

Lochinvar Developments Pty Ltd

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Lochinvar Residential Subdivision - Archaeological Test Excavation

LGA: Maitland

Aboriginal Cultural Heritage Assessment (ACHA)

22 April 2024

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Date: 22 April 2024

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EXECUTIVE SUMMARY

McCardle Cultural Heritage Pty Ltd (MCH) was engaged by Lochinvar Developments Pty Ltd to prepare an Aboriginal Cultural Heritage Assessment (ACHA) and an Aboriginal Heritage Impact Permit (AHIP), if required, for the proposed residential subdivision of land located at the corner of the New England Highway and Windella Road, Lochinvar.

The project area is characterized by the Permian Dalwood Group, specifically the Lochinvar geological formation consisting of siltstone, sandstone, basic lava, and tuff. The presence of tuff suggests the possible presence of stone materials suitable for manufacturing stone artifacts throughout the project area. The project area includes a slope, two drainage lines, and a creek in the southern part.

The northern portion of the project area consists of the Rothbury soil landscape, while the rest is the Lochinvar soil landscape. Both landscapes consist of an upper soil Horizon A and underlying B, interpreted as Holocene and Pleistocene in age respectively. Sites tend to occur on or within the interface of horizons A and B. The project area has two 2nd order creeks, one in the north and one in the south, flowing west and forming a 3rd order along the far western boundary. The Hunter River, a 6th order river, is approximately 1.8 kilometres west of the project area.

The project area has been cleared and primarily used for pastoral purposes, including grazing and ploughing for improved pasture grasses. This involved the wholesale clearance of native vegetation, introduction of pasture grass, construction of dams, fencing, tracks, and structures. These land uses range from low to high impact on the landscape and deposits. Significant natural impacts, such as extreme flooding, have led to erosion, material displacement, and burial.

A search of the AHIMS register identified 53 known Aboriginal sites within five kilometres of the project area and include 43 artefact sites, five PADs, two artefact and PAD sites and two that were not sites. One site was identified in the project area (LCC1 – AHIMS 37-6-2228), which consisted of the following four loci:

- Loci 1 (L1) is located on a gentle slope. Isolated artefact (silcrete flake) in an exposure of 30m x 30m
- Loci 2 (L2) was located on a gentle slope. Three artefacts (mudstone and silcrete flakes and a flake piece) were identified along the drainage trench that was cut down slope exposing an area of 50m x 2m to a depth of 50cm.
- Loci 3 (L3) is located on a gentle slope above the confluence of the minor watercourses. Seven artefacts located in an area of 40m x 15m consisting of four mudstone flakes and three mudstone flake pieces
- Loci 4 (L4) is located on a gentle slope. Four artefacts located in an exposure around a dam (50m x 5m) and included three mudstone flakes and one mudstone core

The site in question is accompanied by a Potential Archaeological Deposit (PAD) located on the lower slopes adjacent to Lochinvar Creek. It is situated near the confluence of various tributaries and is associated with four areas containing artefacts. Given the environmental, cultural, and archaeological context, it is possible that additional artefacts may be discovered, or that previous artefacts have been disturbed as a result of recent major flooding events, which may have exposed, covered, or washed them away. It is likely that low-to-medium-density artefact scatterings are present in close proximity to water sources. The intermittent nature of the drainage lines and creeks suggests that they were used opportunistically for hunting and gathering, rather than for extensive camping,

The project area was divided into two survey units, namely slopes and creeks. Survey unit 1, which encompassed the majority of the project area, consisted of a south-facing slope surrounded by fencing. The slope had been previously cleared and ploughed, resulting in evident erosion in the form of ridges and furrows. Two dams were located in the mid-section, and an additional dam was found in the southern section. Currently, the area is used for cattle grazing, as indicated by deep hoof prints throughout. Vegetation primarily consists of pasture grass, with limited tree coverage, leading to reduced visibility of the ground surface. Exposures in this survey unit include tracks, erosion, and the dams. The road reserves of the New England Highway and Wyndella Road are also part of this survey unit.

Survey unit 2 focused on the 2nd order creek located in the southern portion of the project area, along with a 10-meter buffer on both sides. The creek had been previously cleared, resulting in a grassy vegetation cover. Evidence of previous ploughing was observed through eroded ridges and furrows, and grazing activity was evident from deep hoof prints. Visibility and exposures in this survey unit were low. The survey successfully located and re-assessed 37-6-2228 (L1, L4, and associated PAD) within the project area.

- Loci 1 (L1) – was originally located on a gentle slope. Isolated artefact (silcrete flake) in an exposure of 30m x 30m. The site was not relocated during the assessment. This is not unusual given the length of time since first recorded and impacts to the landscape (grazing, erosion). Additionally, the visibility at the site was 3%.
- Loci 4 (L4) – was originally located on a gentle slope (mid). Four artefacts located in an exposure around a dam (50m x 5m) and included three mudstone flakes and one mudstone core. This site was located during the survey. Located on the dam wall, only one mudstone flake was found on the western side of the dam on top of the wall. This is not unusual given the length of time since first being recorded and the erosion down the dam walls. Visibility on the dam wall was excellent (70%) and exposure 100%

The PAD (37-6-2228) was delineated based on previous excavation findings in the Lochinvar area. Artefacts were found to be minimal in the low-lying high-clay soils near water sources, while occupation areas were located on elevated, well-drained land. It was determined that the low-lying areas adjacent to the existing creek lines were unsuitable for occupation due to increased incision in the last century. Therefore, the previously identified PAD remained unchanged.

Loci 1 and Loci 4 of AHIS site 37-6-2228 were found to be highly disturbed with no in situ subsurface potential. They were deemed to have low scientific significance, and their cultural significance was not assessed. The nature of the identified PAD remained unknown and as such, an archaeological test excavation was recommended.

A total of 20 pits were excavated (and no artefacts were present). The test excavation identified evidence of past land uses with clay of the B horizon mixed throughout the A horizon with eroded plough ridges and furrows on both the surface and subsurface. There is no evidence of stratigraphy and the evidence indicates the area has been subject to clearing, ploughing and grazing, and as such is identified as a disturbed deposit with little likelihood of in situ deposits.

The evidence gathered across the project area suggests that it was likely used for more transitory activities such as hunting and gathering, rather than long-term camping. As a result, artifacts associated with these activities are scattered throughout the landscape, making it difficult to predict their specific locations. Additionally, the land uses of clearing, ploughing, grazing, and dam construction have been known to redistribute or destroy archaeological sites, further complicating the prediction of hunting and gathering activity locations.

Impacts to the known archaeological record (loci 1 and Loci 4 of AHINMS site 37-6-2228) are low and the following recommendations are provided:

- 1) The persons responsible for the management of onsite works will ensure that all staff, contractors and others involved in construction and maintenance related activities are made aware of the statutory legislation protecting sites and places of significance. Of particular importance is the National Parks and Wildlife Regulation 2019, under the National Parks and Wildlife Act 1974; and
- 1) An Aboriginal Site Impact Recording Form (ASIRF) will be completed updating the results of the test excavation;
- 2) If Loci 1 and Loci 4 of AHIMS site 37-6-2228 will be harmed by any future development an AHIP will be required prior to works at those locations;
- 3) Any new AHIP application must exclude the boundary of AHIP #C0001860 to avoid overlapping AHIP boundaries. Lochinvar Developments Pty Ltd should seek written approval from AHIP holder Hunter Water Corporation to complete works within the boundary of AHIP #C0001860 which expires on 19th May 2026; and
- 4) An Aboriginal Site Impact Recording Form (ASIRF) will be completed following an AHIP.

GLOSSARY

Aboriginal Cultural Heritage Values: traditional values of Aboriginal people, handed down in spiritual beliefs, stories and community practices and may include local plant and animal species, places that are important and ways of showing respect for other people.

Aboriginal Place: are locations that have been recognised by the Minister (and gazetted under the *National Parks and Wildlife Act 1974*) as having special cultural significance to the Aboriginal community. An Aboriginal Place may or may not include archaeological materials.

Aboriginal Site: an Aboriginal site is the location of one or more Aboriginal archaeological objects, including flaked stone artefacts, midden shell, grinding grooves, archaeological deposits, scarred trees etc.

Artefact: any object that is physically modified by humans.

Assemblage: a collection of artefacts associated by a particular place or time, assumed generated by a single group of people, and can comprise different artefact types.

Axe: a stone-headed axe usually having two ground surfaces that meet at a bevel.

Backed artefact: a stone tool where the margin of a flake is retouched at a steep angle and that margin is opposite a sharp edge.

Background scatter: a term used to describe low density scatter of isolated finds that are distributed across the landscape without any obvious focal point.

Blade: a flake that is at least twice as long as it is wide.

Bondi point: a small asymmetrical backed artefact with a point at one end and backing retouch.

Core: a chunk of stone from which flakes are removed and will have one or more negative flake scars but no positive flake scars. The core itself can be shaped into a tool or used as a source of flakes to be formed into tools.

Debitage: small pieces of stone debris that break off during the manufacturing of stone tools. These are usually considered waste and are the by-product of production (also referred to as flake piece).

Flake: any piece of stone struck off a core and has a number of characteristics including ring cracks showing where the hammer hit the core and a bulb of percussion. May be used as a tool with no further working, may be retouched or serve as a platform for further reduction.

Flaked piece/waste flake: an unmodified and unused flake, usually the by-product of tool manufacture or core preparation (also referred to asdebitage).

Formation processes: human caused (land uses etc) or natural processes (geological, animal, plant growth etc) by which an archaeological site is modified during or after occupation and abandonment. These processes have a large effect on the provenience of artefacts or features.

Grinding stone: an abrasive stone used to abrade another artefact or to process food.

Hammer stone: a stone that has been used to strike a core to remove a flake, often causing pitting or other wear on the stone's surface.

Harm: is defined as an act that may destroy, deface or damage an Aboriginal object or place. In relation to an object, this means the movement or removal of an object from the land in which it has been situated

Holocene: the post-glacial period, beginning about 10,000 B.P.

In situ: archaeological items are said to be "in situ" when they are found in the location where they were last deposited.

Pleistocene: the latest major geological epoch, colloquially known as the "Ice Age" due to the multiple expansion and retreat of glaciers. Ca. 3,000, 000-10,000 years B.P.

Retouched flake: a flake that has been flaked again in a manner that modified the edge for the purpose of resharpening that edge.

Stratified Archaeological Deposits: Aboriginal archaeological objects may be observed in soil deposits and within rock shelters or caves. Where layers can be detected within the soil or sediments, which are attributable to separate depositional events in the past, the deposit is said to be stratified. The integrity of sediments and soils are usually affected by 200 years of European settlement and activities such as land clearing, cultivation and construction of industrial, commercial and residential developments.

Stream order: All watercourse orders stated are determined from hydro "Blue" lines taken from topographic maps and strahler stream order classification.

Taphonomy: the study of processes which have affected organic materials such as bone after death; it also involves the microscopic analysis of tooth-marks or cut marks to assess the effects of butchery or scavenging activities.

Traditional Aboriginal Owners: Aboriginal people who are listed in the Register of Aboriginal owners pursuant to Division 3 of the *Aboriginal Land Register Act (1983)*. The Registrar must give priority to registering Aboriginal people for lands listed in Schedule 14 of the *National Parks and Wildlife Act 1974* or land subject to a claim under 36A of the *Aboriginal Land Rights Act 1983*.

Traditional Knowledge: Information about the roles, responsibilities and practices set out in the cultural beliefs of the Aboriginal community. Only certain individuals have traditional knowledge and different aspects of traditional knowledge may be known by different people, e.g., information about men's initiation sites and practices, women's sites, special pathways, proper responsibilities of people fishing or gathering food for the community, ways of sharing and looking after others, etc.

Typology: the systematic organization of artefacts into types on the basis of shared attributes.

Use wear: the wear displayed on an artefact as a result of use.

ACRONYMS

| | |
|--------------|---|
| ACHA | Aboriginal Cultural Heritage Assessment |
| ACHMP | Aboriginal Cultural Heritage Management Plan |
| AHIMS | Aboriginal Heritage Information Management System |
| AHIP | Aboriginal Heritage Impact Permit |

AHIMS SITE ACRONYMS

| | |
|------------|---|
| ACD | Aboriginal ceremonial and dreaming |
| AFT | Artefact (stone, bone, shell, glass, ceramic and metal) |
| ARG | Aboriginal resource and gathering |
| ART | Art (pigment or engraving) |
| BOM | Non-human bone and organic material |
| BUR | Burial |
| CFT | Conflict site |
| CMR | Ceremonial ring (stone or earth) |
| ETM | Earth mound |
| FSH | Fish trap |
| GDG | Grinding groove |
| HAB | Habitation structure |
| HTH | Hearth |
| OCQ | Ochre quarry |
| PAD | Potential archaeological Deposit |
| SHL | Shell |
| STA | Stone arrangement |
| STQ | Stone quarry |
| TRE | Modified tree (carved or scarred) |
| WTR | Water hole |

1 INTRODUCTION

1.1 INTRODUCTION

McCardle Cultural Heritage Pty Ltd (MCH) has been engaged by Lochinvar Developments Pty Ltd to prepare an Aboriginal Cultural Heritage Assessment (ACHA), and an Aboriginal Heritage Impact Permit (AHIP), if required, for the proposed residential subdivision of land located at the corner of the New England Highway and Windella Road, Lochinvar.

The assessment has been undertaken to meet the Heritage NSW, Department of Premier & Cabinet, Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (DECCW 2010), the Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH 2011), the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW 2010b), Councils’ requirements and the brief.

1.2 PROPONENT DETAILS

Lochinvar Developments Pty Ltd

1.3 THE PROJECT AREA

The project area is defined by the proponent and is located at the corner of the New England Highway and Windella Road, Lochinvar. Including Lot 2/DP 747391, Lot 3/DP 747391, Lot 4/DP 747391, Lot 5/DP 747391, Lot 6/DP 747391, Lot 12/DP 1219648, Lot 13/DP 1219648 and Lot 9/DP 747391 the location and extent of the project area is illustrated in Figures 1.1 to 1.3.

Some minor interface works surrounding the boundary of the development are also identified for Lot 1 DP65706; Lot 2 DP818314 and Lot 11 DP1219648. Potential intersection works on the corner of New England Highway and Windella Road are possible; however, would be assessed separately to the subdivision Development Application under Part 5 of the Act.

Figure 1.1 Regional location of the project area

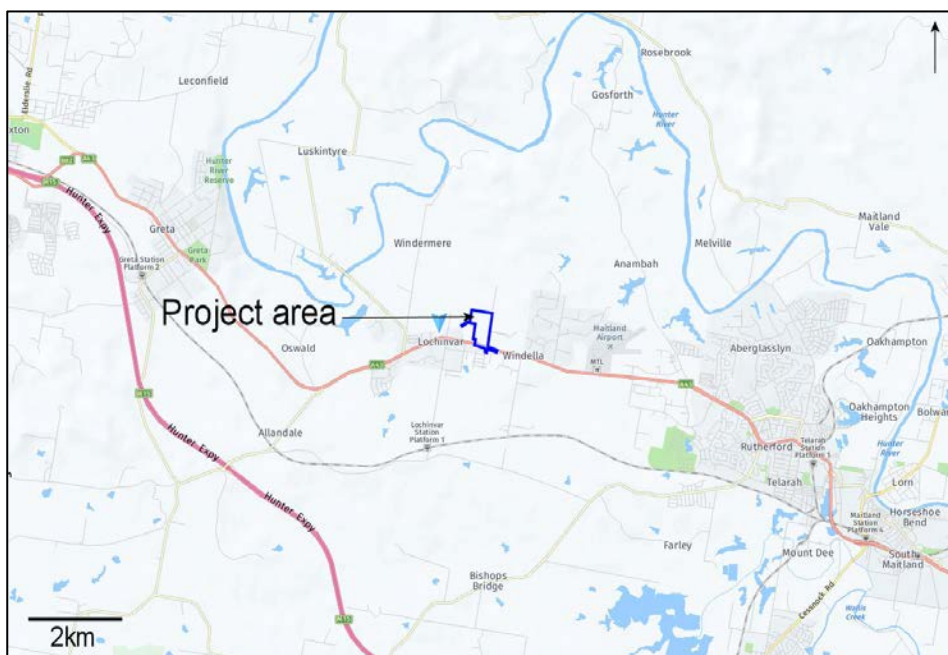


Figure 1.3 Local location of the project area

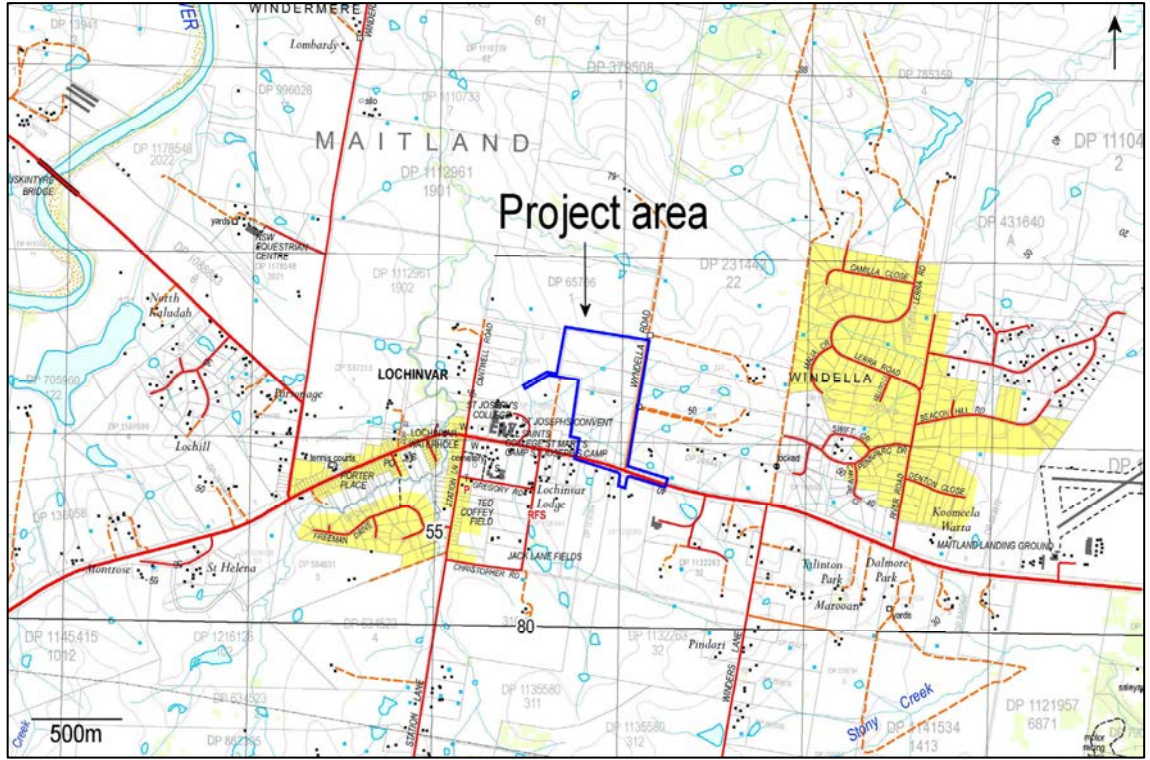
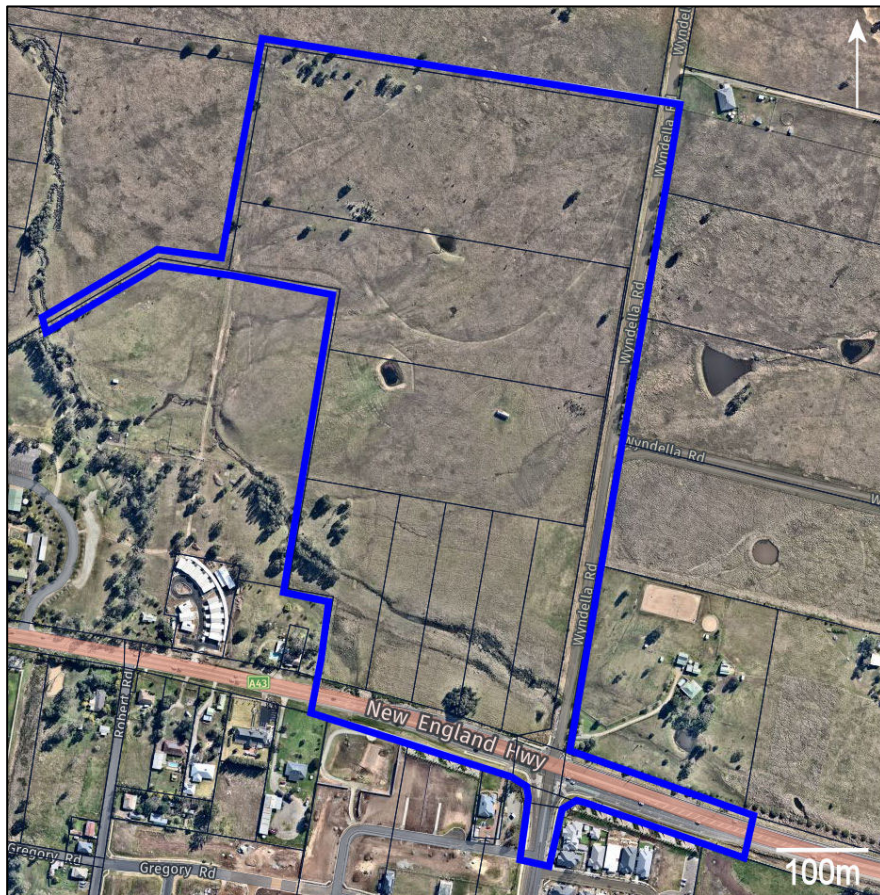


Figure 1.2 Aerial photograph of the project area (Nearmap 2022)



1.4 DESCRIPTION OF THE PROPOSED DEVELOPMENT

The project will include the subdivision of the project area into residential lots. Works typically associated with residential developments include clearing and demolition of existing structures, site remediation, bulk earthworks including construction of dwellings and roads, services reticulation: WW, PW, NBN, electrical and gas and landscaping.

1.5 PURPOSE OF THE ARCHAEOLOGICAL ASSESSMENT

The purpose of the assessment is to assess any archaeological constraints to support the proposal and to provide opportunities and options to ensure any cultural materials present are protected through appropriate mitigation and management.

1.6 OBJECTIVE OF THE ASSESSMENT

The objective of the assessment is to identify areas of Aboriginal cultural heritage value, to determine possible impacts on any Aboriginal cultural heritage identified (including potential subsurface evidence) and to develop management recommendations where appropriate. The assessment employs a regional approach, taking into consideration the landscape of the project area (landforms, water resources, soils, geology etc), the regional archaeological patterning identified by past studies, natural processes (e.g., erosion) as well as land uses and associated impacts across the landscape and any associated cultural that may be present.

1.7 PROJECT BRIEF/SCOPE OF WORK

The following tasks were carried out:

- a review of relevant statutory registers and inventories for indigenous cultural heritage including the Aboriginal Heritage Information Management System (AHIMS) for known archaeological sites, the State Heritage Register, the National Heritage List, the Commonwealth Heritage List, the National Trust Heritage Register and the relevant Local Environmental Plan;
- a review of local environmental information (e.g., topographic, geological, soil, geomorphological, vegetation, hydrology) to determine the likelihood of archaeological sites and specific site types that may be present, prior and existing land uses and associated impacts and site disturbance that may affect site integrity;
- a review of previous investigations to determine the extent of archaeological investigations in the area and identify any archaeological patterns;
- the development of a predictive archaeological model based on the data searches and literature review;
- identification of human and natural impacts in relation to the known and any new archaeological sites and archaeological potential within the project area;
- consultation with the Registered Aboriginal Parties (RAPs) as per the Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010);
- undertake a site inspection with the participation of the RAPs, and
- the development of mitigation and conservation measures in consultation with the RAPs.

1.8 LEGISLATIVE CONTEXT

The following overview of the legislative framework, is provided solely for information purposes for the client, and should not be interpreted as legal advice. MCH will not be liable for any actions taken by any person, body or group as a result of this general overview and MCH recommends that specific legal advice be obtained from a qualified legal practitioner prior to any action being taken as a result of the general summary below.

Land managers are required to consider the effects of their activities or proposed development on the environment under several pieces of legislation. Although there are a number of Acts and regulations protecting Aboriginal heritage, including places, sites and objects, within NSW, the three main ones include:

- National Parks and Wildlife Act (1974, as amended)
- National Parks and Wildlife Regulation (2019)
- Environmental Planning and Assessment Act (1979)

1.8.1 NATIONAL PARKS AND WILDLIFE ACT (1974, AS AMENDED)

The National Parks and Wildlife Act (1974), Amended 2019, is the primary legislation for the protection of Aboriginal cultural heritage in New South Wales. The NPW Act protects Aboriginal heritage (places, sites and objects) within NSW and the protection of Aboriginal heritage is outlined in s86 of the Act, as follows:

- “A person must not harm or desecrate an object that the person knows is an Aboriginal object” s86(1)
- “A person must not harm an Aboriginal object” s86(2)
- “A person must not harm or desecrate an Aboriginal place” s86(4)

Penalties apply for harming an Aboriginal object, site or place. The penalty for knowingly harming an Aboriginal object (s86[1]) and/or an Aboriginal place (s86[4]) is up to \$550,000 for an individual and/or imprisonment for 2 years; and in the case of a corporation the penalty is up to \$1.1 million. The penalty for a strict liability offence (s86[2]) is up to \$110,000 for an individual and \$220,000 for a corporation.

Harm under the National Parks and Wildlife Act (1974, as amended) is defined as any act that; destroys defaces or damages the object, moves the object from the land on which it has been situated, causes or permits the object to be harmed. However, it is a defence from prosecution if the proponent can demonstrate that;

- 1) harm was authorised under an Aboriginal Heritage Impact Permit (AHIP) (and the permit was properly followed), or
- 2) the proponent exercised due diligence in respect to Aboriginal heritage.

The ‘due diligence’ defence (s87[2]), states that if a person or company has applied due diligence to determine that no Aboriginal object, site or place was likely to be harmed as a result of the activities proposed for the Project Area, then liability from prosecution under the NPW Act 1974 will be removed or mitigated if it later transpires that an Aboriginal object, site or place was harmed. If any Aboriginal objects are identified during the activity, then works should cease in that area and Heritage NSW, Department of Premier & Cabinet notified (DECCW 2010:13). The due diligence defence does not allow for continuing harm or as defence to s.86(1) or (4).

1.8.2 NATIONAL PARKS AND WILDLIFE REGULATION (2019)

The National Parks and Wildlife Regulation 2019 provides a framework for undertaking activities and exercising due diligence in respect to Aboriginal heritage. The Regulation (201909) recognises various due diligence codes of practice, including the Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW, but it also outlines procedures for Aboriginal Heritage Impact Permit (AHIP) applications and Aboriginal Cultural Heritage Consultation Requirements (ACHCRs); amongst other regulatory processes.

1.8.3 ENVIRONMENTAL PLANNING & ASSESSMENT ACT 1979 (EP&A ACT)

EP&A Act establishes the statutory framework for planning and environmental assessment in NSW and the implementation of the EP&A Act is the responsibility of the Minister for Planning, statutory authorities and local councils. The EP&A Act contains three parts which impose requirements for planning approval:

- Part 3 of the EP&A Act relates to the preparation and making of Environmental Planning Instruments (EPIs), State Environmental Planning Policies (SEPPs) and Local Environmental Plans (LEPs).
- Part 4 of the EP&A Act establishes the framework for assessing development under an EPI. The consent authority for Part 4 development is generally the local council, however the consent authority may be the Minister, the Planning Assessment Commission or a joint regional planning panel depending upon the nature of the development.
- Part 4, Division 4.1 of the EP&A Act establishes the assessment pathway for State significant Development (SSD) declared by the State Environmental Planning Policy (State and Regional Development) 2011 (NSW). Once a development is declared as SSD, the Secretary's Environmental Assessment Requirements (SEARs) will be issued outlining what issues must be considered in the EIS.
- Part 5 of the EP&A Act provides for the control of 'activities' that do not require development consent and are undertaken or approved by a determining authority. Development under Part 5 that are likely to significantly affect the environment is required to have an EIS prepared for the proposed activity.
- Part 5.1 of the EP&A Act establishes the assessment pathways for State Significant Infrastructure (SSI). Development applications made for SSI can only be approved by the Minister. Once a development is declared as SSI, the SEARs will be issued outlining what issues must be addressed in the EIS.

The applicable approval process is determined by reference to the relevant environmental planning instruments and other controls, LEPs and State Environmental Planning Policies (SEPPs). This project falls under Part 4 and Part 5.

1.9 QUALIFICATIONS OF THE INVESTIGATOR

Dr. Penny McCardle: Principal Archaeologist & Forensic Anthropologist has 22 years experience in Indigenous archaeological assessments, excavation, research, reporting, analysis and consultation and 19 years in skeletal identification, biological profiling and skeletal trauma identification for NPWS, NSW Police and the NSW Department of Forensic Medicine.

- BA (Archaeology and Palaeoanthropology): Indigenous archaeology, University of New England 1999

- Hons (Archaeology and Palaeoanthropology): Physical Anthropology, University of New England 2001
- Forensic Anthropology Course, University of New England 2003
- Armed Forces Institute of Pathology Forensic Anthropology Course, Ashburn, VA 2008
- Analysis of Bone trauma and Pseudo-Trauma in Suspected Violent Death Course, Erie College, Pennsylvania, 2009
- Documenting Scenes of War and Human Rights Violations. Institute for International Criminal Investigations, 2018
- PhD, University of Newcastle, 2019

1.10 REPORT STRUCTURE

The report includes Section 1 which outlines the project, Section 2 provides the consultation, Section 3 presents the environmental context, Section 4 presents ethno historic context, Section 5 provides the archaeological background, Section 6 provides the results of the fieldwork, analysis and discussion; Section 7 presents the significance assessment, Section 8 the development impact assessment, Section 9 presents the mitigation strategies and Section 10 presents the management recommendations.

2 CONSULTATION

As per the Heritage NSW, Department of Premier & Cabinet Aboriginal Cultural Heritage Consultation Requirements for Proponents (April 2010), MCH followed the four stages of consultation as set out below. All correspondences for each stage are provided in Appendix A.

In relation to cultural significance, MCH recognises and supports the indigenous system of knowledge. That is, that knowledge is not 'open' in the sense that everyone has access and an equal right to it. Knowledge is not always definitive (in the sense that there is only one right answer) and knowledge is often restricted. As access to this knowledge is power, it must be controlled by people with the appropriate qualifications (usually based on age seniority, but may be based on other factors). Thus, it is important to obtain information from the correct people: those that hold the appropriate knowledge of those sites and/or areas relevant to the project. It is noted that only the Aboriginal community can identify and determine the accepted knowledge holder(s) may be not archaeologists or proponents. If knowledge is shared, that information must be used correctly and per the wishes of the knowledge holder.

Whilst an archaeologist may view this information as data, a custodian may view this information as highly sensitive, secret/sacred information and may place restrictions on its use. Thus, it is important for MCH to engage in affective and long-term consultation to ensure knowledge is shared and managed in a suitable manner that will allow for the appropriate management of that site/area. MCH also know that archaeologists do not have the capability nor the right to adjudicate on the spirituality of a particular location or site as this is the exclusive right of the traditional owners who have the cultural and hereditary association with the land of their own ancestors. For these reasons, consultation forms an integral component of all projects and this information is sought from the registered stakeholders to be included in the report in the appropriate manner that is stipulated by those with the information.

2.1 STAGE 1: NOTIFICATION & REGISTRATION OF INTEREST

The aim of this stage is to identify, notify and register Aboriginal people and/or groups who hold cultural knowledge that is relevant to the project area, and who can determine the cultural significance of any Aboriginal objects and/or places within the proposed project area. In order to do this, the sources identified by Heritage NSW, Department of Premier & Cabinet (OEH 2010:10) and listed in Table 2.1, to provide the names of people who may hold cultural knowledge that is relevant to determining the significance of Aboriginal objects and/or places were contacted by letter on 9th December 2022). Information included in the correspondence to the sources listed in Table 2.1 included the name and contact details of the proponent, an overview of the proposed project including the location and a map showing the location.

Table 2.1 Sources contacted

| Organisations contacted | Response |
|---|----------------------|
| Office of Environment and Heritage | 50 groups |
| Mindaribba LALC | no groups |
| Maitland City Council | no response |
| Registrar Aboriginal Land Rights Act 1983 | no response |
| National Native Title Tribunal | no claims - freehold |
| Native Title Services Corporation Limited | no response |
| Hunter Local Land Services | no response |

Following this, MCH compiled a list of people/groups to contact (Refer to Appendix A). As per the Aboriginal cultural heritage consultation requirements for proponents (April 2010), archaeologists and proponents must write to all those groups provided asking if they would like to register their interest in the project. Unfortunately, some Government departments written to requesting a list of groups to consult with do not differentiate groups from different traditional boundaries and provide an exhaustive list of groups from across the region including those outside their traditional boundaries.

MCH wrote to all parties identified by the various departments on the 28th December 2022, and an advertisement was placed in the Maitland Mercury on 23rd December 2022. Additional time to register was provided due to the Christmas and New Year holidays. The correspondence and advertisement included the required information as per the Aboriginal Cultural Heritage Consultation Requirements for Proponents (April 2010) and requested to nominate the preferred option for the presentation of information about the proposed project: an information packet or a meeting and information packet (Refer to Stage 2). The Registered Aboriginal Parties (RAPs) are listed in Table 2.2.

Table 2.2 Registered Aboriginal Parties

| RAP | Contact |
|-----------------------------------|-------------------------|
| A1 Indigenous Services | Carolyn Hickey |
| Corroboree Aboriginal Corporation | Marilyn Carroll-Johnson |
| Culturally Aware | Tracey Skene |
| Widescope Indigenous Group | Steven Hickey |
| Gomery Cultural Consultants | David Horton |
| Hunter Traditional Owner | Paulette Ryan |
| | Robert Syron |
| AHCS | Amanda De Zwart |

2.2 STAGE 2: PRESENTATION OF INFORMATION

The aim of this stage is to provide the RAPs with information regarding the scope of the proposed project and the Indigenous cultural heritage assessment process.

As the RAPs did not provide their preferred method of receiving information, an information packet was sent to all RAPs and included the required information as per the Aboriginal Cultural Heritage Consultation Requirements for Proponents (April 2010). The pack included the required information as per the Aboriginal Cultural Heritage Consultation Requirements for Proponents (April 2010) and a written response to the proposed methods was due no later than 21st February 2023.

The information pack also stipulated that consultation was not employment, and requested that in order to assist the proponent in the engagement of field workers, that the groups provide information that will assist in the selection of field staff who may be paid on a contractual basis. This included, but was not limited to, experience in field work and in providing cultural heritage advice and their relevant experience; and to provide a CV and insurance details.

The information pack also noted that failure to provide the required information by the date required (28 days) will result in a missed opportunity for the RAPs to contribute to their cultural heritage and the project will proceed.

