and will require some ground disturbing activities to be undertaken in the form of new access roads, house construction and fencing. The land is subject to review under Part 4 (Development) and Part 5 (Environmental Assessment) of the NSW Environmental Planning and Assessment Act (EP&A Act) 1979.

The overall aim of this assessment is to determine whether there are any heritage values associated with the study area that could potentially be affected by the proposed subdivision and to provide relevant management measures if impacts are likely.

RESULTS

A search of the Office of Environment and Heritage's (OEH) Aboriginal Heritage Information Management System (AHIMS) and other relevant literature, identified that no Aboriginal heritage sites have previously been recorded within or within close proximity (1 km) to the study area (AHIMS search number 209813). However, 21 Aboriginal sites and one Aboriginal Place (Oak Hill) were identified within a two kilometre radius of the study area (AHIMS search number 209819). Forty two Aboriginal heritage sites and one Aboriginal Place (Oak Hill) was identified within a three kilometre radius study area (AHIMS search number 209820). A desk based assessment and an archaeological field survey of the study area (undertaken on 15 of November 2016) identified a European historical heritage site (some dilapidated brick and stone features), 3 new Aboriginal heritage sites (two isolated stone artefact sites and a low density stone artefact site), and eight areas of Potential Archaeological Deposit (PAD) as existing within the DP 754923 study area. The study area's potential to reveal further in situ surface or sub-surface Aboriginal cultural heritage material is considered to be low due to the significant levels of ground disturbance that has occurred since European occupation. Identified past ground disturbances include tree removal, tree planting, road construction, ground ploughing from an early period, rock clearing activities, hard hoofed animal husbandry, fencing, excavation for house and shed constructions, over-head power lines, underground services, and dam construction.

RECOMMENDATIONS

None of the located sites or PAD's is positioned where ground disturbance is proposed (using the subdivision option shown in Figure 4). Therefore, as long as the proposed areas of disturbance remain unchanged, no Aboriginal Heritage Impact Permit (AHIP), artefact collection program, sub-surface test excavations or any further heritage assessment is required for the subdivision to proceed. However, no ground disturbing activities are to occur within the near vicinity of where European and Aboriginal heritage sites have been identified within the study area of this project.

If ground disturbance to one of the identified heritage locations becomes imminent for the subdivision to proceed, then an AHIP application and program of artefact collection and sub-surface test excavations will be required before ground disturbances occur. The test excavations should be conducted with the aim of determining the nature and extent of Aboriginal archaeological sites within the area proposed for disturbance. This will also assist the NSW Office of Environment and Heritage (OEH) in a determination of any further AHIP or development applications.

If previously unrecorded European or Aboriginal sites are located during or after the subdivision of the study area, the Unexpected Discoveries Protocol supplied in this report should be observed.

ABBREVIATIONS USED IN THIS DOCUMENT

ACHAR:	Archaeological Cultural Heritage Assessment Report
AHIMS:	Aboriginal Heritage Information Management System
AHIP:	Aboriginal Heritage Impact Permit
BHM:	Bowen Heritage Management
DECC:	Department of Environment and Climate Change
EP&A Act:	Environmental Planning and Assessment Act, 1979
HA:	Heritage Assessment
NP&W Act:	NSW National Parks and Wildlife Act, 1974
NSW:	New South Wales
OEH	Office of Environment and Heritage
PAD:	Potential Archaeological Deposit
RAO:	Registered Aboriginal Organisations
RNE:	Register of the National Estate
SHI:	State Heritage Inventory
SHR:	State Heritage Register

Title Page

Executive Summary

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1 Introduction

Bowen Heritage Management Pty Ltd (BHM) was commissioned by Ruth Condon – C/o Direct Project Solutions (DPS) – to prepare an Aboriginal Cultural Heritage Due Diligence Assessment Report for a proposed subdivision of the property at Lot 107 and Lot 108 DP 754923, located at the end of Irvine Drive, Yass, NSW (the study area). The property is approximately 42.9 hectares (106 acres) in size, located directly south of Yass River (see *Figure 2*). Bango Creek meets the Yass River directly north east the study area's north eastern border. Two, unnamed waterway enters Yass River near the study area, one in the north west and one from the east (neither within the actual study area) (*Figure 1, 2, 3*). It is proposed to subdivide the property into 4 individual rural blocks (each of approximately 26.5 acres) with some ground disturbing activities to be undertaken in the form of new access roads, house construction and fencing. This Archaeological Due Diligence Assessment has been prepared to assist the proponent with meeting heritage obligations required by the Office of Environment and Heritage (OEH) and Yass Valley Council.

The aim of this investigation is to identify any cultural values (and potential impacts to these values) within the study area, through the use of appropriate archaeological procedures – in this case, a desk top assessment and field survey work. This will facilitate an understanding of the range and nature of European and Aboriginal cultural material (or areas with potential to hold cultural heritage material) within the study area. Relevant mitigation measures for any potential impacts to this material are provided, along with a determination of whether an Aboriginal Heritage Impact Permit (AHIP) is required for the subdivision to proceed.

The results of this archaeological due diligence assessment, in report format, will act as a suitable document to be incorporated, as appropriate, into the proponents Development Application with Yass Valley Council detailing the study areas suitability for subdivision.

The field survey and associated research has been conducted in accordance to the requirements of the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (OEH 2010) and the *Code of Practice for the investigation of Aboriginal Objects in NSW* (OEH 2010). It identifies the heritage values of the study area and suggests suitable mitigation approaches.

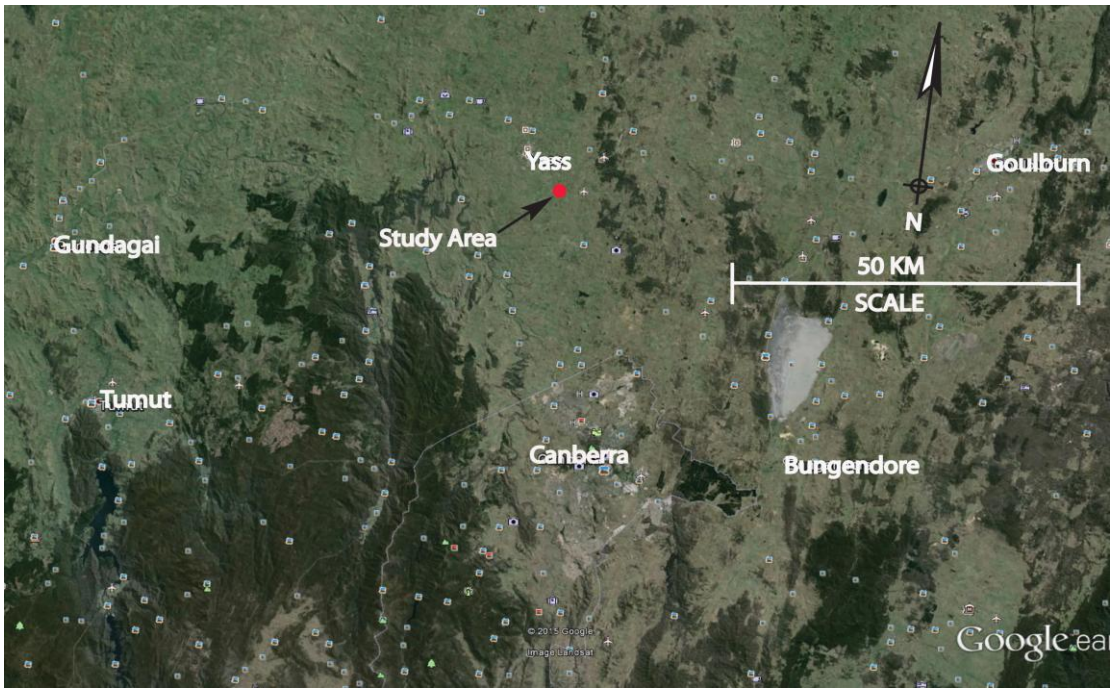

Figure 1 Study area location relative to the New South Wales region (Google Earth).

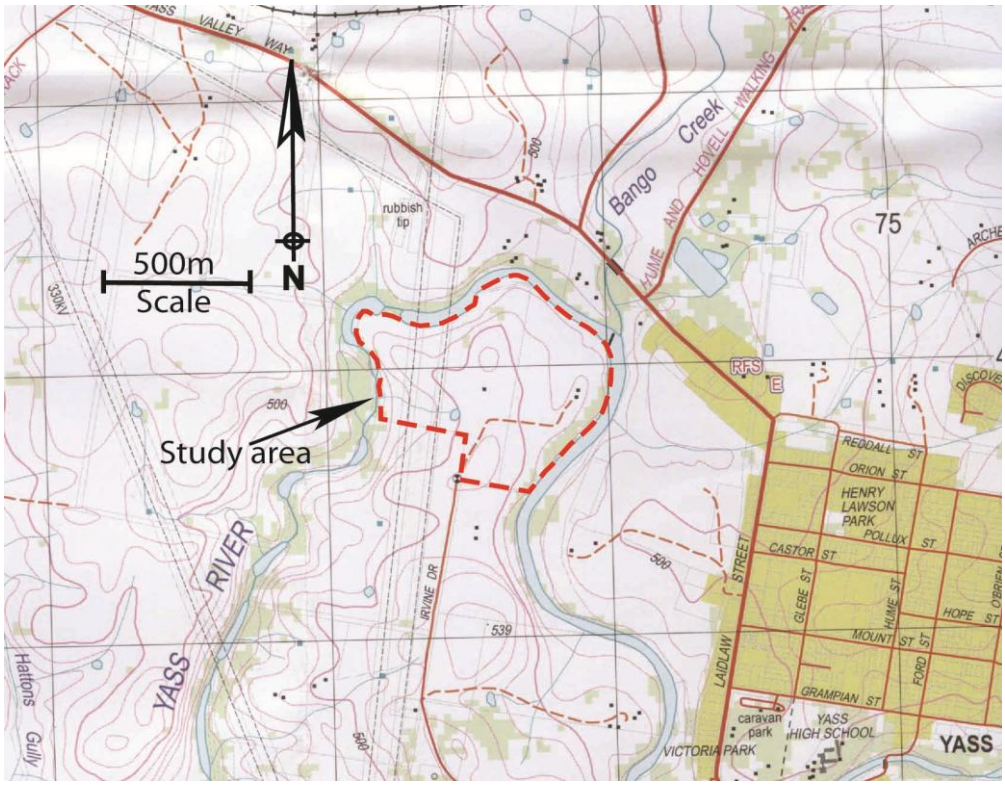

Figure 2 The study area location (in red dotted line) relative to the Yass River (Yass 8628-2N 1: 25,000 topographic map 2012).

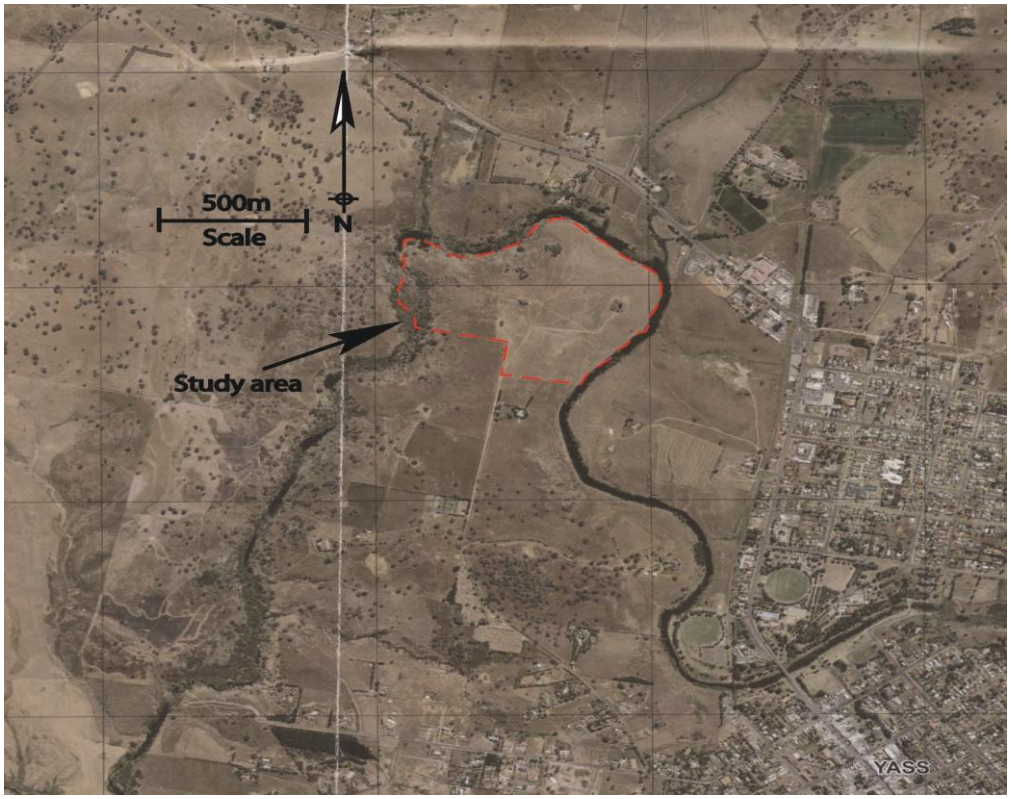

Figure 3 The study area location (in red dotted line) relative to the Yass River (Yass 8628-2N 1: 25,000 topographic map aerial 2012).

AUTHORSHIP

Alister Bowen (BHM Archaeologist) conducted the desktop assessment, heritage field survey and report writing for this project. Fieldwork was undertaken on the 15 of November 2016 and took 9 hours to compete. Alister completed an Honours degree in archaeology in 1999 at the Australian National University and a PhD in archaeology in 2007 at La Trobe University. A background in the Trades has equipped Alister with strong practical experience to complement his academic qualifications. He has undertaken a wide range of historical and pre-historical archaeological projects throughout Queensland, South Australia, Victoria, the Australian Capital Territory and New South Wales.

REPORT STRUCTURE

This report is structured in the following way:

Chapter 2	Outlines the proposed development;
Chapter 3	NSW heritage legislative framework and statutory requirements;
Chapter 4	Potential archaeological site types located within the study region;
Chapter 5	Background to the European occupation of the study region and study area;
Chapter 6	Background to the Aboriginal occupation of the study region;
Chapter 7	Environmental background relating to the study area, including its current archaeological context, and implications for potential archaeological sites;
Chapter 8	*A*ssessment of heritage sites located within the study region and the archaeological potential of the study area;
Chapter 9	Explanation of the field methodology employed, any identified gaps in the in knowledge required for the study and the survey results;
Chapter 10	Heritage management, impact mitigation measures and sub-surface sampling strategy;
Chapter 11	Development of a series to actions to be taken in the event an unexpected heritage find during the construction works; and
Chapter 12	A list of references used in the report.