2.3 STAGE 3: GATHERING INFORMATION ABOUT CULTURAL SIGNIFICANCE

The aim of this stage is to facilitate a process whereby the RAPs may contribute to culturally appropriate information gathering and the research methodology, provide information that will enable the identification of the cultural significance of any Aboriginal objects and or/places within the proposed project area, and have input into the development of any cultural heritage management and mitigation measures. In order to do this, included in the information pack sent for Stage 2, was information pertaining to the gathering of cultural knowledge. This included the following information;

- MCH noted that information provided by RAPs may be sensitive and MCH and the proponent will not share that information with all RAPs or others without the express permission of the individual. MCH and the proponent extended an invitation to develop and implement appropriate protocols for sourcing and holding cultural information including any restrictions to place on information, as well as the preferred method of providing information;
- request for traditional/cultural knowledge or information associated with ceremonial, spiritual, mythological beliefs, traditions and known sites from the pre-contact period;
- request for traditional/cultural knowledge or information regarding sites or places with historical associations and/or cultural significance which date from the post-contact period and that are remembered by people today (e.g., plant and animal resource use areas, known camp sites); and
- request for traditional/cultural knowledge or information in relation to any sites or places of contemporary cultural significance (apart from the above) which has acquired significance recently.

During this process, the RAPs did not disclose any specific traditional/cultural knowledge or information of sites or places associated with spiritual, mythological, ceremonies or beliefs from the pre contact period, historic and, or, contemporary periods, within the project area or surrounding area. However, it must be noted that traditional/cultural knowledge and/or

information regarding sites and/or places of cultural significance may exist that were not divulged to MCH by those consulted.

2.4 SURVEY

All RAPs were invited to participate in the survey on 21st March 2023. Unfortunately, no RAPs attended and the survey proceeded.

2.5 STAGE 4: REVIEW OF DRAFT CULTURAL HERITAGE ASSESSMENT

Copies of the draft report were forwarded to all RAPs for their review and were asked to provide a written or verbal response no later than 24th April 2023. Robert Syron supported the report and recommendations and no other RAP responded.

2.6 TEST EXCAVATION

All RAPs were invited to participate in the test excavation that commenced on 13th February 2024. Paulette Ryan (Hunter Traditional Owner), Luke Hickey and Josh Hickey (Widescope Indigenous Group) attended the test excavation. Discussions during the excavation centred on the disturbances across the area and significant clays throughout the deposits. All present agreed the area was highly disturbed and unlikely to have been favoured for camping.

2.7 REVIEW OF DRAFT CULTURAL HERITAGE ASSESSMENT

Copies of the draft report were forwarded to all RAPs for their review and were asked to provide a written or verbal response no later than 18th April 2024. MCH received no responses and all RAPs were sent a copy of the final report. All documentation regarding the consultation process is provided in Appendix A.

3 LANDSCAPE AND ENVIRONMENTAL CONTEXT

3.1 INTRODUCTION

Documenting and understanding the context of archaeological sites in relation to surrounding terrain features is essential to landscape archaeological studies worldwide (De Reu et al., 2011; De Smedt et al., 2013; Turrero et al., 2013) and the nature and distribution of Aboriginal cultural materials in a landscape are strongly influenced by environmental factors such as topography, geology, landforms, climate, geomorphology, hydrology and the associated soils and vegetation (Hughes and Sullivan 1984). These factors influence the availability of plants, animals, water, raw materials, the location of suitable camping places, ceremonial grounds, burials, and suitable surfaces for the application of rock art. As site locations may differ between landforms due to differing environmental constraints that result in the physical manifestation of different spatial distributions and forms of archaeological evidence, these environmental factors are used in constructing predictive models of Aboriginal site locations, based on the assumption that the environment provided constraints and opportunities that influenced such behaviour in relation to site selection and use.

Environmental factors also effect the degree to which cultural materials have survived in the face of both natural and human influences and affect the likelihood of sites being detected during ground surface survey. Site detection is dependent on a number of environmental factors including surface visibility (which is determined by the nature and extent of ground cover including grass and leaf litter etc) and the survival of the original land surface and associated cultural materials (by flood alluvium, erosion etc). It is also dependant on the exposure of the original landscape and associated cultural materials by human impacts (e.g., Aboriginal fire stick farming, clearing, logging, agricultural activities, construction works, mining etc), (Hughes and Sullivan 1984). Combined, these processes and activities are used in determining the likelihood of both surface and subsurface cultural materials surviving and being detected.

It is therefore necessary to understand the environmental factors, processes and activities, all of which affect site location, preservation and detection during surface survey and the likelihood of in situ subsurface cultural materials being present. The environmental factors, processes and disturbances of the surrounding environment and specific project area are discussed below.

3.2 GEOLOGY

The underlying regional geology plays a major role in the structure of the surrounding environment (e.g., landforms, topography, geomorphology, vegetation, climate, hydrology etc), and also influences patterns of past occupation and their manifestation in the archaeological record. This is primarily relevant to past Aboriginal land use in regard to the location of stone resources or raw materials and their procurement for the manufacturing and modification of stone tools.

The processes of sedimentation, uplift, ongoing physical and chemical weathering, re-deposition and volcanic activity have resulted in the formation of a complex landscape in the regional area that incorporates diversity in topography, vegetation and wildlife. For its Aboriginal inhabitants, these processes have resulted in the presence of caves and ledges suitable for shelter/occupation and the application of rock art, deposits of raw materials essential to the manufacture of stone tools as well as locations that provide the rocky creek bed outcrops utilised in the production of ground-edge implements.

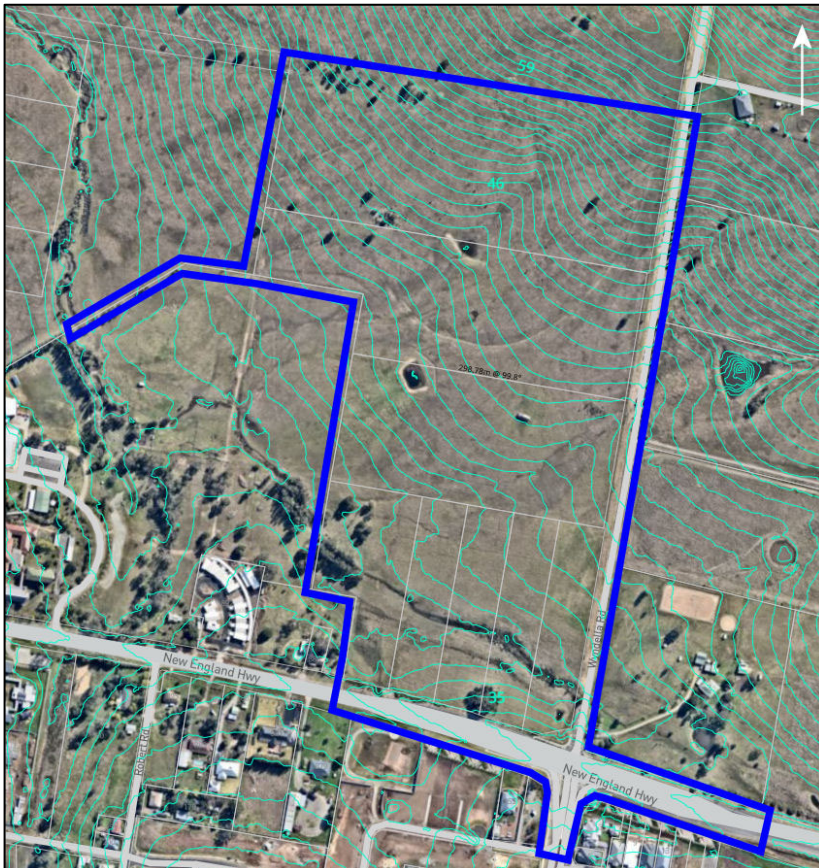
The project area is located within the Central Lowlands, (a broad lowland belt of lowlands approximately 15 kilometres wide) which lies at the centre of the region extending from Murrurundi to Newcastle. Consisting of the Permian Dalwood Group of the Lochinvar geological formation of siltstone, sandstone, basic lava and tuff (Singleton Geological Map Sheet 1969), the presence of tuff within the geology of the project area indicates that stone materials suitable for manufacturing stone artefacts may occur in various locations throughout the project area.

3.3 TOPOGRAPHY

The topographical context is important to identify potential factors relating to past Aboriginal land use patterns and is largely determined by the geology and is important to identify potential factors relating to past Aboriginal land use patterns as not all landforms are suitable camping locations. Story et al (1963) divided the Hunter Valley into eight main sub-regions including the Southern Mountains, Central Goulburn Valley, Merriwa Plateau, Liverpool and Mt Royal Ranges, Barrington tops, North-Eastern Mountains, Central lowlands and the Coastal Zone.

The project area is located within the Central Lowlands, (a broad lowland belt of lowlands approximately 15 kilometres wide) which lies at the centre of the region extending from Murrurundi to Newcastle. It is bounded on all sides by steep rugged country except in the far west where the Cassilis Gate provides access to the interior. To the south is dissected plateau country; to the north and west are the Liverpool Range and Barrington Uplands. As shown in Figure 3.1, the project area consists of a south western facing slope with two drainage lines and a creek in the southern end of the project area.

Figure 3.1 Contours/topography of the project area



3.4 GEOMORPHOLOGY

Geomorphology is the study of landscapes, their evolution and the processes operating within earth systems. Cultural remains are part of these systems, having being deposited on, and in part, resulting from interactions within landscapes of the past. An understanding of geomorphological patterning and alterations is therefore essential in assess and interpreting the archaeological record.

The geomorphology of the Hunter Valley is complex and is summarised below based upon studies undertaken by Galloway (1963) and Hughes (1984). The Hunter Valley contains a variety of landforms ranging from rugged mountains to plains and varying in elevation from sea level to over 1500 metres (AHD). It is surrounded on all sides by mountainous terrain with the exception of the western portion where a low rise divides it from the Darling River drainage area and the south eastern zone where it is bounded by the Pacific Ocean.

Four major elements are distinguished in the drainage pattern. The western half of the valley is drained by the Goulburn River and its tributaries that flow east to Denman. The north-eastern part is drained by the upper Hunter River, which flows southwest to unite with the Goulburn River at Denman. The combined rivers then flow east-south-east as the lower Hunter River, opening to the ocean at Newcastle. The Williams and Paterson Rivers drain the high country of the Barrington Tops in the east and join the Hunter River near its mouth. The watershed of the Goulburn River coincides with the Great Dividing Range, where it swings west in a vast loop.

The CSIRO (Story et al 1963) conducted a study of the Hunter Region and classified the landforms into nine sub-regions (Mt Royal Range, Liverpool Ranges, Northeast Mountains, Barrington Tops, Merriwa Plateau, Central Goulburn Valley, Southern Mountains, Central Lowlands and the Coastal Zone). The project area lies within the Central Lowlands, which is a belt of lowlands developed on the weak sedimentary rocks that extend from Murrurundi to Newcastle.

The soils throughout the region reflect the influence of a range of factors including the parent geological material, topography, climate, organisms and length of formation time. Differences between these elements are reflected in variation in soil types across the Hunter Valley. Texture contrast soils mantle the undulating to hilly landscapes on Permian and Carboniferous rocks and the older alluvial terraces and valley fills. The two major groups of texture contrast soils include solonetzic and podzolic soils. These soils consist of an upper soil Horizon A and underlying B (referred to as duplex soils). The upper A unit consists of grey to buff silts and sand with gravels, is usually no greater than one metre in depth (usually shallower), has a weakly developed soil profile and is typically discontinuous, especially along hill slopes. The underlying B unit consists of brown-red gravel rich clays with evidence of deep weathering and strongly contrasting horizons.

Unit A and Unit B are interpreted as being Holocene and Pleistocene in age respectively. Within the region, sites tend to occur on or within soil Horizon A or are often present at the interface of the A and B horizons. Within the A horizon the lowermost (in terms of vertical positioning) artefact assemblages tend to contain artefacts that are typically attributed to the mid-Holocene, as characterised by an increase in the number of backed artefacts. Given the lack of detailed information regarding artefact sequences and chronologies in the Hunter Valley, this assumption should not be accepted without question. However, on geomorphological grounds, A horizon soils in this context are generally considered as dating to the mid-late Holocene (Dean-Jones and Mitchell 1993:76).

In contrast, the underlying weathered nature of the clayey B-horizon indicates that its parent material is much older. Evidence of earlier occupation of the region was identified at Warkworth West (AMBS 2002) where a limited artefact assemblage is present within deposit older than 14,000

years. It is also suggested that materials from Fal Brook and Carrington date to the Pleistocene period (Koettig 1987). The B-horizon parent material in hill slope formations is typically composed of weathered, in-situ bedrock whereas soils along the valley floors are generally alluvial or colluvial in origin.

The archaeological importance of foot slopes and valley floors with soils of this type is enhanced by the fact that the interaction between alluvial and colluvial deposition can result in the formation of sealed deposits. However, landforms of this type are also prone to erosion which may broadly reveal previously buried archaeological evidence. Extensive sheet and gully erosion occurs throughout the area, potentially resulting in artefacts that were originally deposited on or within the A-horizon being exposed as highly visible lag. Thus, although erosion greatly increases the visibility of artefacts, it also disturbs and damages them.

Similarly, the impacts of bioturbation upon the archaeological record must also be addressed. Focussed studies regarding bioturbation have primarily been conducted outside Australia (e.g., Armour-Chelu and Andrews 1994; Fowler et al 2004; Peacock and Fant 2002). Therefore, whilst the subsequent findings are broadly applicable within the Australian context, further research is certainly warranted. In general, it appears that, within duplex soils, the burrowing activities of fauna including earthworms can often cause the lateral and horizontal movement of artefacts through the soil profile, eventually resulting in the formation of a stone layer at the interface of the A and B horizons. The other important element to address is the differential movement of artefacts according to size/weight. In this respect, bioturbation has the potential to artificially conflate and separate artefacts according to size grouping as opposed to depositional context (Fowler et al 2004; Armour-Chelu and Andrews 1994).

As duplex soils are the dominant soil type within the Hunter Valley, the inherent properties of these soils must be taken into consideration in regard to the likelihood of site detection (through exposure by erosion), the stratigraphic context and age of sites, potential site location in relation to past use of the landscape and landscape instability. Certain land systems and types of deposit are however, considered to have greater potential to contain stratified and/or older archaeological sites. This does not imply that older sites are intrinsically more significant than more recent sites, rather, the more important issue in scientific terms is the level of integrity within the site. In broad terms, windblown sand sheets/dunes (such as those at Warkworth), alluvial fan deposits and foot slopes with the potential to have colluvial deposits should be considered as archaeologically sensitive landforms (refer to Dean-Jones and Mitchell 1993; Hughes 1984).

3.5 SOILS

The nature of the surrounding soil landscape also has implications for Aboriginal land use and site preservation, mainly relating to supporting vegetation and the preservation of organic materials, the location and age of cultural materials.

Past human actions impact the soil record, as seen through changes in soil characteristics, changes to sedimentation, and the presence of archaeological features and artefacts preserved within modern soils. Soil and sediment conditions control what survives in the burial environment, what decomposes, and consequently influence all archaeological sites, artefacts, and biological remains. Soils have formed under the continuous influence of people, up to the present day, when most land is actively managed for agriculture, pastoral, forestry, extraction or construction.

Soils may also be impacted on by natural agencies. The deposit of alluvial and aeolian sediments and colluvium movement of fine sediments (including artefacts) results in the movement and burying of archaeological materials. The increased movement in soils by this erosion is likely to

impact upon cultural materials through the post-depositional movement of materials, specifically small portable materials such as stone tools, contained within the soil profiles.

The impacts of the various land uses and natural agencies on the environment and soils are discussed in detail in Sections 3.9 and 3.10 respectively, and the soil landscapes of the project area are summarised below.

The far northern portion of the project area consists of the Rothbury soil landscape and the remainder consists of the Lochinvar soil landscape. The Rothbury soil landscape is characterised by undulating to rolling hills with elevations ranging from 60-140 metres. Local relief is 60-80 metres and drainage lines are common throughout the area (Kovac and Lawrie 1991:338). The main soils are Red Podzolic (dark brown fine sandy loam topsoil to a depth up to 30cm and pH 6.0-6.5, changing to reddish brown clay subsoil with a pH 5.5-6.0) occurring on upper slopes with Yellow Podzolic soils (dark brown sandy loam topsoil with a depth up to 20cm and pH 5.5-6.0, and changes to bright reddish-brown clay at depth with pH of 5.5) on mid slopes. Yellow Solodic soils (dull yellowish brown loamy sand topsoil to depth of 15cm and pH 6.0, changing to dull yellow orange clay and pH of 6.5) and brown Solotyhs (brown sandy loam topsoil to a depth of 25cm and pH 7.0, changes to brown clay at depth with pH of 5.5-6.5) occur on lower slopes with Prairie Soils (dark brown silt loam to a depth of 70cm and pH of 6.0, changes to dark brown clay and pH of 8.0) in the drainage lines (Kovac and Lawrie 1991:339). Minor sheet erosion on slopes with moderate sheet and gully erosion occurs on the lower slope areas.

The Lochinvar Soil Landscape includes topsoils (A horizon) on the gentle slopes consisting of dark brown silty clay loam (up to 40 centimetres in depth). This overlies a subsoil with a clear change to brown medium clay (B horizon). The steeper areas have topsoils that are brown to brownish black light sandy clay loam to silty clay loam and sometimes an A2 horizon is present and is a bleached bright brown sandy loam. This topsoil is up to 35 centimetres in depth and overlies a B horizon that consists of a change to brown sand to medium clay (Kovac and Lawrie 1991:258-259). On the mid to lower slopes the top soils are dark brown loam and are up to 20 centimetres in depth and a thin layer of bleached A2 may be present. This overlays a subsoil with a clear change to yellowish brown light clay B horizon.

As previously discussed in Section 3.4, these soils consist, consisting of an upper soil Horizon A and underlying, are interpreted as being Holocene and Pleistocene in age respectively. Within the region, sites tend to occur on or within soil Horizon A or are often present at the interface of the A and B horizons and artefact assemblages tend to contain artefacts that are typically attributed to the mid-Holocene, as characterised by an increase in the number of backed artefacts. Based on geomorphological grounds, A horizon soils in this context are generally considered as dating to the mid-late Holocene.

The A horizon of the Soil Landscapes of the project area are generally up to 40cm or less in depth and soil deflation and erosion expose rather than bury former land surfaces on which stone artefacts may have been present, removing the upper part of the soil profile, usually to the exposed B horizon. In addition to this, land uses such as clearing and ploughing (Refer to Section 3.9) also disturb the top 20cm of soils and contribute further to erosion. The result of these factors further deflates and erode the topsoils leaving shallow soils with the B horizon exposed in parts across the landscape.

3.6 CLIMATE

Climatic conditions would also have played a part in past occupation of an area as well as impacted upon the soils and vegetation and associated cultural materials. The climatic zone as defined by Kovac and Lawrie (1991) and is characterised by temperatures ranging from an

average minimum of below 5°C to an average maximum of 28°C. Winter rainfall levels are somewhat variable and generally average 30 millimetres per month. Summer rainfalls are more stable at approximately 55-60 millimetres per month, giving a mean annual rainfall of 740 millimetres. During summer, the increased rainfall rate and reduced ground cover is reflected in a proportionately higher risk of erosion.

3.7 WATERWAYS

One of the major environmental factors influencing human behaviour is water as it is essential for survival and as such people will not travel far from reliable water sources. In those situations where people did travel far from reliable water, this indicates a different behaviour such as travelling to obtain rare or prized resources and/or trade. Proximity to water not only influences the number of sites likely to be found but also artefact densities. The highest number of sites and the highest density are usually found in close proximity to water and usually on an elevated landform. This assertion is undisputedly supported by both the regional and local archaeological, where by such patterns have been identified and sites are typically within 50 metres of a reliable water source in the valley landforms and up to 100 metres in the sandstone country.

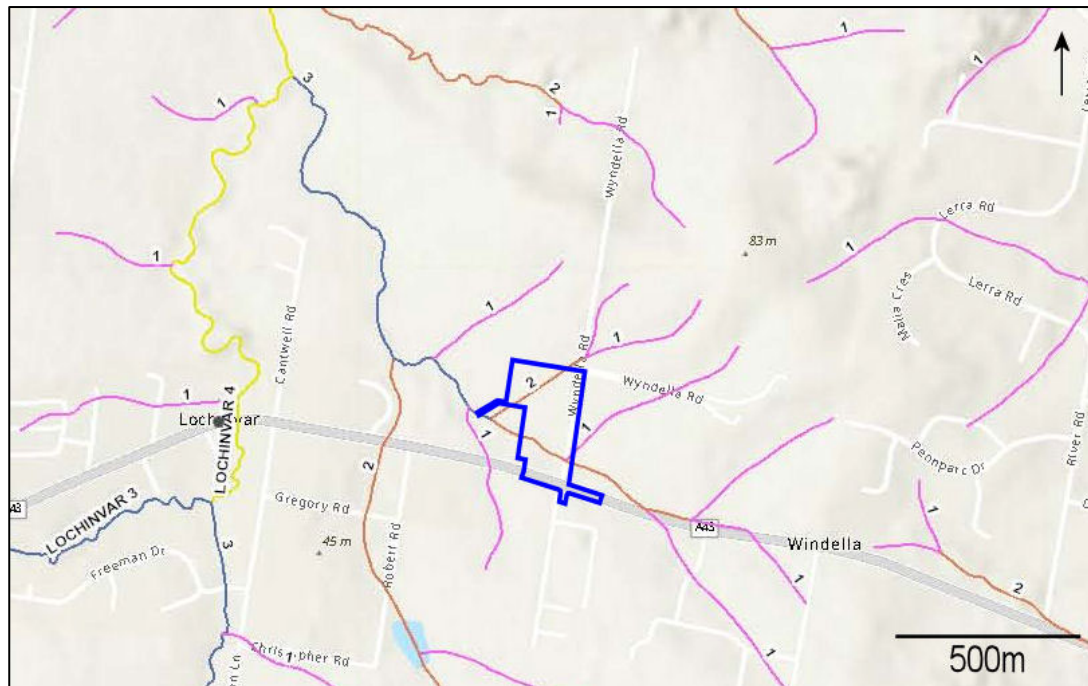
The main types of water sources include permanent (rivers and soaks), semi-permanent (large streams, swamps and billabongs), ephemeral (small stream and creeks) and underground (artesian). Stream order assessment is one way of determining the reliability of streams as a water source. Stream order is determined by applying the Strahler method to 1:25 000 topographic maps. Based on the climatic analysis, the project area will typically experience comparatively reliable rainfalls under normal conditions and thus it is assumed that any streams above a third order classification will constitute a relatively permanent water source.

The Strahler method dictates that upper tributaries do not exhibit flow permanence and are defined as first order streams. When two first order streams meet, they form a second order stream. Where two-second order streams converge, a third order stream is formed and so on. When a stream of lower order joins a stream of higher order, the downstream section of the stream will retain the order of the higher order upstream section (Anon 2003; Wheeling Jesuit University 2002).

As illustrated in Figure 3.2, although two 2nd order creeks are located in the project area, one in the north and one in the southern portion, the northern is actually a drainage depression. This drainage depression flows south west into a 2nd order creek that flows east/west through the southern part of the project area to form a 3rd order that is located outside the project area. The Hunter River (6th order) is located approximately 1.8 kilometres west of the project area.

In terms of past Aboriginal land uses and survival (water is necessary for survival), the project area may be considered low to moderately resourced in terms of water availability. The areas along the 2nd and 3rd order creeks during wet seasons or after continuous heavy rain when water was available would likely have been utilised to support hunting and gathering opportunities for small to medium sized groups and travel to the more reliable Hunter River located 1.8 kilometres to the west. Evidence of such past Aboriginal land uses manifests in the archaeological record as a background scatter of discarded artefacts across the landscape with some small camping location in close proximity to a reliable water source.

Figure 3.2 Stream orders within the project area



3.8 FLORA AND FAUNA

The availability of flora and associated water sources affect fauna resources, all of which are primary factors influencing patterns of past Aboriginal land use and occupation. The assessment of flora has two factors that assist in an assessment including a guide to the range of plant resources used for food and medicine and to manufacture objects including nets, string bags, shields and canoes which would have been available to Indigenous people in the past. The second is what it may imply about current and past land uses and to affect survey conditions such as visibility, access and disturbances.

European settlers extensively cleared the original native vegetation from the project area and is now dominated by introduced grasses with few trees scattered about the properties. The drainage throughout the project area would have supported a limited range of faunal populations including kangaroo, wallaby, goanna, reptiles and a variety of birds. A wider variety of resources would have been available in areas to the west in closer proximity to the Hunter River.

3.9 LANDUSES AND DISTURBANCES

Heritage NSW (DECCW 2010) defines disturbed lands as land that has been the subject of human activity that has changed the lands' surface and, or the subsurface, these changes being changes that remain clear and observable. Examples may include ploughing, construction works (roads, tracks, fire trails, dams, fences, clearing, utilities and infrastructure). This definition is based on the types of disturbances classified in The Australian Soil and Land Survey Field Handbook (CSIRO 2010) and Table 3.1 provides a scale formulated by the CSIRO of the levels of disturbances and their classification, which will assist in determining the level of disturbance across the project area and its impact on potential cultural material that may be present. These disturbances on the landscape have been thoroughly examined and recorded through numerous experiments (see

below) in a variety of landforms throughout the world, along with the impacts on objects within the deposits.

Table 3.1 Land use scale (CSIRO 2010)

| Minor disturbance | | Moderate disturbance | | Major disturbance | |
|---|--|--|---|---|---|
| Cleared and/or grazed at some time, but apparently never ploughed | | Cleared and/or grazed at some time, with ploughing also attested | | Severe disturbance to natural soil profiles; complete-to-near complete topsoil loss/disturbance | |
| 0 | No effective disturbance; natural | 3 | Extensive clearing (e.g., poisoning and ringbarking) | 6 | Cultivation: grain fed |
| 1 | No effective disturbance other than grazed by hoofed animals | 4 | Complete clearing: pasture native or improved, but never cultivated | 7 | Cultivation: irrigated, past and present |
| 2 | Limited clearing (e.g., selected logging) | 5 | Complete clearing: pasture native or improved, cultivated at some stage | 8 | Highly disturbed: e.g., quarry, road works, mining, landfill, urban |

Based upon archaeological evidence, the occupation of Australia extends back some 40,000 years (Mulvaney and Kamminga 1999). Although the impact of past Aboriginal occupation on the natural landscape is thought to have been relatively minimal, it cannot simply be assumed that 20,000 years of land use have passed without affecting various environmental variables. The practice of 'firestick farming' whereby the cautious setting of fires served to drive game from cover, provide protection and alter vegetation communities significantly influenced seed germination, thus increasing diversity within the floral community.

Following European settlement of the area in the 1820s, the regional landscape has been subjected to a range of different modifactory activities including extensive logging and clearing, agricultural cultivation (ploughing), pastoral grazing, residential developments and mining (Turner 1985). The associated high degree of landscape disturbance has resulted in the alteration of large tracts of land and the cultural materials contained within these areas. Based on aerial photography (Nearmap 2000 – 2021), the project area has been subject to a range of both moderate and high landuses disturbances and impacts. The project area has been cleared and primarily used for pastoral purposes (grazing) with at least one ploughing event for pasture grasses, involving the wholesale clearance of native vegetation, the introduction of pasture grass, the construction of dams, housing, fencing, numerous tracks and the construction of dams. These landuses and how they impact on the landscape and deposits are discussed below.

In terms of these land uses and impacts on the landscape and cultural materials that may be present, early vegetation clearing included the uprooting of trees by chaining which will disturbed or destroy that may be present near, or underneath trees and vegetation (Wood 1982). Farming and agricultural activities also disturbed the landscape. Although pastoralism is a comparatively low impact activity, it does result in disturbances due to vegetation clearance and the trampling and compaction of grazed areas. These factors accelerate the natural processes of sheet and gully erosion, which in turn can cause the horizontal and lateral displacement of artefacts. Furthermore, grazing by hoofed animals can affect the archaeological record due to the

displacement and breakage of artefacts resulting from trampling (Yorston et al 1990). Pastoral land uses are also closely linked to alterations in the landscape due to the construction of dams, fence lines and associated structures.

As a sub-set of agricultural land use, ploughing typically disturbs the top 10-12 centimetres of topsoil (Koettig 1986a) depending on the method and machinery used during the process. Ploughing increases the occurrence of erosion and can also result in the direct horizontal and vertical movement of artefacts, thus causing artificial changes in artefact densities and distributions. In fact, studies undertaken on artefact movement due to ploughing (e.g., Roper 1976; Odell and Cowan 1987) has shown that artefacts move between one centimetre up to 18 metres laterally depending on the equipment used and horizontal movement. Ploughing may also interfere with other features and disrupt soil stratigraphy (Lewarch and O'Brien 1981), all of which result in a disturbed deposit, which, depending on the depth of soils, may result in no site integrity remaining. Ploughing activities are typically evidenced through 'ridges and furrows' however a lengthy cessation in ploughing activities dictates that these features may no longer be apparent on the surface.

Excavation works required for developments, including but not limited to business, residential, industrial, aviation, works depots, mining, dams and associated infrastructure and utilities, require excavation, cut and fill methods. Remediation works also result in additional impacts and typically involve the removal of soils. These direct impacts to the land and associated cultural materials that may be present are easy to see and understand. Any form of construction or resource exploitation that involves the removal of, relocation of or compaction of soils sediments or minerals, requires the modification of the topography, thus displacing and/or destroying any cultural materials that may have been present (Wood 1982).

In terms of everyday land uses, vehicular movements on sites have been well documented and based on several experiments (DeBloois, Green and Wylie 1974, Gallagher 1978), have shown that vehicle movements over an archaeological site are extremely destructive to the site through compaction and movement, thus altering the spatial relationship and location of the artefacts. Based on general observations it is expected that the creation of dirt tracks for vehicle access would also result in the loss of vegetation and therefore will enhance erosion and the associated relocation of cultural materials. As fence construction require the removal of soils for the post holes, this would also have resulted in the disturbance and possible destruction of any cultural materials. All of which result in loss of vegetation and erosion to some extent.

As the A horizon of the Soil Landscape of the project area are generally 40 cm or less in depth (due to erosion), the above land uses, some of which impact deposits deeper than the soils present in the project area (clearing, dam construction), are expected to have significantly impacted on the soils within the project area and any cultural materials that may be present at those locations.

3.10 NATURAL DISTURBANCES

The disturbance of cultural materials can also be a result of natural processes. The patterns of deposition and erosion within a locality can influence the formation and/or destruction of archaeological sites. Within an environment where the rate of sediment accumulation is generally very high, artefacts deposited in such an environment will be buried shortly after being abandoned. Frequent and lengthy depositional events will also increase the likelihood of the presence of well-stratified cultural deposits (Waters 2000:538,540).

In a stable landscape with few episodes of deposition and minimal to moderate erosion, soils will form and cultural materials will remain on the surface until they are buried. Repeated and extended periods of stability will result in the compression of the archaeological record with

multiple occupational episodes being located on one surface prior to burial (Waters 2000:538-539). Within duplex soils, artefacts typically stay within the A horizon on the interface between the A and B horizons.

If erosion occurs after cultural material is deposited, it will disturb or destroy sections, or all of, archaeological sites even if they were initially in a good state of preservation. The more frequent and severe the episodes of erosional events the more likely it is that the archaeological record in that area will be disturbed or destroyed (Waters 2000:539; Waters and Kuehn 1996:484). Regional erosional events may entirely remove older sediments, soils and cultural deposits so that archaeological material or deposits of a certain time interval no longer exist within a region (Waters and Kuehn 1996:484-485). A number of significant natural impacts have occurred in the region, including Lochinvar, and include the extreme flooding in recent years which results in both the erosion and sweeping away of materials as well as burring materials.

The role of bioturbation is another significant factor in the formation of the archaeological record. Post-depositional processes can disturb and destroy artefacts and sites as well as preserve cultural materials. Redistribution and mixing of cultural deposits occur as a result of burrowing and mounding by earthworms, ants and other species of burrowing animals. Artefacts can move downwards through root holes as well as through sorting and settling due to gravity. Translocation can also occur as a result of tree falls (Balek 2002:41-42; Peacock and Fant 2002:92). Depth of artefact burial and movement as a result of bioturbation corresponds to the limit of major biologic activity (Balek 2002:43).

Burrowing and mounding by various animals and insects can result in the burial and translocation of artefacts. Size-sorting also tends to occur thus destroying stratigraphic integrity. Artefacts with a diameter smaller than that of burrows within an area may be moved upwards and be deposited in mounds by the fauna. Conversely, larger artefacts gradually move downward due to gravity and to animals burrowing beneath the larger artefacts and eventually collapsing into the burrow. They may then form concentrations which mimic cultural layers and are therefore open to misinterpretation (Balek 2002:46). Artefact burial rate through the effects of burrowing and mounding animals varies but can be as great as 2.7 metres in 5000 years (Balek 2002:45).

Experiments to assess the degree that bioturbation can affect material have been undertaken. In abandoned cultivated fields in South Carolina, Michie (summarised in Balek 2002:42-43) found that over a 100-year period 35% of shell fragments that had been previously used to fertilise the fields were found between 15 and 60 centimetres below the surface, inferred to be as a result of bioturbation and gravity.

Earthworms have been known to completely destroy stratification within 450 years (Balek 2002:48). Earthworm activity can significantly affect cultural materials though the degree and nature of disturbance will relate to the species of earthworm/s represented (Armour-Chelu and Andrews 1994; Canti 2003; Fowler et al. 2004; Stein 1983). Different species of earthworm's act in varying ways; some species live in deep soils and move vertically to and from the surface, whilst others live within the top ten centimetres of soil and tend to move horizontally through the soil matrix (Fowler et al. 2004:453). Earthworms, under favourable conditions, can excavate to depths of six metres (Stein 1983:278). Whilst, the size and behaviour of earthworms varies between species, they are similar in some ways; earthworms burrow through the soil by pushing soil aside or consuming it as well as organic materials, which they then regurgitate or excrete either behind them or on the surface. As earthworms move through the soil, they churn the soil within an area over time which results in blurring of soil horizons (Fowler et al. 2004:457, 461; Stein 2003:139).

The ways in which earthworms can affect cultural deposits includes: creating false artefact concentrations and stratigraphy (for example biomantles) by moving artefacts downwards through the soil; indirectly displacing larger artefacts as they burrow through the soil; burying artefacts through the deposition of faecal material on the surface; and blurring natural and cultural boundaries. They can also destroy remains of seeds and organic materials as they eat them (Fowler et al. 2004:462; Stein 1983:280-281). In Australia, most earthworm species cannot tolerate pH values lower than 4.5 and prefer neutral conditions with a pH of around 7 (Stein 1983:280).

Artefacts may also be moved as a result of an oscillating water table causing alternate drying and wetting of sediments, and by percolating rainwater (Villa 1982:279).

3.11 DISCUSSION

The regional environment provided resources, including raw materials, fauna, flora and water, that would have allowed for sustainable occupation of the area. Within the project area, the landforms of a slope with two 2nd order drainage lines/creeks, and a 3rd order immediately outside the project area to the west, may have been suitable for past Aboriginal land uses during the wet season and/or during times of heavy rain as this would have provided water along the 2nd and 3rd order streams.

In relation to modern alterations to the landscape, the use of the project area for agricultural and grazing purposes can be expected to have had low to high impacts upon the archaeological record. European land uses such as clearing, grazing, ploughing, and the construction of dams and fences may have displaced cultural materials, however in less disturbed areas, it is likely that archaeological deposits may remain relatively intact.

4 CULTURAL CONTEXT

Unfortunately, due to European settlement and associated destruction of past Aboriginal communities, their culture, social structure, activities and beliefs, little information with regards to the early traditional way of life of past Aboriginal societies remains.

Anthropologists and ethnographers have attempted to piece together a picture of past Aboriginal societies throughout Australia. Although providing a glimpse into the past, one must be aware that information obtained on cultural and social practices were commonly biased and generally obtained from informants including white settlers, bureaucrats, officials and explorers. Problems encountered with such sources are well documented (e.g., Barwick 1984; L'Oste-Brown et al 1998). There is little information about who collected information or their skills. There were language barriers and interpretation issues, and the degree of interest and attitudes towards Aboriginal people varied in light of the violent settlement history. Access to view certain ceremonies was limited and cultural practices (such as initiation ceremonies and burial practices) were commonly only viewed once by an informant who would then interpret what he saw based on his own understanding and then generalise about those practices.

4.1 WONNARUAH COUNTRY

Brayshaw (1987) examined early ethnographic literature relating to the Aboriginal occupation and European settlement of the Hunter Valley in order to determine the manner in which past Aboriginal communities adapted to their environment, the extent to which they utilised the available resources, and to assess the comparability of the described material culture with the archaeological evidence.

In relation to the limitations inherent within the ethno-historic documentation, Brayshaw (1987) notes that the early records of settlers, explorers and surveyors provide the only picture of past Aboriginal life in the Hunter Valley, as it was prior to the impact of contact and white settlement and therefore worthy of consideration. Dawson (1830; in Brayshaw 1987) and Fawcett (1898; in Brayshaw 1987) suggest that fire was used to deter Europeans, to attract game for hunting and to signal to other tribes for both hunting and ceremonial purposes. It is also commonly known that firestick farming was used to modify the environment throughout Australia (Mulvaney and Kamminga 1999). Floral resources were also utilised in many ways with bark been widely used as huts or 'gunyahs', canoes, string, baskets, drinking containers and in burial practices. Vegetable and bark fibres were also used for fishing lines, nets and sewing. Wood was used for clubs, yam sticks, boomerangs, spears, spear throwers and hatchets, and both wood and bark were used to make shields (Paterson 1801; Barrallier 1802). Shells were used as scrapers to sharpen spears (later replaced by glass) and ground into shape for fishhooks (Caswell 1841 and Gunson 1974, both in Brayshaw 1987:67). Although there are no apparent ethnographic reference to stone being used as tools, physical evidence indicates stone was utilised as tools. Kangaroo bones were made into awls and used to repair canoes and in sewing possum and kangaroo skins for clothing (Boswell 1890; Fawcett 1898 in Brayshaw 1987). Dawson (1830:115-116) notes that kangaroo bone also functioned as a comb. Dietary staples included a variety of plant foods, shellfish and other animal foods (Grant 1803:161; Wood 1972:44). Animal foods may have included kangaroos, wallabies, echidna, emus, possums, birds, goannas, snakes and honey from native trees. The occurrence of these resources would have depended largely on seasonality and geographic location. Little is known of past ritual life, as access to these rites was restricted.

5 ARCHAEOLOGICAL CONTEXT

A review of the archaeological literature of the region, and more specifically the local area and the results of an AHIMS search provide essential contextual information for the current assessment. Thus, it is possible to obtain a broader picture of the wider cultural landscape highlighting the range of site types throughout the region, frequency and distribution patterns and the presence of any sites within the project area. It is then possible to use the archaeological context in combination with the review of environmental conditions to establish an archaeological predictive model for the project area.

5.1 REGIONAL ARCHAEOLOGICAL CONTEXT

The definition of site curtilages in NSW are guided by the requirements for site registration in the AHIMS database, leading to geographically discrete sites as individual entities, existing in isolation. Such an approach is understandable, as it grows from the need to define sites as per legislatively guided parameters. This is further reinforced by the geographically focussed work of consultant archaeologists, limiting their analysis to a specific geographically constrained area based on individual project specifications. While this is the common practice for recording individual sites, it is important to contextualise them within a broader archaeological and cultural landscape that links them together. In this way assemblages may be understood as a continuous scatter of cultural material across the landscape and the nature of activities and occupation can be identified through the analysis of artefact distributions across a landscape.

The majority of archaeological surveys and excavations throughout the region have been undertaken in relation to environmental assessments for the coal mining and power industries of the Hunter Valley. A review of the most relevant investigations (Dyall 1979, 1980; Davidson et al 1993; Dean-Jones and Mitchell 1993; Koettig and Hughes 1984; McDonald 1997; Haglund 1999; Kuskie 2000; HLA-Envirosciences 2002; AMBS 2002; MCH 2004a, b) illustrates consistency in site type and location across the region as well as a possible bias in the results due to a focus on specific landforms. The corpus of recorded sites is described and assessed qualitatively in MCH (2004b) and these findings are summarised and supplemented below.

Based on the available information it is possible to identify a number of trends in site location and patterning within the region. Open campsites are by far the most common site type with isolated finds also comparatively well represented. A variety of other site types have been identified in far lower concentrations and include grinding grooves, scarred trees, rock shelters, shelters with art and burials. The high representation of sites containing stone artefacts is to be expected due to the durability of stone in comparison to other raw materials. In relation to stone artefact raw materials, it is important to note that there is a potential for discrepancies in the way in which archaeologists classify lithic materials. This will consequently affect the proportional representation of raw materials within the recorded assemblages. However, as a whole mudstone is the most common lithic artefactual material found in the region, followed by silcrete. Chert, tuff, quartz, quartzite, petrified wood, porcellanite, hornfels, porphyry, basalt, limestone, sandstone, rhyolite, basalt, European glass and other non-specific lithic types also occur in smaller quantities. Variation in the classificatory definitions employed by archaeologists will again significantly influence the range of artefact types identified within a project area. Due to differences in recording techniques it is difficult to determine how many of each artefact type is represented across the region though types include flakes, broken flakes, retouched flakes, multi-platform cores, single platform cores, bipolar cores, flaked pieces, 'waste' pieces, 'chips',debitage, 'geometric microliths', 'backed blades', 'bondi points', 'scrapers', 'eloueras', 'burrins', 'blades', 'hatchets', 'unifacial choppers', 'bifacial choppers', 'pebble tools', a 'slice', edge-ground axes,

anvils, hammer stones and heat. Due to variations in both the amount of data that is included in reports, and the terms different archaeologists used to describe artefact types, it is not practicable to provide a count of the different artefact types.

For example, the distinction between a waste flake, a debitage flake and a flaked piece may be heavily subject to the perspective of the recorder. Thus, it is not productive to attempt to quantify the proportionate representation of artefact types identified in previous studies. That said, based on the information collated from previous regional studies (refer to MCH 2004b) it is apparent that the most common artefact types are flakes, flake fragments and flaked pieces. Cores, edge ground axes, millstones, grindstones, hammer stones and backed artefacts including backed blades, bondi points, geometric microliths and eloueras also occur though in lower frequencies. In general, the stone artefact assemblage in the area has been relatively dated to what was previously known as the Small Tool Tradition (10,000 years BP). On the basis of stone tool technology, the overwhelming majority of Aboriginal open sites within the region are attributed to the Holocene period. However, at Glennies Creek, north of Singleton, based on radiocarbon dated charcoal and geomorphological evidence it is suggested that artefacts found in the B-horizon may have been deposited between 10,000 and 13,000 BP (Koettig 1986a, 1986b).

An analysis of sites according to the number of artefacts present, the distance from water and the landform type may allow for the identification of a number of trends. However, that there are various factors influencing these results, including, but not limited to:

- the fact that the landform on which a site area is observed may not necessarily be its origin, for example, artefacts from a crest may be relocated by erosion such that they are recorded further down a slope;
- effects of biased sampling of landforms due to decisions made by archaeologists as a result of development area boundaries, levels of exposure on different landforms and variable recording by archaeologists. For example, the large percentage of sites found along creek lines may be (at least partially), a result of the biased focus of many cultural heritage surveys towards this landform; and
- artefact counts can be skewed due to factors such as the differing fragmentation levels of discrete stone types and levels of ground surface visibility. Typically, a very large number of sites/artefacts are located on exposures and yet no, or very few artefacts are visible away from these exposures.

When assessing sites in terms of distance to water, in the Hunter Valley there is a clear pattern of past land uses whereby the majority of high-density sites are situated within 50 metres of reliable fresh water (high order) and reduce in both numbers and densities with a decrease in stream order. Thus, it is apparent that open campsites/isolated finds are most concentrated in number and size within 50 metres of reliable fresh water.

As is to be expected, the majority of sites within 50 metres of water are present on elevated landforms in association with creek lines whilst slopes and crest/ridge formations are also common site locations. The frequent presence of sites on crest/ridges and slopes is also noticeable for sites located over 50 metres from water. Due to the importance of water in the grinding process, it is not surprising that sites of this type are situated close to water.

5.1.1 SUMMARY OF REGIONAL ARCHAEOLOGICAL PATTERNING

In summary, despite the recognised limitations of utilising previous studies as the basis for generalisations regarding archaeological patterning, the following broad predictions can be made for the region:

- a wide variety of site types are represented in the project area with open campsites and isolated artefacts by far the most common;
- lithic artefacts are primarily manufactured from mudstone and silcrete with a variety of other raw materials also utilised but in smaller proportions;
- sites in proximity to ephemeral water sources or located in the vicinity of headwaters of upper tributaries (1st order streams) have a sparse distribution and density and contain little more than a background scatter;
- sites located in the vicinity of the upper reaches of minor tributaries (2nd order streams) also have a relatively sparse distribution and density and may represent evidence of localised one-off behaviour;
- sites located in the vicinity of the lower reaches of tributaries (3rd order creeks) have an increased distribution and density and contain evidence that may represent repeated occupation or concentration of activity;
- sites located in the vicinity of major tributaries (4th and 5th order streams/rivers) have the highest distribution and densities. These sites tend to be extensive and complex in landscapes with permanent and reliable water and contain evidence representative of concentrated activity; and
- sites located within close vicinity at the confluence of any order stream may be a focus of activity and may contain a relatively higher artefact distribution and density.

Within the region, a broad range of site types are represented including isolated artefacts, open campsites, shelters, grinding grooves, engravings and shelters with art and/or deposit. Within the areas covered by the regional studies, the range of available landforms has been sampled. In regional terms, site distribution is extremely closely linked to topography and access to reliable fresh water exhibiting the highest concentrations of sites.

5.2 HERITAGE REGISTER LISTINGS

The State Heritage Register, the National Heritage List, the Commonwealth Heritage List, the National Trust Heritage Register and the relevant Local Environmental Plan have no Aboriginal objects, sites or places listed.

5.3 ABORIGINAL HERITAGE INFORMATION MANAGEMENT SYSTEM

MCH note that there are many limitations with an AHIMS search. Firstly, site coordinates are not always correct due to errors and changing of computer systems over the years that failed to correctly translate old coordinate systems to new systems. Secondly, AHIMS will only provide up to 110 sites per search, thus limiting the search area surrounding the project area and enabling a more comprehensive analysis and finally, few sites have been updated on the AHIMS register to notify if they have been subject to a s87 or s90 and as such what sites remain in the local area and what sites have been destroyed, to assist in determining the cumulative impacts, is unknown. Additionally, terminology for site names including (amongst many) an 'artefact' site encompasses stone, bone, shell, glass, ceramic and/or metal and combines both open camps and isolated finds into the one site name. Unfortunately, this greatly hinders in the predictive modelling as different sites types grouped under one name provided inaccurate data.

A search of the AHIMS register has shown that 53 known Aboriginal sites are currently recorded within five kilometres of the project area and include 43 artefact sites, 5 PADs, 2 artefact and PAD sites and 2 that are not sites. The AHIMS results are provided in Appendix B and the location of

sites is shown in Figure 5.1 and as illustrated in 5.2, the majority of sites are focused along water courses with reduced numbers of sites in locations in between these sources.

Figure 5.1 Approximate location of AHIMS sites (aerial)

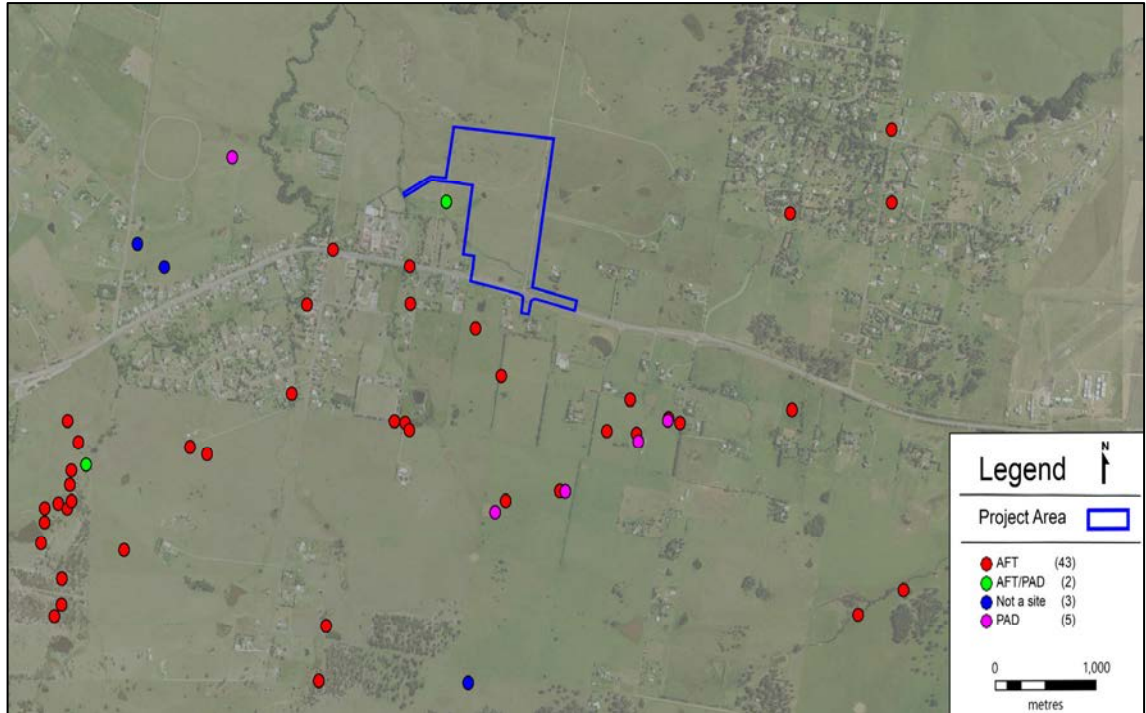
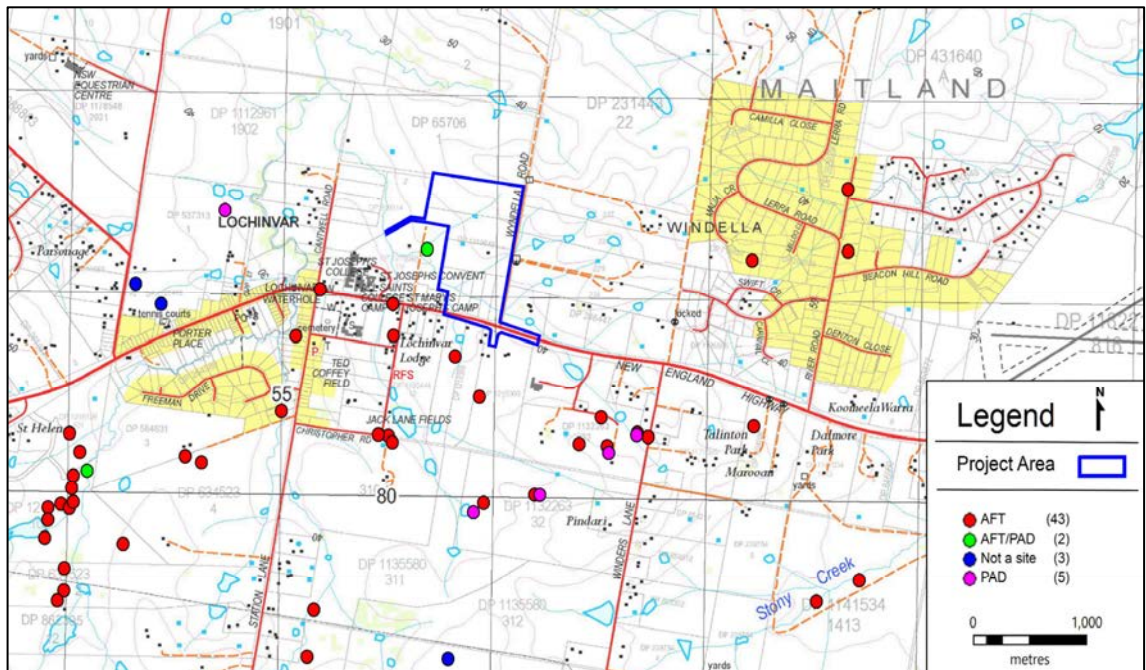


Figure 5.2 Approximate location of AHIMS sites (topographic)

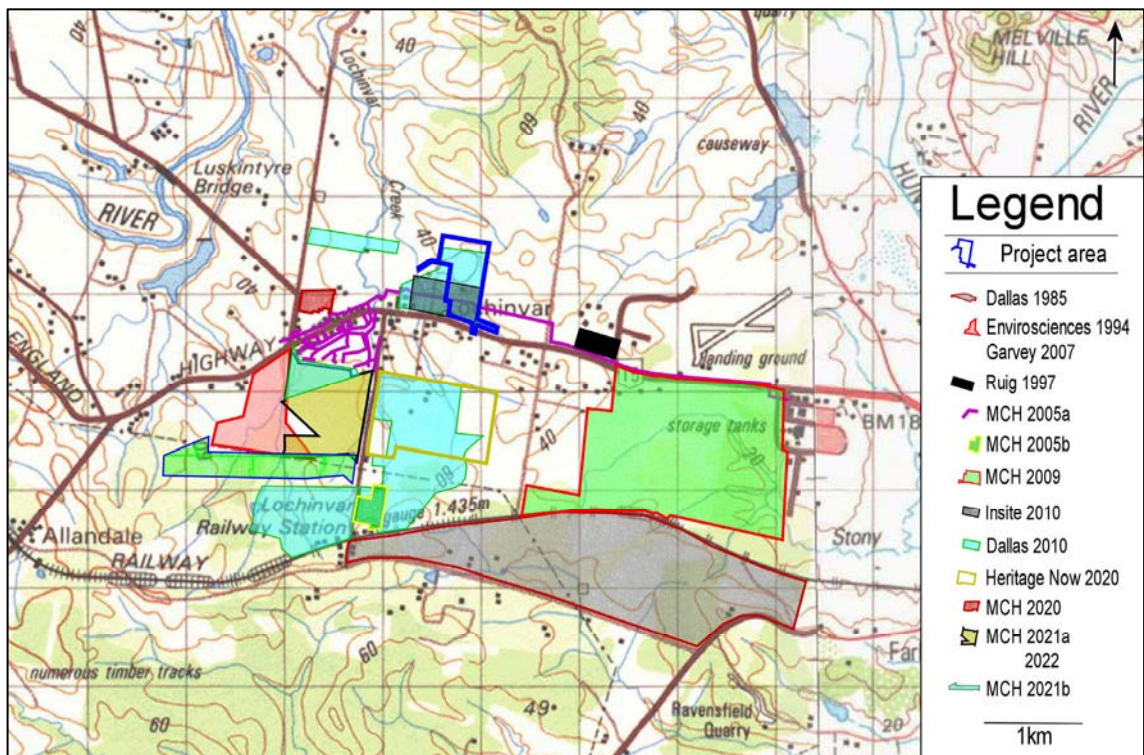


5.4 LOCAL ARCHAEOLOGICAL CONTEXT

Limitations in the use of examining previous local assessment include the number of studies in the local area. Fewer studies suggest that sites have not been recorded, ground surface visibility also hinders site identification and the geomorphology of the majority of NSW soils and high levels of erosion have proven to disturb sites and site contents, and the extent of those disturbances is unknown (i.e., we do not know if a site identified at the base of an eroded slope derived from the upper crest, was washed along the bottom etc: thus, altering our predictive modelling in an unknown way).

All archaeological surveys throughout the local area have been undertaken in relation to environmental assessments for developments. The most relevant investigations indicate differing results and observations based on surface visibility and exposure, alterations to the landscape (including mining, industrial and residential development), proximity to water sources and geomorphology. The reports available from AHIMS are discussed below and their approximate location illustrated in Figure 5.3.

Figure 5.3 Approximate location of previous assessments



Envirosciences (1994) undertook an assessment for a proposed subdivision at St Helens near Lochinvar. The study area was an undulating lowland with Lochinvar Creek running north-north across the project area and a tributary in the south eastern corner. It was noted that the creeks were quite eroded exposing a brown/grey clay loam overlaying a yellowish-brown gravelly clay. Two sites were identified. Loch 1 was an isolated artefact (chert flake) located on a track next to a gate in a fence. Loch 2 (an historical site) was a low mound about 6 metres long and 1.5 metres wide comprising various pieces of concrete, stone and hand-made bricks. The report notes that the isolated artefact is of low scientific and cultural significance and it was recommended that a consent to destroy be sought.

Dallas (1985) undertook an archaeological study of a section of land to be rezoned from non-Urban and developed as a rural residential subdivision. The investigation area was situated 2km west of Farley near Maitland, between Old North Road, the Great Northern Railway, Wollombi Road and the unformed reservation of Winders Lane. The investigation area consisted of six 40 hectare lots and was being used for grazing land at the time of inspection. Landforms across the investigation area included gently undulating land with some steeper slopes in the eastern section and a subdued but distinct ridge that ran from east to west forming a natural watershed for creeks to the north and south. Creeks in the area were intermittent with flat gradients and wide cross sections. At the time of inspection, a creek in the southern section of the investigation area was noted as consisting of a series of small ponds, with the creek having been drained in several places. The investigation area had been subject to widespread vegetation clearance with the majority of the area devoted to grasslands for grazing and some ground cover couch; however, some areas were noted to include *Eucalyptus maculatta*, *E. Fibrosa*, *E. Mollucana*, *Angophora*, *Melaleuca*, *Acacia*, *Hakea*, *Leptospernum*, as well as ironbark and grey box regrowth. A search of the NPWS sites register identified six previously recorded sites within the project area that were identified by Dyall. Dallas noted that review of previous reports identified that Dyall did not locate and/or record all surface artefact occurrences and did not present systematic sampling or survey strategy. The six previously identified sites were revisited with additional recording undertaken where material additional to the original recording was identified. No predictive model was included in this report. Of the six previously recorded sites, four were devoid of visible artefactual remains with little or no likelihood of subsurface materials. The other two artefact scatter sites were re located and situated along a creek bank/creek bed. Both were highly disturbed with no potential for in situ cultural materials. Summarised in the table below, these sites were assessed as having no archaeological significance.

Table 5.1 Summary of sites (Dallas 1985)

| Site | Site type | Landform | Distance to water | Stream order | Artefacts/features | Disturbance | Subsurface potential |
|-----------|------------------|----------------------|-------------------|--------------|--|---|----------------------|
| 37-6-0117 | artefact scatter | creek bank/creek bed | 0m | not noted | 3 edge scrapers, 3 flaking cores, 17 waste flakes of quartzite, chert and volcanic | dam construction/ cattle trampling/ erosion | no |
| 37-6-0115 | artefact scatter | creek bank/creek bed | 0m | not noted | 1 red silcrete flake: additional to original recording | cattle trampling/ erosion | no |

Dallas recommended that no further investigation of the six previously recorded sites was warranted and that a Consent to Destroy permit be sought for sites 37-6-0117 and 37-6-0115. Dallas also recommended that should further artefacts be encountered during the proposed works that works cease and the Regional Archaeologist of NPWS be notified immediately.

Ruig (1997) undertook a series of test excavations on Portion 62 at Penn Park in Lochinvar, NSW. The excavations were carried out under NPWS permit SZ 135, issued 20 April 1997. The test excavations were recommended following an archaeological survey carried out in July 1996 due to the proposal to develop land as a rural residential subdivision. Test excavations were recommended along the creek line of the surveyed area in Portion 62 of the study area, located in

the southeast portion of the Penn Park property. Information regarding the survey, topographic data and the location's vegetation were not included in this report, as they had been detailed in the previous survey report. A total of 44 test trenches were excavated, totalling 11 square metres, covering both sides of the creek. Transects were laid out over 50 metres parallel to either side of the creek at a distance of 10 metres either side of the creek channel. One low density artefact scatter was identified (Penn Park 1) found along the creek bank and consisted of 1 mudstone flake piece and one mudstone flake. There was no further potential for subsurface deposits. The excavated archaeological deposit was assessed as having low scientific and educational significance. Based on the test excavation results it was recommended that no further archaeological investigation be undertaken and that a Consent to Destroy permit be applied for regarding the Penn Park 1 site. The excavated material from this site was to be forwarded to the Australian Museum in Sydney for curation within their repository.

McCardle Cultural Heritage (MCH 2005a) undertook archaeological test excavation at three PAD locations (PAD 2, 3, and 5) of the five previously identified by Austral (2005) for the proposed Lochinvar Sewerage Scheme. MCH undertook a re-assessment of the study area and identified PADs, and concluded that the PAD 2, 3 and 5 required test excavations should the proposed development impact upon them.

PAD2 was considered to have potential for archaeological deposits on the benching slopes on the northern side of the creek. The southern side and the creek flats themselves had been subjected to considerable disturbance in the form of erosion and agricultural activities including fencing, gates and dumping. MCH determined that PAD3 was likely to contain cultural materials. In particular, the foot slopes at the east of PAD3 and close to the confluence of the two creeks were considered to have a high likelihood of deposits due to the nature of the colluvial-alluvial interface that can occur within this environmental setting.

PAD5 was situated in close proximity to a creek confluence and was predominantly flat. The Austral report referred to the likelihood that the confluence would become a wetland during times of heavy rainfall however, during the brief field inspection, it was noted that the creek was incised into the banks and that the surrounding land was more elevated. Following consultation with the Aboriginal community, the PAD was therefore extended to encompass the confluence area and this area is considered to be the portion of PAD5 most likely to contain concentrated evidence of human activity.

PADs 2 and 3 were first excavated using a backhoe in 10cm spits (to 15-20cm). The geomorphological analysis determined the geomorphology of each pit and surrounding area was flood plain and it was determined that to continue excavation was inappropriate due to flooding and the area being unlikely to have been suitable for past Aboriginal land uses and excavations ceased at these locations. Excavation for PAD 5 continued down to 15cm to the B horizon (clays) and ceased. All excavation identified highly disturbed deposits through clearing and ploughing and only two artefacts were identified from PAD 5 (one silcrete and one mudstone flake – Site Lochinvar 1). MCH recommended that no further archaeological works were required and a s90 would be required for Lochinvar 1.

MCH (2005b) undertook an assessment of 414 Station Lane, Lochinvar. Consisting of Permian conglomerates, mudstone shale and tuff, the project area included the Lochinvar Soil Landscape. In terms of fresh water availability, two first order drainage lines were present that flowed into a second order stream towards the north of the study area. The closest permanent reliable water source was the Hunter River that was located approximately 2.5 kilometres to the north-west. The second most reliable water source is Lochinvar creek that is situated approximately 1.5 kilometres to the north. The study area was initially cleared for agricultural purposes and further clearance and landscape alterations occurred in association with agricultural practices. A search

of AHIMS identified 71 known Aboriginal sites recorded within five kilometres surrounding the project area and included 44 artefact, 18 open camp, four axe grinding grooves, one isolated find and four PADs. The survey identified that overall, the study area was disturbed with clearing and past cultivation occurring throughout, dams constructed as well as fencing, tracks and dwellings. Natural disturbances included sheet wash and gulying and the area was currently used for horses. No sites or PADs were identified.

Garvey (2007) compiled inputs from South East Archaeology Pty Ltd and HLA-Envirosciences to provide support for a permit application. The permit was intended to cover site impacts to be caused by a proposed subdivision at St Helenas in Lochinvar, NSW. Past investigations had occurred in 1994 and 2004, the results of which were referenced to support the application. The Thornton Land Company proposed to develop the Lochinvar Section 90 application area for a French provincial themed residential village, incorporating French architecture and a village square. The proposal included such impacts as a commercial centre, incorporating shops, commercial premises, sports centre, day spa, town hall, church, markets and outdoor entertainment facilities, an artist's colony, 190 individually themed residential dwellings (to be sold as a built product), a 35-room hotel, guest house and 42 tourist accommodation units. The application contained appended details for relevant sites including 37-6-1423, 37-6-1424, 37-6-1425, 37-6-1426, 37-6-1427, 37-6-1428, 37-6-1429, 37-6-1430, 37-6-1431, 37-6-1432 and 37-6-1433. Two sites (Loch 1 and L10/A) were proposed to be impacted – the other sites were proposed to be avoided, protected and conserved. The purpose of this document was to apply for a permit application. No further information or recommendations were included.

McCardle Cultural Heritage (MCH) (2009) undertook an archaeological assessment for land proposed for rezoning and eventual development at West Rutherford, NSW. The topography of the study area was gently sloping and contained sections of Stony Creek and an unnamed tributary, along with smaller drainage lines. Drainage flowed generally south-east towards Wentworth Swamp, which was located approximately two kilometres from the study area. The study area was located on deposits of Permian sandstone, siltstone, mudstone, shale, conglomerate, tuff, basalt and erratics of the Dalwood Group (part of the Maitland Group). The B-horizon soils in hillslopes were typically composed of weathered, in-situ bedrock, while soils along the valley floors were generally alluvial or colluvial in origin.

Topsoils were often absent on side slopes due to sheet wash and the B horizon was often exposed. The A2 horizon was a dark brown to brownish black sandy clay loam to clay loam; the B horizon consisted of a dull yellowish brown to brown sticky clay loam. Vegetation had undergone extensive clearance in the past in order to develop the area for stock grazing purposes. Prior to the extensive clearance it is likely to have supported tall open forest with spotted gum, broad-leaved ironbark and slaty red gum with grey box. This vegetation is likely to have supported resource species such as kangaroo, wallaby, goanna, marsupial mice, snakes, possum, koala and birds. It was assessed that the study area would have been well resourced for water as well as floral and faunal species. A search of the NPWS register identified 97 registered Aboriginal sites within five kilometres of the study area. These included 63 artefact sites, 24 open camps, four grinding grooves, four Potential Archaeological Deposits (PADs) and two isolated artefacts. Two of these sites (AHIMS #37-6-1221 and #37-6-1222) were located within the bounds of the study area.

Based on the results of previous studies it was predicted that common site locations would include along reliable watercourses, on gentle slopes, hilltops and ridges. Artefact density was predicted to be highest within 50 metres of watercourses and on elevated landforms over 100 metres from water. Sites were predicted to contain assemblages dating from the mid to late Holocene, disturbed by past natural (erosion) and human (clearing, improved pastures)

disturbances. The site types predicted as most likely to occur within the study area were artefacts scatters and isolated artefacts. A total of ten new sites and three PADs were identified and are summarised in Tables 5.2 and 5.3. MCH recommended that sites REA2, REA3 and/or REA4 will be impacted by development a s90 permit is required, if sites REA1 and REA5 to REA10 will be impacted by development a s87 permit is required and if PADs 1 to 3 will be impacted by development a s87 permit is required.

5.2 Summary of sites (MCH 2009)

| Site | Site type | Landform | Distance to water | Stream order | Artefacts /features | Disturbance | Subsurface potential |
|-------|-------------------|----------|-------------------|---------------|---------------------|------------------------|----------------------|
| REA1 | artefact scatter | bank | 15m | Stoney Creek | 20+ | erosion | high |
| REA2 | artefact scatter | modified | not provided | unnamed creek | 2 | clearing, cattle & dam | low |
| REA3 | isolated artefact | slope | not provided | unnamed creek | 1 | ant nest | low |
| REA4 | isolated artefact | modified | not provided | unnamed creek | 1 | clearing, cattle & dam | low |
| REA5 | artefact scatter | bank | not provided | Stoney Creek | 16+ | minimally disturbed | high |
| REA6 | artefact scatter | bank | not provided | Stoney Creek | 4 | minimally disturbed | high |
| REA7 | artefact scatter | bank | not provided | Stoney Creek | 2 | minimally disturbed | high |
| REA8 | artefact scatter | bank | not provided | Stoney Creek | 3 | minimally disturbed | high |
| REA9 | isolated artefact | bank | not provided | Stoney Creek | 1 | minimally disturbed | high |
| REA10 | artefact scatter | bank | not provided | Stoney Creek | 3 | minimally disturbed | high |

Table 5.3 Summary of PADs (MCH 2009)

| PAD name | Landform | PAD area | Disturbance |
|----------|---------------------|----------------------------------|---|
| PAD 1 | creek banks/channel | >100m wide, length not specified | water flow |
| PAD 2 | creek banks/channel | >100m wide, length not specified | water flow, clearing, grazing & fencing |
| PAD 3 | creek banks/channel | >4m wide, length not specified | water flow & motorbike track |

Insite Heritage (2010) undertook an assessment across Lots 2-7 DP747391 for the proposed construction of an aged care facility which represents the southern portion of the project area.

The project area included undulating rises that consisted of the Lochinvar Soil Landscape. The project area was traversed by Lochinvar Creek that flowed northwards into the Hunter River approximately 3 kilometres north of the project area. The project area had been cleared and utilised for pastoral activities. A search of the AHIMS was conducted for a 100km² area surrounding the project area that identified 83 previously recorded sites within the search area. Approximately 70% of these sites were recorded as artefact scatters – open campsites, with 20% recorded as isolated finds. Other recorded site types in the area included Axe Grinding Grooves (5%) and areas of PAD (Potential Archaeological Deposit, 5%). Dominant raw material types recorded were silcrete and mudstone with some tuff and quartz. No AHIMS were located in the project area.

The survey was divided into 4 survey units based on landforms. SU1 included the gentle slopes down to Lochinvar Creek. Cleared of trees, vegetation consisted of heavy grass cover across the open paddock. Some disturbance included stock trails, vehicular track, a dam and an excavated drainage channel. Two minor drainage depressions cutting across paddock were present but were barely discernible. Insite noted that sub-surface deposits were likely to be present on basal slopes above Lochinvar Creek.

SU2 consisted of the drainage depressions – low lying section of paddock between two minor watercourses (1st order) flowing into Lochinvar Creek (3rd order). This area was very heavily grassed, <1% SV and Insite noted that sediment deposition occurred along Lochinvar Creek. Whilst the slightly elevated bench between depressions may have potential for sub-surface material, potential for subsurface deposits was considered more likely to be on higher areas on slopes to north and south.

SU3 included that gentle slope falling down to Lochinvar Creek. Cleared of native trees, there was some replanting along road verge. This SU consisted of very heavy grass cover (improved pasture) with no distinct exposures. SU4 included gentle slopes and Insite identified that the area around school and convent had been modified significantly. Car-parks had been paved and surrounding landscape grassed and maintained as lawn. A garden patch adjacent to a creek appears to have been worked over for some time and no artefacts were located although visibility limited to worked areas. Insite found that sub-surface deposits are highly likely to be present on basal slopes particularly in vicinity of confluence of streams.