2 Proposed Development

The proposed subdivision incorporates an area of 42.9 hectares (106 acres) (the study area) in the Yass Valley local government area (Lot 107 and Lot 108 DP 754923). The property location is at the end of Irvine Drive, Yass, NSW, approximately 230 metres south west from the Yass main road, 2 kilometres north west of the Yass Township, 1.5 kilometres south of the Hume Highway and 9 kilometres south east of Bowning. The study area's subdivision is proposed to divide the land into 4 rural allotments – each of between 10 and 12.9 hectares (26.5 acres) (*Figure 4 & 4a*). Only a small percentage of land within the study area will be impacted (disturbed) by the proposed subdivision (namely the areas for new fencing, access roads and house positions). Two proposed subdivision layouts have been forwarded (*Figure 4 & 4a*). All landforms within the study area, with particular emphasis on landforms deemed to have archaeological potential, and all intended areas of ground disturbance were surveyed for their archaeological potential.

Figure 4 Plan of the study area indicating one of two proposed layouts of subdivision and areas of proposed disturbance such as access roads, house positions and fencing (BE = Proposed Building Envelope. Notched red lines indicate existing overhead power lines) (DPS plan 2016).

Figure 4a Plan of the study area indicating one of two proposed layouts of subdivision and areas of proposed disturbance such as access roads, house positions and fencing (BE = Proposed Building Envelope. Notched red lines indicate existing overhead power lines) (DPS plan 2016).

3 Heritage Legislation

Aboriginal cultural heritage in New South Wales is protected by the *National Parks and Wildlife (NPW) Act 1974* (NPW Act). Land managers are required to consider the effects of their activities or proposed development on the environment under several pieces of legislation, principally the *Environmental Planning & Assessment Act 1979* (EP&A Act) and the *Heritage Act 2010* (the Heritage Act). Cultural heritage, which includes indigenous heritage, is included within the definition of "environment". In certain circumstances Commonwealth legislation protecting Aboriginal heritage may also apply to Aboriginal heritage places in NSW.

The desk top assessment identified no European heritage items within the study area that are listed under Commonwealth, State or Local entities. In close vicinity to study area, a historical colonial period homestead, 'Cliftonwood, dating to the 1840s' exists as well as the Yass Cemetery that dates to 1838. Both are approximately 1 kilometre south of the study area and warrant little mention here, other than just to note their existence. Both the Homestead and Cemetery are acknowledged in the Yass Valley Council's 2013 Local Environmental Plan – as I230 and I229 respectively (Yass Valley Local Environmental Plan, Schedule 5, 2013). The field survey identified one European heritage site existing within the study area, three previously unrecorded Aboriginal heritage sites (two Isolated stone artefacts and one low density stone artefact scatter), and eight areas of PAD were identified within the study area. A brief outline of the relevant legislation protecting these sites is provided below.

NATIONAL PARKS AND WILDLIFE ACT 1974 (NSW)

All Aboriginal objects within the state of New South Wales are protected under Part 6 – Aboriginal objects and Aboriginal Places – of the *National Parks and Wildlife Act 1974*.

The Act defines an "Aboriginal Object" as 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.

Sites of traditional significance that do not necessarily contain archaeological materials may be gazetted as "Aboriginal places" and are protected under Section 84 of the *National Parks and Wildlife Act 1974*. This protection applies to all sites, regardless of their significance or land tenure. Under Section 86 and Section 90, a person who, without first obtaining the consent of the Director-General, knowingly destroys, defaces or damages, or knowingly causes or permits the destruction or defacement of or damage to, an Aboriginal object or Aboriginal place is guilty of an offence.

The National Parks and Wildlife Act is administered by the NSW Office of Environment and Heritage (OEH), with the Director-General of that department the consent authority. All Archaeological Cultural Heritage Assessments are to be undertaken in accordance with the appropriate OEH requirements set out in:

- *Code of practice for Archaeological investigations of Aboriginal Objects in New South Wales*

CODE OF PRACTICE

- As this heritage assessment is to be carried out in accordance with the OEH's *Code of practice for Archaeological investigations of Aboriginal Objects in New South Wales (2010),* a basic understanding of the code requirements should be outlined.

The Code states that individuals and organisations are required to undertake reasonable and practicable steps in order to:

- Identify whether Aboriginal objects are, or are likely to be present, in the area.
- Determine whether their activities are likely to harm Aboriginal objects (if present).
- Determine whether an AHIP application is required.

A person who exercises due diligence in determining that their actions will not harm Aboriginal objects has a defence against prosecution for the strict liability offence if they later unknowingly harm an object without an AHIP.

The Code sets out a series of assessments to identify the potential impact of an activity on Aboriginal cultural heritage and for deciding whether an AHIP is required for a development/subdivision.

The proponent must:

- Determine whether the proposed activity is likely to disturb the ground surface or a culturally modified tree.
- Conduct a search of the OEH AHIMS database to ascertain whether Aboriginal objects have been recorded in the area of the proposed development.

- Undertake a landscape analysis to assess the archaeological sensitivity of the proposed development area.
- If Aboriginal objects are deemed likely to occur within an area of developmental impact and the land has not been previously disturbed, effort must be made to avoid harm to Aboriginal object/s or landscape features by moving the boundaries of the proposed activity.
- If activity boundaries cannot be moved, then a heritage based desktop assessment and visual land inspection must be conducted to determine the presence or absence of Aboriginal cultural heritage and the necessity for an AHIP application.
- If it has been determined that harm is likely to occur to Aboriginal cultural heritage, a detailed archaeological investigation and impact assessment must be carried out in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (OEH 2010) and an application be made for an AHIP.

Other similar and relevant legislation for investigating Aboriginal cultural heritage in NSW can be viewed in:

- *the Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales;*
- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural heritage in NSW;*
- *Aboriginal cultural heritage consultation requirements for proponents 2010;*
- *the Guidelines to Aboriginal Heritage Impact Assessment 2005*.
- *the Heritage Branch NSW's Assessing Significance for Historical Archaeological Sites and 'Relics', 2009*;
- *NSW Heritage Manual 1996 and specific Heritage Office guidelines; and*
- *the Burra Charter.*

HERITAGE ACT 2010 (NSW)

The *Heritage Act 2010* is administered by the OEH and aims to protect the natural and cultural heritage of NSW with emphasis on non-indigenous cultural heritage through protection provisions and the establishment of a Heritage Council. The *Act* provides blanket protection for surface and sub-surface relics and for heritage items of state significance listed on the State Heritage Register. The Act defers to local planning instruments under the *Environmental Planning & Assessment Act* 1979 for the protection of items of local significance ('items of environmental heritage").

While Aboriginal heritage sites and objects are primarily protected by the *NPW Act 1974*, if an Aboriginal site, object or place is listed on the State Heritage Register or is of great significance it can be protected by an interim heritage order issued by the Minister on the advice of the Heritage Council.

THE BURRA CHARTER

The Australian ICOMOS (International Council on Monuments and Sites) Charter for the conservation of places of cultural significance (the Burra Charter) sets a standard of practice for those who provide advice, make decisions about, or undertake works to places of cultural significance including owners, managers and custodians. The Charter provides specific guidance for physical and procedural actions that should occur in relation to significant places. A copy of the charter can be accessed online at http://icomos.org/australia.

ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979 (NSW)

The *Environmental Planning and Assessment Act 1979* (EP&A Act) is administered by the NSW Department of Planning and Infrastructure. This Act requires that environmental impacts are considered in a land-use and development planning approval process, including impacts on indigenous and non-indigenous heritage. In the framework of Aboriginal heritage, the Act identifies permissible land use and development constraints.

The NSW NP&W provides guidelines for Aboriginal heritage assessment, including those conducted under the *EP&A Act* 1979. However, where Aboriginal heritage assessments are conducted under the Integrated Development Approval process, a more detailed set of NP&W guidelines applies.

ABORIGINAL AND TORRES STRAIT ISLANDER HERITAGE PROTECTION ACT 1984 (COMMONWEALTH)

The *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* protects areas and/or objects which are of significance to Aboriginal people and which are under threat of destruction. The Act can, in certain circumstances override state and territory provisions, or can be implemented in circumstances where state or territory provisions are lacking or are not enforced. A significant area or object is defined as one that is of particular importance to Aboriginal people according to Aboriginal tradition. The Act must be invoked by or on behalf of an Aboriginal or Torres Strait Islander or organisation.

4 Potential items of archaeological interest

ABORIGINAL SITES

A summary of the Aboriginal site types that may be located within the study area for this project is provided in *Table 1*. These artefact types are the material items (located on the grounds surface and revealed in sub-surface areas of archaeological potential) that are capable of identifying Aboriginal occupation of an area.

Table 1. A summary of the site types that may be located within the study area for this project (from Parks and Wildlife Group Site Type Definitions).

Site types	Definition
Stone artefact scatters	Stone artefact scatter sites, also known as open campsites, are usually indicated by surface scatters of stone artefacts and sometimes fire blackened stones and charcoal. Where such sites are buried by sediment they may not be noticeable unless exposed by erosion or disturbed by modern activities. The term campsite is used as a convenient label which, in the case of open sites, does not necessarily imply that Aboriginal people actually camped on the sites; rather it indicates only that some type of activity was carried out there.
Isolated finds	Sites consisting of only one identified stone artefact, isolated from any other artefacts or archaeological evidence. They are generally indicative of sporadic past Aboriginal use of an area.

Site types	Definition
Grinding grooves	Grooves resulting from the grinding of stone axes or other implements are found on flat areas of suitable sandstone. They are often located near waterholes or creek beds as water is necessary in the sharpening process. In areas where suitable outcrops of rock were not available, transportable pieces of sandstone were used.
Quarries	These are areas where stone was obtained for flaked artefacts or ground-edge artefacts, or where ochre was obtained for rock paintings, body decoration or decorating wooden artefacts.
Art sites	Rock engravings, carvings or peckings are found on sandstone surfaces both in the open and in shelters. These are referred to as rock engraving sites.
Scarred trees	Scarred trees bear the marks of bark and wood removal for utilisation as canoes, shields, boomerangs or containers. It is commonly very difficult to confidently distinguish between Aboriginal scars and natural scars or those made by Europeans.
Burial sites	Burials may be of isolated individuals, or they may form complex burial grounds.
Stone arrangements, carved trees and ceremonial grounds	These site types are often interrelated. Stone arrangements range from simple cairns or piles of rocks to more elaborate arrangements; patterns of stone laid out to form circles and other designs, or standing slabs of rock held upright by stones around the base. Carved trees are trees with intricate geometric or linear patterns or representations of animals carved into their trunks. Ceremonial grounds and graves were often marked by such trees. Bora grounds are a common type of ceremonial site and they are generally associated with initiation ceremonies. They comprise two circles, generally edged with low banks of earth but sometimes of stone, a short distance apart and connected by a path.

POTENTIAL ARCHAEOLOGICAL DEPOSITS

An area of Potential Archaeological Deposit (a PAD), is defined by Parks (2010: 5) as any location where the potential for sub-surface archaeological material is considered to be medium or high, relative to the surrounding landscape. The potential for sub-surface material to be present is assessed using a criteria developed from the results of previous surveys and excavations relevant to the region. The boundaries of PADs are generally defined by the extent of particular micro-landforms known to have high correlations with archaeological material. A PAD may or may not be associated with surface artefacts.

HISTORICAL SITES

Historical archaeology in Australia relates to a study of the period after initial contact between Aboriginal and European people. Historical archaeology has the benefit of using the physical remains of human activities in conjunction with historical documents. As with Aboriginal sites, the physical remains may be above or below ground and may be any item, landform or feature that was formed by human action at or after the 'contact' period. Historical remains are particularly useful for conducting comparisons between sites and identifying local, regional and sometimes national and international patterns of behaviour.

The historical site types that may be located within the study area for this project are (but not limited to):

- intact or ruined buildings, building foundations or building fabrics;
- board landform features that suggest 'post-contact' human occupation such as dug pits or mounds, transport infrastructure, plantings, and evidence of animal or land husbandry; and
- occupational domestic and industrial tools and refuse deposits.

HISTORICAL HERITAGE SEARCHES

The background investigation included a search of the NSW Heritage Branch, Department of Planning, State Heritage Register (SHR) and Inventory (SHI), the Register of the National Estate (RNE) and the National Trust Register.

It was found that no previously recorded historical heritage sites/items of State significance are located within the study area. As previously mentioned above, two historical 1800s period historical items were identified just south of the study area, 'Cliftonwood Homestead', dating to the 1840s and the 'Yass Cemetery' that dates to 1838. Both are noted in the Yass Valley Council's 2013 Local Environmental Plan and therefore are protected against disturbance (Yass Valley Local Environmental Plan, Schedule 5, 2013). Neither Cliftonwood Homestead nor Yass Cemetery is located within the study area.

5 Historical Overview

The European use of a landscape is of fundamental importance to the destruction or preservation of the archaeological record. The purpose of this section is to provide relative historical information for the archaeological record of the study area. The following section contains a historical (non-Aboriginal) summary of the history of the study area and surrounding region.

Yass is positioned within the western portion of the Southern Tablelands of New South Wales and is located 226 kilometres south west of Sydney, 150 kilometres inland from the coast, and 36 kilometres north west from Canberra (see *Figure 1*). The region is well watered, having within its boundaries the Murrumbidgee, Yass and Goodradigbee Rivers, along with several creeks that permanently hold water. Aboriginal people were present in the area long before European settlers arrived. The name Yass may have derived from the Aboriginal name for the area, which at the point of contact was Ya (Julian 1958:3). The Aboriginal groups associated with the region were the nomadic Ngunnawal-speaking people. George Augustus Robinson, the Government appointed Protector for Aborigines in 1844 recorded that the Onerwal and Wiradjuri Aboriginal groups (all Ngunnawal speaking) occupied the Yass area (Giovanelli and McCann 2002: 2).

The first documented case of Europeans visiting the Yass River (although 20 kilometres south east of where the township of Yass is positioned) is from the explorer Charles Throsby who, in 1820, was in search of the Murrumbidgee River (http://gungahlin.net/history.html). Whilst exploring from Lake George to the Murrumbidgee River, Throsby recorded seeing the Yass River on the 27 of October 1820. Of the area, Throsby stated it was "*a beautiful clear plain...that is as finest country as ever was seen...and a fine rich black soil fit for any purpose either grazing or agriculture*" (Gunning and District Historical Society 1992: 33).

The first record of Europeans entering the actual Yass Plains district is in 1821 and relates to Hamilton Hume, his brother-in-law George Barber, their friend William Broughton and his exploration party, who travelled through the area whilst exploring the land between Sydney and Port Philip. These explorers subsequently returned to the region in 1824 and settled there, becoming the first European family names associated with area. Hume established the Wollowardella Cattle Station near the present-day township of Gunning, Barber at Bell Vale (close to Yass), and Broughton took up land near Burrowa (Bland 1831; Bayley 1973: 17). Other early land holders in the area were Henry O'Brien (the Douro property, approximately 5 kilometres south of Yass), Samuel Terry (at Kenilworth, approximately 8.5 kilometres south east of the study area) and Dr Harris' Underaligo – all of who had successfully applied for free Government land grants (Julian 1958: 4). Free Government land grants often went to those in favour with the colonial Governor, those who the Government owed for particular services or to people already with capital. Anyone with some capital and good social contacts could take advantage of free Government land grants. Within the 'Limits of Location', newly surveyed parcels of land, 640 acres in size, were given for every £500 of money or stock that a colonial resident possessed, with a limit of 2000 acres – which was later increased to 2560 acres (Ellis 1989: 33).