One site was identified (LCC1 – AHIMS 37-6-2228) that consisted of four loci as follows:

- Loci 1 (L1) – located on a gentle slope (basal). Isolated artefact (silcrete flake) in an exposure of 30m x 30m
- Loci 2 (L2) – located on a gentle slope (basal). Three artefacts (mudstone and silcrete flakes and a flake piece) were identified along drainage trench that was cut down slope exposing an area of 50m x 2m to a depth of 50cm.
- Loci 3 (L3) – located on a gentle slope (basal) above confluence of minor watercourses. Seven artefacts located in an area of 40m x 15m consisting of four mudstone flakes and three mudstone flake pieces
- Loci 4 (L4) – located on a gentle slope (mid). Four artefacts located in an exposure around a dam (50m x 5m) and included three mudstone flakes and one mudstone core

Areas considered highly likely to contain subsurface archaeological material, were identified across the study area. These areas were identified on the basal slopes adjacent to Lochinvar Creek, in the vicinity of tributary confluences and in association with the four loci of artefacts located in the northern portion of the study area. The PAD identified (37-6-2228) was delineated in consideration of the results of the MCH (2005) excavation results which found minimal artefacts in the low-lying high clay soils close to the confluence. Insite Heritage (2010) found that the

occupation areas between the confluences of Lochinvar Creek were on the more elevated well drained land with artefact numbers diminishing as the soils become increasingly clayey. Insite noted that this was possibly because the creek lines have become more incised in the last 100 years therefore the areas adjacent to the existing creek lines were too low lying for occupation areas. A recommendation was made to undertake archaeological test excavation of the PAD prior to impacts.

Umwelt (2016) undertook salvage works for a water and sewer main at Lochinvar in accordance with AHIP C0001860 for Aboriginal objects contained within the boundaries of a proposed new water main, duplication of a sewer main and construction of a new regional waste water pumping station in Lochinvar. The salvage allowed for community collection of 10 AHIMS sites and excavation specified areas of archaeological sensitivity. The purpose of these works was to obtain a representative artefact assemblage from which further information could be derived.

Of the 10 sites subject to community collection, only one site was located and 29 artefacts collected from that site. Artefact collected were comparable to site both locally and regionally and consisted of flakes, broken flakes, few cores and few retouched artefacts, all manufactured from silcrete and mudstone.

The area of archaeological sensitivity was approximately 350 metres in length and associated with the main channel of Lochinvar Creek. The area of archaeological sensitivity for the sewer main was approximately 1100 metres in length comprising 200-metres associated with the main channel of Lochinvar Creek, 550-metres associated with a tributary channel of Lochinvar Creek and 275-metres within the Cantwell Road Reserve.

Test pits within the 200-metre section bordering the main channel of Lochinvar Creek were spaced at 20-metre intervals either side of the creek but not within the current channel, former channel or any area of noted disturbance. Test pits within the 550-metre section bordering the tributary channel of Lochinvar Creek were spaced at 40-metre intervals on either side of the tributary but not within the current channel, former channel or any area of noted disturbance. Test pits were not excavated within the road reserve. The excavation within the trench alignment included an initial testing stage of 1 square metre test pits and expansion around the initial test pits was only triggered if 10 or more artefacts were uncovered.

A total of 15 test pits were excavated along the water main alignment, resulting in the recovery of 34 artefacts, with the highest number of artefacts in any one pit was 7. A total of 42 pits were excavated along the sewer main alignment, of which 19 were located within the area of the approved variation and 23 were located along the initial main alignment, resulting in the recovery of 49 and 371 artefacts respectively for a combined total of 420 artefacts. Of the 65 test pits, only two pits with more than 10 artefacts were identified. The two test pits included Sewer 1 with 13 artefacts and Sewer Variation 7 with 92 artefacts. No further artefacts were recovered from expanded excavations at Sewer 1 during the excavation expansion whilst an additional 269 artefacts were recovered from the expansion of Sewer Variation 7. Artefacts recovered during the test excavation were also comparable to site both locally and regionally and consisted of flakes (41%), broken flakes (33%) and flake pieces (20%), all manufactured from silcrete (67%), mudstone (30%) and the remainder of other raw materials. Umwelt noted that the high percentage of broken flakes and flaked pieces potentially reflects the high level of disturbance noted during excavations (including evidence of former cultivation), which have resulted in increased rates of breakage and damage.

The test excavation also identified a highly disturbed landscape with the soil profiles in the majority of excavations had been substantially disturbed by historical land use, as evidenced by the existence rubbish such as metals, glass and ceramic material. The majority of the test pits were

also shallow, and where deeper soil profiles were present, the upper portion of these comprised relatively flood deposit that did not contain artefacts.

In relation to test pit Sewer variation 7 and expansions test pits, 371 artefacts (82%) of the sub-surface assemblage were recovered from this location. The soil profile in this area was the same to those in other areas but was slightly deeper. This area was located close to the confluence of two tributaries of Lochinvar Creek, however other test pits (such as Sewer Variation 8) were located in a similar context but did not contain comparable numbers of artefacts. In reviewing the assemblage from the Test Pit Sewer Variation 7 area, it is noted that much of the assemblage comprised a fairly distinctive pink and white silcrete. While the number of artefacts is relatively high, there were no artefacts exhibiting usewear or retouch. The assemblage contained 8 silcrete cores, of which all except two were of the pink and white silcrete, and on that basis, Umwelt suggested that the high number of artefacts (compared to other portions of the AHIP area) was indicative of the reduction of a particular piece (or pieces) of the same silcrete at this location and that many of the artefacts were 'debitage' from the knapping process. In the absence of retouched artefacts and formal tool types, nothing further could be determined regarding the techniques or intent of artefact manufacture at this location.

In 2016, Umwelt completed an archaeological salvage program at Lochinvar consisting of a surface collection and excavation program as part of the conditions of AHIP #C0001860, which was obtained by Hunter Water Corporation on 19 May 2016. Surface collection was completed across eight AHIMS sites to be impacted by the works. The collected assemblage contained silcrete (n=26) and mudstone (n=3) stone artefacts, the majority of which were cores (n=12) and flaked pieces (n=9). Low artefact numbers were attributed to ongoing impacts of modern land usage and sheetwash erosion. Following surface collection, archaeological test excavation was completed over 14 days along the proposed pipeline alignment.

In total 57 x 1 m² test pits were excavated as part of the work, 15 along the water main line and 42 along the sewer main line. Along the water main line 34 artefacts were recovered with 420 recovered along the sewer main line. Excavation consisted of 1 metre square test pits with expansion triggered by the presence of 10+ artefacts, from which only two pits triggered expansion: Sewer 1 (13 artefacts) and Sewer Variation 7 (92 artefacts). Within the current Project area this consisted of the excavation of the seven 1 m² test pits resulting in the recovery of four Aboriginal objects from two test pits (TPs 11 and 13). Of the total 454 artefacts in the broader assemblage, 80% were found in Sewer Variation 7 (371 artefacts) at the maximum depth across the development area of 41 cm. Umwelt suggests that this anomaly was likely a knapping site with 8 silcrete cores present of similar colour (pink/white) to other artefacts. The two most prevalent raw materials were silcrete (67%) and mudstone (30%), with complete flakes and other flake debris making up 94% of the assemblage. Of note is the lack of cortical surfaces on the stone artefacts (96%) those artefacts where cortex was present, exhibited a pebbled surface likely sourced from the Hunter River (mudstone) and the Thornton area (silcrete). The results of this salvage assembly were assessed as being consistent with the broader Hunter Valley stone artefact assemblage.

Heritage Now (2020) completed a cultural heritage assessment of a study area located 10 kilometres to the west of Maitland, at 44 Christopher Road, Lochinvar. The study area was proposed for residential development. The topography of the study area consisted of low-lying relatively flat cleared pastoral land. The underlying geology consisted of the Lochinvar Formation of the Dalwood Group, dating to the Permian Era, containing sandstone, siltstone, shale, tuff, basalt and volcanics. The Hunter River was located 2.5 kilometres from the study area at its closest point. A third order stream crossed the southwestern corner and a second order stream crossed the eastern corner of the study area, both tributaries of Lochinvar Creek. A search

of the AHIMS register identified one previously recorded site within the study area, being artefact scatter 37-6-3830 (consisting of two artefacts). A total of 66 sites were identified in a search centred on the study area, comprising of 39 artefact scatters, 23 isolated artefacts and four areas of Potential Archaeological Deposit (PAD). It was predicted that surface expressions of artefacts could be present within the study area, most likely associated with Lochinvar Creek and its associated wetlands and tributaries. Ground surface visibility during the survey average 15% and all areas of exposure were targeted for inspection. No sites or PADs were defined and the previously identified site in the project area was confirmed as an artefact scatter (37-6-3830). Heritage Now recommended that an AHIP for 37-6-3830 should be applied for, and that community collection of the artefacts was to be undertaken.

MCH (2020) undertook an assessment of 26 Windermere Road, Lochinvar. The project area is located within the Central Lowlands and consisted of a gentle east facing slope with one 1st drainage channel. The underlying geology of the project area is the Permian Lochinvar Formation of the Dalwood Group geological formation consisting of siltstone, sandstone, basic lava and tuff. The project area is situated on the Lochinvar Soil Landscape. One 1st order drainage channel is located in the north-eastern corner of the project area. This flows east where it meets Lochinvar Creek (3rd order) approximately 300 metres from the project area. The Hunter River is located approximately 1.4 kilometres north west of the project area. In terms of fresh water availability, the project area was not well resourced and would not have enabled sustained camping but may have supported more transitory activities such as hunting and gathering and travel to more reliable fresh water sources outside the project area.

In terms of land uses and impacted to the landscape and cultural materials that may be present, the project area has been cleared and primarily used for pastoral (grazing) and agricultural (ploughing), involving the wholesale clearance of native vegetation, the introduction of pasture grass, the construction of dams in the north eastern corner, housing and sheds in the south western corner, fencing, numerous tracks and associated infrastructure (water, electricity, telephone), all of which may have displaced cultural materials at those locations.

A search of the AHIMS register has shown that 44 known Aboriginal sites are currently recorded within a two-kilometre radius of the project area and include 38 artefact sites, four PADs and two artefact and PAD sites. Two previously identified PADs had been located in the project area. However, due to their distance from reliable water and resources, and with no explanation as to why these locations were identified as PADs, the PADs identifications are in question and were reassessed during this assessment.

The project area, was divided into 2 survey units (SU) that were based on landform elements. The 1st order drainage line (180m x 5m) located in the north east of the project area had been previously cleared, cultivated and grazed, the far north eastern end of the drainage channel is dammed. Visibility was low to moderate and exposures high (clearing, cultivation, erosion, dam). The remainder of the project area (slope) had also been previously cleared, ploughed and grazed. Additionally, a house, sheds, established garden and associated infrastructure and utilities were located in the south western corner. Vegetation included grass with very few trees and visibility was low end exposures moderate to high (clearing, cultivation, erosion, tracks). The overall effective coverage for project area illustrates that overall effective coverage being 28.52% with grass being the limiting factor.

The previously recorded PADs were located and reassessed. 37-6-2963 (PAD 1) and 37-6-2964 (PAD 2) were recorded as being located on a ridge in an undulating plain that had been previously cleared, grazed and established urban uses. The PADs are actually located on a gentle slope and been subjected to previous large-scale clearing, cultivation, grazing and erosion. Being

located over 300 metres from Lochinvar Creek, the only water source close by, it is highly unlikely that the area would have been favoured for camping. The area may have been utilised for transitory activities on the way to fresh water sources such as hunting and gathering which manifests in the archaeological record as a background scatter of discarded artefacts, which, in this case, would have been displaced by past land uses. These are not PADs and AHIMS was updated. No sites or PADs were identified.

MCH (2021) undertook a due diligence assessment for 51, 134, 146 Station Lane, Lochinvar. Consisting of the Lochinvar geological formation of siltstone, sandstone, basic lava and tuff, two 1st order creeks are located in the eastern side of the project area and converge to form a 2nd order roughly in the middle along the eastern border that converges with a 3rd order unnamed creek in the north eastern section of the project area. Lochinvar Creek (3rd order) is located in and out of the project area along the western border of the project area. Additional 1st and 2nd order creeks are located outside the project area to the east and west and the Hunter River (6th order) is located 1.5 kilometres to the north of the project area. Being located in between two semi reliable water sources (along the east and western borders) and the Hunter River located 1.5 kilometres to the north, the project area was likely utilised for small scale hunting parties as more reliable water would have been required for larger groups of people. European settlers extensively cleared the original native vegetation in the 1800's and since then the investigation area has been subject to continued clearing and grazing. There are numerous tracks and access roads to residential houses and sheds, six dams and fencing, all of which would have disturbed any cultural materials that may have been present at those locations.

An AHIMS search identified 75 Aboriginal sites are recorded within three kilometres of the project area and included 69 artefact sites, four PADs and two Artefact with PAD sites. Three previously identified sites were located in the project area and included two artefact scatters (one with an area of potential archaeological sensitivity) and one isolated artefact.

When 37-6-2223 (low density artefact scatter) was first recorded in 2009, this site consisted of 11 artefacts at six locations along the creek. Artefacts included flakes and cores manufactured from tuff, mudstone and quartzite. In addition, the banks of the creek appeared to have retain some original topsoil and had been assessed as retaining subsurface archaeological potential.

37-6-2225, a low-density artefact scatter, also recorded in 2009, was located on a slope and included three artefacts located (mudstone flake piece, tuff flake, chert flake piece) located in an exposure and trampled ground around adjacent to a small horse enclosure and the third artefact located approximately 50m west along an exposed foot track.

The isolated stone artefact, 37-6-2217) (recorded in 2009) was located in a paddock about 80m to the east of 37-6-2225 and no further artefacts were located. Located on moderately sloping ground and are not expected to have been used intensively in the past.

The project area was divided into three survey units. SU 1, consisting of the crest through the centre of the project area and the partial crest in the south, had been previously cleared and grazed. A residential house is located at the southern and northern ends of the large crest along with the associated infrastructure and utilities. Visibility was excellent due to drought conditioned reducing vegetation cover (pasture grasses with scattering of trees) at 80% and exposures were moderate (sheet wash, erosion) at 60%. The slopes throughout the project area (SU 2), consisted of pasture grass with few trees. This area had been previously cleared and utilised for grazing. Including four dams, tracks, access roads and fencing, visibility was good at 80% due to drought conditions and associated reduced grass cover. Exposures were moderate

(70%) due to erosion, tracks and dams. SU3 unit included all drainage lines and the two 3rd order creeks (one in the east and Lochinvar Creek in the west). Previously cleared, these areas consisted of pasture grass and trees along Lochinvar Creek. Erosion, including sheet wash and creek bank erosion was present and visibility was good at 70% and exposures high at 80%.

This assessment relocated the area of sensitivity but no artefacts were identified at 37-6-2223. Vegetation included pasture grasses and scatterings of trees along the creek banks. Visibility was excellent due to drought conditions (80%). The site had been subject to irregular local flooding, erosion and grazing since 2009 (11 years), thus it is not surprising the artefacts are no longer present. Whilst the site itself is of low scientific significance, the significance of the area of potential archaeological significance remains unknown. 37-6-2225 consisted of pasture grass with visibility being excellent due to drought conditions (60%). The area contained a small shed currently housing calves, fences are present and a sewer line. The previously recorded artefacts were not relocated and this is not surprising as 11 years of sheet wash and grazing have occurred at this site. Due to the erosion, there is very little of the A horizon remaining and as such the presence of subsurface cultural materials is low to zero. This site is of low scientific significance. The isolated stone artefact, 37-6-2217, was not relocated and this is not surprising as 11 years of sheet wash and grazing have occurred at this site. Due to the erosion, there is very little of the A horizon remaining and as such the presence of subsurface cultural materials is low to zero. This site is of low scientific significance.

An additional area of potential archaeological sensitivity was identified. This area included the eastern 3rd order creek on the eastern side. The western side of the creek consisted of slopes and unsuitable for camping. This PAD commenced north of the confluence with a 2nd order creek and continued north to the border of the project area and extends east to the border of the project area. Being a very low slope (almost flat) elevated landform overlooking the 3rd order creek, this area would have supported small numbers of people for short periods of time during times of heavy rain and as some topsoils remain, there is a potential for subsurface cultural materials. The archaeological significance of this area remains unknown.

MCH undertook an archaeological due diligence assessment at 146 Station Lane, Lochinvar. Consisting of the Lochinvar geological formation of siltstone, sandstone, basic lava and tuff, the project area consisted of slopes and a small crest was located along the southern border of the project area. The project area was dissected north-south by two 2nd order creeks located roughly through the centre of the project area that flow north into a 3rd order Lochinvar Creek outside the project area and the Hunter River (6th order) is located 1.5 kilometres to the north.

A search of the AHIMS register indicated there were 75 known Aboriginal sites recorded within three kilometres of the project area and included 69 artefact sites, four PADs and two artefacts with PAD sites. Four previously identified sites were located in the project area and include three isolated finds and one low density artefact scatter, all of which had been subject to AHIMS Permits 2421 and 3035. Unfortunately, the Permits were not available from AHIMS and AHIMS had not been updated to reflect the impact the Permits had on the sites.

The project area, consisting of three landforms, was divided into three survey units (SU) that were based on landform elements (crest, slopes, creeks). Consisting of the crest along the southern border that extended north, this area had been previously cleared, ploughed and grazed. Visibility was low due to grass cover at 10% and exposures were moderate (ploughing, grazing, sheet wash, erosion) at 60%. Consisting of the slopes throughout the project area, this landform consisted of pasture grass with new growth open bushland through the centre and western

portion. This area had been previously cleared, ploughed and utilised for grazing. Including, tracks, access roads, power easement and fencing, visibility was moderate at 40% due to grass and vegetation hindering visibility and exposures were moderate (70%) due to erosion, tracks and power easements. The third survey unit included the two creeks that flow through the centre of the project up to 50 metres both sides. Previously cleared, both creeks included large dams at their centres and significant creek bank erosion due to flooding events. Visibility was good at 70% and exposures high at 90%.

The previously recorded sites were not relocated and is likely due to the significant flooding event in 2007 and 2016. Additionally, as the sites had been subject to a Permit (AHIMS #2421 and 3035), but the Permits are unavailable and AHIMS has not been updated, it was unknown if this site was destroyed under the previous permits. AHIMS was updated to this site being destroyed due to natural processes. Two PADs were identified and include the two creeks in the project area including Lochinvar Creek (Station Street PAD 1) and the un-named 3rd order creek (Station Street PAD 2) in the west of the project area. A number of sites were previously identified within 50 meters of Lochinvar Creek and being low slopes (almost flat) elevated landform overlooking the creeks, these locations would have supported small numbers of people for short periods of time during times of heavy rain and as some topsoils remain, there is a potential for subsurface cultural materials to remain. Both PADs extend up to 50 metres both sides of the creeks.

MCH (2022) undertook the test excavation for the project located at 51, 134, 146 Station Lane, Lochinvar. The test excavation methods consisted of a 15m x 15m systematic grid system across the PADs. Test pits were 50cm x 50cm and were excavated to the B horizon. A total of 21 test pits were completed in PAD1, 27 on the western side of the PAD associated with 37-6-2223 and 56 on the eastern side of this PAD. Disturbances across PAD1 were consistent across the site and included wholesale clearing, evidence of previous agricultural activity, mixed soils, various densities of small, medium and large rocks throughout and some rubbish. The B horizon was mixed with the lower sections of the A horizon, with no sharp change to the B horizon. A moderate amount of insect bioturbation was noted throughout the deposit and was consistent across the site and included curl grubs, worms, spiders and beetles. No sites were identified in this PAD.

The disturbances in the western side of the PAD associated with 37-6-2223 included wholesale clearing with evidence of previous agricultural activity. Natural surface drainage and topsoil erosion from sheet wash had occurred across the site. The B horizon was mixed with the lower sections of the A horizon, with no sharp change to the B horizon. A moderate amount of insect bioturbation was noted throughout the deposit and was consistent across the site and included curl grubs, worms, spiders and beetles. One isolated flake was identified on the western side of the creek.

The eastern side of the creek was significantly disturbed and included wholesale clearing with evidence of previous agricultural activity with the B horizon being the surface with little to no A horizon remaining across the PAD area. Natural surface drainage and topsoil erosion from sheet wash had occurred across the site. A moderate amount of insect bioturbation was noted was consistent across the site and included worms and ants. One isolated flake piece was identified on the eastern side of the creek.

The two lithic items include a silcrete flake and a mudstone flake piece, both of which represent debris from stone knapping representing non-specific flaking associated with hunting and gathering or travel.

The results of the test excavation identified a highly disturbed landscape and whilst it is possible that the site may represent at least two episodes of occupation over a period of time, (one isolated

artefact on either side of the creek) it is not possible to clarify this. The location of PAD along a creek line and associated resources, renders this location favourable for opportunistic hunting and gathering opportunities following heavy rain.

Although two isolated artefacts were recovered during the test excavation, the project area was highly disturbed through previous clearing, ploughing, grazing, sheet wash and flooding, resulting in no site integrity remaining or potential for in situ deposits, the artefacts were representative of opportunistic hunting and gathering activities, there was limited to no potential for additional artefacts to be present in the project area. A project based AHIP that includes AHIMS site 37-6-2223 was recommended prior to works.

5.5 MOST RECENT PREVIOUS ASSESSMENT OF THE PROJECT AREA

AECOM (2022) undertook an archaeological due diligence of the project area. AECOM identified that the artefact site with PAD “LCC1 and PAD” (37-6-2228) appeared to be located approximately 100 m to the west of the Project area. However, examination of site card for LCC1 and PAD (37-6-2228) indicated that this site does, in fact, extend into the project area. LCC1 and PAD (37-6-2228) was recorded by Insite Heritage in 2010 as part of Aboriginal heritage assessment for a proposed aged care facility. Insite Heritage recorded a total of 15 stone artefacts across four separate “loci”(i.e., clusters) designated as L1, L2, L3 and L4. Three spatially discrete PADs, one encompassing L1 through L4, were also identified associated with slopes and flats adjacent to Lochinvar Creek. As shown on Figure 5.4 (AECOM 2022), the project area incorporates two of the four loci recorded by Insite Heritage (2009), with two areas of PAD also present.

Figure 5.4 Location of sites & PADs in the project area (AECOM 2022)



AECOM also identified that part of the project area was subject to AHIP permit #C0001860 (Figure 5.5). The AHIP was issued to Hunter Water Corporation in 2016 for a period of ten years to allow impacts to Aboriginal site LCC1 and PAD (37-6-2228) from the construction of a sewer pipeline. Conditions 7-10 of the AHIP allowed for salvage excavations to be completed along the pipeline prior to impacts. The conditioned excavation works were carried out by Umwelt. It is noted that AHIP is valid until May 2026 and that all works within the boundary of the AHIP must be completed in accordance with the AHIP conditions.

Figure 5.5 Location of AHIP boundary in the project area (AECOM 2022)



The survey confirmed that one AHIMS site is present within the project area: LCC1 and PAD (37-6-2228) and consisted of surface artefacts at four discrete loci, two of which were located within the project area, as well as three PADs, two of which fall within the project area (in whole or part). The survey also identified five artefacts, all of which were associated with previous recorded AHIMS site LCC1 and PAD (37-6-2228) Loci 4. Areas of subsurface archaeological sensitivity were identified within the project area were associated with the tributaries of Lochinvar Creek and these areas have been previously mapped as PADs associated with AHIMS site LCC1 and PAD (37-6-2228).

AECOM recommended that archaeological survey and a program of subsurface testing focused on the two areas of PAD associated with 37-6-2228 should be undertaken in accordance with Heritage NSW's Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010a) and Heritage NSW's Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW, 2010c).

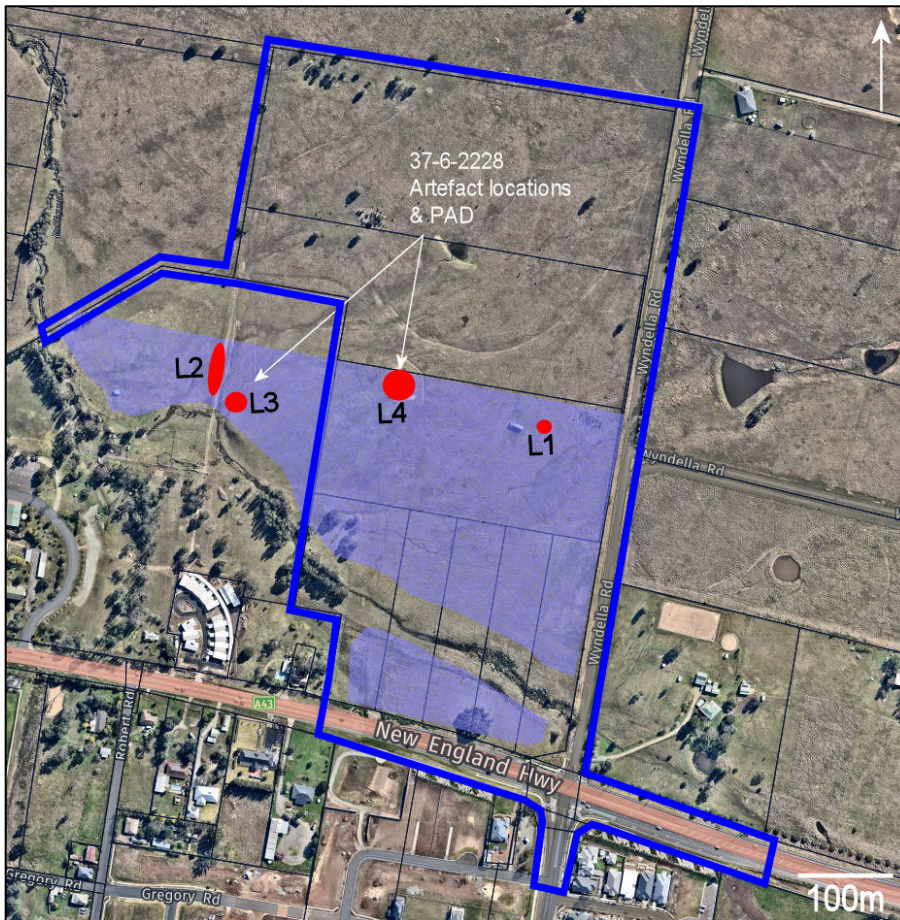
A Section 90 AHIP will be required to permit impacts to Aboriginal site LCC1 and PAD (#37-6-2228) and any additional sites identified during further archaeological investigations.

Any new AHIP application must exclude the boundary of AHIP #C0001860 to avoid overlapping AHIP boundaries. Lochinvar Developments Pty Ltd should seek written approval from AHIP holder Hunter Water Corporation to complete works within the boundary of AHIP #C0001860.

5.6 AHIMS SITES IN THE PROJECT AREA

Site LCC 1 and 4 and the associated PAD (AHIMS 37-6-2228) are located within the project area and their location are provided in Figure 5.6.

Figure 5.6 Site & PAD in the project area



5.7 LOCAL & REGIONAL CHARACTER OF ABORIGINAL LAND USE & ITS MATERIAL TRACES

The following is a summary of the previous investigations detailed in Section 5.3 and 5.4. It must be remembered, however, that there are various factors which will have skewed the results discussed in Section 5.3. Therefore, the summary provides an indication of what may be expected in terms of site location and distribution.

- the majority of high-density sites are located on elevated landforms within 50 metres of a reliable fresh water source with a drop of site number and densities with a decrease in stream order;

- the likelihood of finding sites of any size increases with proximity to fresh water sources and the likelihood of finding large artefact scatters also increases markedly with proximity to reliable high order water sources;
- the main site types are artefact scatters and isolated finds;
- mudstone, silcrete and tuff are by far the most common raw material types represented at sites in the region. Quartz and chert are the next most frequently in artefact assemblages followed by volcanic materials, porphyry and petrified wood. Siltstone, rhyolite and porcellanite are relatively rare;
- flakes, broken flakes and flaked pieces are the most common artefact types recorded;
- the stone artefacts are usually relatively dated to within the last 5,000 years;
- grinding grooves may be located along or near water sources;
- the likelihood of finding scarred trees is dependent on the level of clearing in an area;
- the vast majority of artefactual material in the region was observed on exposures with good to excellent ground surface visibility; and
- the majority of sites will be subject to disturbances including human and natural.

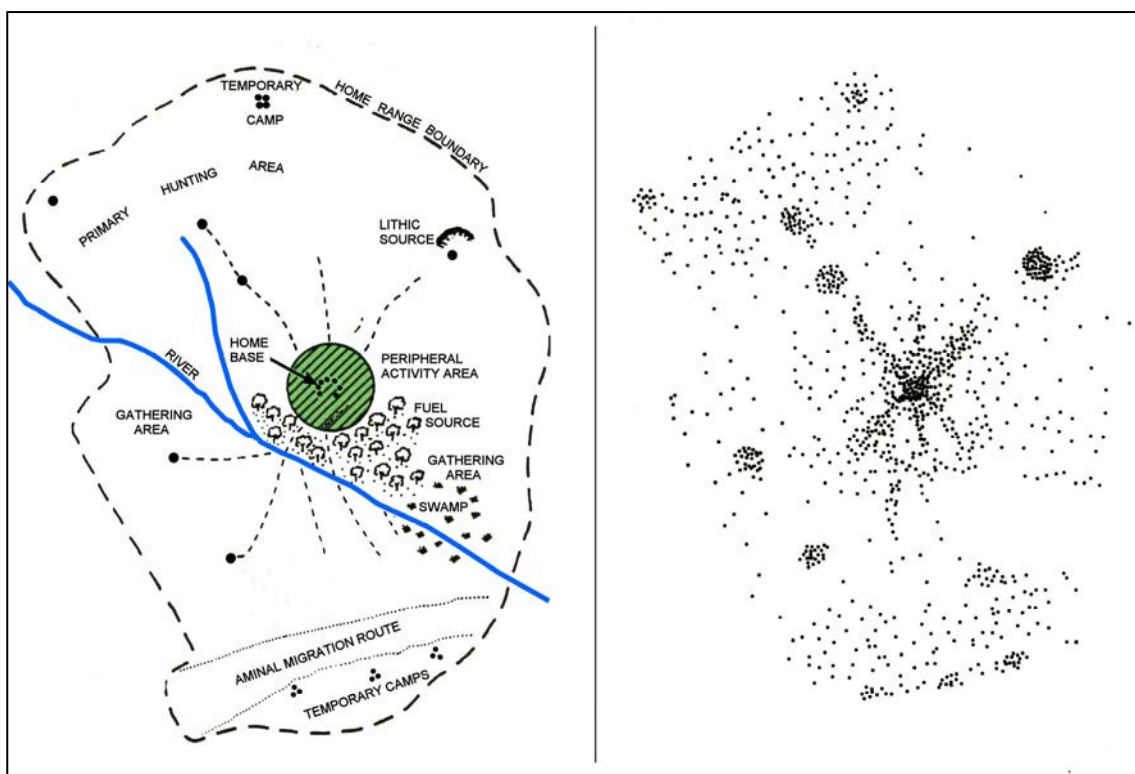
These findings are consistent with models developed for the local area.

5.8 MODELS OF PAST ABORIGINAL LAND USE

The aim of this assessment is to attempt to define both the nature and extent of occupation across the area. As a result, the nature of the analysis will focus on both landform units and sites. The purpose of this strategy is to highlight any variations between sites and associated assemblages, landforms and resources across the area treating assemblages as a continuous scatter of cultural material across the landscape. In doing this, it is possible to identify land use variations across the landscape, landforms and assemblages that correspond with variation in the general patterns of landscape use and occupation. Thus, the nature of activities and occupation can be identified through the analysis of stone artefact distributions across a landscape. A general model of forager settlement patterning in the archaeological record has been established by Foley (1981). This model distinguishes the residential “home base” site with peripheral “activity locations”. Basically, the home base is the focus of attention and many activities and the activity locations are situated away from the home base and are the focus of specific activities (such as tool manufacturing).

This pattern is illustrated in Figure 5.7. Home base sites generally occur in areas with good access to a wide range of resources (reliable water, raw materials etc), and the degree of environmental reliability, such as reliable water and subsistence resources, may influence the rate of return to sites and hence the complexity of evidence. Home base sites generally show a greater diversity of artefacts and raw material types (which represent a greater array of activities performed at the site and immediate area). Activity locations occur within the foraging radius of a home base camp (approximately 10 km); (Renfrew and Bahn 1991). Based on the premise that these sites served as a focus of a specific activity, they will show a low diversity in artefacts and are not likely to contain features reflecting a base camp (such as hearths). However, it is also possible that the location of certain activities cannot be predicted or identified, adding to the increased dispersal of cultural material across the landscape. If people were opting to carry stone tools during hunting and gathering journeys throughout the area rather than manufacturing tools at task locations, an increased number of used tools should be recovered from low density and dispersed assemblages across the landscape.

Figure 5.7 Foley's model (L) and its manifestation in the archaeological record (R), (Foley 1981).



5.8.1 MODEL OF OCCUPATION FOR THE HUNTER VALLEY

Archaeological work throughout the Hunter Valley has aimed to understand the nature of Aboriginal occupation and determine the nature of land use. This theme often aims to identify and explain archaeological patterning in site type, content and distribution. General theories have been developed outlining the relationship between land use patterns and the resulting archaeological evidence. A number of models developed for the Hunter Valley have been reviewed (Koettig 1994; Dean-Jones and Mitchell 1993; Rich 1995; Kuskie and Kamminga 2000) and the most commonly accepted model is summarised below.

Kuskie and Kamminga (2000) established a general model of occupation strategies based primarily upon ethnographic research. Used as a starting point, it makes a general set of predictions for the region that is consistent with other studies (e.g., Nelson 1991). The model distinguishes between short-term or extended long-term occupation and makes some predictions about the likely location of different foraging and settlement activities. Combining this information with a general review of assemblage contents from a sample of excavated sites within the region, a baseline of settlement activities may be determined (Barton 2001).

The model provides a number of archaeological expectations that may be tested. For example, the presence of features requiring a considerable labour investment such as stone-lined ovens or heat-treatment pits are likely to occur at places where occupation occurred for extended periods of time. The presence of grindstones is also a reliable indicator of low mobility and extended occupation. Seed grinding requires a large investment of time and effort (Cane 1989). In most ethnographic examples, seed grinding is an activity that takes place over an entire day to provide adequate energetic returns (Cane 1989; Edwards and O'Connell 1995).

Where group mobility was high and campsites frequently shifted throughout the landscape, artefact assemblages are not expected to contain elements such as grindstones, heat-treatment pits, ovens and the diversity of implements frequently discarded at places of extended residential occupation. It may also have been the case that the location of particular activities could not be predicted by tool users, adding to the increased low-density scattering of artefacts over the landscape. Also, if individuals were opting to carry a number of stone tools during hunting and gathering activities and maintaining these tools rather than manufacturing new tools at each task location, the ratio of used tools to unworn flakes in these assemblages should be high. Table 5.2 has been adapted from Kuskie and Kamminga (2000). The identification of specific activity areas through analysis of the composition of the patterning of lithic assemblages was utilised. However, this is applied to excavated materials as they provide more realistic data due to the lesser degree of disturbances, removal and breakages.

Table 5.4 Site descriptions (Kuskie & Kamminga 2000).

| Occupation pattern | Activity location | Proximity to water | Proximity to food | Archaeological expectations |
|--|---|-----------------------------------|---------------------|--|
| Transitory movement | all landscape zones | not important | not important | <ul style="list-style-type: none"> assemblages of low density & diversity evidence of tool maintenance & repair evidence for stone knapping |
| Hunting &/or gathering without camping | all landscape zones | not important | near food resources | <ul style="list-style-type: none"> assemblages of low density & diversity evidence of tool maintenance & repair evidence for stone knapping high frequency of used tools |
| Camping by small groups | associated with permanent & temporary water | near (within 100m) | near food resources | <ul style="list-style-type: none"> assemblages of moderate density & diversity evidence of tool maintenance & repair evidence for stone knapping & hearths |
| Nuclear family base camp | level or gently undulating ground | near reliable source (within 50m) | near food resources | <ul style="list-style-type: none"> assemblages of high density & diversity evidence of tool maintenance & repair & casual knapping evidence for stone knapping heat treatment pits, stone lined ovens grindstones |
| Community base camp | level or gently undulating ground | near reliable source (within 50m) | near food resources | <ul style="list-style-type: none"> assemblages of high density & diversity evidence of tool maintenance & repair & casual knapping evidence for stone knapping heat treatment pits, stone lined ovens grindstones & ochre large area >100sqm with isolated camp sites |

5.9 PREDICTIVE MODEL FOR THE PROJECT AREA

Due to issues surrounding ground surface visibility and the fact that the distribution of surface archaeological material does not necessarily reflect that of sub-surface deposits, it is essential to establish a predictive model.

Previous archaeological studies undertaken throughout the region, the AHIMS register and the environmental context provide a good indication of site types and site patterning in the area. This research has shown that occupation sites (artefact scatters and isolated finds) are the most

frequently recorded site type and are commonly located along or adjacent to watercourses, and on relatively flat to gently sloping topography in close proximity to reliable fresh water. Sites with higher artefact densities are similarly concentrated within fifty metres of higher order watercourses with site numbers and site densities decreasing with a reduction of stream order and distance from a water source. Within the local area, previous assessments within a similar environmental context indicate that, within a well-watered context, there is high potential for archaeological material to be present on level, typically well-elevated landforms that provide ready access to low-lying waterlogged areas and the associated resources.

Within the specific project area, a number of locations with artefacts have been identified along with PADs. It is possible that additional artefacts may be identified, or previous artefacts may have been disturbed due to the recent major flooding events (exposing, covering, washing away). Low to medium density artefacts scatters are likely to be present in close proximity to water ways and due to the drainage lines and creeks being intermittent, likely utilised for opportunistic hunting and gathering opportunities rather than large scale camping that requires a reliable fresh water source. The refinement of this predictive model will be dependent upon an investigation of the range of landforms and the occurrence of disturbances within the project area including both human and natural.

5.10 ARCHAEOLOGICAL POTENTIAL IN THE PROJECT AREA

Based on archaeological sites registered in the region and the results of past archaeological studies, two site types are likely to occur throughout the project area:

- **Artefact scatters**

Also described as open campsites, artefact scatters have been defined as two or more stone artefacts within 50 metres of each other and will include archaeological remains such as stone artefacts and may be found in association with hunting and gathering activities (manifests in the archaeological record as low-density discarded artefacts across the landscape) or camping where other evidence may be present such as shell, hearths, stone lined fire places and/or heat treatment pits. These sites are usually identified as surface scatters of artefacts in areas where ground surface visibility is increased due to lack of vegetation and land uses. Erosion, agricultural activities (such as ploughing, grazing), construction and mining activities and access ways can also expose surface campsites. Artefact scatters may represent evidence of;

- Large camp sites, where everyday activities such as habitation, maintenance of stone or wooden tools, manufacturing of such tools, management of raw materials, preparation and consumption of food and storage of tools has occurred;
- Medium/small camp sites, where activities such as minimal tool manufacturing occurred;
- Hunting and/or gathering events;
- Other events spatially separated from a camp site, or
- Transitory movement through the landscape.

Artefact scatters are a common site type in the locality and the broader region. There is potential for low density artefact scatters to occur within the project area in areas of elevated landforms in close proximity to fresh water along the drainage lines and creek.

There is also the potential for such sites to be impacted on through past impacts including previous clearing, at least one ploughing event for improved pasture, erosion and major flooding events.

- **Isolated finds**

Isolated artefacts are usually identified in areas where ground surface visibility is increased due to lack of vegetation and land uses. Erosion, agricultural activities (such as ploughing), construction and mining activities and access ways can also expose surface artefacts. Isolated finds may represent evidence of;

- Hunting and/or gathering events; or
- Transitory movement through the landscape.

Isolated finds are a common site type in the locality and the broader region. There is potential for isolated artefacts to occur across the project area and across all landforms. There is also the potential for such sites to be impacted on through past impacts including previous clearing, at least one ploughing event for improved pasture, erosion and major flooding events.

6 RESULTS

6.1 METHODOLOGY

The survey area was surveyed on foot by the archaeologist in accordance with the proposed methodology provided to the stakeholders for review. The survey included transects at approximately 10 metres apart walked in an east/west direction across the project area and focused on areas of high ground surface visibility and exposures (erosional features, creek banks, tracks, dams, cleared areas).

6.2 LANDFORMS

McDonald et al (1998) describes the categories of landform divisions that consists of a two layered division involving treating the landscape as a series of “mosaics”. The mosaics are described as two distinct sizes: the larger categories are referred to as landform patterns and the smaller being landform elements within these patterns. Landform patterns are large-scale landscape units, and landform elements are the individual features contained within these broader landscape patterns. There are forty landform pattern units and over seventy landform elements. However, of all the landform element units, ten are morphological types. For archaeological investigations they divide the landscape into standardised elements that can be used for comparative purposes and predictive modelling. As outlined in Section 3, the project area includes three landforms: slopes and drainage lines/ creeks.

6.3 SURVEY UNITS

The project area, consisting two landforms (slopes and a creek), was divided into two survey units (SU) that were based on landform elements (following McDonald et al 1984). The locations of the SUs are marked on Figure 6.1 and are summarised below.

Figure 6.1 Survey units



Survey Unit 1: Slopes

This survey unit included the majority of the project area that consisted of a south facing slope. It is bounded on all sides by fencing. This area had been previously cleared and ploughed as evident eroded by ridges and furrows, two dams located through the mid-section, one dam located the southern section and is currently used for cattle grazing with deep hoof prints throughout. Vegetation is predominantly pasture grass with few trees in some areas which contributed to reduced ground surface visibility and exposures were also low and included tracks, erosion and the dams. This survey unit also included the road reserves of the New England Highway and Wyndella Road and up to 10 metres outside the project area boundary.

Survey Unit 2: 2nd order (creek)

This survey unit included the 2nd order creek located in the southern portion of the project area and up to 10 metres both sides. Previously cleared, vegetation consisted of grass. Evidence of previous ploughing was evident (eroded ridges and furrows) as well as grazing (deep hoof prints). Visibility was low due to grass cover and trees along the eastern end of the creek as were exposures.

Figure 6.2 South eastern corner of the project area facing north west



Figure 6.3 Middle of the project area facing north



Figure 6.4 Middle of the project area facing south



Figure 6.5 Example of vegetation and exposures



Figure 6.6 Intersection of New England Highway and Wyndella Rd



6.4 EFFECTIVE COVERAGE & DISTURBANCES

To determine the effectiveness of an archaeological survey, the visibility and exposure conditions for each survey unit is calculated to provide an effective coverage amount. Effective coverage is an estimate of the amount of ground observed considering local constraints on site discovery

such as vegetation and leaf litter and erosion. There are two components to determining the effective coverage: visibility and exposure.

Visibility is the amount of bare ground on the exposures which may reveal artefacts or other cultural materials, or visibility refers to 'what conceals'. Visibility is hampered by vegetation, plant or leaf litter, loose sand, stony ground or introduced materials (such as rubbish). On its own, visibility is not a reliable factor in determining the detectability of subsurface cultural materials (DECCW 2010/783:39).

The second component in establishing effective coverage is exposure. Exposure refers to "what reveals". It estimates the area with a likelihood of revealing subsurface cultural materials rather than just an observation of the amount of bare ground. Exposure is the percentage of land for which erosion and exposure is sufficient to reveal cultural materials on the surface (DECCW 2010/783:37). The effective coverage for the project area was determined for both visibility and exposure ratings and Table 6.1 details the visibility rating system used.

Table 6.1 Ground surface visibility rating

| Description | GSV rating % |
|---|--------------|
| Very Poor – heavy vegetation, scrub foliage or debris cover, dense trees or scrub cover. Soil surface of the ground very difficult to see. | 0-9% |
| Poor – moderate level of vegetation, scrub, and / or tree cover. Some small patches of soil surface visible in the form of animal tracks, erosion, scalds, blowouts etc, in isolated patches. Soil surface visible in random patches. | 10-29% |
| Fair – moderate levels of vegetation, scrub and / or tree cover. Moderate sized patches of soil surface visible, possibly associated with animal, stock tracks, unsealed walking tracks, erosion, blow outs etc, soil surface visible as moderate to small patches, across a larger section of the project area. | 30-49% |
| Good – moderate to low level of vegetation, tree or scrub cover. Greater amount of areas of soil surface visible in the form of erosion, scalds, blowouts, recent ploughing, grading or clearing. | 50-59% |
| Very Good – low levels of vegetation / scrub cover. Higher incidence of soil surface visible due to recent or past land-use practices such as ploughing, mining etc. | 60-79% |
| Excellent – very low to non-existent levels of vegetation/scrub cover. High incidence of soil surface visible due to past or recent land use practices, such as ploughing, grading, mining etc. | 80-100% |
| Note: this process is purely subjective and can vary between field specialists, however, consistency is achieved by the same field specialist providing the assessment for the one project area/subject site. | |

As indicated in Table 6.2, the overall effective coverage for project area is 6.86% with grass being the limiting factor. The disturbances included clearing, ploughing, grazing, dam and road construction and fencing, all of which have impacted upon the landscape and associated cultural materials through removal and displacement.

Table 6.2 Effective coverage for the investigation area

| SU | Landform | Area (m2) | Vis. % | Exp. % | Exposure type | Previous disturbances | Present disturbances | Limiting visibility factors | Effective coverage (m2) |
|-----------------------------|----------|----------------|--------|--------|--|--|----------------------|-----------------------------|-------------------------|
| 1 | slope | 271,900 | 20% | 35% | clearing, ploughing, grazing, erosion, fencing, dams, tracks, road works | clearing, ploughing, grazing, erosion, fencing, dams, tracks, road works | erosion, road | grass | 19,033 |
| 2 | creek | 6,700 | 5% | 20% | clearing, ploughing, grazing, erosion | clearing, ploughing, grazing, erosion | erosion | grass | 67 |
| Totals | | 278,600 | | | | | | | 19,100 |
| Effective coverage % | | | | | | | | | 6.86% |

The level and nature of the effective survey coverage is considered satisfactory to provide an effective assessment of the project area. The coverage was comprehensive for obtrusive site types (e.g., grinding grooves and scarred trees) but somewhat limited for the less obtrusive surface stone artefact sites by surface visibility constraints that included vegetation cover and minimal exposures.

In relation to land uses and the associated impacts on the landscape and any cultural materials that may have been present, and those that are present, the project area has been subject to clearing, ploughing, grazing, dam and road construction and fencing, all of which are known to at least displace cultural materials across the landscape and as indicated in Table 6.3, these disturbances range from minor to high.

Table 6.3 Land use scale (CSIRO 2010) and land uses in the project area

| Minor disturbance | | Project area | Moderate disturbance | | Project area | Major disturbance | | Project area |
|-------------------|--|--------------|----------------------|---|--------------|-------------------|---|--------------|
| 0 | No effective disturbance; natural | | 3 | Extensive clearing (e.g., poisoning and ringbarking) | | 6 | Cultivation: grain fed | |
| 1 | No effective disturbance other than grazed by hoofed animals | | 4 | Complete clearing: pasture native or improved, but never cultivated | | 7 | Cultivation: irrigated, past and present | |
| 2 | Limited clearing (e.g., selected logging) | | 5 | Complete clearing: pasture native or improved, cultivated at some stage | yes | 8 | Highly disturbed: e.g., quarry, road works, mining, landfill, urban | part |

In view of the predictive modelling and the results obtained from the effective coverage and disturbance rating, it is concluded that the survey provides a valid basis for determining the probable impacts of the proposal and formulating recommendations for the management of the project area.

6.5 ARCHAEOLOGICAL SITE

The previously identified site 37-6-2228 was re-assessed during this assessment and the results are discussed below.

6.5.1 SITE - 37-6-2228

The results of the survey located and re-assessed 37-6-2228 (L1, L4 and associated PAD within the project area) and are discussed in detail below.

- Loci 1 (L1) – was originally located on a gentle slope. Isolated artefact (silcrete flake) in an exposure of 30m x 30m.

This site was not re-located during this assessment. This is not unusual given the length of time since first recorded and impacts to the landscape (grazing, erosion). Additionally, visibility at the site was 3% (Figure 6.7).

Figure 6.7 Loci 1 (facing south)



- Loci 4 (L4) – was originally located on a gentle slope. Four artefacts located in an exposure around a dam (50m x 5m) and included three mudstone flakes and one mudstone core.

This site was located during the survey. Located on a dam wall, only one mudstone flake was found on the western side of the dam on top of the wall. This is not unusual given the length of time since first being recorded and erosion down the dam walls. Visibility on the dam wall was excellent (70%) and exposure 100% (Figures 6.8 to 6.10).

Figure 6.8 Loci 4 (facing west)



Figure 6.9 Loci 4 location of artefact



Figure 6.10 Loci 4 artefact



6.6 POTENTIAL ARCHAEOLOGICAL DEPOSIT/ SENSITIVITY

The terms “potential archaeological deposit (PAD)” and “area(s) of archaeological sensitivity” are used to describe areas that are likely to contain sub-surface cultural deposits. These sensitive landforms or areas are identified based upon the results of fieldwork, the knowledge gained from previous studies in or around the subject area and the resultant predictive models. Any or all of these attributes may be used in combination to define an area of potential archaeological sensitivity.

The likelihood of a landscape having been used by past Aboriginal societies and hence containing archaeologically sensitive areas is primarily based on the availability of local natural resources for subsistence, artefact manufacture and ceremonial purposes. The likelihood of surface and subsurface cultural materials surviving in the landscape is primarily based on past land uses and preservation factors.

Areas considered highly likely to contain subsurface archaeological material, were identified across the study area. These areas were identified on the basal slopes adjacent to Lochinvar Creek, in the vicinity of tributary confluences and in association with the four loci of artefacts located in the northern portion of the study area. The PAD identified (37-6-2228) was delineated in consideration of the results of the MCH (2005) excavation results which found minimal artefacts in the low-lying high clay soils close to the confluence. Insite Heritage (2010) found that the occupation areas between the confluences of Lochinvar Creek were on the more elevated well drained land with artefact numbers diminishing as the soils become increasingly clayey. Insite noted that this was possibly because the creek lines have become more incised in the last 100 years therefore the areas adjacent to the existing creek lines were too low lying for occupation areas.

Areas considered highly likely to contain subsurface archaeological material (PADs), were previously identified across the project area. These areas were identified on slopes adjacent to the 2nd order creek. The PAD identified by Insite (2010) (37-6-2228) was delineated in consideration of the results of the MCH (2005) excavation results which found minimal artefacts in the low-lying high clay soils close to a water source. Insite Heritage (2010) found that occupation areas between the confluences of Lochinvar Creek were on the more elevated well drained land with artefact numbers diminishing as the soils become increasingly clayey. Insite noted that this was possibly because the creek lines have become more incised in the last 100 years therefore the areas adjacent to the existing creek lines were too low lying for occupation areas. Based on this, the previously identified PAD remains unchanged and is subject to archaeological test excavations.

7 TEST EXCAVATION METHODS

7.1 OBJECTIVES

The purpose of archaeological test excavation was to collect information regarding the nature and extent of sub-surface Aboriginal objects, based on the sample obtained from these sub-surface investigations. The test excavation will contribute to the understanding of site characteristics and local and regional prehistory and was used to inform conservation goals and harm mitigation measures for the proposed activity. The test excavation also determined if an Aboriginal Heritage Impact Permit (AHIP) is required and what type of controlled salvage works may be required, if necessary, under the AHIP.

7.2 DATE OF COMMENCEMENT AND COMPLETION

13th February 2024

7.3 LOCATION OF TEMPORARY STORAGE OF CULTURAL MATERIALS

McCardle Cultural Heritage Pty Ltd
New Lambton NSW 2305

At the completion of the test excavation and analysis all artefacts will be handed to the Aboriginal representative selected by the RAPs (yet to be determined) for further temporary storage until the registered stakeholders agree to a suitable re-burial location or obtain a Care Agreement from Heritage NSW to keep the artefacts.

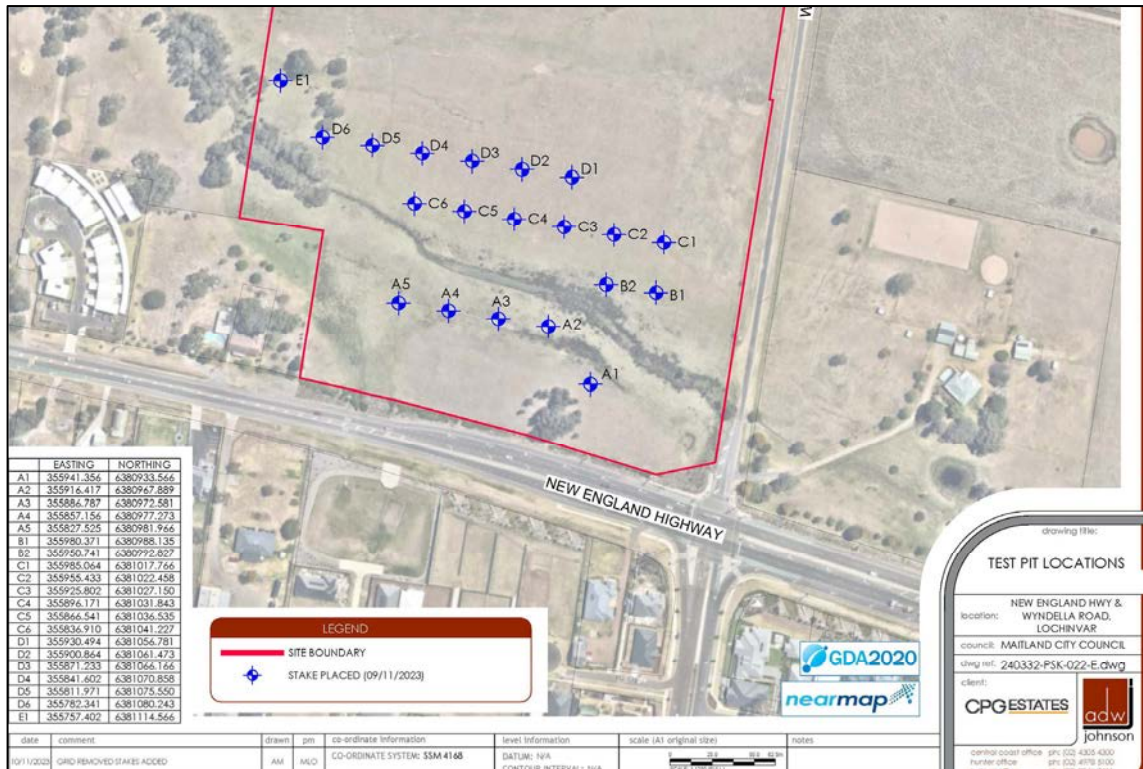
7.4 EXCAVATION METHODS

This proposed methodology is subject to variation due to unforeseen field conditions/constraints. The area to be subject to a test excavation program will include the area clarified as having archaeological potential and will include:

- the test excavation units will be placed on a 30m x 30m systematic grid system across the PAD (ensuring that the maximum surface area of all test excavation pits is no greater than .5% the PAD areas;
- the test excavation will be pegged by a surveyor who will also provide a plan and coordinated of each test pit;
- test excavations units will be excavated using hand tools only;
- test excavations will be excavated in 50 cm x 50 cm units. If the pits are deeper than 1m, due to safety, the pits will be battered to allow safe access and batters excavated and sieved as the test excavation;
- the first excavation unit will be excavated and documented in 5 cm spits. Based on the evidence of the first excavation unit, 10 cm spits or sediment profile/stratigraphic excavation (whichever is smaller) will then be implemented;
- all material excavated from the test excavation units will be sieved using a 5-mm wire-mesh sieve;
- test excavation units will be excavated to the base of the identified Aboriginal object-bearing units, or until the B horizon is reached;

- if more than 10 artefacts are uncovered in one pit, then additional test pits will be located north, south, east and west of that pit and placed at 5m from the original pit so long as the total area excavated did not exceed 0.5% of the PAD;
- the test excavation will cease if the first two transects of test pits from the creek yield no cultural materials;
- test excavations will cease when enough information has been recovered to adequately characterise the objects/site(s) present with regard to their nature and significance;
- photographic and scale-drawn records of the stratigraphy/soil profile, features and informative Aboriginal objects will be made for each excavation point;
- test excavations units will be backfilled as completed; and
- all artefacts will be removed at the end of each day for security and held with MCH until the artefact analysis is complete and will be handed to the RAPs (care and control to be determined).

Figure 7.1 Test pit plan



The assessment is designed to address a number of research hypothesis. The research questions listed below derive from Kuskies (2005) detailed work in the region and are used here for consistency in analysis and discussions as well as local and regional comparative research.

- What past Aboriginal activities occurred within the project area?
- What types of past Aboriginal occupation occurred within the project area (e.g., transitory movement, hunting, gathering, camping etc)?
- Were the types of activity and nature of occupation related to environmental factors (e.g., landforms, proximity to reliable water)?

- Does spatial patterning of activity areas occur within the project area?
- Did single or multiple episodes of occupation occur within the project area?
- Did episodes of occupation occur at different times over the whole time-span of occupation in the region within the project area?
- Is there potential for older evidence of occupation (i.e., early Holocene)?
- How intensive was occupation of the sites, in both a local and regional context?
- Did microblade and microlith production occur on the sites?
- Were other tools manufactured on the sites?
- Was maintenance of tools conducted on site?
- Was knapping of flakes largely casual and opportunistic, meeting requirements on 'as needed' basis?
- What raw materials were favoured for use on site within the project area and why?
- Did thermal alteration of raw materials occur within the project area?
- How does the evidence and inferred human behaviour represented within the project area compare with evidence from other locations in the region?
- How does the evidence relate to the regional and local models of occupation?

8 RESULTS

The results of the test excavation, the analysis and discussion of these results are presented in this Section. The results and discussion of Transect A (located on the southern side of the creek) is provided first, followed Transects B-E (located on the northern side of the creek). A total of 20 pits were excavated (the test pit data is provided in Appendix C) and no artefacts were present.

8.1 SOUTHERN SIDE OF THE CREEK

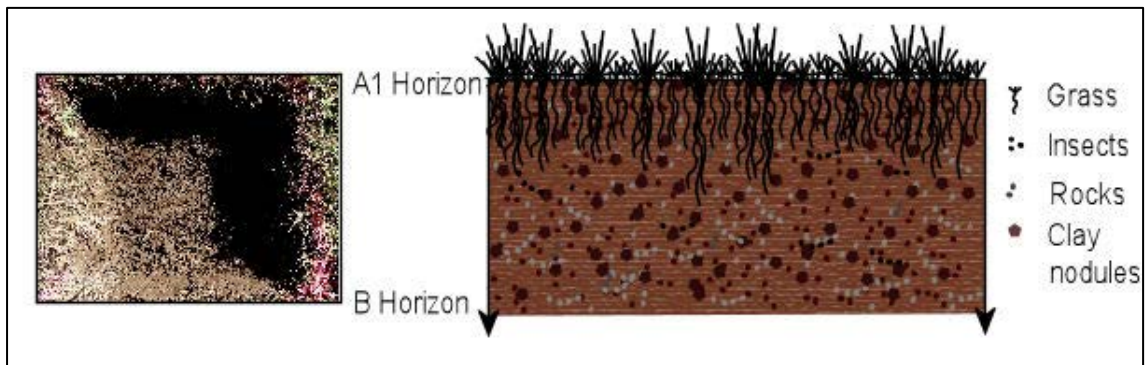
This transect was located along the southern side of the creek and consisted of 5 test pits (A1 – A5). The excavation ceased at the B horizon.

The disturbances across the PAD were consistent and consisted of agricultural activity (clay nodules mixed throughout the A horizon) along with eroded plough ridges and furrows both on the surface and subsurface. Grass and grass roots were present throughout along with low density small rocks. A moderate amount of insect bioturbation was noted throughout the deposit and included worm lines throughout, ants and beetles.

8.1.1 SOIL PROFILE & STRATIGRAPHY

The soil profile and stratigraphy were constant with changes in depth only and all included an A horizon that ranged in depth from 9cm to 21cm and consisted of dark brown loam mixed with dark brown very plastic/sticky clay nodules (7.5YR 2.5/1; pH 6-8). The A horizon was mixed with the B horizon and small sized rocks were found throughout the deposit. Figure 8.1 provides a representation of the stratigraphy of the southern side of the creek PAD area.

Figure 8.1 Representation of the stratigraphy (southern side of the creek)



8.2 NORTHERN SIDE OF THE CREEK

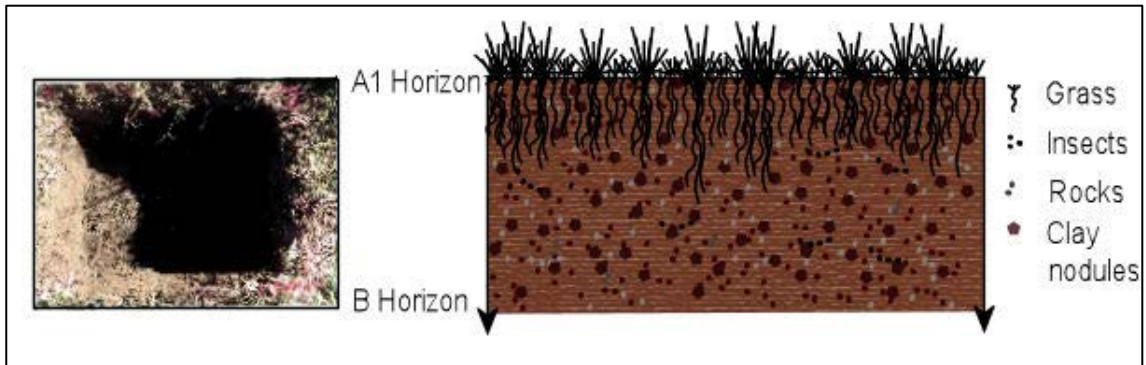
This transect was located along the northern side of the creek and consisted of 15 test pits. The excavation ceased at the B horizon.

The disturbances across the PAD were consistent and consisted of agricultural activity (clay nodules mixed throughout the A horizon) along with plough furrows. Grass and grass roots were present throughout along with small sized rocks, ironstone, broken ceramic pieces (pits C2, E1) and broken purple glass bottle (pit B2). Plough furrows were also present as well as a moderate amount of insect bioturbation was noted throughout the deposit and included worm lines throughout.

8.2.1 SOIL PROFILE & STRATIGRAPHY

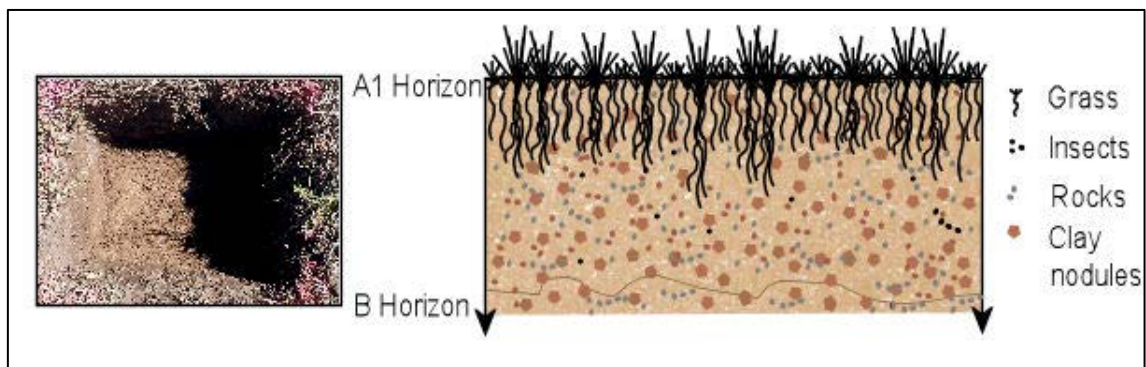
The soil profile and stratigraphy of Pits B1 and B2 (closest to the creek) were similar to those on the southern side of the creek and both consisted of dark brown loam mixed with dark brown very plastic/sticky clay nodules (7.5YR 2.5/1; pH 6-8). The A horizon was mixed with the B horizon and small sized rocks were found throughout the deposit. Figure 8.2 provides a representation of the stratigraphy of Pits B1 and B2.

Figure 8.2 Representation of the stratigraphy Pits B1 and B2 (northern side of the creek)



The soil profile and stratigraphy of the remaining test pits in the northern side of the creek were constant with changes in depth only and all included an A horizon that ranged in depth from 6cm – 33cm and consisted of light brown loam mixed with light brown clay nodules (7.5YR 4/3; pH 6-7). The A horizon was mixed with the B horizon and small sized rocks were found throughout the deposit. Figure 8.3 provides a representation of the stratigraphy of the southern side of the creek PAD area.

Figure 8.3 Representation of the stratigraphy (northern side of the creek)



8.2.2 SITE INTEGRITY

Site integrity can be examined through three main factors including land use history and natural processes, the horizontal and vertical distribution of artefacts and conjoins of artefacts and inferred associations between individual artefacts. The initial assessment identified that previous and present land uses and their impacts as well as natural impacts (such as bioturbation, erosion etc) within the test excavation investigation area were assessed as low. The potential effects of land use and their impacts on cultural heritage can be considered.

The test excavation identified evidence of past land uses with clay of the B horizon mixed throughout the A horizon with eroded plough ridges and furrows on both the surface and subsurface. There is no evidence of stratigraphy and the evidence indicates the area has been subject to clearing, ploughing and grazing, and as such is identified as a disturbed deposit with little likelihood of in situ deposits.

8.3 REGIONAL CONTEXT

As no sites were identified and the project area is highly disturbed through past land uses, there is no evidence to examine in the regional context.

8.4 RESEARCH QUESTIONS

- *What types of past Aboriginal occupation occurred within the project area (e.g., transitory movement, hunting, gathering, camping etc)?*

No evidence of past Aboriginal land use in PAD. This is not a PAD.

- *What past Aboriginal activities occurred within the project area?*

NA

- *Were the types of activity and nature of occupation related to environmental factors (e.g., landforms, proximity to reliable water)?*

NA

- *Does spatial patterning of activity areas occur within the project area?*

NA

- *Did episodes of occupation occur at different times over the whole time-span of occupation in the region within the project area?*

NA

- *Is there potential for older evidence of occupation (i.e., early Holocene)?*

NA

- *How intensive was occupation of the sites, in both a local and regional context?*

NA

- *Did microblade and microlith production occur on the sites?*

NA

- *Were other tools manufactured on the sites?*

NA

- *Was maintenance of tools conducted on site?*

NA

- *What raw materials were favoured for use on site within the project area and why?*

NA

- *Where were the raw material procured from?*

NA

- *How does the evidence and inferred human behaviour represented within the project area compare with evidence from other locations in the region?*

NA

- *How does the evidence relate to the regional and local models of occupation?*

NA

8.5 DISCUSSION

Considering the environmental, cultural and archaeological contexts of the regional and local area, the distribution of archaeological sites may be identified and thus effectively protected, manage lands, and conserve areas where required and appropriate.

As no sites were identified, the results of the investigation are discussed below in terms of site integrity, local and regional contexts, occupation models (interpretation) and predictive modelling.

8.5.1 INTEGRITY

The integrity of an area can be assessed only for surface integrity through the consideration of past and present land uses and their impacts. Subsurface integrity can only be assessed through controlled excavation that allows for the examination of both the horizontal and vertical distribution of cultural materials (caused by natural and/or human impacts) and by conjoining artefacts. Land uses and their impacts (clearing, ploughing, grazing, dam construction), as well as natural impacts (bioturbation, erosion, flooding), within the project area have been discussed in Section 3 and 6 and are considered to be high across the project area and any sites that may have been present are likely to have been disturbed. Based in the evidence of the test excavation, it is identified that the likelihood of in situ deposits remaining in the project area is low to zero.

8.6 INTERPRETATION & OCCUPATION MODEL

The inferences that can be made about the nature of occupation within the project area and the specific sites identified are limited by the small sample size. However, consistent with the occupation model (Kuskie and Kamminga 2000), it is inferred from the evidence obtained during the survey that:

- Aboriginal people used and occupied the area but generally at a very low intensity within the last 4,000 years. Although occupation of the region extends back to at least 20,000 years ago, the environmental context would have been very different to the present over such an extended period of time;
- the previously identified disturbed surface artefact evidence is consistent with transitory movement through the landscape and occasional and short-duration visits by small parties of hunters and/or gatherers for food procurement;
- notwithstanding the points above, the very low density of artefacts previously identified within the project area, the distribution of these artefacts (disturbed through ploughing, dam construction) and the topography of the area (minimal presence of higher order

watercourses or other similar subsistence resource zones) indicates that in the broader locality focused occupation was more likely to have occurred outside of the project area in association with those such contexts where more preferential circumstances existed for reliable water, level ground and subsistence resources; and

- the stone material mudstone was predominantly used for stone-working activities, largely because of its local availability, and it was probably procured from relatively local location in a casual, opportunistic manner.

The results are consistent with, or do not contradict the general model of occupation.

8.7 REGIONAL & LOCAL CONTEXT

Although the results from this assessment are limited by the sample size and include the previously recorded artefacts only, the evidence can be compared with other assessment and sites from the region. The main purpose for this is to identify any differences or similarities with other assessments throughout the region (such as site patterning, site types, land form preference etc) in order to provide a framework to interpret and establish representativeness for the identified sites within the investigation area. Several similarities have been recognised between the evidence within the investigation area and other assessments from the surrounding area. These are as follows:

- prevalence of stone artefact evidence (not surprising given the durability of stone);
- similar raw materials used for tool manufacture (mudstone);
- similar artefact types (flakes);
- sites located on similar landforms (slopes), and
- sites were located in disturbed contexts.

8.8 REASSESSMENT OF THE PREDICTIVE MODEL

In view of the survey results, the predictive model of site location can be reassessed for the investigation area as follows:

The potential for bora/ceremonial, carved tree, scarred tree, rock engraving and stone arrangement sites to occur within the investigation remains assessed as very low or negligible.

No direct evidence of lithic procurement sites was identified.

No evidence was encountered of burial sites, and although the potential for skeletal remains to occur within the investigation area is considered to be very low, it cannot be discounted.

Sites of traditional cultural significance (such as mythological sites) were not identified by the RAPs involved in the investigation. The registered Aboriginal stakeholders also did not disclose any specific knowledge of other cultural values/places. However, the possibility cannot be excluded that traditional or historical Aboriginal values or associations may exist that were not divulged to MCH by the persons consulted, although this potential is assessed as low.

There is a low potential for additional open artefact evidence to occur in project area and due to the highly disturbed natures of the project area (clearing, ploughing, grazing, dam construction), any sites that may be present will be highly disturbed.

8.9 CONCLUSION

Sites provide valuable information about past occupation, use of the environment and its specific resources including diet, raw material transportation, stone tool manufacture, and movement of groups throughout the landscape. Previous broad-based regional research has shown that proximity to water was an important factor in past occupation, with sites reducing in number significantly away from water. This research has also shown that occupation sites (artefact scatters and isolated finds) are the most frequently recorded site type and are commonly located along or adjacent to watercourses, and on relatively flat elevated landforms in close proximity to reliable fresh water. Sites with higher artefact densities are similarly concentrated within fifty metres of watercourses and throughout the wider landscape, a background scatter of artefacts is present and represent hunting and gathering or travel.