In 1824, the Colonial Office in London instructed Governor Darling to model the settlement and administration of Australia's new 'out-lands' ['Limits of Location'] on the existing English method – where the church played a major role. However, with the greater distances and vast quantities of land involved, the system of local government that emerged in Australia was one based on police districts with local police magistrate administrators. Police district boundaries were used for collecting population and agricultural data and became our modern day county and parish areas. Settlers living within one of the police districts – the 'Limits of Location' – were provided with Government administration, but more importantly, police protection. In 1829, the Yass Plains area was a Police district just inside the 'Limits of Location', but many people squatted or grazed their livestock beyond this point. Official Government surveying of the Yass township took place in 1834 and the township was mapped out in 1836 with a goal, courthouse, post office, and a few rudimentary houses becoming built in that same year (Julian 1958: 6; Irving 1982). Township Lots were sold for £2 per acre until (due to flooding) the whole township site was abandoned and moved up hill. In 1841, Binalong (approximately 35 kilometres north west of Yass) was officially 'beyond the 'Limits of Location', but had for some years acted as the home base for the Border Police and later become the centre for the whole region's 'Police District' (Maher 2003).

The Colonial Government counteracted the free use of land outside of the 'Limits of Location', to some degree, by introducing squatting licences in 1837 and tasking the Border Police with collecting the land use fees and taxes on livestock. Falling within a Police District, well watered farming land, and Yass's location on a travel route – along the road from Sydney to the Port Phillip District (now Melbourne) – made the Yass Plains an attractive place for settlers seeking land.

Australia's population grew through the 1850s gold rush and settlement in the Yass region increased. Then with the introduction of the Robertson Land Acts in 1861 there was another increase in Yass district's settlement rates (The Acts allowed for free selection – before sale – of crown land of between 40 to 320 acres and made redundant the 'Limits of Location'). The smaller land parcels encouraged an increase in sheep runs and the Yass Plain's wool industry began to develop in earnest (Town and Villages NSW 2008). By the late 1870s the region was positively thriving. The Robertson Land Acts caused most of the big Yass Plain's stations (that were outside of the 'Limits of Location') to be divided into smaller freehold properties, although the existing wealthy squatter families remained influential in the region. One such family was the Terry's of the Kenilworth Property (approximately 8.5

kilometres south east of the study area). As the Terry's were wealthy and noteworthy land owners to the Yass area, there exists some historical literature about the history of Kenilworth. As Kenilworth is fairly representative of the region it will be briefly discussed here.

KENILWORTH, YASS

By the time the late 1820s had arrived there were several newly established livestock stations (mostly cattle) operating within the Yass Plains region and consequently, a steady trail of cattle and sheep were being driven from Yass to the Sydney markets (Howard 1970:14). One of the early successful land holders was Samuel Terry who owned, as one of his many assets, Kenilworth Station, situated approximately 6.5 kilometres south east of the current day Yass Township. Terry was an absentee land owner, who in the 1820s employed a man called Davis to manage his Yass Plain's venture. During this early period, before the introduction of land titles and on land outside the 'Limits of Location', Terry would have been unauthorised to use the land (he was legally squatting). It is known that Terry was grazing cattle on the Yass Plains during this early period from another wealthy land selector, William Riley, who documented his trip to the area in September 1830 stating that when he looked over the Yass Plains he saw *"...where Terry's stockman [Davis] with his wife and family were living in a small but comfortable hut..."* (Riley 1946: 229). During this period, Davis was looking after 1,200 head of Terry's stock on squatted land, but it wasn't long before Terry increased his Yass Plains' holdings (on which he now farmed sheep as well as cattle) to several thousand acres of legally purchased land (which may have included the study area) (Riley 1946: 230).

THE STUDY AREA

In time, portions of the Kenilworth property were sold off and smaller scale farm operations became common. Small scale land-ownership in the Yass region came about initially through the Government selling off blocks of affordable land during the lead up to the passing of the Robertson Land Acts in 1860. The study areas most likely use during this period (the 1830 to 1890s), would have been sheep and cattle farming, with crop growing in the more fertile regions. By the 1890s, most land in the areas close to Yass had been granted or sold in small blocks of between 80 to 1000 acres.

The study area is recorded on an 1881 Parish Map as consisting of 2 parcels of land (Lots 107 and 108) with the owner listed as H N Wilson. This is probably the same H N Wilson that's listed as Henry Wilson (1936 – 1900) on i-Family Tree's website as a farmer on the Yass River (http://www.bellsite.id.au/gdbtree/HTMLFiles/HTMLFiles_46/P41472.html). Wilson is still listed as the land owner in 1886, but by 1892 Pt Bailey owned Lots 107 and 108. The Parish Maps then show that by 1903 Pt Bailey had sold the lots separately with Lot 108 going to T Laidlaw (probably where the Street name Laidlaw ST in Yass, opposite the study area, derives from) and Lot 107 to Geo Edward MacKay (the name MacKay has been associated with the Yass region since the early 1860s) (*Figures 5 and 6*). The Parish Maps show that Wilson, Bailey, Laidlaw and MacKay had possession of the land when it had already been divided into Lots 107 and 108. Therefore, small scale land-ownership of the study area (and its associated farming practices) has been in use at Lots 107 and 108 since at least 1881.

The Parish maps show no built structures existing within the study area at that time – 1886 to 1947 [the last historical map] (*On line Historical Lands Record Viewer, Parish of Yass*). However, even on a Lands Titles Office Charting map for 1980 there are no buildings shown within the study area – even though the historical site and its associated structures, and the

farm shed and yards are known to have been there since before this time. The current owners – the Condon's – purchased the land in 1965 from Roy Davis and have used it since then for animal husbandry and agricultural pursuits and as a place of residence (building their current house in 2002).

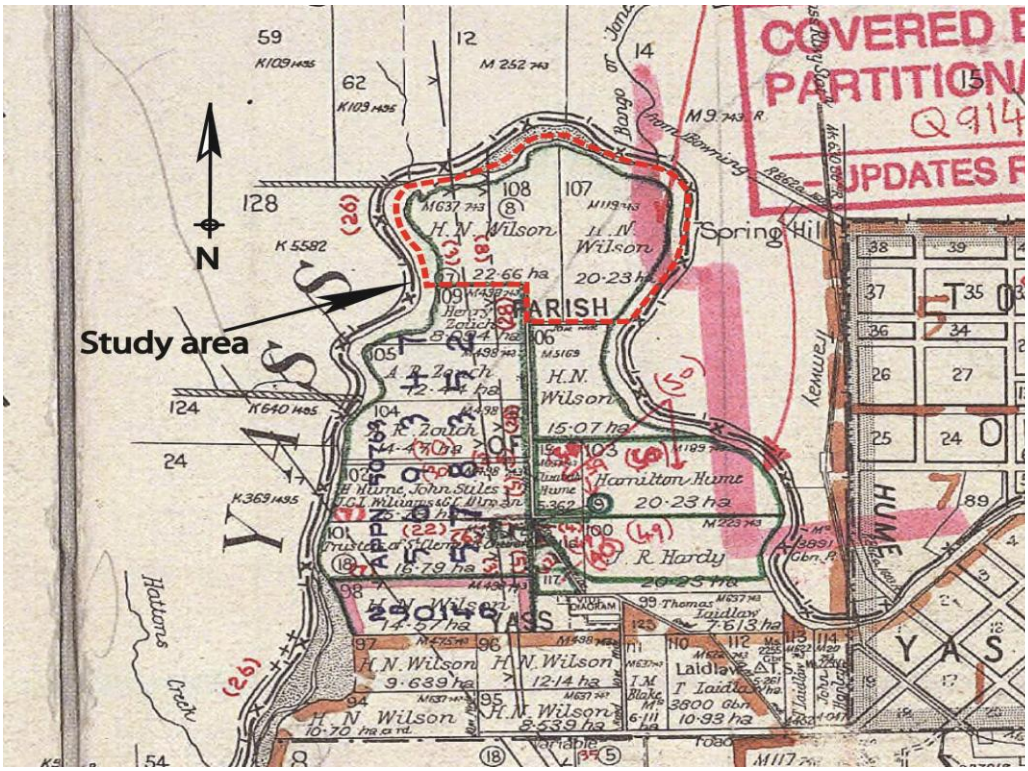

Figure 5 Historical Parish Map of the study area – study area shown in red (from 1881) [County of Murray Parish of Yass], (http//images.maps.nsw.gov. /Rotation Filter/Mosaic.asp).

Figure 6 Historical Parish Map of the study area – study area shown in red (from 1903) [County of Murray Parish of Yass], (http//images.maps.nsw.gov. /Rotation Filter/Mosaic.asp).

Overview of Historical Disturbances

Early regional farming practices from the late 1820s focused heavily on the ploughing and cultivation of fertile ground (alluvial soil) and animal grazing (predominantly sheep and cattle) in all other areas. Other ground disturbing activities associated with European settlement of the study area were tree clearing (the area has been mostly cleared of native vegetation), tree planting, dam building, irrigation, road construction, power line construction, building constructions and the development of associated infrastructure such as underground telecommunication services and fencing activities (*Figure 7*).

Figure 7 Some past ground disturbing activities at the study area, from left: fence line, steel power poles, house construction, and road building.

In addition to the above disturbances, the study area has been the focus of activities such as animal husbandry and ground ploughing, seed sowing, and harvesting of the crops. During the field survey for this project several pieces of farm equipment were noted within the study area that attest to the occurrence of ground disturbing activities such as the pasture cropping machine shown in *Figure 8.*

Figure 8 Farm equipment in the study area included this pasture cropping machine.

During the field survey it was estimated that the above historical ground disturbances have impacted on 95% of the study area's surface and sub-surface ground layers (predominantly from animal husbandry and ploughing). This, in turn, affects the potential integrity of Aboriginal sites within the area. However, the 5% of the study area where disturbance has not occurred holds potential to reveal *in situ* Aboriginal archaeological sites. The identified pattern of land use has implications for the management recommendations associated with the need to either conserve Aboriginal archaeological material or conduct sub-surface archaeological investigations on any cultural heritage sites or areas of PAD identified during the archaeological field survey.

Impacts associated with ploughing the ground for improved crop growing would have only disturbed the upper 250 millimetres of soil (i.e., 250 millimetres is the maximum plough depth). Therefore, deeper soil deposits (where they exist within the study area) may retain *in situ* Aboriginal archaeological sites. For this reason, the plough zone is considered as an area of significant disturbance, however, any artefacts existing below the top 250 millimetres of a plough zone should be considered as *in situ* and potentially of high archaeological significance.

6 Aboriginal overview

The following section contains a summary of pre-contact Aboriginal occupation of the study region.

Archaeological evidence suggests that Aboriginal people had occupied all of Australia's environmental zones by 31,000 years before present (BP) (Flood 1995: 286). Ethnographic information relating to the Aboriginal occupation of the study area has been obtained predominantly from historical documentation written by early European explorers, settlers and government officials during the mid-to-late 18th century.

Australian Aboriginal people occupied land according to a system of spatial organisation and land occupancy (Barwick 1984; Clark 1990: 11-14). Individual groups were intimately familiar with their own geographical regions and the seasonal availability of resources within it. Tribal boundaries were often defined through linguistic associations, social relations, and spiritual links to the land. These boundaries were most likely fluid, changing over time. This suggests that tribal boundaries recorded by European people at, or after, the point of contact can only be considered as current to that period and were probably quite different prior to European observation. To make things more ambiguous, the few European accounts of Aboriginal groups in the study region are limited in detail, often confused in regard to Aboriginal group names and give varying interpretations of territorial boundaries (Flood 1980: 2).

In general, early settlers recorded very little of their observations, particularly in regard to the Aboriginal people they encountered. The best recorded observations come from the journals of early explorers, government surveyors and authors of travel books. By the early 1840s, Currie, Bennet, Lhotsky, Backhouse, and George August Robinson had each recorded small amounts of detail regarding Aboriginal people broadly within the region surrounding the study area. By this time (the 1840s), European settlement of the region had already impacted on Aboriginal people. They had been displaced from seasonal hunting and gathering grounds, suffered from European diseases, and their traditional economy had been altered to include European commodities (Lea-Scarlett 1986; Flood 1980; Butlin 1983). By the 1880s, when more serious ethnographers came into the region, the consequences of European settlement had greatly altered the traditional Aboriginal way of life (Flood 1980: 26).

Aboriginal people have been visiting the region for at least 21,000 years, as evidenced through archaeological evidence derived from the recordings of hundreds of sites associated with Aboriginal culture within the broad region surrounding Yass. The vast majority of these represent campsites, many of which have now been destroyed by European developments such as cities, towns, roads and housing. As far as can be ascertained, the Aboriginal groups living permanently in the Yass region were the Ngunnawal (often spelt Ngunawal) and the Onerwal people, with the surrounding groups speaking different, but related languages all most likely associated with the Ngunnawal. However, territorial divisions are difficult to accurately determine. One study by White and Cane (1986) suggests the two Aboriginal groups living in the Yass region were Ngunnawal and Wiradjari people. Tindale (1974) suggests that during the contact period the Ngunnawal were sharing a

boundary with the Gandangara (Eades 1976; Cooke 1988: 33; Flood 1980: 194; Tindale: 1974). George Augustus Robinson, the Government appointed Protector for Aborigines recorded that the Onerwal and Wiradjuri Aboriginal groups occupied the Yass area (Giovanelli and McCann 2002: 2).

Aboriginal people in the broader district are associated collectively within the Gandangara, Ngarigo, Wodiwodi, Wandandian, Walbanga, Daruk, Wiradjari and Walgalu boundaries (*Figure 9*) (Tindale 1974; Flood 1980; Horton 1999). These people are thought to have lived in small, highly mobile, kin-based groups. Individual groups came together regularly to participate in trade, marriage and ceremonial gatherings. An early ethnographic account from Bennett (1834: 173) records their diet as including flying squirrel, kangaroo, wallaby, wombat, koala, possum, emu, duck, swan, snake, goanna, platypus, ant eggs, insects, fish, mussels, yabbies, plant tubers, berries and seeds.

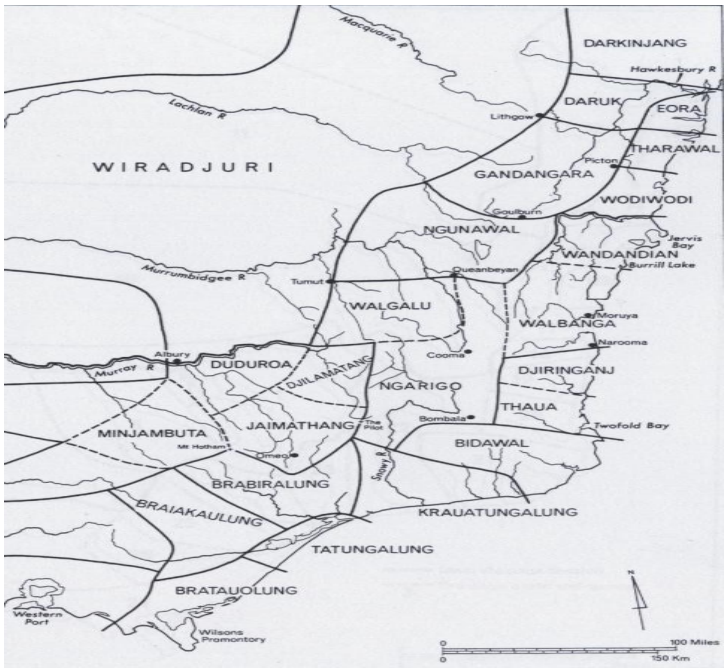

Figure 9 Tribal boundaries of the Canberra and wider region (after Tindale 1974).