A 2nd order creek is located in the southern part of the project area, one artefact scatter located mid slope on a dam wall and an isolated artefact, also mid slope (both part of AHIMS site 37-6-228) and both located 180 metres from the creek. Such low-density sites are representative of hunting and gathering activities which is represented across the landscape as discarded artefacts (background scatter).

It has been argued that low lying landforms in close proximity to a water source in the local Lochinvar area may not have been favoured for camping due to the creek becoming more incised over the past 100 years, but in such an area, it is the mid slope areas that were favoured. This is considered unusual as it has been proven that sites of the highest numbers and densities are within 50 metres of a water source and numbers and densities decrease with distance from the water source. The absence of sites in closer proximity to the 2nd order creek in the project area was thought to be a reflection of low surface visibility during all surveys of the project area. For this reason, the PAD was subject to the archaeological test excavation that revealed a highly disturbed landscape with no evidence of past Aboriginal land uses in the PAD area. The evidence gathered across the project area suggests that it was likely used for more transitory activities such as hunting and gathering, rather than long-term camping. As a result, artifacts associated with these activities are scattered throughout the landscape, making it difficult to predict their specific locations. Additionally, the land uses of clearing, ploughing, grazing, and dam construction have been known to redistribute or destroy archaeological sites, further complicating the prediction of hunting and gathering activity locations.

9 SIGNIFICANCE ASSESSMENT

9.1 THE SIGNIFICANCE ASSESSMENT PROCESS

One of the key steps in the process of cultural heritage management is the assessment of significance. Not all sites are equally significant and not all are worthy of equal consideration and management (Sullivan and Bowdler 1984; Pearson and Sullivan 1995: 7). The assessment of significance of archaeological sites and resources is defined in most cases by what these entities can contribute to our understanding or knowledge of a place or site. In most cases, it is not possible to fully articulate or comprehend the extent of the archaeological resource at the outset, let alone its value. Therefore, the evaluation of the significance of archaeological material is based on the potential this resource has to contribute to our understanding of the past and the contribution that it can make to our understanding of a place or a cultural landscape.

9.2 BASIS FOR EVALUATION

The significance of archaeological sites or cultural places can be assessed on the criteria of the Burra Charter, the Australian Heritage Commission Criteria of the National Estate, and the Heritage NSW and the Department of Premier & Cabinet guidelines that are derived from the former two. There are two realms of significance assessment:

- Aboriginal cultural significance
- Archaeological (scientific) significance

The Aboriginal cultural significance of sites/objects/places are assessed by the RAPs and the archaeological significance by a qualified archaeologist.

9.3 ARCHAEOLOGICAL (SCIENTIFIC) SIGNIFICANCE

Scientific significance is assessed according to the contents of a site, state of preservation, integrity of deposits, representativeness/rarity of the site type, and potential to answer research questions on past human behaviour (NPWS 1997). For open campsites, evidence required to adequately assess significance includes information about the presence of sub-surface deposits, the integrity of these deposits, the nature of site's contents and extent of the site. A review of information pertaining to previously recorded sites within the local area and region enables the rarity and representativeness of a site to be assessed. High significance is usually attributed to sites that are so rare or unique that the loss of the site would affect our ability to understand an aspect of past Aboriginal use/occupation of an area. In some cases, a site may be considered highly significant because its type is now rare due to destruction of the archaeological record through development. Medium significance can be attributed to sites that provide information on an established research question. Low significance is attributed to sites that cannot contribute new information about past Aboriginal use/occupation of an area. This may be due to site disturbance or the nature of the site's contents. In order to clarify the significance assessment, the criteria used are explained below.

9.3.1 RESEARCH POTENTIAL

Research potential refers to the potential for information gained from further investigations of the evidence to be used in answering research questions. Research questions can relate to any number of issues concerning past human material culture and associated behaviour (including

cultural, social, spiritual etc) and/or use of the environment. Several inter-related factors to take into consideration include the intactness or integrity of the site, the connectedness of the site to other sites, and the potential for a site to provide a chronology extending back in the past. Several questions are posed for each site or area containing evidence of past occupation:

- Can the evidence contribute information not available from any other resource?
- Can the evidence contribute information not available from any other location or environmental setting?
- Is this information relevant to questions of past human occupation (including cultural, social and/or spiritual behaviour) and/or environments or other subjects?

Assessing research potential therefore relies on comparisons with other evidence both within the local and regional context. The criteria used for assessing research potential include:

- potential to address specific local research questions;
- potential to address specific regional questions;
- potential to address general methodological and theoretical questions;
- potential sub-surface deposits; and
- potential to address future research questions.

The particular questions asked of the available evidence should be able to contribute information that is not available from other resources or evidence and are relevant to questions about past human societies and their material culture. Levels for defining research potential are as follows:

| | |
|--------|---|
| High | Has the potential to provide new information not obtained from any other resource to answer current and/or future research questions. |
| Medium | Has the potential to contribute significant additional information to answer current and/or future research questions. |
| Low | Has no potential to contribute significant information to answer current or future research questions. |

9.3.2 REPRESENTATIVENESS AND RARITY

Representativeness and rarity are assessed at a local, regional and national level (although assessing at a national level is difficult and commonly not possible due to a lack of national reports and available database). As the primary goal of cultural resource management is to afford the greatest protection to a representative sample of Aboriginal heritage throughout a region, this is an important criterion. The more unique or rare the evidence is, the greater its value as being representative within a regional context. The main criteria used for assessing representativeness and rarity include:

- the extent to which the evidence occurs throughout the region;
- the extent to which this type of evidence is subject to existing and potential future impacts in the region;
- the integrity of the evidence compared to that at other locations within the region;
- whether the evidence represents a primary example of its type within the region; and

- whether the evidence has greater potential for educational purposes than at other similar locations within the region.

9.3.3 NATURE OF THE EVIDENCE

The nature of the evidence is related to representativeness and research potential. For example, the less common the type of evidence, the more likely it is to have representative value. The nature of the evidence is directly related to its potential to be used in addressing current and/or future research questions. Criteria used in assessing the nature of the evidence include:

- presence, range and frequency of artefacts and artefact types; and
- presence and types of other features.

9.3.4 INTEGRITY

The state of preservation and disturbances of the evidence (integrity) is also related to representativeness and research potential. The higher the integrity (well preserved and not disturbed) of the evidence, the greater the level of information that is likely to be obtained from further study. This translates to greater importance for the evidence within a local and regional context, as it may be a suitable example for preservation/ conservation. The criteria used in assessing integrity include:

- horizontal and vertical spatial distribution of artefacts;
- preservation of intact features such as hearths or knapping floors;
- preservation of site contents such as charcoal which may enable direct dating providing a reliable date of occupation of a given area;
- preservation of artefacts which may enable use-wear/residue analysis to determine tool use and possibly diet; and
- preservation of other cultural materials that may enable interpretation of the evidence in relation to cultural/social behaviour (e.g., burial types and associated mortuary practices may have been based on cultural, social, age, and/or gender distinctions).

Many of these criteria can only be obtained through controlled excavation. Generally high levels of ground disturbance (such as erosion, excavation works, ploughing, tracks, dams etc) limit the possibility that an area would unlikely contain intact spatial distributions, intact features, in situ charcoal etc. Definitions for defining levels of site integrity and condition have been derived from Witter (1992) and HLA (2002) and are as follows:

| | |
|-----------|--|
| Excellent | Disturbance, erosion or development is minimal. |
| Good | Relatively undisturbed or partially disturbed with an obvious in situ deposit. |
| Fair | Some disturbance but the degree of disturbance is difficult to assess. |
| Poor | Clearly mostly destroyed or disturbed by erosion or development. |
| Very Poor | Sites totally disturbed or clearly not in situ. |
| Destroyed | A known site that is clearly no longer there. |

9.3.5 SCIENTIFIC EVALUATION

The following is an evaluation of the scientific significance of the individual archaeological sites identified within the project area. Table 7.1 presents the archaeological significance assessment for the sites identified.

Table 8.1 Significance assessment

| Site | Site Type | Representativeness | Integrity | Res. Pot | Sci. Sig |
|-----------|------------------|--------------------|-----------|----------|----------|
| 37-6-2228 | artefact scatter | well represented | poor | low | low |
| | PAD | Not a PAD | | | |

9.4 CULTURAL SIGNIFICANCE

While Aboriginal sites and places may have scientific significance, they also have cultural/social significance to the Aboriginal people from that area. Determining cultural/social significance can only be determined by the Aboriginal people from the area in which the sites and/or places were identified. Consultation with the Aboriginal community has been undertaken in order to document cultural/social significance and are discussed below.

9.4.1 AESTHETIC SIGNIFICANCE

Aesthetic value includes aspects of sensory perception for which criteria can and should be stated. Such criteria may include consideration of the form, scale, colour, texture and material of the fabric; the smells and sounds associated with the place and its use (Australia ICOMOS 1999:11). Table 7.2 provides information relating to the aesthetic value of the site by the RAPs.

Table 8.2 RAPs assessment of aesthetic significance

| RAP | Assessment |
|-----------------------------------|---|
| A1 Indigenous Services | has not assigned aesthetic significance |
| Corroboree Aboriginal Corporation | has not assigned aesthetic significance |
| Culturally Aware | has not assigned aesthetic significance |
| Widescope Indigenous Group | has not assigned aesthetic significance |
| Gomery Cultural Consultants | has not assigned aesthetic significance |
| Hunter Traditional Owner | has not assigned aesthetic significance |
| Robert Syron | has not assigned aesthetic significance |
| AHCS | has not assigned aesthetic significance |

9.4.2 HISTORIC SIGNIFICANCE

The historic value encompasses the history of aesthetics, science and society. A place may have historic value because it has influenced, or has been influenced by, an historic figure, event, phase or activity. It may also have historic value as the site of an important event. For any given place the significance will be greater where evidence of the association or event survives in situ, or where the settings are substantially intact, than where it has been changed or evidence does not

survive. However, some events or associations may be so important that the place retains significance regardless of subsequent treatment (Australia ICOMOS 1999:11). Table 7.3 provides information relating to the historic value of the site by the RAPs.

Table 8.3 RAPs assessment of historic significance

| RAP | Assessment |
|-----------------------------------|---|
| A1 Indigenous Services | has not assigned historic significance |
| Corroboree Aboriginal Corporation | has not assigned historic significance |
| Culturally Aware | has not assigned historic significance |
| Widescope Indigenous Group | has not assigned historic significance |
| Gomery Cultural Consultants | has not assigned historic significance |
| Hunter Traditional Owner | has not assigned aesthetic significance |
| Robert Syron | has not assigned aesthetic significance |
| AHCS | has not assigned aesthetic significance |

9.4.3 SOCIAL/SPIRITUAL SIGNIFICANCE

Social value embraces the qualities for which a place has become a focus of spiritual, political, national or other cultural sentiment to a majority or minority group (Australia ICOMOS 1999:11). Table 7.5 provides information relating to the social/spiritual value of the site by the RAPs.

Table 8.4 RAPs assessment of social/spiritual significance

| RAP | Assessment |
|-----------------------------------|--|
| A1 Indigenous Services | has not assigned social/spiritual significance |
| Corroboree Aboriginal Corporation | has not assigned social/spiritual significance |
| Culturally Aware | has not assigned social/spiritual significance |
| Widescope Indigenous Group | has not assigned social/spiritual significance |
| Gomery Cultural Consultants | has not assigned social/spiritual significance |
| Hunter Traditional Owner | has not assigned social/spiritual significance |
| Robert Syron | has not assigned social/spiritual significance |
| AHCS | has not assigned social/spiritual significance |

10 ASSESSMENT OF IMPACTS

The archaeological record is a non-renewable resource that is affected by many processes and activities. As outlined in Section 3 and 6, the various natural processes and human activities would have impacted on archaeological deposits through both site formation and taphonomic processes. Section 6 describes the impacts within the project area, showing how these processes and activities have disturbed the landscape and associated cultural materials in varying degrees.

10.1 IMPACTS

Detailed descriptions of the impacts are provided in Section 1.5 and the results of the survey in Section 6. The Heritage NSW, Department of Premier & Cabinet Code of practice for the archaeological investigation of Aboriginal objects in New South Wales (2010:21) describes impacts to be rated as follows:

- 1) Type of harm: is either direct, indirect or none
- 2) Degree of harm is defined as either total, partial or none
- 3) Consequence of harm is defined as either total loss, partial loss, or no loss of value

As indicated in Table 8.1, the results of the assessment show that Loci 1 and 4 of AHIMS site 37-6-2228 will be impacted upon by the development. With the exception of areas along the 2nd order creek (30 metre required buffer), PAD will also be impacted on by the development.

Table 8.5 Impact summary

| Site | Site type | Type of harm | Degree of harm | Consequence of harm | Rep. | Integrity | Res. Pot | Sci. Sig |
|-----------|------------------|--------------|----------------|---------------------|------------------|-----------|----------|----------|
| 37-6-2228 | Loci 1 Loci 4 | direct | total | total | well represented | poor | low | low |
| | PAD | Not a PAD | | | | | | |

Of the sites that will be directly impacted by the development, Loci 1 is an isolated artefact and Loci 4 is a highly disturbed artefact scatter consisting of 4 artefacts originally. These sites are well represented both locally and regionally and are highly disturbed with little to no research or scientific potential.

10.2 CUMULATIVE IMPACTS

The cumulative impact to Aboriginal heritage in the project area is limited given that:

- the net development footprint (i.e., the area of direct impact) is small and does not affect a high proportion of any particular landform present within the region;

- a comparable suite of landforms that are expected to, and do contain a similar archaeological resource occur in multiple contexts both within the local area and throughout the local and regional area;
- the surface Loci of AHIMS 37-6-2228 (Loci 1 and Loci 4) are highly disturbed and very well represented both locally and regionally; and
- A PAD was subject to test excavation which identified a highly disturbed area and no artefacts found.

Mitigation measures to minimise these impacts are outlined in the following chapter.

11 MITIGATION AND MANAGEMENT STRATEGIES

Specific strategies, as outlined through the Heritage NSW, Department of Premier & Cabinet: Code of practice for archaeological investigation of Aboriginal objects in New South Wales (DECCW 2010b) and the Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH 2011) are considered below for the management of the identified site within the project area.

One of the most important considerations in selecting the most suitable and appropriate strategy is the recognition that Aboriginal cultural heritage is very important to the local Aboriginal community. Decisions about the management of sites and potential archaeological deposits should be made in consultation with the appropriate local Aboriginal community.

11.1 CONSERVATION/PROTECTION

Heritage NSW, Department of Premier & Cabinet is responsible for the conservation/protection of Indigenous sites and they therefore require good reason for any impact on an indigenous site. Conservation is the first avenue and is suitable for all sites, especially those considered high archaeological significance and/or cultural significance. Conservation includes the processes of looking after an indigenous site or place so as to retain its cultural and scientific significance and are managed in a way that is consistent with the nature of peoples' attachment to them.

As Loci 1 and Loci 4 of AHIMS site 37-6-2228 are highly disturbed with no potential for in situ deposits, and are very well represented both locally and regionally and are of low scientific significance, conservation/protection of those Loci are not required.

11.2 FURTHER INVESTIGATION

With the exception of shell middens and burials, an Aboriginal Heritage Impact Permit (AHIP) is not required to undertake test excavations (providing the excavations are in accordance with the Code of Practice for Archaeological Investigations in NSW and consultation with the RAPs). Subsurface testing is appropriate when a PAD has been identified, and it can be demonstrated that sub-surface Aboriginal objects with potential conservation value have a high probability of being present, and that the area cannot be substantially avoided by the proposed activity.

The archaeological test excavation identified a highly disturbed Pad area with no sites present. No further archaeological investigations are required.

11.3 AHIP

If harm will occur to an Aboriginal object or Place, then an AHIP is sought from Heritage NSW, Department of Premier & Cabinet as a defence to that harm. If a systematic excavation of the known site could provide benefits and information for the Aboriginal community and/or archaeological study of past Aboriginal occupation, a salvage program, and, or community collection, may be an appropriate strategy to enable the salvage of cultural objects.

As Loci 1 and Loci 4 of AHIMS site 37-6-2228 will be impacted on by the development, are highly disturbed with no potential for in situ deposits, and are very well represented both locally and regionally and are of low scientific significance an AHIP will be required prior to works commencing at those locations.

12 RECOMMENDATIONS

12.1 GENERAL

- 1) The persons responsible for the management of onsite works will ensure that all staff, contractors and others involved in construction and maintenance related activities are made aware of the statutory legislation protecting sites and places of significance. Of particular importance is the National Parks and Wildlife Regulation 2019, under the National Parks and Wildlife Act 1974.

12.2 PAD AND SITES

- 2) An Aboriginal Site Impact Recording Form (ASIRF) will be completed updating the results of the test excavation;
- 3) If Loci 1 and Loci 4 of AHIMS site 37-6-2228 will be harmed by any future development an AHIP will be required prior to works at those locations;
- 4) Any new AHIP application must exclude the boundary of AHIP #C0001860 to avoid overlapping AHIP boundaries. Lochinvar Developments Pty Ltd should seek written approval from AHIP holder Hunter Water Corporation to complete works within the boundary of AHIP #C0001860; and
- 5) An Aboriginal Site Impact Recording Form (ASIRF) will be completed following an AHIP.

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APPENDIX A

Aboriginal Stakeholder Consultation

| Date | Consultation type | Heritage NSW requirement | Consult stage | RAP/Agency | Contact person | Description |
|---|-------------------|----------------------------|---------------|--|-----------------------------------|--|
| 9/12/22 | Letter | 4.1.2 | 1 | MCH contacted Heritage NSW | Steven Johnson | Letter to identify Aboriginal parties. Requested response no later C.O.B. 23/12/2022 |
| 9/12/22 | Letter | 4.1.2 | 1 | MCH contacted Mindaribba Local Aboriginal Land Council (MLALC) | | Letter to identify Aboriginal parties. Requested response no later C.O.B. 23/12/2022 |
| 9/12/22 | Letter | 4.1.2 | 1 | MCH contacted Registrar of Aboriginal Owners (RAO) | | Letter to identify Aboriginal parties. Requested response no later C.O.B. 23/12/2022 |
| 9/12/22 | Letter | 4.1.2 | 1 | MCH contacted Maitland City Council (MCC) | | Letter to identify Aboriginal parties. Requested response no later C.O.B. 23/12/2022 |
| 9/12/22 | Letter | 4.1.2 | 1 | MCH contacted Native Title Tribunal (NNTT) | | Letter to identify Aboriginal parties. Requested response no later C.O.B. 23/12/2022 |
| 9/12/22 | Letter | 4.1.2 | 1 | MCH contacted NTSCORP Ltd | | Letter to identify Aboriginal parties. Requested response no later C.O.B. 23/12/2022 |
| 9/12/22 | Letter | 4.1.2 | 1 | MCH contacted Hunter Local Land Services (HLLS) | | Letter to identify Aboriginal parties. Requested response no later C.O.B. 23/12/2022 |
| 9/12/22 | Letter/e-mail | 4.1.2 | 1 | NNTT | | No claims - Freehold |
| 21/12/22 | Letter | 4.1.2 | 1 | Heritage NSW | | Identified Aboriginal parties: 50 |
| NA | | 4.1.2 | 1 | LALC | | No response |
| NA | | 4.1.2 | 1 | Council | | No response |
| NA | | 4.1.2 | 1 | RAO | | No response |
| NA | | 4.1.2 | 1 | NTSCORP | | Do not provide lists of possible stakeholders |
| NA | | 4.1.2 | 1 | HLLS | | Do not provide lists of possible stakeholders |
| 23rd December 2022 C.O.B. Request for groups to consult with closed | | | | | | |
| 23/12/22 | Public notice | 4.1.3 | 1 | All registered Aboriginal parties (RAPs) | | Public notice in the Maitland Mercury and requested registration no later than 6/1/2023 |
| 28/12/22 | Letter & email | 4.1.3, 4.1.4, 4.1.5, 4.2.1 | 1 | All RAPs | those provided from sources above | Formal letter to identified RAPs. Letter requested registration of interest in the project, project outline, maps and asking for the preferred method to receive information (meeting/mail/email). Required registration by C.O.B. 13/1/2023 |
| 28/12/22 | Email | 4.1.7, 4.1.8 | 1 | Culturally Aware | Tracey Skeen | Registered for the project |
| 29/12/22 | Email | 4.1.7, 4.1.8 | 1 | | Robert Syron | Registered for the project |
| 30/12/22 | Txt message | | | Gomery Cultural Consultants | David Horton | Registered for the project |

| Date | Consultation type | Heritage NSW requirement | Consult stage | RAP/Agency | Contact person | Description |
|--|-------------------|--|---------------|-----------------------------------|---------------------------------|--|
| 30/12/22 | Email | 4.1.7, 4.1.8 | 1 | | Paulette Ryan | Registered for the project |
| 2/2/23 | Email | 4.1.7, 4.1.8 | 1 | Corroboree Aboriginal Corporation | Marilyn Carroll-Johnson | Registered for the project |
| 3/1/23 | Email | 4.1.7, 4.1.8 | 1 | Widescope Indigenous Group | Steven Hickey | Registered for the project |
| 10/1/23 | Email | 4.1.7, 4.1.8 | | Amanda Hickey Cultural Services | Amanda De Zwart | |
| 12/1/23 | Email | 4.1.7, 4.1.8 | 1 | A1 Indigenous Services | Carolyn Hickey | Registered for the project |
| 13th January 2023 C.O.B. Registration for project closed | | | | | | |
| 24/1/23 | Email & letter | 1; s 4.1.6 | | Heritage NSW | | Letter notifying Heritage NSW of RAPs |
| 24/1/23 | Email & letter | 1; s 4.1.6 | | MLALC | | Letter notifying MLALC of RAPs |
| 24/1/23 | Letter | 4.2.1, 4.2.2, 4.2.3, 4.3.1, 4.3.2, 4.3.3, 4.3.4, 4.3.5, 4.3.6, 4.3.7 | 2 & 3 | All RAPs | | Formal letter and information packet sent to identified RAPs. Information packet included project outline, project area, critical timelines, impacts, brief cultural, environmental and archaeological context, proposed methods of investigation, proposed methods of gathering cultural knowledge, and maps. A response the proposed methodology was required registration by C.O.B. 21/2/2023 |
| 26/1/23 | E-mail & letter | 4.2.1, 4.2.2, 4.2.3, 4.3.1, 4.3.2, 4.3.3, 4.3.4, 4.3.5, 4.3.6, 4.3.7 | 2 & 3 | Gomery Cultural Consultants | David Horton/ Leanne Kirkman | Responded to the information packet and supported the methods |
| 12/2/23 | E-mail & letter | 4.2.1, 4.2.2, 4.2.3, 4.3.1, 4.3.2, 4.3.3, 4.3.4, 4.3.5, 4.3.6, 4.3.7 | 2 & 3 | A1 Indigenous Services | Carolyn Hickey | Responded to the information packet and supported the methods |
| 21st February 2023 C.O.B. Response to information packet closed | | | | | | |
| 5/3/23 | Letter/email | | | All RAPs | | Invited to attend the survey on 21/3/2023 |
| 21st March 2023 Survey (no RAPs attended and the survey proceeded) | | | | | | |
| 22/3/23 | email | 4.3.5; 4.3.6; 4.3.7 4.4.1; 4.4.2; 4.4.3 | 3 & 4 | All RAPs | | Draft report sent to all RAPs for their review and a response was requested no later than C.O.B. 24 th April 2023 (additional time provided due to Easter) |
| 11/4/23 | email | 4.3.5; 4.3.6; 4.3.7 4.4.1; 4.4.2; 4.4.3 | 3 & 4 | | Robert Syron | Supported the report and recommendations |

| Date | Consultation type | Heritage NSW requirement | Consult stage | RAP/Agency | Contact person | Description |
|--|-------------------|--|---------------|-----------------------------|---------------------------------|---|
| 24th April 2023 C.O.B. Response to Draft Report Closed | | | | | | |
| 25/4/23 | email | 4.4.4; 4.4.5 | 4 | All RAPs | | Final report sent to all RAPs |
| 25th April 2023 C.O.B. Assessment Complete | | | | | | |
| 5/9/23 | Email | | | All RAPs | | Project update |
| 6/9/23 | email | 4.2.1, 4.2.2, 4.2.3, 4.3.1, 4.3.2, 4.3.3, 4.3.4, 4.3.5, 4.3.6, 4.3.7 | 2 & 3 | All RAPs | | Draft test excavation methods sent to all RAPs |
| 6/9/23 | email | 4.2.1, 4.2.2, 4.2.3, 4.3.1, 4.3.2, 4.3.3, 4.3.4, 4.3.5, 4.3.6, 4.3.7 | 2 & 3 | Culturally Aware | Tracey Skeen | Agreed with the proposed methods |
| 6/9/23 | email | 4.2.1, 4.2.2, 4.2.3, 4.3.1, 4.3.2, 4.3.3, 4.3.4, 4.3.5, 4.3.6, 4.3.7 | 2 & 3 | Gomery Cultural Consultants | David Horton/ Leanne Kirkman | Agreed with the proposed methods |
| 17/9/23 | email | 4.2.1, 4.2.2, 4.2.3, 4.3.1, 4.3.2, 4.3.3, 4.3.4, 4.3.5, 4.3.6, 4.3.7 | 2 & 3 | A1 Indigenous Services | Carolyn Hickey | Agreed with the proposed methods |
| 4th October 2023 C.O.B. Response to draft test excavation methods closed | | | | | | |
| 6/10/23 | Email | | | All RAPs | | Invited to attend the test excavation commencing on 13/11/2023. |
| 10/10/23 | Email | | | Gomery Cultural Consultants | David Horton | Provided signed paperwork |
| 10/10/23 | Email | | | Widescope Indigenous Group | Steven Hickey | Provided signed paperwork |
| 10/10/23 | Email | | | A1 Indigenous Services | Carolyn Hickey | Provided signed paperwork |
| 13th November 2023 soils too wet – re-scheduled | | | | | | |
| 13/11/23 | Email | | | All RAPs | | Informed that the work is re-scheduled to 15 th January 2024 |
| 14/1/24 | Email | | | All RAPs | | Informed that the work is re-scheduled to 23 rd January 2024 due to rain |

| Date | Consultation type | Heritage NSW requirement | Consult stage | RAP/Agency | Contact person | Description |
|--|-------------------|--|---------------|------------|----------------|---|
| 22/1/24 | Email | | | All RAPs | | Informed that the work is re-scheduled to 13 th February 2024 due to rain |
| 13th February 2024 test excavation | | | | | | |
| | | | | | | |
| 19/3/24 | Email | 4.3.5; 4.3.6; 4.3.7 4.4.1; 4.4.2; 4.4.3 | 3 & 4 | All RAPs | | Draft report sent to all RAPs for their review and a response was requested no later than C.O.B. 18 th April 2024 (additional time provided due to Easter) |
| | | 4.3.5; 4.3.6; 4.3.7 4.4.1; 4.4.2; 4.4.3 | 3 & 4 | | | |
| 18th April 2024 C.O.B. Response to Draft Report Closed | | | | | | |
| 22/4/24 | email | 4.4.4; 4.4.5 | 4 | All RAPs | | Final report sent to all RAPs |
| 22nd April 2024 C.O.B. Assessment Complete | | | | | | |

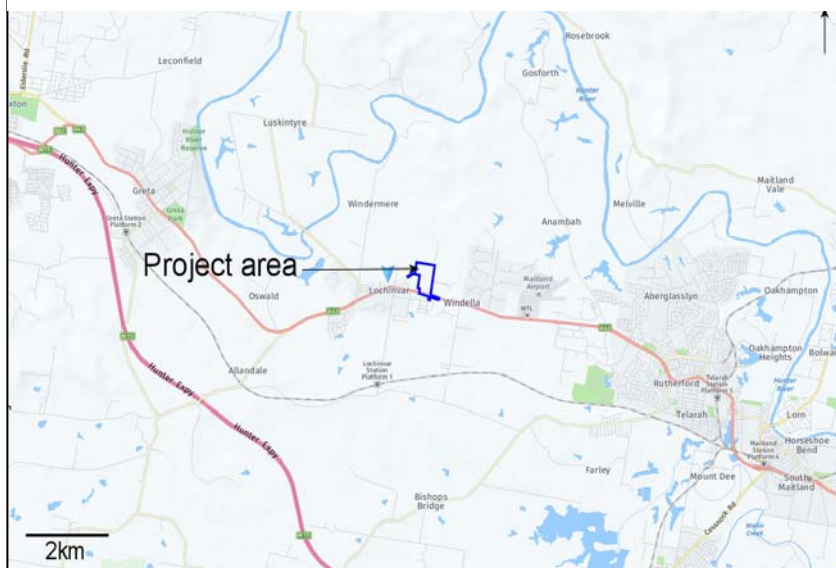
From: penny@mheritage.com.au
Sent: Friday, 9 December 2022 9:03 AM
To: 'information@ntscorp.com.au'; 'heritagemailbox@environment.nsw.gov.au';
'admin.hunter@lls.nsw.gov.au'; 'ceo@mindaribbalalc.org'; 'info@maitland.nsw.gov.au'; 'Rachel Rewiri'
Subject: List of RAPs

RE: Written notification of project proposal and registration of interest as required under Heritage NSW Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Stage 1)– Proposed residential subdivision of land located at Lochinvar

McCardle Cultural Heritage (MCH) have been engaged by Lochinvar Developments Pty Ltd (C/o: ADW Johnson, 7/335 Hillsborough Rd, Warners Bay NSW 2282) to undertake an Aboriginal Cultural Heritage Assessment (ACHA) and prepare an Aboriginal Heritage Impact Permit (AHIP) application if required for residential subdivision of land located at the corner of the New England Highway and Windella Road, Lochinvar (Lot 9 DP747391, Lot 12 DP1219648, Lot 13 DP1219648, Lot 2 DP747391, Lot 3 DP747391, Lot 4 DP747391, Lot 5 DP747391, Lot 6 DP747391, Lot 223 DP246447, Lot 1 DP741330, Lot 11 DP1219648, Lot 2 DP818314, Lot 1 DP65706), Maitland Local Government Area (LGA).

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Location of the project area



In order to comply with the Heritage NSW, Department of Premier & Cabinet policy - Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010, in particular Stage 1 (s4.1.2) - we are writing to advise you of the proposal and ask whether you could provide details of any Aboriginal groups or individuals that your organisation is aware of who may have an interest in the investigation area and hold knowledge relevant to determining the cultural significance of Aboriginal objects and/or places in the area of the proposed project.

Should you have this information, we request that you provide the names and contact details of these Aboriginal people/organisations, in writing, to the undersigned either via written correspondence or email (penny@mheritage.com.au) within 14 working days of receipt of this letter.

Please note that in order to adhere to time constraints, and the minimal time requirements as stated in the Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010, the absence of a response by the prescribed timeline, will be taken by the proponent as your indication that your organisation is not aware of any such interested parties.

Should you wish to discuss this matter, please do not hesitate to contact me on 0412 702 396.

Kind regards,

Dr. Penny McCardle

Archaeologist

Forensic Anthropologist



PO Box 166,
Adamstown 2289 NSW
P: 0412 702 396
mheritage.com.au

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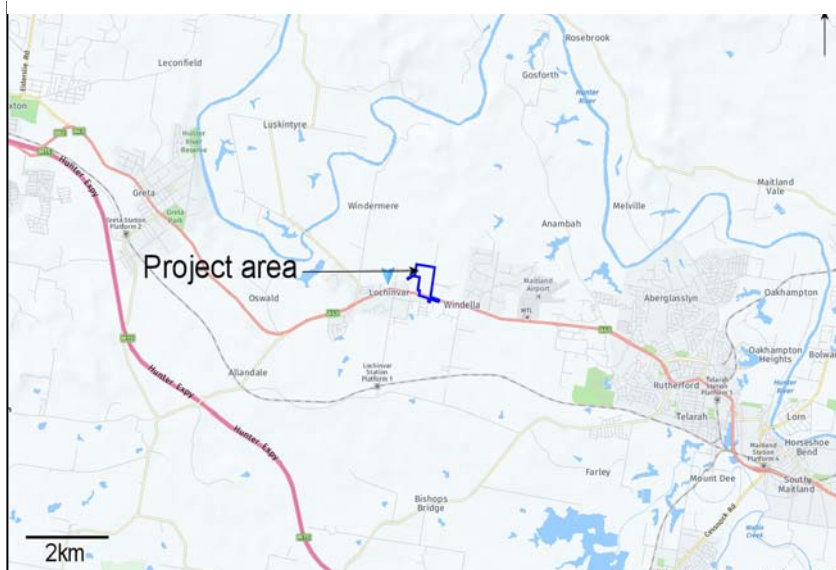
From: penny@mheritage.com.au
Sent: Friday, 9 December 2022 9:06 AM
To: 'GeospatialSearch@NNTT.gov.au'
Subject: Search
Attachments: NNTT GeospatialSearch2020.pdf

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Location of the project area



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Request for Spatial Search of Tribunal Registers

1: Your details

| | | | |
|-------------------------------------|---|-------------|--------------|
| Your name: | DR Penny McCardle | | |
| Your company: | McCardle Cultural Heritage Pty Ltd | | |
| E-mail address: | penny@mheritage.com.au | Phone: | 0412 702 396 |
| Your reference: | Lochinvar | Your state: | NSW |
| <input checked="" type="checkbox"/> | <i>I have read and acknowledge the terms and conditions on the next page.</i> | | |

2: Areas to be searched

| | | | |
|------------------------------|--|------------------------|--|
| Jurisdiction to be searched: | | Tenure to be searched: | |
|------------------------------|--|------------------------|--|

Parcel or tenement identifiers (add up to 20 separate identifiers). **Please see over for parcel identifiers.**

| | | | |
|------------|-------------------------------------|------------|--|
| Parcel 1: | Lot 9 DP747391 | Parcel 2: | |
| Parcel 3: | Lot 12 DP1219648 | Parcel 4: | |
| Parcel 5: | Lot 13 DP1219648 Lot 2 DP747391, | Parcel 6: | |
| Parcel 7: | Lot 3 DP747391 | Parcel 8: | |
| Parcel 9: | Lot 4 DP747391 Lot 5 DP747391 | Parcel 10: | |
| Parcel 11: | Lot 6 DP747391, | Parcel 12: | |
| Parcel 13: | Lot 223 DP246447 Lot 1 DP741330 | Parcel 14: | |
| Parcel 15: | Lot 11 DP1219648 | Parcel 16: | |
| Parcel 17: | Lot 2 DP818314 Lot 1 DP65706 | Parcel 18: | |
| Parcel 19: | | Parcel 20: | |

If your search area is not a non-freehold parcel or mining or petroleum tenement, you can enter other tenure or administrative regions here (e.g. local government area, townsite or county). Please provide as much detail as you can.

Click or tap here to enter text.

E-mail the completed form to GeospatialSearch@NNTT.gov.au

Parcel Identifiers

In most jurisdictions please identify parcels using lot on plan, or lot/section/plan as appropriate. The NNTT is generally not able to identify parcels using land title information. Where possible, the NNTT uses the terminology and formatting of unique identifiers used in each state to uniquely identify a land parcel. More details are below:

1. **Lot on plan.** Use for Western Australia and Queensland.
2. **Lot/Section/Plan.** Use for New South Wales.
3. **LAISKEY.** Use for the Northern Territory. The laiskey is a unique identifier for each parcel comprised of the location code, LTO code (derived from the survey plan) where applicable and the parcel number.
4. **Parcel ID** – Use for South Australia. Concatenation of Parcel Type, Parcel, Plan Type and Plan.
5. **SPI (Standard Parcel Identifier)** – Use for Victoria.