Probably the best account of Aboriginal people living in the broad area comes from Charles MacAlister, who lived in the region during the 1830s and wrote about his observation of traditional Aboriginal life (with a Eurocentric view point). He documented that during the 1830s, three Aboriginal tribes were living in the district (but slightly closer to Goulburn), the Cookmai (or Mulwaree), the Tarlo and the Burra Burra (MacAlister 1907:82).

Regional Aboriginal people regularly came together to participate in ceremony and there are records of large gatherings (3000 people or more) occurring at several places (particularly along the Yass River) between Yass and Good Hope (Tazewell 1991: 243; Wyatt 1972: 112).

Research done by Smith (1992) suggests that the general region was a gathering place for Aboriginal groups, including the Cookmai, Gandangara, Ngarigo and Pajong people.

Flood (1980) has researched Aboriginal burial practices for the area and reports that four types of graves were used: either burial in the ground, piled rocks, burial in caves or burial in the hollow of a tree.

The oldest dates for Aboriginal people living in the broad region comes from around Lake George (approximately 45 kilometres south east of the study area), where stone artefacts were excavated from a layer of sand that dated to between 17,000 and 23,000 years ago.

Reliable occupation dated also come from rock shelters in the Australian Alps where an Aboriginal occupation of 20,000 years ago has been recorded (Koettig 1981; Flood 1980).

7 Archaeological Assessment

The purpose of this section is to provide environmental contextual information and for use in developing a predictive model for Aboriginal sites in the study area.

Environmental Background

Interactions between people and their surroundings are of integral importance to both the initial formation and the subsequent preservation of the archaeological record. The nature and availability of resources including water, flora, fauna and suitable stone materials for tool manufacture have a significant influence over the way in which people utilise the landscape. Alterations to the natural environment also impact upon the preservation and integrity of any cultural materials that may have been deposited in a landscape, whilst current vegetation and erosional regimes affect the visibility and ability to detect archaeological sites. For these reasons, it is essential to consider the environmental context as a component of any Aboriginal heritage assessment.

Climate

The study area is positioned in a cool temperate climate with an approximate annual rainfall of 636mm. The region is dry in summer with most precipitation falling during the winter months. Winter brings frosts which frequently freezes surface water (http://www.bom.gov.au/nsw/).

Geology, Landscape and Soils

The base geology and landscape values are assessed as part of the construction of a landscape. This assessment considers the natural range (diversity) of geological (bedrock), geomorphological (landform) and soil features, assemblages, systems and processes present within the study area.

As an average, the Yass area is elevated at 530 metres above sea level with the actual study area averaging 492 metres above sea level. It is located on the Southern Tablelands of NSW. The Tablelands span the central and western side of the Great Dividing Range and associated plateaus. The main drainage system for the region is the Yass River which drains north west before turning south west to enter the Murrumbidgee. There are several other smaller watercourses, creeks and ephemeral drainage lines running through the gently undulating region. The southern and western sections of Yass are within the Murrumbidgee River catchment, while the north eastern sections are within the Lachlan River catchment.

The Yass Valley spans two bioregions as defined by the NSW Office of Environment and Heritage (OEH 2012). The first is the South Eastern Highlands Bioregion. This runs roughly north to south from Bathurst through Cooma and south Bombala. It's bounded to the east by the coastal plateau and to the west and south by the Australian Alps. The majority of the Yass Valley falls within the South Eastern Highlands Bioregion and the remaining north western portion of Yass falls within the South Western Slopes Bioregion, which encompasses the western foothills of the Great Dividing Range. There are mountainous regions to the east and south west of Yass that are highly dissected forming steep valleys and hillsides and this

in part influences its Geology. This region is characterised by rugged eucalypt bush land, with gullies, gorges and a predominantly sandy soil.

The base geology across the Yass region is a combination of Palaeozoic granites (averaging 182 - 171 million years old), metamorphosed sedimentary rock and Tertiary basalts (up to 300 million years old). These are overlaid by Teschenite intrusions (a coarse grained, dark-coloured, intrusive igneous rock) (Best et al 1963: 39; Meakin 2013). The oldest rock type in the region are Douro deposits formed during the Silurian Period (averaging 430 million years old) (Geological Map 1:250,000, Yass Sheet, Series SI 55-12). Existing within the Douro Group is middle Silurian period (416 million years old) Hawkins volcanic deposits that include tightly welded rhyolite ignimbrites (a very hard, fine grained rock which is essentially an altered basalt and only 1.1 million years old) (Geological Map 1:250,000, Yass Sheet, Series SI 55-12; Dibden 2009:20).

The geomorphology of the region is defined by the Lachlan fold belt that covers the whole of eastern Australia. It comprises sandstones, shales and volcanic with numerous granite intrusions and a few areas of Tertiary basalt flow occurring. Volcanic flows on the Monaro are close in nature to the Yass Valley and Limestone deposits near Wee Jasper have been found to contain a fossil record dating back to marine beds of the Early Ordovician Period (488.3 million years ago) (Abell 1991). Quaternary period sands (2.6 million years ago), clays and gravels along with alluvial soils occur along the margins of Yass River, with pockets of alluvial soil, gravel and sand interspersed throughout the entire area, especially in association with lower elevated flood zones.

Immediately west of Yass is the famous Cookbundoon syncline and Yarralaw Fault that both sit just within the eastern limits of the Goulburn Basin area (Meakin 2013). Landforms within the actual study area include generally low gradient undulating plains, hill slopes and several low level hill tops, knolls, spur lines and valleys.

The majority of the study area consists of relatively shallow soils derived from light brown to red soils (and moderately compact in nature) that are associated in part with flooding episodes of Yass River and the product of eroded bedrock and other sedimentary materials. Soil profiles exposed through erosion and Wombat holes within the study area were seen to be characterised by 200 – 400mm of light brown to red soils and silty sandy brown loam in the low laying areas. Topsoil loss is evident on the elevated areas. Bedrock can be seen exposed in several places, especially on high ground and along some parts of the banks of Yass River.

In general, soils across the study area have moderate clay and gravel content and become deeper with lower level terrain, with some areas of gravelly, silty sand near the Yass River. Alluvial soils do occur, as well as pockets of alluvial sand. Some of the local geological rock types have the potential to provide raw materials that would be suitable for stone artefact manufacture such as tuff, rhyolite, mudstone, quartz and sandstone.

HYDROLOGY

Besides the presence of one man-made dam within the study area and several ephemeral drainage lines, water resources are dominated by one natural drainage feature – the Yass River. As the main drainage system for the region, the Yass River is a third order water-way, using the Strahler drainage order system (Speight 1990). The Yass River drains north west before turning west, south west near Yass to flow on to Burrinjuck Dam and the Murrumbidgee River. As an undulating landscape, with several peaks, the study area drains surface water through several small ephemeral drainage lines to the Yass River, which flows on to the Murrumbidgee River. The Murrumbidgee then flows generally south east for approximately 70 kilometres through towards the Canberra region. Yass River contains fast

flowing water after precipitation and holds water permanently within the study area. Across the study area the hydrology could be described as gently undulating, with generally less than 15% slope, but falling steeply from some rocky peaks (especially in the central northern and western areas) and in areas closer to Yass River.

FAUNA AND FLORA

The recorded extent of native animal and plant species diversity in the Yass Valley Council region is approximately 930 plant species and 281 vertebrate animal species, but these records are not comprehensive (http://reports.envcomm.act.gov.au /SoE2004/YassValley/nativespecies.htm). Information regarding rare and threatened fauna recorded – or potentially occurring species – within the broad study region was obtained from database searches and the Native Species Yass Valley Local Government Area document (2004). From these documents, it was seen that the actual study area habitat supports a range of faunal species which broadly speaking includes birds, mammals, reptiles and invertebrates. Forty two threatened species of flora and six species of threatened fauna are recorded as existing within the study area.

Native (pre-European) vegetation in the study area has been almost entirely cleared, but the area most likely consisted of native grasslands with interspersed woodlands. Since European settlement, surface ground layers and the associated flora within the study area have been substantially altered to make way for pasture growth and grassy understory.

Some native trees do remain within the study area, especially along the river margins. However, most vegetation within the study area is represented by exotic grasses, weed, low level bushes and planted trees.

LOCAL LANDSCAPE AND LANDFORMS

The study area is generally sloping with some peaks, undulations, and low gradient rolling landscapes, but slopes steeply from several high areas in the central northern and western portions. The study areas most dominant landscape feature is its highest peak approximately 509 metres above sea level in the central northern portion – a rocky outcrop landform which provides views across the entire study area. Outcrops of bedrock can be seen in several places with in the study area.

The much broader surrounding region is dominated by The Great dividing Range to the east (at 690 metres above sea level) and a smaller belt of mountain ranges to the south west at 630 metres above sea level. The effect of these hills is such that the study area appears as centrally located within a wide valley of undulating land with a logical point of access through the roughly north west – east south valley flood plain, which is dissected by the Yass River.

ABORIGINAL SUBSISTENCE RESOURCES

A number of subsistence food resources would have been available to past Aboriginal groups within the study area. Associated with the Yass River (which was flowing at the time of the field survey and represents a large, permanent body of water), would have been a range of aquatic animals such as duck, swan, fish, mussels, yabbies, and platypus, and also flora such as plant tubers, grass seeds and berries. Native dry land grasses and the abundance of water would have also attracted larger fauna such as kangaroos that would have been hunted there by Aboriginal people.

IMPLICATIONS FOR LOCAL ABORIGINAL HERITAGE

The location of the study area is within a wider region of flood plains and low level hills, flanked by distant mountain ranges. Within this setting, there are several landscape elements that would have acted as a focus for Aboriginal subsistence activities. For example, two large and permanent bodies of water (the Yass and Murrumbidgee Rivers) are within close proximity to the study area – Yass River boarders the study area – each would have attracted past Aboriginal groups into the region (using the Strahler stream order system Yass River is a third order water system and the Murrumbidgee River is a fourth order water system) (Speight 1990). Water would have attracted native fauna, which would have been hunted by Aboriginal people. Eucalypt trees would have been easily accessible for bark and wood removal to produce a range of items including canoes, shelter material, bowls, shields, spears, or boomerangs. Attractive also would have been the study area's more elevated landforms which provide views through the valley region. As a first order stream, Bango Creek and its associated landscapes would not have been substantial enough to attract large scale Aboriginal occupation. However, the Yass and Murrumbidgee Rivers are permanent water sources and substantial enough to support Aboriginal occupation. The study area would have provided a suitable location for transient Aboriginal subsistence activities such as camping, food gathering and tool making, and therefore it is likely to have been used for hunting, gathering and other subsistence activities which could result in moderate rates of artefact discard.

Overall, the study area exhibits a combination of environmental elements which could have been exploited by Aboriginal groups. Soil profiles associated with the study area suggest that any sub-surface archaeological deposits would, in general, be no deeper than 400mm below surface level. The historical review suggests that the upper soil horizons (the top 250mm) within most parts of the study area have been heavily disturbed through past European land use practices, predominantly animal husbandry, ground ploughing activities, but also tree clearing, tree planting, road construction, dam building, underground services (Telecom), house and shed construction, and fencing. Aboriginal cultural heritage material may still exist within the disturbed zone, but could not be considered as *in situ*. Aboriginal cultural heritage material may exist *in situ* below the zone of disturbed soil and in areas where European ground disturbances have been minimal.

8 Local Archaeological Context

This chapter provides the findings of the desktop assessment and gives a description and approximate location of known Aboriginal artefacts/objects within the broad study region.

Information and details of local Aboriginal site locations and previously produced Aboriginal heritage reports have been provided by the OEH. Such material has helped to inform the current study on matters concerning local Aboriginal site types and patterning. The exact site location of local Aboriginal sites have been kept broad in nature as this knowledge is restricted and should not be reproduced or distributed to the general public without prior knowledge and permission of the OEH.

ABORIGINAL HERITAGE INFORMATION MANAGEMENT SYSTEM (AHIMS)

A search of the OEH AHIMS database found that no items, objects or sites of Aboriginal cultural heritage have previously been recorded within the study area (AHIMS search number 209813). A search incorporating a one kilometre radius of the study area still reveals no Aboriginal cultural heritage sites have been previously recorded in this area (AHIMS search number 209816. A wider search covering a two kilometre radius of the study area

shows 21 Aboriginal cultural heritage sites have been previously recorded in that region and one Aboriginal place (Oak Hill) (AHIMS search number 209819). An even wider search revealed that 42 Aboriginal archaeological sites have been previously recorded within a three kilometre radius of the study area (AHIMS search number 209820). These sites are made up of isolated artefacts, low density stone artefact scatters, scarred trees, and Oak Hill (an Aboriginal Mission place). The sites closest to the study area are isolated stone artefacts and scarred trees, recorded just north of the Yass Township, approximately 1.2 kilometres east of the study area.

It should be noted that the AHIMS database only documents Aboriginal sites and objects that have been reported to NSW OEH. Therefore, AHIMS is not a full indication of what sites exist within the area and unrecorded Aboriginal sites or objects may be present. In addition, OEH does not guarantee that AHIMS is an accurate database record.

MISSIONS

During the 1880 through to the 1960s the government enacted policies meant to protect and assimilate Aboriginal people. The Aboriginal Protection Board was established and had the power to dictate where Aboriginal people were allowed to live (which was timely for the passing of the Robertson Land Act of 1861 that resulted in a significant increase in European settlement). The Board used Yass as an initial trial and initiated the forced removal of Aboriginal people onto reserves and into missions. The Yass region had three such areas: Yass Town Camp, Oak Hill Reserve and Hollywood Mission, all within a two kilometre radius of the study area. Although not within the study area, the missions characterise Aboriginal history in Yass from this period.

PREVIOUS ARCHAEOLOGICAL STUDIES

In order to evaluate the potential for Aboriginal sites to exist within the study area, consideration has been given to local and regional site patterning. This section provides a review of past research (mostly archaeological consulting reports) and an examination of locally identified Aboriginal cultural heritage sites.

Several heritage studies have been undertaken in the study region that attest to Aboriginal occupation of the broader area. Over the past thirty odd years industrial and residential development occurring in the broad study region has resulted in the undertaking of several heritage studies within close proximity to the study area. Some of the more recent localised studies include: Packard (1984), White (1986), Witter (1980, Koettig and Silcox (1983, 1985 and 1988), Witter and Hughes (1983), Brayshaw (1985), Mackay (1986), Koettg (1986), Kuskie (1992), Boot and Kabaila (1995), Boot (1995), Oakley and Saunders)1989), Saunders (2003 & 2003a), Navin Officer (2001), Thompson (2003), Dibden (2009), Dibden (2009a).