Terms and Conditions

1. Specify only one jurisdiction (e.g. Queensland) and one type of tenure (e.g. mining tenement) per form. You can add up to 20 separate tenements or parcels per search request. For more than 20 parcels or tenements please submit additional search requests or contact GeospatialSearch@NNTT.gov.au to discuss your requirements.

Note: if your area of interest cannot be clearly identified from the search form, or is not held in NNTT datasets, we may instead provide search results for a surrounding local government area, or other suitable regional area.

2. Freehold land.

Under the Native Title Act 1993 (Cth), the valid grant of a freehold estate (other than certain types of Aboriginal and Torres Strait Islander land) on or before 23 December 1996 is known as a 'previous exclusive possession act'. This means that native title has been extinguished over the area. Native title claimants are not allowed to include land and waters covered by previous exclusive possession acts in their applications; therefore they would normally exclude freehold areas. A native title application may, however, be made over freehold land on the basis that freehold was invalidly granted, but the chances of this happening are very low.

3. Cultural Heritage in NSW.

The National Native Title Tribunal has undertaken steps to remove itself from the formal list of sources for information about indigenous groups in development areas. The existence or otherwise of native title is quite separate to any matters relating to Aboriginal cultural heritage. Information on native title claims, native title determinations and Indigenous Land Use Agreements is available on the Tribunal's website.

4. Spatial searches rely on data obtained from the relevant custodian. Whilst efforts are taken to update such datasets on a regular basis, the collection and interpretation of such datasets may be influenced by a number of factors that can impact of the completeness and accuracy of your search results.

Disclaimer

While the National Native Title Tribunal (NNTT) and the Native Title Registrar (Registrar) have exercised due care in ensuring the accuracy of the information provided, it is provided for general information only and on the understanding that neither the NNTT, the Registrar nor the Commonwealth of Australia is providing professional advice. Appropriate professional advice relevant to your circumstances should be sought rather than relying on the information provided. In addition, you must exercise your own judgment and carefully evaluate the information provided for accuracy, currency, completeness and relevance for the purpose for which it is to be used.

The information provided is often supplied by, or based on, data and information from external sources, therefore the NNTT and Registrar cannot guarantee that the information is accurate or up-to-date.

The NNTT and Registrar expressly disclaim any liability arising from the use of this information.

This information should not be relied upon in relation to any matters associated with cultural heritage.

To: Geospatial Search Requests
Subject: RE: SR22/1989 - Search - SR22/1989 [SEC=OFFICIAL]

From: Geospatial Search Requests <GeospatialSearch@NNTT.gov.au>
Sent: Friday, 9 December 2022 4:27 PM
To: penny@mheritage.com.au
Subject: RE: SR22/1989 - Search - SR22/1989 [SEC=OFFICIAL]

OFFICIAL

Your ref: - *Lochinvar*

Dear Dr Penny McCardle,

Thank you for your search request, please find your results below.

Search Results

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

- Schedule of Native Title Determination Applications
- Register of Native Title Claims
- Native Title Determinations
- Indigenous Land Use Agreements (Registered and notified)

Results for overlapping native title matters in NSW:

| Feature ID | Tenure | Cadastral Data As At | Feature Area SqKm | Overlapping Native Title Feature | | | | |
|---------------|----------|----------------------|-------------------|----------------------------------|------|----------|-------------------|--------------------|
| | | | | NNTT File Number | Name | Category | Overlap Area SqKm | % Selected Feature |
| 1//DP65706 | FREEHOLD | 5/09/2022 | 0.3439 | NNTT File Number | Name | Category | Overlap Area SqKm | % Selected Feature |
| | | | | No overlap | | | - | 0.00% |
| 1//DP741330 | FREEHOLD | 5/09/2022 | 0.0080 | NNTT File Number | Name | Category | Overlap Area SqKm | % Selected Feature |
| | | | | No overlap | | | - | 0.00% |
| 11//DP1219648 | FREEHOLD | 5/09/2022 | 0.1431 | NNTT File Number | Name | Category | Overlap Area SqKm | % Selected Feature |
| | | | | No overlap | | | - | 0.00% |
| 12//DP1219648 | FREEHOLD | 5/09/2022 | 0.0506 | NNTT File Number | Name | Category | Overlap Area SqKm | % Selected Feature |
| | | | | No overlap | | | - | 0.00% |
| 13//DP1219648 | FREEHOLD | 5/09/2022 | 0.0418 | NNTT File Number | Name | Category | Overlap Area SqKm | % Selected Feature |
| | | | | No overlap | | | - | 0.00% |

| | | | | | | | | |
|---------------|----------|-----------|--------|----------------------------|-------------|-----------------|--------------------------|---------------------------|
| 2//DP747391 | FREEHOLD | 5/09/2022 | 0.0166 | NNTT File Number | Name | Category | Overlap Area SqKm | % Selected Feature |
| | | | | No overlap | | | - | 0.00% |
| 2//DP818314 | FREEHOLD | 5/09/2022 | 0.0851 | NNTT File Number | Name | Category | Overlap Area SqKm | % Selected Feature |
| | | | | No overlap | | | - | 0.00% |
| 223//DP246447 | FREEHOLD | 5/09/2022 | 0.0417 | NNTT File Number | Name | Category | Overlap Area SqKm | % Selected Feature |
| | | | | No overlap | | | - | 0.00% |
| 3//DP747391 | FREEHOLD | 5/09/2022 | 0.0107 | NNTT File Number | Name | Category | Overlap Area SqKm | % Selected Feature |
| | | | | No overlap | | | - | 0.00% |
| 4//DP747391 | FREEHOLD | 5/09/2022 | 0.0111 | NNTT File Number | Name | Category | Overlap Area SqKm | % Selected Feature |
| | | | | No overlap | | | - | 0.00% |
| 5//DP747391 | FREEHOLD | 5/09/2022 | 0.0111 | NNTT File Number | Name | Category | Overlap Area SqKm | % Selected Feature |
| | | | | No overlap | | | - | 0.00% |
| 6//DP747391 | FREEHOLD | 5/09/2022 | 0.0115 | NNTT File Number | Name | Category | Overlap Area SqKm | % Selected Feature |
| | | | | No overlap | | | - | 0.00% |
| 9//DP747391 | FREEHOLD | 5/09/2022 | 0.0716 | NNTT File Number | Name | Category | Overlap Area SqKm | % Selected Feature |
| | | | | No overlap | | | - | 0.00% |

For more information about the Tribunal's registers or to search the registers yourself and obtain copies of relevant register extracts, please visit our [website](#).

Information on native title claims and freehold land can also be found on the Tribunal's website here: [Native title claims and freehold land](#).

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

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

Search results and the existence of native title

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

The Tribunal accepts no liability for reliance placed on enclosed information

The enclosed information has been provided in good faith. Use of this information is at your sole risk. The National Native Title Tribunal makes no representation, either express or implied, as to the accuracy or suitability of the

information enclosed for any particular purpose and accepts no liability for use of the information or reliance placed on it.

If you have any further queries, please do not hesitate to contact us via GeospatialSearch@NNTT.gov.au

Regards,

Geospatial Searches

National Native Title Tribunal | Perth

Email: GeospatialSearch@nntt.gov.au | www.nntt.gov.au

From: penny@mheritage.com.au <penny@mheritage.com.au>
Sent: Friday, 9 December 2022 6:06 AM
To: Geospatial Search Requests <GeospatialSearch@NNTT.gov.au>
Subject: SR22/1989 - Search

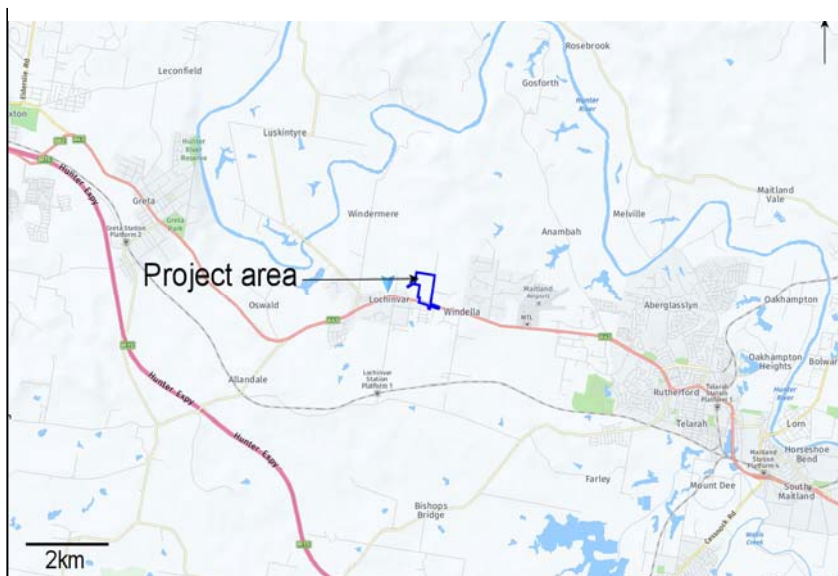
Caution: This is an external email. DO NOT click links or open attachments unless you recognise the sender and know the content is safe.

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Our reference: Doc22/1090805

Dr Penny McCardle
McCardle Cultural Heritage
Archaeologist
Forensic Anthropologist
Po Box 166
Adamstown 2289 NSW

21/12/2022

Dear Penny,

WRITTEN NOTIFICATION OF PROPOSAL AS REQUIRED UNDER DECCW ABORIGINAL CULTURAL HERITAGE CONSULTATION REQUIREMENTS FOR PROPONENTS 2010

Subject: Subdivision of land located at Lochinvar at the corner of the New England Highway and Windella Road, Lochinvar.

Thank you for your correspondence dated 9 December 2022 to Heritage NSW (Department of Planning and Environment) regarding the above project.

Attached is a list of known Aboriginal Stakeholders for the proposed development at the **Maitland** Local Government Area that Heritage NSW considers likely to have an interest in the activity. -

Please note this list is not necessarily an exhaustive list of all interested Aboriginal Stakeholders.

Receipt of this list does not remove the requirement of a proponent/ consultant to advertise in local print media and contact other bodies seeking interested Aboriginal parties, in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (April 2010).

Under Section 4.1.6. of the Consultation Requirements, you must also provide a copy of the names of each Aboriginal person who registered an interest to the relevant Heritage NSW office and Local Aboriginal Land Council (LALC) within 28 days from the closing date for registering an interest.

Please note that the contact details in the list provided by Heritage NSW may be out of date as it relies on Aboriginal stakeholders advising Heritage NSW when their details need changing. If individuals/companies undertaking consultation are aware that any groups contact details are out of date, or letters are returned unopened, please contact either the relevant stakeholder group (if you know their more current details) and/or Heritage NSW. AHIP applicants should make a note of any group they are unable to contact as part of their consultation record.

If you have any questions about this advice, please email:
heritagemailbox@environment.nsw.gov.au or contact (02) 9873 8500.

Yours sincerely



Barry Gunther, Aboriginal Senior Assessment Officer
Environment and Heritage – Heritage NSW
Department of Planning and Environment
Aboriginal Heritage Regulation Branch – South Heritage NSW

Attachment A:

Registered Aboriginal Interests DPE Aboriginal Stakeholders List for the **Maitland** Local Government Area.

LIST OF ABORIGINAL STAKEHOLDERS FOR THE DEPARTMENT of PLANNING and ENVIRONMENT (DPE) SOUTHERN REGION HELD BY DPE FOR THE PURPOSES OF THE OEH *ABORIGINAL CULTURAL HERITAGE CONSULTATION REQUIREMENTS FOR PROPONENTS 2010*

These lists are provided to proponents in accordance with section 4.1.2 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (the "Consultation Requirements") which commenced on 12 April 2010.

The consultation process involves getting the views of, and information from, Aboriginal people and reporting on these. It is not to be confused with other field assessment processes involved in preparing a proposal and an application. Consultation does not include the employment of Aboriginal people to assist in field assessment and/or site monitoring. Aboriginal people may provide services to proponents through a contractual arrangement however, this is separate from consultation. The proponent is not obliged to employ those Aboriginal people registered for consultation. Consultation as per these requirements will continue irrespective of potential or actual employment opportunities for Aboriginal people.

A copy of the Consultation Requirements can be found on the OEH website at:

<http://www.environment.nsw.gov.au/resources/cultureheritage/commconsultation/09781ACHconsultreq.pdf>.

Under the Consultation Requirements; a proponent is required to provide Aboriginal people who may hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects and/or places as relevant to the proposed project area, with an opportunity to be involved in consultation. Section 3.3.1 of the Consultation Requirements states that Aboriginal people who can provide this information are, based on Aboriginal lore and custom, the traditional owners or custodians of the land that is the subject of the proposed project.

The Consultation Requirements also state that:

Traditional owners or custodians with appropriate cultural heritage knowledge to inform decision making who seek to register their interest as an Aboriginal party are those people who:

- *continue to maintain a deep respect for their ancestral belief system, traditional lore and custom*
- *recognise their responsibilities and obligations to protect and conserve their culture and heritage and care for their traditional lands or Country*
- *have the trust of their community, knowledge and understanding of their culture, and permission to speak about it.*

Please note: the placement of an organisation's name on any OEH Aboriginal stakeholder list for the Consultation Requirements does not override a proponent's requirement to also advertise in the local newspaper and to seek from other sources the names of any other Aboriginal people who may hold cultural knowledge as required under clause 60 of the National Parks and Wildlife Regulation 2019.

How to use this list

1. **Contact the organisations/individuals who have indicated an interest in the relevant LGA/s and invite them to register an interest in your project**

Do not reproduce the attached list in publicly available reports and other documents. Your report should only contain the names of the organisations and individuals who you have invited to register an interest in your project and those who have registered as stakeholders for your project.

Last updated November 2022

Aboriginal Stakeholders – Maitland Local Government Area.

| | | | | | | | | |
|--------|--|---|--|----------------------|---|---|---|---|
| 1 | A1 Indigenous Services | Carolyn Hickey | cazadirect@live.com | - | 0411 650 057 | - | 10 Marie Pitt Place, Glenmore Park, NSW, 2745 | - |
| 3 | Aboriginal Native Title Consultants | Christine Paul | christinepaul737@gmail.com | - | 0484 327 664 | - | 68 Tindale Street Muswellbrook NSW 2333 | - |
| 5 | AGA Services | Ashley, Gregory & Adam Sampson | aga.services@hotmail.com | - | AS: 0401 958 050 Donna Sampson 0403 765 018 | - | 22 Ibis Parade WOODBERRY NSW 2322 | - |
| 9 | Aliera French Trading | Aliera French | alierafrenchtrading@outlook.com | - | 0421 299 963 | - | 17 Kalinda St BLACKSMITHS NSW 2281 | - |
| 2 2 | Arwarbukarl Cultural Resource Association, Miromaa Aboriginal Language and Technology Centre | Darren McKenny | contact@acra.org.au | (02) 4940 9100 | - | - | 840 Hunter St NEWCASTLE WEST NSW 2302 | - |
| 2 4 | Awabakal & Guringai Pty Ltd | Tracey Howie & Kerrie Brauer | tracey@guringai.com.au kerrie@awabakal.com.au | - | KB: 0412 866 357 TH: 0404 182 049 | - | PO Box 122 RUTHERFORD NSW 2320 NSW 2259 | - |
| 2 5 | Awabakal Descendants Traditional Owners | Peter Leven | peterleven@y7mail.com | - | 0405 149 684 | - | PO Box 137 BUDGEWOI NSW 2262 | - |
| 2 7 | Awabakal Traditional Owners Aboriginal Corporation | Kerrie Brauer | Kerrie@awabakal.com.au | - | 0412 866 357 | - | PO Box 122 RUTHERFORD NSW 2320 | - |
| 8 4 | Cacatua Culture Consultants | Donna & George Sampson | cacatua4service@tpg.com.au | - | 0403 765 019 0434 877 016 | - | 22 Ibis Parade WOODBERRY NSW 2322 | - |

| | | | | | | | | |
|-------------|---|---|---|-------------------------------|---|---|---|---|
| 1 1 3 | Corroboree Aboriginal Corporation | Marilyn Carroll- Johnson | maz_lolli@yahoo.com.au | (02) 8824 324 | 0415 911 159 | - | PO Box 3340, Rouse Hill, NSW 2155 | - |
| 1 1 6 | Crimson-Rosie | Jeffery Matthews | - | (02) 6543 4791 | - | - | 6 Eucalypt Avenue, Muswellbrook NSW 2333 | - |
| 1 1 9 | Culturally Aware | Tracey Skene | tracey@marrung- pa.com.au | - | 0474 106 537 | - | 7 Crawford Place MILFIELD NSW 2325 | - |
| 1 2 0 | D F T V Enterprises | Derrick Vale | deckavale@hotmail.com | - | 0401 162 998 0422 876 047 0438 812 197 | - | 5 Mountbatten Close RUTHERFORD NSW 2320 | - |
| 1 4 5 | Deslee Talbott Consultants | Deslee Matthews | m-desley@hotmail.com | - | 0431 205 336 | - | Unit 2 / 19 South Street GUNNEDAH NSW 2380 | - |
| 1 5 1 | Didge Ngunawal Clan | Lillie Carroll ; Paul Boyd | didgengunawalclan@yah oo.com.au | - | 0426 823 944 ; 0450 616 404 | - | 33 Carlyle Crescent Cambridge Gardens NSW 2747 | - |
| 1 8 6 | Gidawaa Walang & Barkuma Neighbourhood Centre Inc. | Craig Horne Debbie Dacey- Sullivan | gidawaa.walang@hotma il.com | (02) 4937 1094 | 0432 336 163 | - | 76 Lang Street, Kurri Kurri NSW 2327 | - |
| 1 9 1 | Glen Morris | - | mischelle.morris@outloo k.com | (02) 6543 3008 | - | - | 12 Bell Street Muswellbrook NSW 2333 | - |
| 1 9 6 | Gomery Cultural Consultants | David Horton | leannekirkman1964@gm ail.com | - | 0458 532 707 | - | 22 Cabernet Street Muswellbrook 2333 NSW | - |
| 2 3 6 | Hunter Traditional Owner | Paulette Ryan | hto.paulette@gmail.com | - | 0431 109 001 | - | 165 Susan Street SCONE NSW 2337 | - |

| | | | | | | | | |
|-------------|---|-----------------|--|----------------------|------------------------------|---|--|---|
| 2 3 8 | Hunter Valley Cultural Surveying | Luke Hickey | Microolith99@gmail.com | - | 0435 911 820 | - | 165 Susan Street SCONE NSW 2337 | - |
| 2 3 9 | Hunters & Collectors | Tania Matthews | Tamatthews10@hotmail.com | - | 0407 348 384 | - | Unit 1/19 South Street Gunnedah NSW 2320 | - |
| 2 4 3 | Indigenous Learning | Craig Archibald | indiglearning@gmail.com | - | 0467 229 507 0455 550 549 | - | 2 Victoria Street BELLBIRD HEIGHTS NSW 2325 | - |
| 2 5 8 | Jarban & Mugrebea | Les Atkinson | Les.atkinson@hotmail.com | - | 0466 316 069 | - | 65/ 601 Fishery Point Road Bonnells Bay NSW 2264 | - |
| 2 7 8 | Jumbunna Traffic Management Group Pty Ltd | Norm Archibald | normarch60@gmail.com | - | 0413 718 149 | - | 44 Billabong Dr Cameron Park 2285 | - |
| 2 8 8 | Kauma Pondee Inc. | Jill Green | kaumapondee@live.com.au | - | 0434 210 190 | - | Unit 6/1 Central Street LAMBTON NSW 2305 | - |
| 2 8 9 | Kawul Pty Ltd trading as Wonn1 Sites | Arthur Fletcher | Wonn1sites@gmail.com | (02) 4954 7751 | 0402 146 193 | - | 619 Main Road GLENDALE NSW 2285 | - |
| 2 9 6 | Kevin Duncan | Kevin Duncan | kevin.duncan@bigpond.com | (02) 4392 9346 | 0431 224 099 | - | 95 Moala Parade HARMHAVEN NSW 2263 | - |
| 3 2 9 | Lower Hunter Aboriginal Incorporated | David Ahoy | lowerhunterai@gmail.com | - | 0421 329 520 | - | 5 Killara Drive CARDIFF SOUTH NSW 2285 | - |
| 3 3 0 | Lower Hunter Wonnarua Cultural Services | Lea-Anne Ball | lhwcs.lea@gmail.com | - | 0472 698 659 | - | 712 Maitland Street KURRI KURRI NSW 2327 | - |
| 3 3 1 | Lower Wonnaruah Tribal Consultancy Pty Ltd | Barry Anderson | - | (02) 6574 5303 | 0417 403 153 | - | 156 The Inlet Road BULGA NSW 2330 | - |

| | | | | | | | | |
|-------------|--|-----------------------------------|--|----------------------|--|---|---|---|
| 3 4 8 | Mayaroo | Tracey White | rara02@bigpond.com | - | 0438 909 797 | - | PO Box 168 KURRI KURRI NSW 2327 | - |
| 3 5 6 | Michael Green Cultural Heritage Consultant | Michael Green | bunyipnick50@gmail.com | - | 0497 120 032 | - | 115A Lakeview Parade BLACKSMITHS NSW 2281 | - |
| 3 6 2 | Mindaribba Local Aboriginal Land Council | CEO | ceo@mindaribbalalc.org | (02) 4934 8511 | - | - | 1A Chelmsford Drive METFORD NSW 2323 | - |
| 3 9 0 | Murra Bidgee Mullangari Aboriginal Corporation | Darleen Johnson ; Ryan Johnson | murrabidgeemullangari@yahoo.com.au | - | 0490 051 102 0475 565 517 0497 983 332 | - | PO Box 3035 Rouse Hill NSW 2155 | - |
| 4 0 1 | Myland Cultural & Heritage Group | Warren Schillings | warren@yarnteen.com.au | - | 0431 392 554 | - | 30 Taurus Street ELERMORE VALE NSW 2287 | - |
| 4 7 7 | Renee Sales | Renee Sales | darkinoong@gmail.com | - | 0413 608 477 | - | 858 Lower Kangaroo Creek Coutts Crossing NSW 2460 | - |
| 5 0 9 | Steve Talbott | Steve Talbott | gomeri.namoi@outlook.com | - | 0429 662 911 | - | 73 Kiah Road GILLIESTON HEIGHTS NSW 2321 | - |
| 5 2 8 | The Men's Shack Indigenous Corporations | Rod Hickey | rod.hickey@hotmail.com | - | 0403 655 284 | - | 33 Gardner Circuit Singleton Heights NSW 2330 | - |
| 5 4 2 | Tocomwall Pty Ltd | Scott Franks | scott@tocomwall.com.au | - | 0404 171 544 | - | Po box 145, Miranda NSW 1490 | - |
| 5 5 9 | Ungooroo Aboriginal Corporation | Alan Paget | admin@ungooroo.com.au | (02) 6571 5111 | - | - | PO Box 3095 SINGLETON NSW 2330 | - |

| | | | | | | | | |
|-------------|--|--------------------------------|--|----------------------|--|---|--|---|
| 5 7 2 | Wallagan Cultural Services | Maree Waugh | wallagan@outlook.com | - | 0439 813 078 | - | PO Box 40 CESSNOCK NSW 2325 | - |
| 5 7 8 | Warragil Cultural Services | Aaron Slater (Manager) | Warragil_c.s@hotmail.com | - | 0481 280 067 0422231989 | - | 33 Gardner Circuit Singleton NSW 2566. | - |
| 5 8 1 | WATTAKA Pty Ltd | Des Hickey | deshickey@bigpond.com | (02) 6573 3786 | 0432 977 178 | - | 4 Kennedy Street SINGLETON NSW 2330 | - |
| 5 9 0 | Widescope Indigenous Group | Steven Hickey; Donna Hickey | Widescope.group@live.com | - | SH: 0425 230 693 DH: 0425 232 056 | - | 73 Russell Street, Emu Plains, NSW 2750 | - |
| 6 0 8 | Wonnarua Culture Heritage | Gordon Griffiths | - | (02) 4934 6437 | 0401 028 807 | - | 19 O'Donnell Crescent METFORD NSW 2323 | - |
| 6 0 9 | Wonnarua Elders Council | Richard Edwards | - | (02) 6543 4791 | - | - | PO Box 844 CESSNOCK NSW 2325 | - |
| 6 1 0 | Wonnarua Nation Aboriginal Corporation | Laurie Perry | l.perry@optusnet.com.au | (02) 6571 5419 | 0412 593 020 | - | 254 John St SINGLETON NSW 2330 | - |
| 6 1 2 | Worimi Local Aboriginal Land Council | CEO | andrew@worimi.org.au | (02) 4965 1500 | - | - | 2163 Nelson Bay Road WILLIAMTOWN NSW 2318 | - |
| 6 1 6 | Wurrumay Pty Ltd | Kerrie Slater; Vicky Slater | wurrumay31@outlook.com | - | 0421 077 521 | - | 89 Pyramid Street, Emu Plains NSW 2750 | - |
| 6 2 4 | Yinarr Cultural Services | Kathleen Steward Kinchela | yinarculturalservices@bigpond.com dontminemeay@gmail.com | - | 0475 436 589 | - | Lot 5 Westwood Estate MERRIWA NSW 2329 | - |

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Funeral Notices

WORGER Robert Thomas 'Bob'

Aged 93 Years of Shoal Bay formerly of Rutherford Adored husband of Daphne (dec). Cherished father of Karen, Marilyn (dec), and Annette. Loved father in law of Brian and Mick. Proud Pop of his grandchildren and great grandchildren. Beloved uncle to his nieces and nephews. Much loved by the Worger, Taylor and their extended families. The family respectfully advise a private cremation has taken place as per Bob's wishes.

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Public Notices

Public Notice

Notification of project proposal and registration of interest under Heritage NSW Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Stage 1) - Proposed residential subdivision located at Wyndella Road, Lochinvar.

MCH have been engaged by Lochinvar Developments Pty Ltd to prepare an Aboriginal Cultural Heritage Assessment (ACHA) and Section 90 Aboriginal Heritage Impact Permit (AHIP) application, if required, for the proposed residential subdivision located at Wyndella Road, Lochinvar (Lot 9 DP747391, Lot 12 DP1219648, Lot 13 DP1219648, Lot 2 DP747391, Lot 3 DP747391, Lot 4 DP747391, Lot 5 DP747391, Lot 6 DP747391, Lot 223 DP246447, Lot 1 DP741330, Lot 11 DP1219648, Lot 2 DP818314, Lot 1 DP65706), Maitland LGA. The purpose of community consultation with Aboriginal people is to assist the proposed applicant in the preparation of the AHIP application if required and to assist the Chief Executive of Heritage NSW, Department of Premier & Cabinet in his or her consideration and determination of the application should an AHIP be required. In compliance with the Heritage NSW policy - Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010, MCH would like to extend an invitation to Aboriginal people who hold cultural knowledge relevant to the proposed project area and who can determine the significance of Aboriginal object(s) and/or place(s) in the area of the proposed project to register an interest in the consultation process for this project. Written registrations must be forward to MCH (P.O. Box 166 Adamstown, NSW, 2289; penny@mcheritage.com.au

no later than C.O.B. 06.01.2023: 14 days after publication). All registered parties will then be contacted to discuss the project in compliance with Heritage NSW policy. If you register your interest in this project, please also nominate your preferred option to receive the initial information. You may wish to attend a non-paid meeting and receive an information pack, or receive an information packet through the mail or e-mail. Any parties who register are advised that, unless otherwise requested, their details will be forward to Heritage NSW and the relevant LALC within 28 days of the closing date of registration and in compliance with Heritage NSW policy.

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BRYANT John Saxon OAM

Aged 95 years Formerly of Greta Beloved husband of Shirley. A loved father and grandfather. Family and friends are respectfully advised John passed away on 13th December, 2022. Privately interred. A Memorial Service will take place in the New Year. Details to be advised.

FRY BROS
4933 6155
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Funeral Notices

JORDAN KEITH "Whiskers"

Aged 93 years and 11 months Of Paterson Beloved husband of Beryl (dec) and Marjorie (dec). Loving father and father in law of Christine and Ray, Darryl and Jo, Brett, and Carl (dec) and a dearly loved grandfather and great grandfather. Much loved youngest brother of 14. Loved brother of Dorothy and Daphne and dearly loved member of the JORDAN and COLLISON families. Family and friends are warmly invited to the Service in celebration of Keith's life at St Columba's Catholic Church, Paterson on **FRIDAY, 23rd December, 2022 at 12 o'clock.** Burial will follow at Paterson cemetery. The Service will be live streamed. For the link please visit Fry Bros website on the Funeral Services page.

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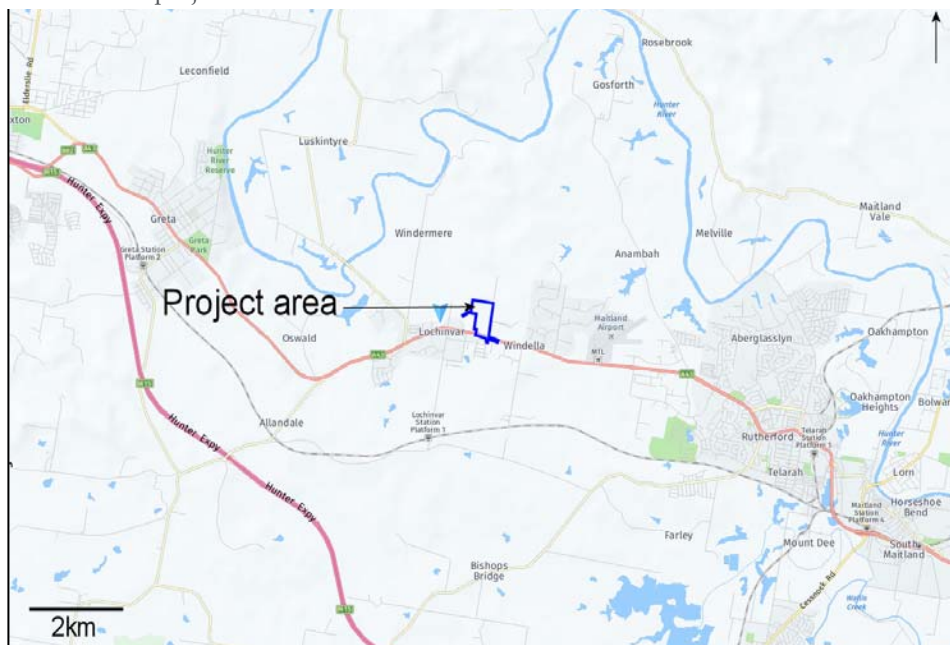
From: penny@mheritage.com.au
Sent: Wednesday, 28 December 2022 3:42 PM
To: 'Cazadirect@live.com'; 'christinepaul737@gmail.com'; 'aga.services@hotmail.com'; 'alierafrenchtrading@outlook.com'; 'contact@acra.org.au'; 'tracey@guringai.com.au'; 'kerrie@awabakal.com.au'; 'awabakal.to@gmail.com'; 'Kerrie@awabakal.com.au'; 'cacatua4service@tpg.com.au'; 'corroboreecorp@bigpond.com'; 'tracey@marrung-pa.com.au'; 'deckavale@hotmail.com'; 'm-desley@hotmail.com'; 'didgengunawalclan@yahoo.com.au'; 'gidawaa.walang@hotmail.com'; 'mischelle.morris@outlook.com'; 'leannekirkman1964@gmail.com'; 'hto.palette@gmail.com'; 'Microlith99@gmail.com'; 'Tamathews10@hotmail.com'; 'indiglearning@gmail.com'; 'Les.atkinson@hotmail.com'; 'normarch60@gmail.com'; 'kaumapondee@live.com.au'; 'Wonn1sites@gmail.com'; 'kevin.duncan@bigpond.com'; 'lowerhunterai@gmail.com'; 'lhwcs.lea@gmail.com'; 'rara02@bigpond.com'; 'bunyiipnick50@gmail.com'; 'ceo@mindaribbalalc.org'; 'murrabidgeemullangari@yahoo.com.au'; 'warren@yarnteen.com.au'; 'darkinoong@gmail.com'; 'gomeri.namoi@outlook.com'; 'rod.hickey@hotmail.com'; 'scott@tocomwall.com.au'; 'admin@ungooroo.com.au'; 'wallangan@outlook.com'; 'warragil_c.s@hotmail.com'; 'deshickey@bigpond.com'; 'Widescope.group@live.com'; 'gordon.griffithsbra@yahoo.com.au'; 'l.perry@optusnet.com.au'; 'andrew@worimi.org.au'; 'Wurrumay@hotmail.com'; 'yinarculturalservices@bigpond.com'
Subject: Proposed residential subdivision of land located at Lochinvar

RE: Written notification of project proposal and registration of interest as required under Heritage NSW Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Stage 1)– Proposed residential subdivision of land located at Lochinvar

McCardle Cultural Heritage (MCH) have been engaged by Lochinvar Developments Pty Ltd (C/o: ADW Johnson, 7/335 Hillsborough Rd, Warners Bay NSW 2282) to undertake an Aboriginal Cultural Heritage Assessment (ACHA) and prepare an Aboriginal Heritage Impact Permit (AHIP) application if required for residential subdivision of land located at the corner of the New England Highway and Windella Road, Lochinvar ((Lot 9 DP747391, Lot 12 DP1219648, Lot 13 DP1219648, Lot 2 DP747391, Lot 3 DP747391, Lot 4 DP747391, Lot 5 DP747391, Lot 6 DP747391, Lot 223 DP246447, Lot 1 DP741330, Lot 11 DP1219648, Lot 2 DP818314, Lot 1 DP65706), Maitland Local Government Area (LGA).

As per the Heritage NSW, Department of Premier & Cabinet policy - Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010, Stage 1 (s1.3 to 4.1.8), MCH and the proponent are seeking community consultation with indigenous knowledge holders relevant to the project area who can determine the cultural significance of Aboriginal objects and/or places in the area of the proposed project.

Location of the project area



The purpose of community consultation with Aboriginal people is to assist the proposed applicant in the preparation of an application for an AHIP (if required) and to assist the Chief Executive of Heritage NSW, Department of Premier & Cabinet policy, in his or her consideration and determination of the application should an AHIP be required.

This is an invitation for **Aboriginal people who hold cultural knowledge relevant to the proposed project area (registration is not to be based on where an individual or company works across NSW)** and who can determine the significance of Aboriginal object(s) and/or place(s) in the area of the proposed project to register an interest in a process of community consultation. As per the Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (s 4.1.5, 4.1.7 and 4.1.8), you are advised of the following:

- unless otherwise specified, if you register your interest, your details will be provided to Heritage NSW and the LALC;
- the LALC's who hold cultural knowledge relevant to the proposed project area that is relevant to determining the significance of Aboriginal objects and/or places within the proposed project area who wish to register, must do so as an Aboriginal organisation not an individual;
- where an Aboriginal organisation representing Aboriginal people, who hold cultural knowledge relevant to the proposed project area and that is relevant to determining the significance of Aboriginal objects and/or places within the proposed project area who wish to register, must nominate a contact person and provide written confirmation and contact details of this person or persons.