A summary of these reports is provided below in *Table 2*.

Table 2. Summary of previous heritage studies within the study region.

Author and Date	Distance from current study area	Findings
Packard (1984)	In this project a survey was conducted to investigate Aboriginal sites associated with 35 modern salinisation and salt scalding sites around the Yass area.	The grounds gradient was never greater than 5° and Packard located a Range of stone artefact types at each salinisation and salt scalding site. The suggestion was that Aboriginal people were conducting several activities associated with salt scalding activities.
White (1986)	White a mixed cultural assessment of the Wiradjuri people's language, economy,	White concluded that there was no evidence that the Aboriginal groups referred to as 'Wiraduri' constituted a single cultural unit, but were rather

Author and Date	Distance from current study area	Findings
	social organisation and ceremonies.	part of a larger multi-group system.
Whitter (1980)	Witter surveyed a lineal tract of land for a proposed gas pipeline from Dalton to Canberra. The route travelled across the Yass River in the centre of the Upper Yass catchment.	Witter recorded eleven low density artefact scatters and thirty two isolated artefact sites. The most dominant artefact material was quarts, although silcrete, felsites and volcanics were also present. Back blades were the most prominent stone artefact type located.
Koettig and Silcox (1983)	For this project a 14 kilometre long lineal survey was undertaken of the proposed freeway bypass north and east of Yass. This study is located approximately 1 kilometre north of the current study area at its closest spot.	Eight low density stone artefact scatters were located along with 50 isolated stone artefact sites. Most of the sites were located on low ridges and sloped and all of them were within 200 metres of water. Milky quartz was the most dominant artefact material located.
Koettig and Silcox (1985)	Koettig and Silcox carried out a survey for a proposed alternate Yass bypass route. The survey identifies nine stone artefact scatters and six isolated stone artefacts. Their study area is approximately 1 kilometre east of the current study area at its closest spot.	Most of the identified sites were situated on ridgeline slopes or hill crests that are within 200 metres o f a waterway. By far the majority of artefacts were unmodified flakes or flaked pieces and quarts was the dominant artefact material.
Koettig and Silcox (1988)	As a follow on from their 1985 survey Koettig and Silcox conducted more survey work and test excavations within a 6km route of the proposed Barton Highway extension. Again within approximately 1 kilometre east of the current study area at its closest spot.	Five isolated artefacts, a large stone artefact scatter and two moderately dense subsurface stone artefact sites were located. The artefacts were made up of flaked pieces, cored and backed blades. The main artefact material was silcrete and the rest was made up of quartz, mudstone, volcanic and chert.
Witter and Hughes (1983)	This report presents the results of an archaeological survey for a transmission line from Wagga Wagga to Yass.	This project revealed that archaeological sites rarely occur in the mountain country along the transmission route, but are often located in the major valley regions near creeks. Twenty one isolated stone artefact sites were located along with three scarred trees and nine stone artefact scatters. The most common artefact material was quartz with some volcanics and chert.
Brayshaw (1985)	Brayshaw conducted surface survey work on a 50 ha block of land for a rock quarry approximately 10 kilometres north of the study area.	During the field survey no archaeological sites were located.
Mackay (1986)	This study consisted of survey work 50m north of Cooma Cottage near Yass and 6 kilometres south east of the study area.	Mackay recorded one site consisting of approximately eight stone artefacts and one glass artefact. The site was within approximately 100 metres of the Yass River.

Author and Date	Distance from current study area	Findings
Koettig (1986)	In this Aboriginal cultural assessment Koettig surveyed a route for a proposed water pipe line between Bowning and Yass. The study area approximately 1 kilometre east of the current study area at its closest spot.	Two small stone artefact scatters were located and two scarred trees within a 100m of Derringullen Creek. Further subsurface investigations located one low density stone artefact site.
Kuskie (1992)	An optical fibre route between Cootamundra, NSW and Hall in the ACT was surveyed for signs of Aboriginal cultural heritage material.	One small artefact scatter was located on a broad terrace on the southern side of Yass River. The site comprised one retouched chert flake, a chert flake and a single volcanic flake.
Boot and Kabaila (1995)	These researchers recorded the remains of Oak Hill camp as an historical period site. The site is approximately 1 kilometre south east of the current study area.	The deciphered that the site had been occupied for three main periods: 1888-1910, 1917-1934 and 1960-1982. At the time of survey the site consisted of some hit remains and some household items, mostly from after the WWII period.
Oakley and Saunders (1998)	A survey project for a proposed fibre optical cable along the southern side of Yass Valley Way to the east of the Barton Highway.	The area was found to be highly disturbed and no archaeological site were located.
Navin Officer (2001)	Here a site at the Yass substation on low gradient slopes along the middle reaches of Booroo Ponds Creek approximately 1.5 kilometres south of the study area was investigated.	At this location Navin Officer located one small artefact scatter along a spur crest. The site comprised four flakes of volcanic, silcrete and chert.
Saunders (2003)	Approximately 3 kilometres south east of the study area Saunders surveyed a 60 ha block of land for a residential subdivision.	Only one low density stone artefact scatter was located during the site inspection and one area of archaeological potential. The artefacts were all quartz flakes located on the crest of a ridgeline knoll.
Saunders (2003a)	Added to Saunders original 1003 study area was a further 7.5 ha area for survey.	Saunders completed the survey with no further Aboriginal sites located.
Thompson (2003)	This report documents the results of an archaeological survey for a residential subdivision along Yellow Creek Road, Yass. The study area is approximately 1.2 kilometres east of the current study area.	Six archaeological sites were recorded during the survey and consisted of three scarred trees and three isolated stone artefacts. All stone artefacts were recorded as Crystal Quartz, on low level slopes.
Dibden (2009)	Completed for the purpose of establishing the Yass Dam Raising Project. The study area is approximately 2 kilometres south east of the current study area.	Four Aboriginal stone artefact sites were recorded within the study area. These sites consisted entirely of isolated finds. Glass (artefactual status uncertain) chert and quartz materials were recorded: chert being the most dominant material. The sites were located on ridge crests, spur crests, creek margins, and upper slopes, mid slope, alluvial flats, and alluvial terraces.

Author and Date	Distance from current study area	Findings
Dibden (2009a)	Survey work for a wind farm proposal within the Yass Valley. The study area is approximately 25 kilometres south west of the current study area.	The project involved survey work over a large study area (approximately 1237ha). Five hundred and eighty three Aboriginal stone artefact sites were recorded all along the crests of hills or on simple slopes. Two areas of potential archaeological deposit were also located. Of the stone artefacts chert was the most dominant materials although volcanic, quartz and silcrete was also located.

ARCHAEOLOGICAL POTENTIAL OF THE STUDY AREA

In the process of field-testing and refining a model for archaeologically sensitive environmental zones in the Goulburn region (60 kilometers to the east of the study area), Fuller (1989) produced a regional model that can be used (as both areas are valley regions flanked by low mountain ranges) for the Yass Valley's regional landscape, as shown in the *Table 3* below.

Table 3. Fuller's (1989) model for archaeologically sensitive environmental zones.

Zone	Zone Type	Potential Sensitivity	Potential Significance
1	Major Watercourses	High	High
2a	Undulating Hills and Plains – lower slopes near watercourses	High	Moderate
2b	Undulating Hills and Plains – gently undulating lands or plains	Low	Low
2c	Undulating Hills and Plains – low hills (less than 700asl)	Moderate	Low
2d	Undulating Hills and Plains –moderate hills (700m – 750asl)	Low	Low
2e	Undulating Hills and Plains – high hills (greater than 750asl)	Low	High
3	Hill Tops	Low	High
4	Built up areas	Moderate	Low

In accordance to Fuller's (1989) model, the current study area incorporates three culturally sensitive environmental zones. Namely, Zone 1 (due to Yass River); Zone 2a (the low level slopes along the southern margins of Yass River); and Zone 3 (the dominant, but relatively low level rise in the central northern area of the study area). According to Fuller's model, the potential archaeological sensitivity of any sites within these areas range from low to high. However, noting that most landscapes within the study area have been heavily disturbed through European land use practices, the archaeological significance of any located archaeological sites within a disturbed zone could only be considered as moderate at best.

Nevertheless, a number of subsistence resources that have previously been noted as available to past Aboriginal groups visiting the study area – aquatic animals (frogs, yabbies, fish and several bird species) and flora (aquatic plant tubers and berries) – would have been associated with the area to attract Aboriginal people. Also, native dry land grasses would have provided seeds that could be eaten and along with the water, would have attracted a range of native fauna, creating good hunting areas for Aboriginal people. The type and nature of Aboriginal sites previously recorded within a few kilometres surrounding the

study area confirm the presence of Aboriginal archaeological sites in the region and can be used to predict the Aboriginal site types that are likely to occur within the study area.

The results of the literature review show that most Aboriginal sites within the region occur along the margins of water courses, on ridges or on and around sloping ground and low rises – usually within close proximity to water. Most sites recorded within the study region are isolated stone artefacts and stone artefact scatters, along with some scarred trees. The pattern of recorded sites is dictated to some degree by the location of previous archaeological survey work, however several other observations can be made:

- Aboriginal sites do not necessarily appear within close proximity to a permanent water source, although larger artefact scatters are often recorded within 100-150m of a major water course;
- Most sites within the study region are positioned along water course margins. However, sites may also be located on elevated flat, slightly undulating or sloping landforms, ridges and knolls away from water;
- some sites occur on the crest or immediate slopes of low level rises;
- small tributaries (minor ephemeral water courses) with associated flood zones or marshy areas are likely to be associated with Aboriginal archaeological sites;
- the majority of registered sites are related to stone artefacts and are composed predominantly of quartz and silcrete – although chert, volcanic and tuff materials have also been recorded; and
- Locating burials is rare, however, early European recordings and ethnographic studies suggest that Aboriginal people in this region used burial practices that encompassed either burial in the ground, piled rocks, burial in caves or burial in the hollow of a tree.

The site prediction model suggests that if Aboriginal archaeological sites were located within the study area, they would most likely be isolated stone artefacts, stone artefact scatters and scarred trees (all trees of suitable type and age within the study area were inspected with no scars located).

Some Aboriginal archaeological sites within the study area are likely to have been impacted upon (disturbed) due to European land use activities (farming practices such as tree clearing, ploughing, dam building, fencing activities, vegetation planting, animal grazing, and infrastructure such as above and below ground service lines), the development of transport infrastructure (such as gravel roads), farm sheds and domestic building construction.

Much of the material used by Aboriginal people to produce subsistence equipment (such as wood, bone, shell and fibre material) are highly perishable and do not often survive in the archaeological record. Material culture that has survived, often found in locations where Aboriginal people camped, are generally stone artefacts and scarred trees. Therefore, quartz and silcrete stone artefacts and scarred trees are the most likely artefact types to be located within the study area.

9 Field Assessment

ABORIGINAL CONSULTATION

As the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (OEH 2010) states "Consultation with the Aboriginal community is not a formal requirement of the due diligence process", Aboriginal community consultation for this project has not been undertaken.

SURVEY METHODOLOGY

This Archaeological Due Diligence assessment involved a site investigation. The aim of the investigation was to identify Aboriginal objects or places of potential archaeological deposit. Based upon the background research, known Aboriginal site patterning, current aerial photography, terrain modelling from Google Earth, existing ground disturbances and consultation with the land owner, a pedestrian survey methodology was developed. The field based site assessment was undertaken over a 9 hour period on 15/11/2016 by Alister Bowen (BHM Archaeologist).

Although only a small percentage of land within the study area will be impacted by the proposed subdivision (namely the areas for new access roads, fencing and house construction positions) (see *Figure 4 & 4a*), the field survey aimed to sample all landforms within the study area, with particular emphasis on areas that will potentially be impacted by the subdivision and areas holding archaeological potential. The methodology involved a pedestrian survey across each of the study area's landforms. Special attention was given to areas where ground surface visibility existed, areas deemed to hold archaeological potential (for example, all eucalypt trees, slightly raised flat regions, low gradient slopes, and elevated ground), any ephemeral drainage lines, and the margins of Yass River. All surveyed areas and items of interest were recorded on a topographic map of the study area (using a GPS and GDA 94 coordinates), along with levels of visibility, erosion, soil conditions, evidence of disturbance and the extent of any PAD areas.

Traverses were conducted across the study area navigating according to topography and often (due predominantly to the thick pasture grass) focused on locating patches of bare ground to view. Ideal transect lines were set, however, to obtain access to particular areas of interest, routes were sometimes random. Some areas of ground erosion allowed for good ground visibility. Areas of ground exposure were periodic and grass cover over much of the study area allowed for an average of approximately 2% ground visibility (*Figure 10*). Where larger areas of ground exposure were encountered an intensive search was conducted with the survey transects spaced two metres apart. This follows the methodology set out in Burke and Smith (2004: 65) which states that a single person can effectively visually survey an area of two linear metres. In areas where limited ground exposure existed, an assessment of archaeological potential was undertaken. In some areas of thick ground cover the surveyor transects were spaced appropriately to capture areas of exposed ground. See *Figure 11* for approximate transect directions taken over the nine hour survey.

Weather on the day of the site survey was overcast during the morning, with a sunny afternoon and light winds mostly from the west. Weather conditions did not hamper the survey in any way. The survey was completed within nine hours.

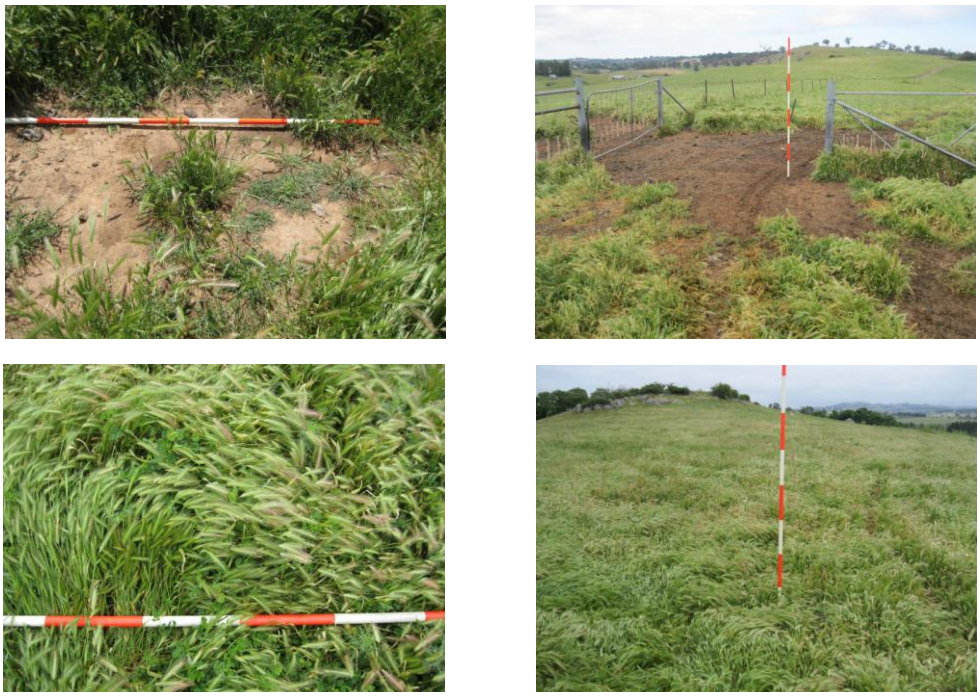

Figure 10 Showing two typical areas of ground exposure (above) and two typical areas of ground cover (below) within the study area.

Figure 11 Showing the approximate route taken during the survey of the study area.

GAPS ANALYSIS

Ground visibility (though wind, water and general erosion) varied between 0% and 2% across the study area as grasses, weed growth, tree litter and rural and domestic constructions obscured ground surface visibility in most locations (mostly grasses). This limited the effectiveness of identifying surface (or sub-surface) archaeological sites within the study area.

SURVEY RESULTS

Within the study area the survey identified one substantial, but dilapidated, historical period brick and stone complex (probably a hide tanning operation), 3 Aboriginal archaeological sites (2 isolated stone artefacts and 1 stone artefact scatter), and eight areas of potential archaeological deposit (PAD). In order to provide an understanding of the landforms encountered and the ground surface condition, a summary of several of the survey transects is provided in *Table* 4.

Table 4. Example of survey transects, distance and notes.

Transect	Landform	Length metres	Field notes
1	Undulating ground, gentle slope, a ridge line, upper slope, steep mid-slope, flood zone.	548	A few good ground exposures examined along undulating ground and ridgeline. Disturbed ground through hard hoof animal grazing and ploughing evident on higher ground, very little ground visibility, especially on undulating ground and sloped area. Good views across to the Yass River at high point to the west. Some erosion noted again giving reasonable ground visibility on lower slope and rocky areas. Reasonable ground visibility on flood zone and large sandy pockets visible.
2	River valley, steep rocky ground, slope up valley side, rocky along edge of river, flattish rocky area, steep rise to end of transect.	210	Few areas of good ground exposure near river. Middle and Upper slope very rocky, crossed several small patches of grassy areas, rocky base of cliff, steep slope heavily vegetated. Low level scrub (Australian native). Predominately steep sloping ground towards creek, with lots of rocky areas on the mid and base of slope. Relatively moderate slope and high ground to the west. Some disturbed ground through wombat burrowing, more rock inclusions at lower elevations.
3	No formal transect. Mid slope to the east falling down to Yass River. Base-slope, some flat areas, undulating ground, long raised ridge lines, dense tree scatters (European) to west, moderately undulating terrain; some nearly flat areas towards ephemeral	589	Ground disturbance noted from ploughing and hard hoof animal grazing. Paddock of long, thick grass on mid slope and lower ground. Some reasonable ground visibility in western portion especially near top of rocky rise. Ground visibility generally poor, especially in the central area, which is pasture land. Shallow soil with elevation of ground.

Transect	Landform	Length metres	Field notes
	drainage line.		
4	Low level pasture paddocks heavily grassed and with little ground exposure. Crossed ephemeral drainage line. Long ridge in central section. Mid-slope and upper slope, some flat areas on top of rises. Dense grass over most of the transect line.	707	In the mid and lower elevated regions there was thick grass cover, although cattle had created some exposed areas and single tracks that could be followed; heavily vegetated near Yass River. Disturbance noted through ground ploughing, tree planting, underground irrigation to house garden tank, and fencing. Thick grasses cover persists associated with good soils. Several PAD areas noted.
5	Transect deviating in all directions to cover upper, mid and base slope west of Yass River. Steep rise to the west and the Yass River weir to the north. Gently sloping land close to edge of river, mid-slope of a larger undulating pasture paddock. Several ploughed areas noted. Two PAD areas noted.	442	Clusters of European trees in west end of transect area. Some slightly elevated areas with flat areas on top. Gently sloping ground, grading to steep ground to the south and west. Ploughing has improved pasture growth, good soils noted. Some exposed ground through animal activities and gateway, gravel used on driveway in several places. Ground disturbance noted through several factors.
6	Generally undulating ground. Mostly clear pasture land with thick pasture growth. Some wind derived ground exposures and along fence lines. Thicker soils nearer to Yass River in the north. Upper slope, ridge line and hill crest. Mid-slope, ground dropping towards Yass River and one section of made gravel road.	678	Undulating to fairly steep ground along extreme eastern boundary of study area. Soils are generally good with several rocky outcrops on the higher ground. Some good sheltered and flattish PAD areas and a hill top PAD area. Small areas of ground visibility. Mostly ploughed ground and mostly grassed with thick pasture.

Visibility refers to the amount of ground visible upon which artefacts could be seen. The presence of vegetation (pasture grasses), gravelled roads and other variables can obscure visibility, which is expressed as a percentage (NPWS 1997: 18). An exposure is defined as an area in which ground surface disturbance (usually in the form of erosion) results in the removal of surface vegetation and soils and permits the detection of archaeological material contained within a surface and sometimes sub-surface context. The level of exposure is determined as a percentage (NPWS 1997:18).

Approximately 2% of the study area was exposed ground through vehicle tracks, animal movement, areas of disturbance, rocky outcrops and natural erosion. This is considered to represent a generally poor level of ground visibility across the study area. The majority of the study area was covered with thick pasture grassed, weeds, low level scrub, rocky outcrops and trees (see *Figure 10 and Table 5*).

The survey targeted locations with good ground exposure and moved quickly over areas where grass or other cover prohibited a visual inspection of ground soils.

Table 5. Ground visibility and exposures for the various landforms in the study area.

	Landform	Visibility	Exposure
1	Sloping/Undulating land	1%	2%
2	Basal Slope	1%	2%
3	Mid Slope	1%	2%
4	Upper Slope	2%	4%
5	Hill Crests	2%	2%
6	Valleys and Creeks	2%	2%

HISTORICAL HERITAGE

One abandoned and dilapidated European brick and stone complex site, most likely dating to the mid 1800s, was identified during the survey of the study area (named Y1 [Y standing for Yass]) (*Figure 12*). The complex comprises the remains of at least eight ruined structures and is not listed on the Yass Valley Council's 2004 list of heritage items (Yass Valley Heritage Web Page 2004). The complex is also not listed on the Commonwealth or State heritage registers. Local oral history gathered from the land owner - Ruth Condon – suggests the complex represents the remains of a hide tanning operation and from the layout of the feature, this seems likely. This site has historical significance to the early European settlement of the area and has technical significance because the well preserved building layout can demonstrate the workings of a colonial period enterprise. As the site has obvious antiquity it is protected from disturbance under the *NSW Heritage Act 1977* (amended).

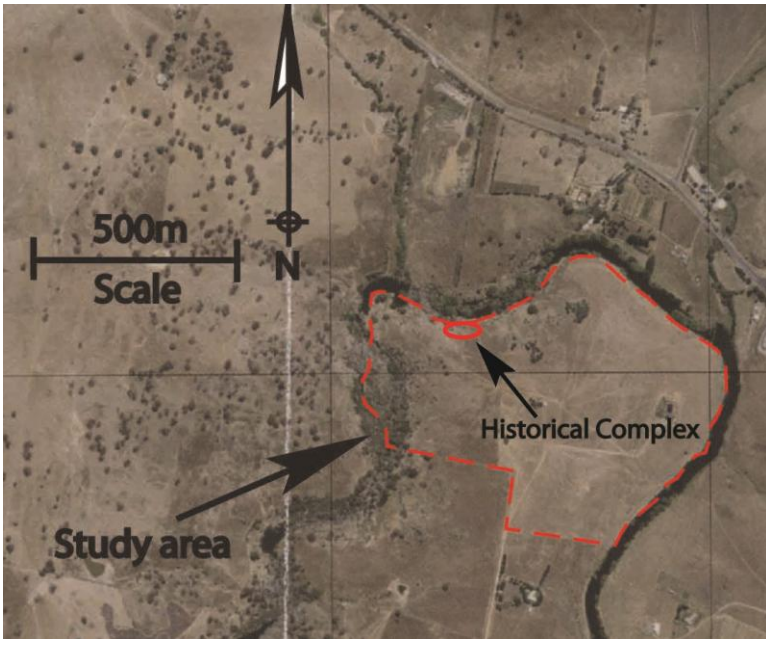

Figure 12 Showing location of historical site (the abandoned and dilapidated brick and stone structures).

The complex consists of a mix of easily visible structures – some of stone, some of brick, some of brick and stone – built into the rocky sloped bank of the Yass River. It is suspected that long grass covered other built features at the site (*Figure 13*).

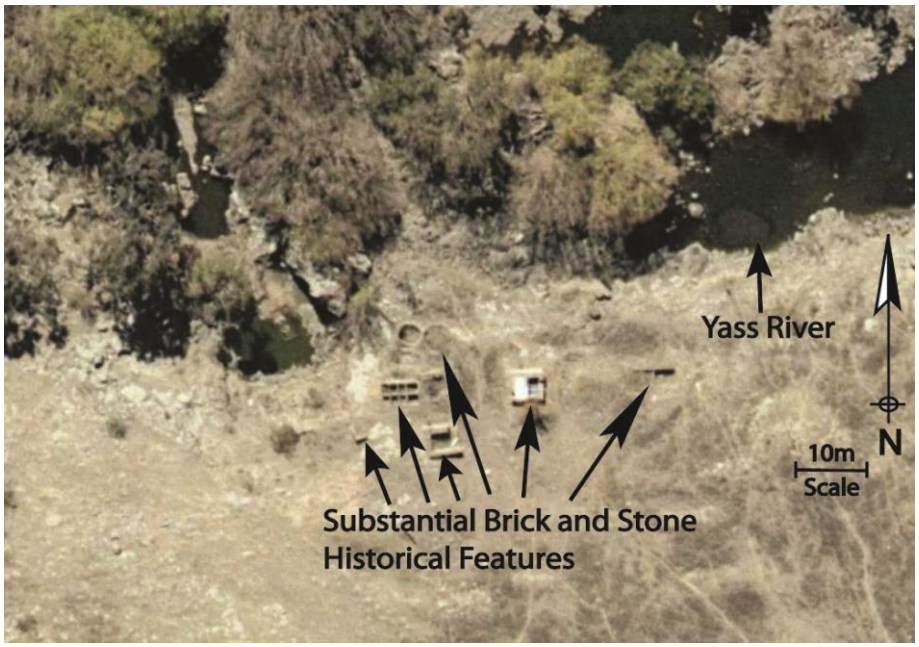

Figure 13 Showing an aerial photo of the historical features within the study area (Land Property Information aerial photo database).

One of the stone structures appears to be a house ruin, with one door opening and a window inset. The rest of the complex appears to be storage rooms or infrastructure associated with the workings of the operation (*Figure 14 & 14a*). Two large round tanks and a set of smaller rectangle features each have a concrete base and were probably for holding liquids associated with the site workings.

This complex ruin site's central grid reference location is GDA 94 0673325 6145121.

Figure 14 Showing some of the brick and stone historical features at the complex.

Figure 14a Showing two historical circular brick tanks at the complex.

Accurately dating the site complex from the physical remains is problematic and historical research would be required to further interpret the site. However, a broad manufacture date may be roughly established from the physical features of the bricks used in construction of the complex. With increased settlement in the Yass district during the 1840s and 1850s, people desired permanent dwellings. To cater for this, temporary, informal, one-man brick making kilns – for the sole purpose of making bricks for a one off building event – were often established. Usually these 'home made' bricks were of a poor quality and were of a non-standard size. Larger regional brick making facilities also existed and resulted in a superior quality brick manufactured at a brick factory.

The bricks from the identified site are of a standard size, have a plain stamped 'frog' or 'indent' and appear of a good manufacture quality – i.e., shows even firing (*Figure 15*).

Figure 15 Showing two good quality bricks located at the ruins complex (top and bottom of bricks).

To be considered historically significant and eligible for listing on the State Heritage Register, an historical item must meet one or more of the below criteria. Knowledge of the State Heritage Register criteria gives an understanding of why the identified historical complex holds or does not hold historical significance.

a) An item is important in the course, or pattern, of NSW's cultural or natural history;
b) An item has strong or special associations with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history;
c) An item is important in demonstrating aesthetic characteristics and/or/ a high degree of creative or technical achievement in NSW;
d) An item has strong or special association with a particular community or cultural group in NSW for social, cultural, or spiritual reasons;
e) An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history;
f) An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history; and
g) An item is important in demonstrating the principal characteristics of its class of NSW's cultural or natural places or cultural or natural environments.

The historical complex described above and situated within the study area could be considered important in the course, or pattern, of NSW's cultural history and until more research is conducted it should be seen as a rare item. This site may hold historical significance that is applicable to the assessment criteria set out in the 2010 Heritage Act that would warrant a listing on the Commonwealth or State heritage register. As the dilapidated brick and stone complex is not noted in any local heritage studies its existence in the area remains undocumented – except for briefly here.

As no disturbance is proposed for this site, no heritage constraints are imposed on it. If disturbance to the complex becomes imminent, a more comprehensive Historical Archaeological Significance Assessment should be undertaken to determine what the site represents and its local or State significance. As this report is focused on Aboriginal cultural heritage the European historical components of the study area will not be discussed further.

ABORIGINAL HERITAGE

During the field survey, 3 Aboriginal cultural heritage sites were located (called Y 2, Y3 and Y4 [Y standing for Yass]). The sites are represented by 2 isolated stone artefacts (Y2 & Y4), 1 low density stone artefact scatter (Y3), and 8 areas of potential archaeological deposit (PADs 1 to 8). The site landscape positions can be seen in *Figure 16* and their grid locations and site types can be seen in *Table 6*.

Several other locations within the study area were considered to be good to potentially hold evidence of Aboriginal cultural heritage i.e., a ground surface that is relatively elevated and level; has good views and is in close proximity water. However, at the time of survey each of these areas showed patches of surface visibility and after a careful localised search was undertaken of the surrounding 50 metre region, with no evidence for Aboriginal cultural heritage located, they were not recorded as places where Aboriginal people had conducted subsistence activities.

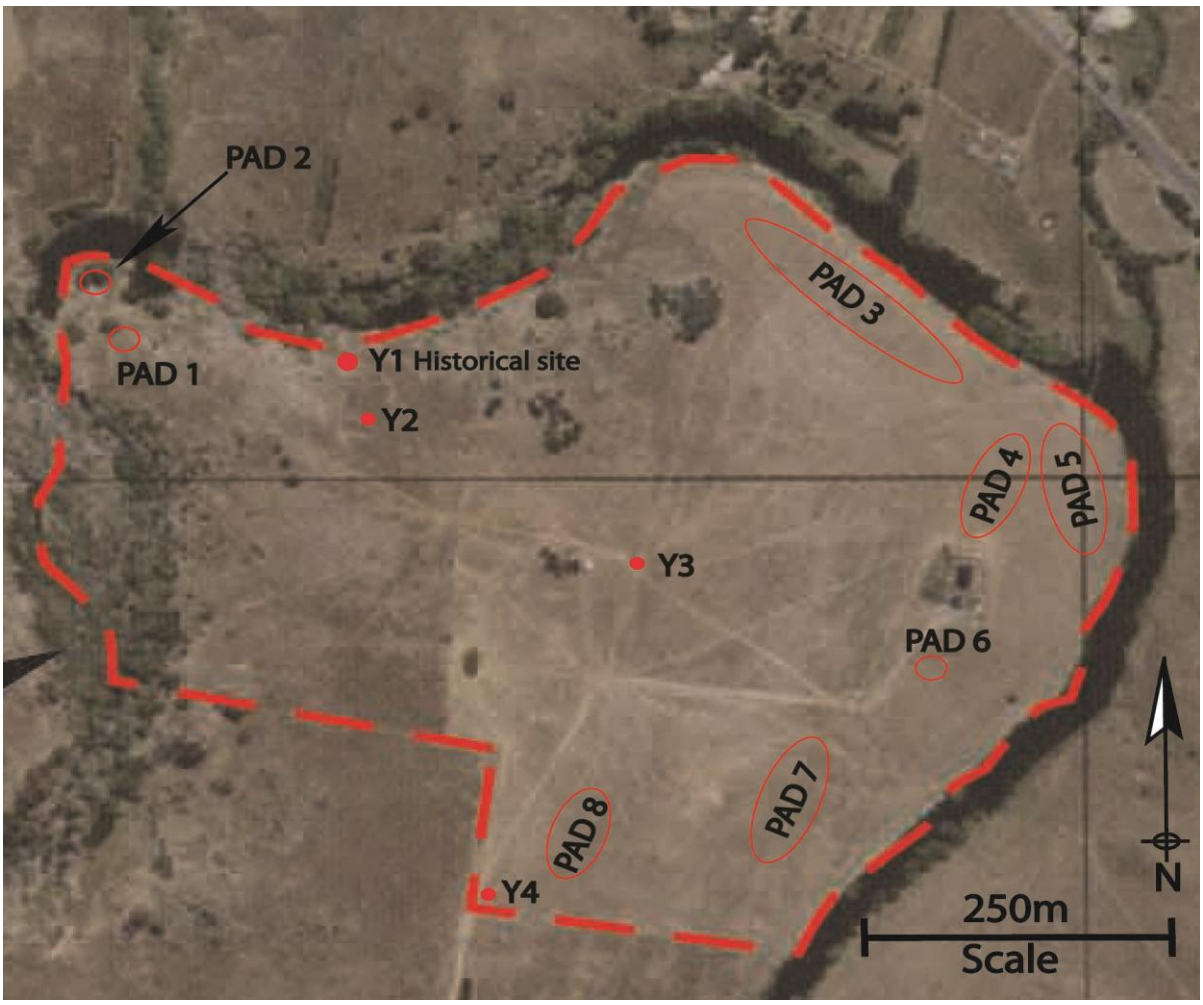

Figure 16 Showing landscape positions for the sites Y1 to 4 and the eight PADs.

Table 6. Showing details for the identified sites and PADs within the study area (Grid Reference taken at: C = Central, N = North, E = East, S = South, W = West).

Site name	Grid co-ordinates	Site type and number of artefacts	Site dimensions	Landscape location
Y 1	0673325 6145121 C	Historical Site	50m x 25m	Rocky slope
Y 2	0673349 6145057 C	Isolated artefact (1)	1m x 1m	Mid slope
Y 3	0673604 6144925 C	Artefact scatter (4)	10m x 10m	Upper slope
Y 4	0673458 6144585 C	Isolated artefact (1)	1m x 1m	Undulating plain
PAD 1	0673172 6145121 C	PAD. No artefacts visible	18m x 12m	Mid slope
PAD 2	0673140 6145204 C	PAD. No artefacts visible	40m x 32m	Flood zone
PAD 3	0673110 6145261 W 0673835 6145115 E	PAD. No artefacts visible	255m x 40m	Undulating plain
PAD 4	0673891 6144967 S 0673940 6145050 N	PAD. No artefacts visible	90m x 22m	Ridge crest
PAD 5	0673940 6145050 N 0673978 6144954 S	PAD. No artefacts visible	118m x 50m	Undulating plain
PAD 6	0673841 6148796 C	PAD. No artefacts visible	12m x 12m	Low hill crest
PAD 7	0675743 6144754 N 0673685 6144663 S	PAD. No artefacts visible	94m x 35m	Mid slope
PAD 8	0673542 6144636 C	PAD. No artefacts visible	45m x 26m	Low hill crest

Site Y2

This site is located on a mid slope on a section of exposed ground caused by Wombat diggings (in a wider grassed rocky landscape above the Yass River) (*see Y2 location in Figure 16*). It consists of one isolated mudstone stone artefact (approximately 30mm x 30mm and 4mm thick) *(Figure 17)*. As the site is located on a sloped and disturbed landscape that has been subjected to hard hoofed animal grazing and Wombat digging, the artefact is not considered to be *in situ*. The site's central grid reference location is 0673349 6145057 (Yass 8628-2N, 1:25,000, 2012. GDA 94). Ground surface visibility in this area was very poor at approximately 2%. An area of approximately twenty metres surrounding the site was carefully searched for further evidence of Aboriginal cultural heritage material with no results returned.

Figure 17 Left picture shows of the isolated artefact. Right picture shows the landscape where the artefact was located (at range pole), picture taken facing north.

Site Y2 is not positioned in an area of proposed disturbance. As no ground disturbing activities are to be conducted in this location, the site does not require an AHIP for the subdivision to proceed. See also management and mitigation measures in Chapter 10 of this report.

Site Y3

This site is located on low gradient upper slope on an exposed section of ground in a paddock gate opening, overlooking the Yass River (in a wider grassy pasture landscape) (*see Y3 location in Figure 16*). The site consists of 4 flaked pieces – 2 silcrete and 2 milky quartz *(Figure 18)*. As the site is located on a sloped landscape where hard hoofed animal movement disturbance has occurred, the artefacts are not considered to be *in situ*. The site's central grid reference location is 0673604 6144925 (Yass 8628-2N, 1:25,000, 2012. GDA 94). Ground surface visibility in this area was good at approximately 50%. An area of approximately twenty metres surrounding the site was carefully searched for further evidence of Aboriginal cultural heritage material with no results returned.

Figure 18 Left picture shows the site artefacts. Right picture shows the landscape where the artefacts are located, picture taken facing north east.

Where the stone artefacts are shown grouped together, this has been done for the purpose of recording the artefacts present in the assemblage. Before collecting each artefact for photographing, their individual locations were marked with a flag. This enables the artefacts to be placed back in their exact location after photographing and site recordings are complete.

Site Y3 is not positioned in an area of proposed disturbance. As no ground disturbing activities are to be conducted in this location, the site does not require an AHIP for the subdivision to proceed. See also management and mitigation measures in Chapter 10 of this report.

Site Y4

This site is located on the side of a short, low gradient slope that has been formed through the process of cutting (with machinery) level the access road through a wider landscape of undulating open grassy pasture land (*see Y4 location in Figure 16*). The site consists of an isolated mudstone flake approximately 20mm x 35mm and 5mm thick *(Figure 19)*. As the site is located on a disturbed section of land and where erosion and hard hoofed animal movement has occurred, it is not considered to be *in situ*. The site's grid reference location is 0673458 6144585 (Yass 8628-2N, 1:25,000, 2012. GDA 94). Ground surface visibility in this area was good at approximately 10%. An area of approximately twenty metres surrounding the site was carefully searched for further evidence of Aboriginal cultural heritage material with no results returned.

Figure 19 Left picture shows the single mudstone artefact. Right picture shows the landscape where the artefact was located, photo taken facing south.

The artefact is positioned 3.5m west of the existing access track to the study areas homestead. This distance is an adequate buffer zone to avoid harm to the site mainly because there the site is a sturdy metal frame like structure concreted into the ground next to the artefact giving it protection. However, if the access road is to be upgraded as part of the subdivision development, the buffer between the road and the artefact must be maintained and caution should be taken avoid ground disturbance in this location.

Site Y4 is not positioned in an area of proposed disturbance. Therefore, the site does not require an AHIP for the subdivision to proceed. See also management and mitigation measures in Chapter 10 of this report.

PAD 1

PAD 1 is located at GDA 94 coordinates 0673172 6145121 (central position) (Yass 8628-2N, 1:25,000, 2012. GDA 94) and has an approximate 18m by 12m radius (*see PAD 1 location in Figure 16*). This PAD is on small knoll, mid slope of a larger hill overlooking and approximately 50 metes from the Yass River (*Figure 20*). This PAD area is in close vicinity to PAD 2 (approximately 50m distance). Grass cover and rock in this location was continuous allowing for no ground visibility. Past ground disturbance in this area is likely due to hard hoofed animal movement. Therefore, the PAD holds only a moderate level of archaeological sensitivity. Even with the thick ground cover, the entire PAD area was heavily scrutinised for evidence of Aboriginal cultural heritage with no result. The PAD area is not positioned where it will be subjected to ground disturbance if the proposed subdivision goes ahead. Nevertheless, its existence should be noted and if future ground disturbing activities are to occur in this location a sub-surface archaeological investigation (in the form of test pitting) should be carried out across the PAD before ground disturbance takes place. Test pitting will assist to determine whether Aboriginal artefacts are present within the PAD area and will help inform any future development proposals.

Figure 20 Showing ground location for PAD 1 (photo taken facing west).

PAD 2

PAD 2 is located at GDA 94 coordinates 0673140 6145204 (central position) and has an approximate 40m by 32m radius (*see PAD 2 location in Figure 16*). This PAD is on a flood zone on the banks of the Yass River approximately 50m north west of PAD 1 (*Figure 21*). Grass cover in this location was continuous, allowing for no ground visibility. The PAD's surface and sub-surface soils have been disturbed due to hard hoofed animal movement and flooding episodes of the Yass River. For these reasons the PAD holds only a moderate level of archaeological sensitivity. The entire grassed PAD area was heavily scrutinised for evidence of Aboriginal cultural heritage with no result. The PAD area is not positioned where ground disturbance is to be undertaken if the proposed subdivision goes ahead. Nevertheless, its existence should be noted and if future ground disturbing activities are to occur in this location a sub-surface archaeological investigation (in the form of test pitting) should be undertaken across the entire PAD before ground disturbance takes place. Test pitting will assist to determine whether Aboriginal artefacts are present within the PAD area and will help inform any future development proposals.

Figure 21 Showing ground location for PAD 2 (photo taken facing north).

PAD 3

PAD 3 is located at GDA 94 coordinates 0673110 6145261 (at its western extreme) and 0673835 6145115 (at its eastern extreme) and is approximately 255m by 40m in size (*see PAD 3 location in Figure 16*). This PAD is along the immediate southern bank above the Yass River, approximately 25m from the water's edge (*Figure 22*). Grass cover in this location was thick and continuous allowing for no ground visibility. The PAD's surface and sub-surface soils have been disturbed due to hard hoofed animal movement, flooding episodes of the Yass River and ground ploughing activities. For these reasons the PAD holds only a moderate level of archaeological sensitivity. The entire grassed PAD area was heavily scrutinised for evidence of Aboriginal cultural heritage with no result. The PAD area is not positioned where ground disturbance is to be undertaken if the proposed subdivision goes ahead. Nevertheless, its existence should be noted and if future ground disturbing activities are to occur in this location a sub-surface archaeological investigation (in the form of test pitting) should be undertaken across the entire PAD before ground disturbance takes place. Test pitting will assist to determine whether Aboriginal artefacts are present within the PAD area and will help inform any future development proposals.

Figure 22 Showing ground location for PAD 3 (photo taken facing east).

PAD 4

PAD 4 is located at GDA 94 coordinates 0673891 6144967 (at its southern extreme) and 0673940 6145050 (at its northern extreme) and is approximately 90m by 22m in size (*see PAD 4 location in Figure 16*). This PAD is positioned approximately 85 metres above and away from the Yass River on a broad ridge line traversing down to the river (*Figure 23*). Grass cover in this location was thick and continuous allowing for no ground visibility. The PAD's surface and sub-surface soils have been disturbed due to hard hoofed animal movement and ground ploughing activities. For these reasons the PAD holds only a moderate level of archaeological sensitivity. The entire grassed PAD area was heavily scrutinised for evidence of Aboriginal cultural heritage with no result. The PAD area is not positioned where ground disturbance is to be undertaken if the proposed subdivision goes ahead. Nevertheless, its existence should be noted and if future ground disturbing activities are to occur in this location a sub-surface archaeological investigation (in the form of test pitting) should be undertaken across the entire PAD before ground disturbance takes place. Test pitting will assist to determine whether Aboriginal artefacts are present within the PAD area and will help inform any future development proposals.

Figure 23 Showing ground location for PAD 4 (photo taken facing north west).

PAD 5

PAD 5 is located at GDA 94 coordinates 0673940 6145050 (at its northern extreme) and 0673978 6144954 (at its southern extreme) and is approximately 118m by 50m in size (*see PAD 5 location in Figure 16*). This PAD is positioned approximately 25 metres above and west from the Yass River on an undulating plain, before a steeper rise away from the river (*Figure 24*). Grass cover in this location was thick and continuous allowing for no ground visibility. The PAD's surface and sub-surface soils have been disturbed due to hard hoofed animal movement, flooding episodes of the Yass River and ground ploughing activities. For these reasons the PAD holds only a moderate level of archaeological sensitivity. The entire grassed PAD area was heavily scrutinised for evidence of Aboriginal cultural heritage with no result. The PAD area is not positioned where ground disturbance is to be undertaken if the proposed subdivision goes ahead. Nevertheless, its existence should be noted and if future ground disturbing activities are to occur in this location a sub-surface archaeological investigation (in the form of test pitting) should be undertaken across the entire PAD before ground disturbance takes place. Test pitting will assist to determine whether Aboriginal artefacts are present within the PAD area and will help inform any future development proposals.

Figure 24 Showing ground location for PAD 5 (photo taken facing east).

PAD 6

PAD 6 is located at GDA 94 coordinates 0673841 6148796 (at its central position) and is approximately 12m by 12m in radius (*see PAD 6 location in Figure 16*). This PAD is positioned approximately 105 metres above and west from the Yass River on the crest of a small hill that exists there (*Figure 25*). Grass cover in this location was thick and continuous allowing for no ground visibility. The PAD's surface and sub-surface soils have been disturbed due to hard hoofed animal movement and ground ploughing activities. For these reasons the PAD holds only a moderate level of archaeological sensitivity. The entire grassed PAD area was heavily scrutinised for evidence of Aboriginal cultural heritage with no result. The PAD area is not positioned where ground disturbance is to be undertaken if the proposed subdivision goes ahead. Nevertheless, its existence should be noted and if future ground disturbing activities

are to occur in this location a sub-surface archaeological investigation (in the form of test pitting) should be undertaken across the entire PAD before ground disturbance takes place. Test pitting will assist to determine whether Aboriginal artefacts are present within the PAD area and will help inform any future development proposals.

Figure 25 Showing ground location for PAD 6 (photo taken facing south).

PAD 7

PAD 7 is located at GDA 94 coordinates 0675743 6144754 (at its northern extreme) and 0673685 6144663 (at its southern extreme) and is approximately 94m by 35m in size (*see PAD 7 location in Figure 16*). This PAD is positioned approximately 95 metres west from the Yass River on a low gradient amphitheatre type wash out, mid slope on a larger rise away from the river (*Figure 26*). Grass cover in this location was thick and continuous allowing for no ground visibility. The PAD's surface and sub-surface soils have been disturbed due to hard hoofed animal movement and ground ploughing activities. For these reasons the PAD holds only a moderate level of archaeological sensitivity. The entire grassed PAD area was heavily scrutinised for evidence of Aboriginal cultural heritage with no result. The PAD area is not positioned where ground disturbance is to be undertaken if the proposed subdivision option shown in *Figure 4* goes ahead. However, PAD 7 is positioned where ground disturbance is to be undertaken if the proposed subdivision option shown in *Figure 4a* goes ahead. If this option is used then a sub-surface archaeological investigation (in the form of test pitting) should be undertaken across the entire PAD before ground disturbance takes place. Test pitting will assist to determine whether Aboriginal artefacts are present within the PAD area and will help inform any future development proposals. Even if the area is not to be disturbed, the PADs existence should be noted and future ground disturbing activities should be avoided in this location.

Figure 26 Showing ground location for PAD 7 (photo taken facing south).

PAD 8

PAD 8 is located at GDA 94 coordinates 0673542 6144636 (at its central location) and is approximately 25m by 265m in size (*see PAD 8 location in Figure 16*). This PAD is positioned approximately 215 metres west from the Yass River on the flat area of a hill crest (*Figure 27*). Grass cover in this location was thick and continuous allowing for no ground visibility. The PAD's surface and sub-surface soils have been disturbed due to hard hoofed animal movement and ground ploughing activities. For these reasons the PAD holds only a moderate level of archaeological sensitivity. The entire grassed PAD area was heavily scrutinised for evidence of Aboriginal cultural heritage with no result. The PAD area is not positioned where ground disturbance is to be undertaken if the proposed subdivision option shown in *Figure 4* goes ahead. However, PAD 7 is positioned where ground disturbance is to be undertaken if the proposed subdivision option shown in Figure 4a goes ahead. If this option is used then a sub-surface archaeological investigation (in the form of test pitting) should be undertaken across the entire PAD before ground disturbance takes place. Test pitting will assist to determine whether Aboriginal artefacts are present within the PAD area and will help inform any future development proposals. Even if the area is not to be disturbed, the PADs existence should be noted and future ground disturbing activities should be avoided in this location.

Figure 27 Showing ground location for PAD 8 (photo taken facing north).

Significance Assessment

The Heritage Act 1977 is administered by the OEH and aims to protect the natural and cultural heritage of NSW through protection provisions and the establishment of a Heritage Council. The two main significance values assessed when investigating Aboriginal sites are scientific (also known as archaeological), which relates to the site or items potential to provide new information about Aboriginal culture; and cultural values, which can be defined as the cultural values held by present day Aboriginal communities about a place or item.

The Heritage Act 1977 provides blanket protection for surface and sub-surface relics (sites) and for heritage items of state significance listed on the State Heritage Register. The Act defers to local planning instruments under the Environmental Planning & Assessment Act 1979 for the protection of items of local significance ("items of the environmental heritage").

One aim of a cultural heritage assessment is to identify and conserve particular types of cultural heritage resource. In this way, rare or unique cultural heritage material or features can be acknowledged and protected under an appropriate cultural heritage significance rating. The principal items when addressing the significance of Aboriginal sites and places are the archaeological/research significance to archaeologists and the cultural/social significance to Aboriginal people. For this reason, the results of the archaeological and cultural significance assessment should take the form of a focused discussion on identifying and assessing these significance values.

As Aboriginal consultation was not undertaken for this due diligence project, the cultural/social significance of the located sites to Aboriginal people cannot be assessed. However, usually Aboriginal people view all sites of Aboriginal cultural heritage as culturally significant to them as they provides a link with the past and to their ancestors.

There are two criteria generally used in assessing the scientific significance of Aboriginal stone artefact sites: One, the potential of a site to provide information which is of value in the scientific analysis of research questions (sites generally need to be located *in situ*); and two,

an assessment of whether the artefact or place is a good representative of its type, this is often assessed in a local, regional or state context (for a place).

All of the stone artefact sites located within the study area represent common site types found throughout New South Wales and therefore only hold a low level scientific significance. Recording the sites will assist in regional studies aimed at assessing levels of a region's Aboriginal exploitation.

10 Recommendations, Management and Mitigation

This section relates to the recommendations that have been made in light of the findings from the background research, predictive modelling, archaeological field assessment, type of development proposed, and relevant NSW legislation protecting Aboriginal and European heritage. Avoidance of archaeological sites represents the best heritage outcome as it means no impact on any heritage features.

The investigation found that most ground locations within the study area have been disturbed through past European land use practices (predominantly ploughing), hard hoof animal grazing and building activities. A total of one European historical site, Y1, three Aboriginal cultural heritage sites – Y2, Y3 and Y4 – and eight areas of PAD have been located. All of the Aboriginal cultural heritage sites have been identified as existing within a disturbed ground context (through European farming practices, erosion or flooding events) and are not considered to be *in situ*. None of the sites or PADs is located in an area that will be disturbed if the subdivision goes ahead – besides PAD 8 if the option shown in Figure 4a is used. It is recommended that the alternate option shown in Figure 4 should be used (or subsurface investigation will need to be undertaken).

Based on the results of the present survey and previous regional archaeological knowledge, any as yet unidentified archaeological sites within the study area (such as within the PAD areas) will most likely consist of isolated stone artefacts or low density stone artefact scatters of quartz and silcrete, although other materials may also be present. As this site type is common to the region, the Aboriginal cultural material contained within them is unlikely to pose an absolute constraint to the proposed development. Nevertheless, if the subdivision goes ahead, all construction workers must be made aware of the identified sites and PAD locations and understand that these areas are to be avoided.

Special caution should be exercised near Site Y4 (discussed above), in order to maintain a 3.5m buffer between the isolated artefact and any access road upgrade work. If access track upgrades are undertaken in this location, all construction workers must be made aware of the site and understand that the buffer must be maintained.

If the proposed subdivision layout changes and disturbance is proposed in locations where European or Aboriginal cultural heritage material or PADs 1 to 8 are positioned, then further heritage assessment will be required in the form of a Historical Archaeological Significance Assessment for the European site and an artefact collection and sub-surface investigations in accordance with an approved AHIP for the Aboriginal sites. The aim of the sub-surface testing program should be to obtain information about the nature and extent of sub-surface Aboriginal objects, to better understand the site's characteristics, and to assist in developing an appropriate site management strategy – if required. Any archaeological artefact collection or test excavation procedures must be conducted in accordance with Requirements 15 and 16 of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (2010).*

Should any previously unrecorded historical or Aboriginal heritage sites or objects be identified during the course of the proposed development, then work in the vicinity of the

item should cease and the site be reported to OEH in order to determine the appropriate course of action.

SUMMARY

Archaeological constraints are relevant for the historical site and the newly identified Aboriginal cultural heritage sites Y2 to Y4 and PAD area's 1 and 8. Therefore:

- No ground disturbing activities are to occur in these areas.
- If disturbance is imminent to the identified historical site then a Historical Archaeological Significance Assessment must be undertaken.
- If ground disturbance is imminent at any of the Aboriginal cultural heritage site locations, an AHIP from OEH Queanbeyan Branch will be required for surface collections of artefacts to be undertaken along with an archaeological sub-surface testing program.

Besides avoidance of the identified site and PAD areas, no archaeological constraints have been imposed for the subdivision to proceed.

SUB-SURFACE SAMPLING STRATEGY

It is recommended that any archaeological test pitting program include each PAD area having:

- One long transect line (matching the length of the PAD) and two shorter transect lines placed across each of the PAD's surface areas, and hand excavated test pits, 0.5 metre by 0.5 metres in size excavated at ten metre intervals along each transect line.
- It is also recommended that if desired by the excavation team, up to four 0.5 metre by 0.5 metre test pits be excavated randomly within the bounds of each PAD area at the discretion of the excavation team – undertaken to capture archaeological samples of specific micro-landforms or to define an identified archaeological site boundary.

This technique will ensure that the PAD areas are adequately tested as part of the sub-surface investigation program. To obtain an appropriate sample of each identified area of interest, the proposed sub-surface testing strategy should excavate a, agreed on (with OEH Queanbeyan) minimum number of test pits within the PAD areas, with a further number of 0.5 by 0.5 meter random test pits done if deemed necessary by the excavation team.

It is recommended that copies of this report be provided to the OEH Queanbeyan Branch for their records and to the Yass Valley Council to support any forthcoming subdivision application.

11 Unexpected Discoveries Protocol

This section represents a contingency plan to manage any unexpected Aboriginal Cultural Heritage issues that may be encountered during the subdivision phase at the study area. This contingency plan should be kept by each owner of the newly subdivided property. The plan provides guidance for any future construction works so that the workers and the owners may meet their obligations with respect to heritage in accordance with the various OEH 2010 guidelines.

There is a low potential for previously unknown Aboriginal cultural heritage to be discovered during the proposed activity. The potential for any previously unknown Aboriginal cultural heritage to be uncovered is most likely limited to isolated stone artefacts and low to medium density stone artefact scatters. Such sites are generally of low archaeological significance and if handled correctly, should pose minimal disruption to any future construction activities.

A person who discovers or suspects they have discovered Aboriginal cultural material during construction activities within the study area covered by this Archaeological Cultural Heritage Due Diligence Assessment (see *Figure 1, 2 and 3*) should immediately notify the person in charge of the activity. The person in charge of the activity should then suspend any ground disturbing works at the location of the discovery and within 25 metres of the extent of the suspected site.

The person in charge of the activity must then contact a Cultural Heritage Advisor within two days who shall notify the OEH Queanbeyan Branch 02 62297089) within a period of three working days. The Cultural Heritage Advisor, after consultation with the appropriate RAO group, will be able to evaluate the Aboriginal cultural material to determine if it represents part of a known site or is a new site. A Cultural Heritage Advisor will then be engaged to update and/or complete site records and advise on possible management strategies.

Within a period of three working days a decision/recommendation will be made by the Cultural Heritage Advisor, in consultation with the RAO representative, regarding the process to be followed to manage the cultural material, and how to proceed with the works. These recommendations should be submitted to the OEH Queanbeyan Branch for review and endorsement.

In instances where salvage of discovered Aboriginal cultural heritage is required, decisions about how to proceed with salvage excavation must be made on a case-by-case basis by the Cultural Heritage Advisor, in consultation with the RAOs and the OEH Queanbeyan Branch.

The methodology of any salvage excavation must be appropriate to the site type(s) discovered and the nature, extent and significance of the site(s). Any salvage excavation undertaken following the unexpected discovery of Aboriginal cultural heritage should abide by the regulations set out in the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (2010)* and be undertaken in accordance with appropriate archaeological procedure.

Construction work may recommence within the area of exclusion:

- when the appropriate protective measures have been taken;
- where the relevant Aboriginal cultural heritage recording forms have been completed;
- where all parties agree there is no other prudent or feasible course of action; and
- once any relevant dispute has been resolved.

The Cultural Heritage Advisor and the RAO representatives should ensure that the above steps are followed and that legal obligations and requirements are complied with at all times.

It should be noted that any Cultural Heritage Advisor engaged to investigate any Aboriginal cultural heritage should retain custody of Aboriginal cultural heritage for a period of up to

three months for analysis. If a longer period is required for analysis, then the Cultural Heritage Advisor should inform the RAOs and make appropriate arrangements. Aboriginal material should then be individually bagged and labelled with reference to provenance, and be handed to the OEH Queanbeyan Branch or RAO representatives together with copies of the catalogue, assessment documentation, management plan and results of the analysis.

CONTINGENCY FOR THE DISCOVERY OF HISTORICAL CULTURAL HERITAGE

There is a low potential for previously unknown historical cultural heritage to be discovered during the proposed activity. The potential for any previously unknown historical cultural heritage to be uncovered is most likely limited to the underground remains (footings or post remains) of a domestic dwelling and associated artefacts.

If items of an historical nature are uncovered during the construction phase of the study area the following procedures must be followed:

- During construction activities, a person who discovers or suspects they have discovered cultural material of an historical nature should immediately notify the person in charge of the activity. The person in charge of the activity should then suspend any ground disturbing works at the location of the discovery and within 25 metres of the extent of the suspected site.

- The person in charge of the activity must then contact the OEH Queanbeyan Branch of the discovery (on 62297089).

- A Cultural Heritage Advisor should be employed to survey the site remains and evaluate their significance.

- If the items are considered to be historically significant the Cultural heritage Advisor should produce a written management procedure for the site and have it approved by the OEH Queanbeyan Branch.

- On completion of the management recommendations, the Study Area developments may continue.

CONTINGENCY FOR THE DISCOVERY OF HUMAN REMAINS

If any suspected human remains are discovered during the construction activity works, all activity in the vicinity must cease immediately. The remains must not be touched and should be left in place and protected from harm or damage. The NSW Police and the NSW Coroner's Office must be notified immediately. If there are reasonable grounds to believe the remains could be Aboriginal, the OEH Queanbeyan Branch should also be notified.

The following five step contingency plan describes the actions which should be taken in instances where human remains or suspected human remains are discovered. Any such discovery within the study area must follow these steps.

1. Discovery:

- if suspected human remains are discovered all activity in the vicinity must stop to ensure minimal damage is caused to the remains;

- the remains must be left in place, and protected from harm or damage; and

- a buffer zone of 50 metres should be established and remain in place around the suspected skeletal remains until they have been assessed.

2. Notification:

- once suspected human skeletal remain have been found, the NSW Coroner's Office (02 85847777) and the NSW Police must be notified immediately (02 62980555);

- all details of the location and nature of the human remains must be provided to the relevant authorities;

- if it is confirmed by these authorities that the discovered remains are Aboriginal skeletal remains, the person responsible for the activity must report the existence of the human remains to a suitably qualified Cultural Heritage Advisor and the OEH Queanbeyan Branch;

- no media is to be contacted in regards to the discovery of human remains; and

- no photographs of human remains are to be taken without appropriate approval of the RAO.

3. Impact Mitigation or Salvage:

- A suitably qualified Cultural Heritage Advisor should consult with the relevant RAOs with an interest in the Aboriginal human remains, carry out an assessment, and determine an appropriate course of action. This course of action should be submitted (in the form of a Cultural Heritage Management Plan) to the OEH Queanbeyan Branch for review and endorsement);

- An appropriate impact mitigation or salvage strategy as determined by the Cultural Heritage Advisor, RAOs, and OEH Queanbeyan Branch should be implemented (this will depend on the circumstances in which the remains were found, the number of burials found, the type of burials and the outcome of consultation with the RAOs);

- On the completion of the prescribed works, the relevant authorities (OEH Queanbeyan Branch) should inform the Site Supervisor (or Project Personnel) that construction works may recommence in the area where the burial was located. If there are further constraints to construction works the Site Supervisor should be informed.

4. Curation and Further Analysis:

- The treatment of salvaged Aboriginal human remains must be in accordance with the direction of the RAOs and the OEH Queanbeyan Branch.

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