MCH understands it is the Indigenous custom to elect knowledge holders and it is traditionally the Indigenous people who are nominated who speak for country. Unfortunately, some RAPs and Government Departments have placed the onus of identifying traditional knowledge holders onto proponents and archaeologists. In order to do this, MCH are guided by the Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010) which provides guidelines to identify traditional knowledge holders. Should you wish to register your interest in this project, please register in writing no later than C.O.B. January 13th 2023 (additional time provided due to New Year) to:

Dr. Penny McCardle
McCardle Cultural Heritage
PO Box 166
Adamstown, NSW, 2289

If you register your interest in this project, please also nominate your preferred option to receive the project information. You may wish to have a non-paid meeting and receive an information pack, or receive information packet through the mail or e-mail. If a preferred method is not nominated, all information will be forward by mail or e-mail. Please note that in order to adhere to time constraints, the absence of a response by the prescribed timeline, will be taken by the proponent as your indication that your organisation does not wish to register for this project.

As all communications, including phone calls, faxes, letters, and e-mails must be included in the consultation component of the report as per the Heritage NSW, Department of Premier & Cabinet requirements, please ensure that any items that you or your group deem confidential are either stated at the beginning of a conversation or stamped/written on each piece of paper communicate.

Kind regards,

Dr. Penny McCardle
Archaeologist
Forensic Anthropologist



PO Box 166,
Adamstown 2289 NSW
P: 0412 702 396
mcheritage.com.au

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From: Tracey Skene <tracey@marrung-pa.com.au>
Sent: Wednesday, 28 December 2022 3:46 PM
To: penny@mheritage.com.au
Subject: Re: Proposed residential subdivision of land located at Lochinvar

Culturally aware is wet of this re and it's surrounded cultural landscapes I would like to put forward my EOI for this assessment.
Tracey Skene

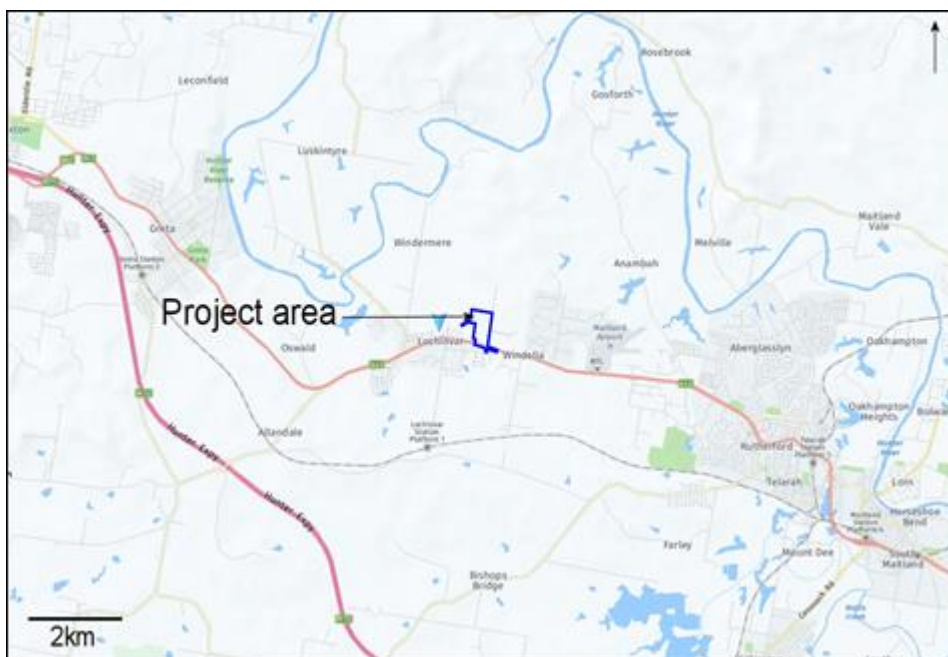
On Wed, 28 Dec 2022 at 3:42 pm, <penny@mheritage.com.au> wrote:

RE: Written notification of project proposal and registration of interest as required under Heritage NSW Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Stage 1)– Proposed residential subdivision of land located at Lochinvar

McCardle Cultural Heritage (MCH) have been engaged by Lochinvar Developments Pty Ltd (C/o: ADW Johnson, 7/[335 Hillsborough Rd, Warners Bay NSW 2282](#)) to undertake an Aboriginal Cultural Heritage Assessment (ACHA) and prepare an Aboriginal Heritage Impact Permit (AHIP) application if required for residential subdivision of land located at the corner of the New England Highway and Windella Road, Lochinvar ((Lot 9 DP747391, Lot 12 DP1219648, Lot 13 DP1219648, Lot 2 DP747391, Lot 3 DP747391, Lot 4 DP747391, Lot 5 DP747391, Lot 6 DP747391, Lot 223 DP246447, Lot 1 DP741330, Lot 11 DP1219648, Lot 2 DP818314, Lot 1 DP65706), Maitland Local Government Area (LGA).

As per the Heritage NSW, Department of Premier & Cabinet policy - Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010, Stage 1 (s1.3 to 4.1.8), MCH and the proponent are seeking community consultation with indigenous knowledge holders relevant to the project area who can determine the cultural significance of Aboriginal objects and/or places in the area of the proposed project.

Location of the project area



penny@mheritage.com.au

From: BS <bobsam1@bigpond.net.au>
Sent: Thursday, 29 December 2022 7:26 PM
To: penny@mheritage.com.au
Subject: RE: Barrington Bridge Aboriginal Interpretation Signage

Hi Penny yes please would like to register for this one and will do contact heritage did you like the media releases in regards to The AKA Guringai?

From: penny@mheritage.com.au <penny@mheritage.com.au>
Sent: Wednesday, 28 December 2022 4:42 PM
To: 'BS' <bobsam1@bigpond.net.au>
Subject: RE: Barrington Bridge Aboriginal Interpretation Signage

Hi Rob,

I have been well hope you are too.

If you would like to be contacted for projects in certain areas, you will have to notify Heritage NSW as they are the one who send us the list of people to write to.

Would you like to register for this one?

Im on leave until the 16th Jan but will sort this with you now.

Kind regards,

Dr. Penny McCardle

Archaeologist

Forensic Anthropologist



PO Box 166,
Adamstown 2289 NSW
P: 0412 702 396
mheritage.com.au

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penny@mheritage.com.au

From: Paulette Ryan <hto.paulette@gmail.com>
Sent: Friday, 30 December 2022 3:44 PM
To: penny@mheritage.com.au
Cc: Cazadirect@live.com; christinepaul737@gmail.com; aga.services@hotmail.com; alierafrenchtrading@outlook.com; contact@acra.org.au; tracey@guringai.com.au; Kerrie Brauer; awabakal.to@gmail.com; cacatua4service@tpg.com.au; corroborcorp@bigpond.com; Tracey Skene; deckavale@hotmail.com; m-desley@hotmail.com; didgengunawalclan@yahoo.com.au; gidawaa.walang@hotmail.com; mischelle.morris@outlook.com; leannekirkman1964@gmail.com; luke hickey; Tamatthews10@hotmail.com; indiglearning@gmail.com; Leslie Atkinson; normarch60@gmail.com; kaumapondee@live.com.au; Arthur Fletcher; kevin.duncan@bigpond.com; lowerhunterai@gmail.com; lhwcs.lea@gmail.com; rara02@bigpond.com; bunyipnick50@gmail.com; Tara Dever; murrabidgeemullangari@yahoo.com.au; warren@yarnteen.com.au; darkinoong@gmail.com; gomeroi.namoi@outlook.com; Rod Hickey; Tocomwall (scott@tocomwall.com.au); Ungooroo Aboriginal Corporation (admin@ungooroo.com.au); wallangan@outlook.com; warragil_c.s@hotmail.com; Des Hickey; Widescope.group@live.com; gordon.griffithsbra@yahoo.com.au; Laurie Perry; andrew@worimi.org.au; Wurrumay@hotmail.com; yinarculturalservices@bigpond.com
Subject: Re: Proposed residential subdivision of land located at Lochinvar
Attachments: image004.png

Thank you for your email
Well keep in touch
Kind regards Paulette Ryan from HTO

On Wed, 28 Dec 2022, 2:42 pm , <penny@mheritage.com.au> wrote:

RE: Written notification of project proposal and registration of interest as required under Heritage NSW Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Stage 1)– Proposed residential subdivision of land located at Lochinvar

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As per the Heritage NSW, Department of Premier & Cabinet policy - Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010, Stage 1 (s1.3 to 4.1.8), MCH and the proponent are seeking community consultation with indigenous knowledge holders relevant to the project area who can determine the cultural significance of Aboriginal objects and/or places in the area of the proposed project.

From: MARILYN CARROLL <maz_lolli@yahoo.com.au>
Sent: Monday, 2 January 2023 10:31 AM
To: penny@mheritage.com.au
Subject: Subject: use this email Re: Proposed residential subdivision of land located at Lochinvar

We are registering Corroboree Aboriginal Corporation in a full capacity. We have worked on a vast number of projects as Cultural Heritage Officers in the project area. We are currently involved on many projects in the subject area. My family and other family members have lived in the area and family currently reside in the surrounding areas. We are registering in a full capacity. We are Aboriginal people who are culturally & heritage aware. We have the necessary ability, experience, skills, insight and the knowledge to identify artefacts on field work. And as Aboriginal People we connect thru the land, thru our Ancestors and our Heritage. Therefore we are able participate on all levels. We have worked with many archaeologists across a broad landscape. We have consulted with most archeological companies over many years on projects. We have all the relevant insurances and safety gear. We are all fit, capable and adapt to a vast landscape. Contact is preferred via email: *maz_lolli@yahoo.com.au* The contact number, email and contact person is also listed in the signature. Please do not disclose any of our details to LALC. We have responded for inclusion, to participate on all levels. Thanks.

Kind regards
Marilyn Carroll-Johnson
Director
Corroboree Aboriginal Corporation
Mob: [0415911159](tel:0415911159)
Ph: [0288244324](tel:0288244324)
E: maz_lolli@yahoo.com.au
Address: PO Box 3340
ROUSE HILL NSW 2155

We respectfully acknowledge the Traditional Owners of the lands upon which we work and pay our deep respect to Elders past, present and emerging.

penny@mheritage.com.au

From: WIDESCOPE . <widescope.group@live.com>
Sent: Tuesday, 3 January 2023 9:01 AM
To: penny@mheritage.com.au
Subject: RE: Proposed residential subdivision of land located at Lochinvar Registration / Steven Hickey

Good morning, Penny

Steven Hickey would like to register his interest in the project.
Contact: Steven Hickey Mob:0425230693,

Preferred option to receive the project information. Receive information packet through e-mail.

Regards

Donna and Steven Hickey
Widescope Indigenous Group

+61425232056 | 73 Russell Street, Emu Plains, NSW 2750

widescope.group@live.com

From: penny@mheritage.com.au

Sent: Wednesday, 28 December 2022 3:42 PM

To: Cazadirect@live.com; christinepaul737@gmail.com; aga.services@hotmail.com;
alierafrenchtrading@outlook.com; contact@acra.org.au; tracey@guringai.com.au; kerrie@awabakal.com.au;
awabakal.to@gmail.com; kerrie@awabakal.com.au; cacatua4service@tpg.com.au; corroboreecorp@bigpond.com;
tracey@marrung-pa.com.au; deckavale@hotmail.com; m-desley@hotmail.com;
didgengunawalclan@yahoo.com.au; gidawaa.walang@hotmail.com; mischelle.morris@outlook.com;
leannekirkman1964@gmail.com; hto.paulette@gmail.com; Microlith99@gmail.com; Tamatthews10@hotmail.com;
indiglearning@gmail.com; Les.atkinson@hotmail.com; normarch60@gmail.com; kaumapondee@live.com.au;
Wonn1sites@gmail.com; kevin.duncan@bigpond.com; lowerhunterai@gmail.com; lhwcs.lea@gmail.com;
rara02@bigpond.com; bunyipnick50@gmail.com; ceo@mindaribbalalc.org; murrabidgeemullangari@yahoo.com.au;
warren@yarnteen.com.au; darkinoong@gmail.com; gomeroid.namoi@outlook.com; rod.hickey@hotmail.com;
scott@tocomwall.com.au; admin@ungooroo.com.au; wallangan@outlook.com; warragil_c.s@hotmail.com;
deshickey@bigpond.com; Widescope.group@live.com; gordon.griffithsbra@yahoo.com.au;
l.perry@optusnet.com.au; andrew@worimi.org.au; Wurrumay@hotmail.com; yinarculturalservices@bigpond.com

Subject: Proposed residential subdivision of land located at Lochinvar

RE: Written notification of project proposal and registration of interest as required under Heritage NSW Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Stage 1)– Proposed residential subdivision of land located at Lochinvar

McCardle Cultural Heritage (MCH) have been engaged by Lochinvar Developments Pty Ltd (C/o: ADW Johnson, 7/335 Hillsborough Rd, Warners Bay NSW 2282) to undertake an Aboriginal Cultural Heritage Assessment (ACHA) and prepare an Aboriginal Heritage Impact Permit (AHIP) application if required for residential subdivision of land located at the corner of the New England Highway and Windella Road, Lochinvar ((Lot 9 DP747391, Lot 12 DP1219648, Lot 13 DP1219648, Lot 2 DP747391, Lot 3 DP747391, Lot 4 DP747391, Lot 5 DP747391, Lot 6 DP747391, Lot 223 DP246447, Lot 1 DP741330, Lot 11 DP1219648, Lot 2 DP818314, Lot 1 DP65706), Maitland Local Government Area (LGA).

As per the Heritage NSW, Department of Premier & Cabinet policy - Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010, Stage 1 (s1.3 to 4.1.8), MCH and the proponent are seeking community consultation

penny@mheritage.com.au

From: Amanda De Zwart <Amandahickey@live.com.au>
Sent: Tuesday, 10 January 2023 10:40 PM
To: penny@mheritage.com.au
Subject: Register for New England Highway and Windella Road, Lochinvar

Hi Penny

Thank you for your email AHCS would like to Formally register a interest in this project
AHCS Holds strong cultural knowledge to the land of Hunter Valley and surrounding
AHCS Holds strong connection to country.
AHCS is able to determine Aboriginal heritage and artefacts.
Over 25 years experience in Aboriginal heritage.
If there is anything you need please feel free to contact me
Mobile 0434 480 558
Or email amandahickey@live.com.au

Have a great day
Amanda AHCS

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penny@mheritage.com.au

From: Carolyn .H <cazadirect@live.com>
Sent: Thursday, 12 January 2023 9:58 AM
To: penny@mheritage.com.au
Subject: Re: Proposed residential subdivision of land located at Lochinvar

Hi,
I would like to register for consultation on this project.
Kind Regards
Carolyn Hickey

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From: penny@mheritage.com.au <penny@mheritage.com.au>
Sent: Wednesday, 28 December 2022, 3:43 pm
To: Cazadirect@live.com <Cazadirect@live.com>; christinepaul737@gmail.com <christinepaul737@gmail.com>; aga.services@hotmail.com <aga.services@hotmail.com>; alierafrenchtrading@outlook.com <alierafrenchtrading@outlook.com>; contact@acra.org.au <contact@acra.org.au>; tracey@guringai.com.au <tracey@guringai.com.au>; kerrie@awabakal.com.au <kerrie@awabakal.com.au>; awabakal.to@gmail.com <awabakal.to@gmail.com>; kerrie@awabakal.com.au <kerrie@awabakal.com.au>; cacatua4service@tpg.com.au <cacatua4service@tpg.com.au>; corroboreecorp@bigpond.com <corroboreecorp@bigpond.com>; tracey@marrung-pa.com.au <tracey@marrung-pa.com.au>; deckavale@hotmail.com <deckavale@hotmail.com>; m-desley@hotmail.com <m-desley@hotmail.com>; didgengunawalclan@yahoo.com.au <didgengunawalclan@yahoo.com.au>; gidawaa.walang@hotmail.com <gidawaa.walang@hotmail.com>; mischelle.morris@outlook.com <mischelle.morris@outlook.com>; leannekirkman1964@gmail.com <leannekirkman1964@gmail.com>; hto.paulette@gmail.com <hto.paulette@gmail.com>; Microlith99@gmail.com <Microlith99@gmail.com>; Tamatthews10@hotmail.com <Tamatthews10@hotmail.com>; indiglearning@gmail.com <indiglearning@gmail.com>; Les.atkinson@hotmail.com <Les.atkinson@hotmail.com>; normarch60@gmail.com <normarch60@gmail.com>; kaumaponded@live.com.au <kaumaponded@live.com.au>; Wonn1sites@gmail.com <Wonn1sites@gmail.com>; kevin.duncan@bigpond.com <kevin.duncan@bigpond.com>; lowerhunterai@gmail.com <lowerhunterai@gmail.com>; lhwcs.lea@gmail.com <lhwcs.lea@gmail.com>; rara02@bigpond.com <rara02@bigpond.com>; bunyipnick50@gmail.com <bunyipnick50@gmail.com>; ceo@mindaribbalalc.org <ceo@mindaribbalalc.org>; murrabidgeemullangari@yahoo.com.au <murrabidgeemullangari@yahoo.com.au>; warren@yarnteen.com.au <warren@yarnteen.com.au>; darkinoong@gmail.com <darkinoong@gmail.com>; gomeroi.namoi@outlook.com <gomeroi.namoi@outlook.com>; rod.hickey@hotmail.com <rod.hickey@hotmail.com>; scott@toacomwall.com.au <scott@toacomwall.com.au>; admin@ungooroo.com.au <admin@ungooroo.com.au>; wallangan@outlook.com <wallangan@outlook.com>; warragil_c.s@hotmail.com <warragil_c.s@hotmail.com>; deshickey@bigpond.com <deshickey@bigpond.com>; Widescope.group@live.com <Widescope.group@live.com>; gordon.griffithsbra@yahoo.com.au <gordon.griffithsbra@yahoo.com.au>; l.perry@optusnet.com.au <l.perry@optusnet.com.au>; andrew@worimi.org.au <andrew@worimi.org.au>; Wurrumay@hotmail.com <Wurrumay@hotmail.com>; yinarculturalservices@bigpond.com <yinarculturalservices@bigpond.com>
Subject: Proposed residential subdivision of land located at Lochinvar

RE: Written notification of project proposal and registration of interest as required under Heritage NSW Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Stage 1)– Proposed residential subdivision of land located at Lochinvar

McCardle Cultural Heritage (MCH) have been engaged by Lochinvar Developments Pty Ltd (C/o: ADW Johnson, 7/335 Hillsborough Rd, Warners Bay NSW 2282) to undertake an Aboriginal Cultural Heritage Assessment (ACHA) and prepare an Aboriginal Heritage Impact Permit (AHIP) application if required for residential subdivision of land located



McCARDLE
CULTURAL HERITAGE

24 January 2023

PO Box 166
Adamstown 2289 NSW
penny@mcheritage.com.au
P: 0412 702 396

mcheritage.com.au

Heritage NSW, Department of Premier & Cabinet
heritagemailbox@environment.nsw.gov.au

Dear Sir/madam,

RE: Written notification of project proposal and registration of interest as required under Heritage NSW Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (s4.1.6): provision of Registered Aboriginal Parties (RAPs): Proposed residential subdivision of land located at Lochinvar

In compliance with the Heritage NSW, Department of Premier & Cabinet policy - Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Stage 1; s 4.1.6), please find attached records of Registered Aboriginal Parties (RAPs) for the above-named project.

Also, in compliance with the Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Stage 1: s 4.1.3 and 4.1.6), please also find attached a copy of the public notification placed in the Maitland Mercury Newspaper.

If you have any questions or would like any additional information please don't hesitate to contact me on 0412 702 396 or via e-mail at penny@mcheritage.com.au.

Yours sincerely,
for McCardle Cultural Heritage Pty Ltd

Dr. Penny McCardle
Principal Archaeologist
Forensic Anthropologist

Registered Aboriginal Parties

| Company | Contact |
|-----------------------------------|-------------------------|
| A1 Indigenous Services | Carolyn Hickey |
| Corroboree Aboriginal Corporation | Marilyn Carroll-Johnson |
| Culturally Aware | Tracey Skene |
| Widescope Indigenous Group | Steven Hickey |
| Gomery Cultural Consultants | David Horton |
| Hunter Traditional Owner | Paulette Ryan |
| | Robert Syron |
| AHCS | Amanda De Zwart |



MCCARDLE
CULTURAL HERITAGE

24 January 2023

PO Box 166
Adamstown 2289 NSW
penny@mcheritage.com.au
P: 0412 702 396

mcheritage.com.au

Mindaribba Local Aboriginal Land Council
ceo@mindaribbalalc.org

Dear Sir/madam,

RE: Written notification of project proposal and registration of interest as required under Heritage NSW Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (s4.1.6): provision of Registered Aboriginal Parties (RAPs): Proposed residential subdivision of land located at Lochinvar

In compliance with the Heritage NSW, Department of Premier & Cabinet policy - Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Stage 1; s 4.1.6), please find attached records of Registered Aboriginal Parties (RAPs) for the above-named project.

Also, in compliance with the Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Stage 1: s 4.1.3 and 4.1.6), please also find attached a copy of the public notification placed in the Maitland Mercury.

If you have any questions or would like any additional information please don't hesitate to contact me on 0412 702 396 or via e-mail at penny@mcheritage.com.au.

Yours sincerely,
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Dr. Penny McCcardle
Principal Archaeologist
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Registered Aboriginal Parties

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| A1 Indigenous Services | Carolyn Hickey |
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| Widescope Indigenous Group | Steven Hickey |
| Gomery Cultural Consultants | David Horton |
| Hunter Traditional Owner | Paulette Ryan |
| | Robert Syron |
| AHCS | Amanda De Zwart |

From: penny@mheritage.com.au
Sent: Tuesday, 24 January 2023 2:20 PM
To: 'Cazadirect@live.com'; 'corroboreecorp@bigpond.com'; 'tracey@marrung-pa.com.au'; 'leannekirkman1964@gmail.com'; 'Widescope.group@live.com'; 'hto.paulette@gmail.com'; 'BS'; 'Amanda De Zwart'
Subject: Lochinvar Info pack
Attachments: ACHAR Info Pack 2022.pdf

RE: Heritage NSW Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Stage 2 & 3) – Presentation of information about the proposed project and request for comment on the proposed methods of investigation – Proposed residential subdivision of land located at Lochinvar

McCardle Cultural Heritage (MCH) would like to thank you for registering your interest in this project. MCH sent a letter extending an invitation to register your interest and asking if you would prefer to have a meeting to discuss the project or have an information pack sent to you. As MCH did not receive your preferred option, we are posting/emailing the information packet.

In order for the proponent to fulfil its cultural heritage consultation requirements per the Heritage NSW, Department of Premier & Cabinet policy - Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Stage 2; s 4.2.1 to 4.2.4; Stage 3, s 4.3.1 to 4.3.7) please find enclosed an Aboriginal Cultural Heritage Assessment Information Packet that outlines the proposed project including, but not limited to, details of the proposed the project including maps, an outline of the impact assessment process, summary of the cultural, environmental and archaeological contexts, a site specific predictive model, details of the proposed methodology, the roles and responsibilities of all parties, and provide an opportunity for you to identify and raise any cultural concerns, perspectives and assessment requirements you may have.

MCH would appreciate your input on;

- The proposed methodology
- Any Aboriginal objects and/or place(s) of cultural value within the investigation area and/or an any issues of cultural significance you are aware of
- Any protocols and/or restrictions you may wish to implement in relation to any information you may like to provide, and
- Any other factors you consider relevant to the heritage assessment;

Please make your written submission to MCH by close of business 21st February 2023. The absence of a response by the requested timeline will be taken as your indication that your organisation has no comments regarding the above.

The proponent intends to engage a number of RAPs (relative to the scale and nature of the investigations) to participate in the field work. If you wish to be considered for paid participation in the field investigations please review and complete the Aboriginal stakeholder site officer application form attached to the information packet provided. Aboriginal representatives will be selected by the proponent based upon merits of the applications received with respect to the selection criteria. Late application will not be accepted by the proponent.

Please note that the number of people engaged and the duration of any engagement will be at the sole discretion of the proponent who will notify MCH of the successful applicants. MCH will notify the successful applicants and all RAPs will be invited to participate in the field investigations regardless of remuneration and subject to Occupational Health and Safety requirements and operational requirements.

Please note that regardless of participation in the field investigations, RAPs will be consulted in accordance with the Heritage NSW, Department of Premier & Cabinet policy - Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 for the remainder of the assessment.

As all communications, including phone calls, faxes, letters, and e-mails must be included in the consultation component of the report as per the Heritage NSW, Department of Premier & Cabinet requirements, please ensure that any items that you or your group deem confidential are either stated at the beginning of a conversation or stamped/written on each piece of paper communicate.

MCH looks forward to your response and working with you on this project. Please do not hesitate to contact myself on 0412 702 396 should you have any questions.

Kind regards,

Dr. Penny McCardle

Archaeologist

Forensic Anthropologist



**PO Box 166,
Adamstown 2289 NSW
P: 0412 702 396
mcheritage.com.au**

CONFIDENTIAL COMMUNICATION

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M

Lochinvar Residential Subdivision

LGA: Maitland

**Aboriginal Cultural Heritage Assessment
Information Packet**

24 January 2023

McCARDLE CULTURAL HERITAGE PTY LTD

ACN 104 590 141 • ABN 89 104 590 141

PO Box 166, Adamstown, NSW 2289

Mobile: 0412 702 396 • Email: penny@mcheritage.com.au



Report No J202291Info Pack

Approved by: Penny McCardle

Position: Director

Signed: 

Date: 24 January 2023

This report has been prepared in accordance with the scope of services described in the contract or agreement between McCardle Cultural Heritage Pty Ltd (MCH), ACN: 104 590 141, ABN: 89 104 590 141, and the proponent. The report relies upon data, surveys, measurements and specific times and conditions specified herein. Any findings, conclusions or recommendations only apply to the aforementioned circumstances and no greater reliance should be assumed or drawn by the proponent. Furthermore, the report has been prepared solely for use by the proponent and MCH accepts no responsibility for its use by other parties.

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GLOSSARY

Aboriginal Cultural Heritage Values: traditional values of Aboriginal people, handed down in spiritual beliefs, stories and community practices and may include local plant and animal species, places that are important and ways of showing respect for other people.

Aboriginal Place: are locations that have been recognised by the Minister for Climate Change and the Environment (and gazetted under the *National Parks and Wildlife Act 1974*) as having special cultural significance to the Aboriginal community. An Aboriginal Place may or may not include archaeological materials.

Aboriginal Site: an Aboriginal site is the location of one or more Aboriginal archaeological objects, including flaked stone artefacts, midden shell, grinding grooves, archaeological deposits, scarred trees etc.

Harm: is defined as an act that may destroy, deface or damage an Aboriginal object or place. In relation to an object, this means the movement or removal of an object from the land in which it has been situated

Traditional Aboriginal Owners: Aboriginal people who are listed in the Register of Aboriginal owners pursuant to Division 3 of the *Aboriginal Land Register Act (1983)*. The Registrar must give priority to registering Aboriginal people for lands listed in Schedule 14 of the *National Parks and Wildlife Act 1974* or land subject to a claim under 36A of the *Aboriginal Land Rights Act 1983*.

Traditional Knowledge: Information about the roles, responsibilities and practices set out in the cultural beliefs of the Aboriginal community. Only certain individuals have traditional knowledge and different aspects of traditional knowledge may be known by different people, e.g., information about men's initiation sites and practices, women's sites, special pathways, proper responsibilities of people fishing or gathering food for the community, ways of sharing and looking after others, etc.

1 INTRODUCTION

McCardle Cultural Heritage Pty Ltd (MCH) has been engaged by Lochinvar Developments Pty Ltd to prepare an Aboriginal Cultural Heritage Assessment (ACHA) and an Aboriginal Heritage Impact Permit (AHIP) if required, for the proposed residential subdivision of land located at the corner of the New England Highway and Windella Road, Lochinvar.

The assessment will determine the potential impacts upon the indigenous cultural heritage within the development area. It is intended that any areas of indigenous cultural heritage and archaeological values will be identified and appropriate management recommendations will be established through consultation with the Registered Aboriginal Parties (RAPs).

In compliance with the Heritage NSW, Department of Premier & Cabinet policy - Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Stage 2, s4.21 to 4.2.4 and Stage 3 s4.3.1 to 4.3.7), this Aboriginal Cultural Heritage Information Packet provides information about the proposed project including, but not limited to, details of the proposed the project including maps, an outline of the assessment process, summary of the environmental, cultural and archaeological contexts, a predictive model, the proposed methodology, the roles and responsibilities of all parties, and provides an opportunity for you to identify and raise any cultural concerns, perspectives and assessment requirements you may have.

The assessment has been undertaken to meet the Heritage NSW, Department of Premier & Cabinet Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010a, the Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW 2011, the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales 2010b, and the brief.

1.1 CONSULTATION

Consultation will be undertaken as per the Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 and will be detailed in the ACHA.

1.2 PROJECT AREA

The project area is defined by the proponent and is located at the corner of the New England Highway and Windella Road, Lochinvar. Including Lot 2/DP 747391, Lot 3/DP 747391, Lot 4/DP 747391, Lot 5/DP 747391, Lot 6/DP 747391, Lot 12/DP 1219648, Lot 13/DP 1219648 and Lot 9/DP 747391 the location and extent of the project area is illustrated in Figures 1.1 and 1.2.

Figure 1.1 Location of the project area

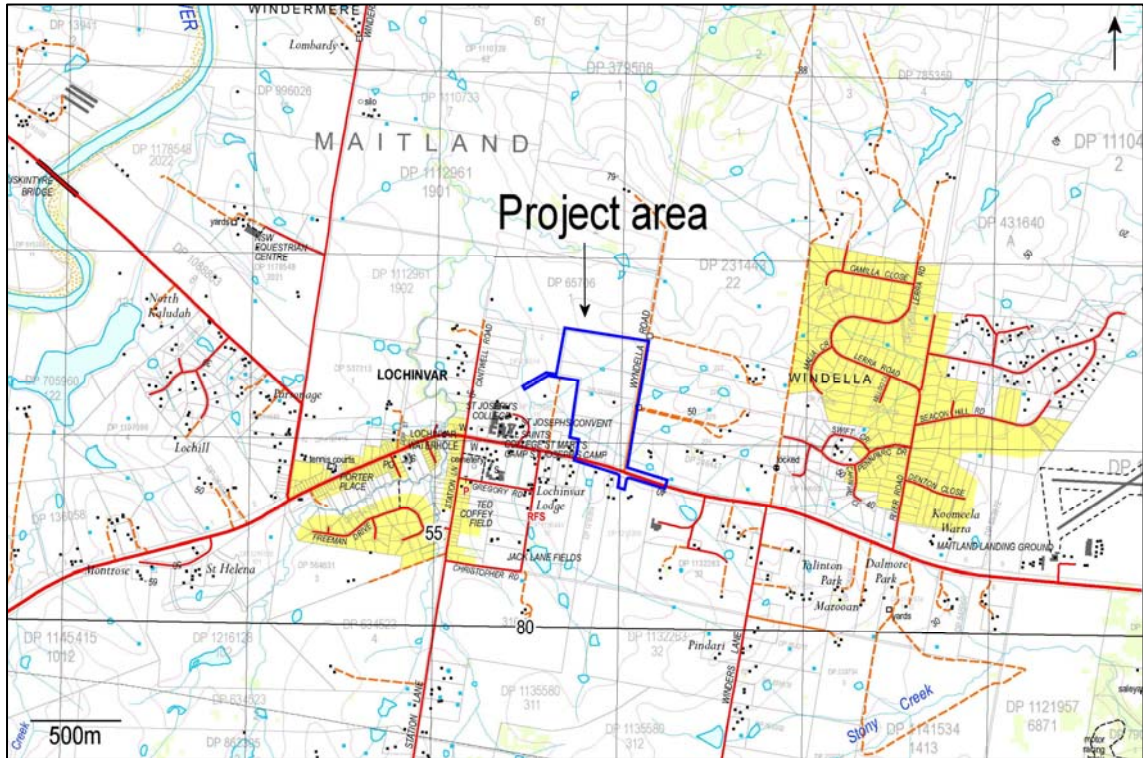
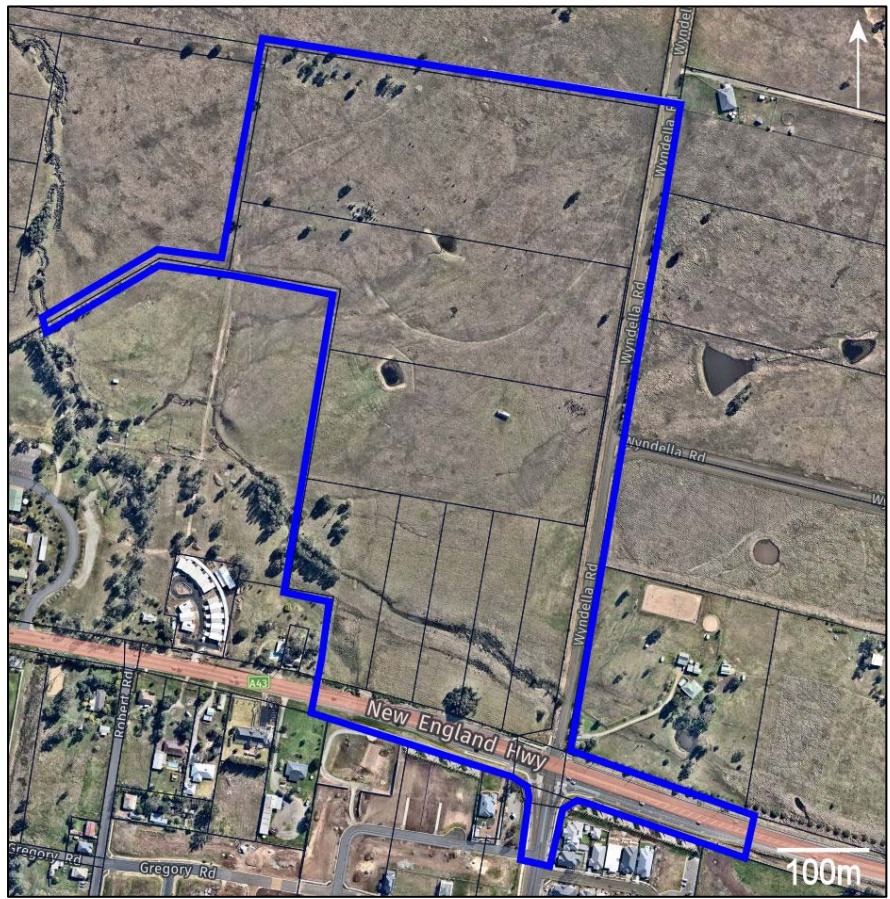


Figure 1.2 Aerial photograph of the project area



1.3 PROJECT OUTLINE AND IMPACTS

The project will include the subdivision of the project area into residential lots. Works typically associated with residential developments include clearing and demolition of existing structures, site remediation, bulk earthworks including construction of dwellings and roads, services reticulation: WW, PW, NBN, electrical and gas and landscaping.

1.4 CRITICAL DEVELOPMENT TIME LINES

The proponent wishes to commence works as soon as possible but also acknowledges the need to undertake cultural heritage and archaeological investigations on the site. Ideally these would be undertaken prior to any works commencing on the site, however, it would be possible to stage the development to exclude areas identified for investigation until the investigations are complete.

1.5 CRITICAL ARCHAEOLOGICAL TIMELINE

The following Table indicates the timelines critical for the archaeological assessment. However, please note that consultation may be increased or decreased depending on response times and knowledge sharing.

1.1 Archaeological timeline

| Stages | Week | | | | | | | | | | | | | | |
|--|--------------|---|-------------|---|------------------|---|---|---|-------------------------------------|----|----|---------------------|----|----|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| Stage 1: consultation | Gov. letters | | RAP letters | | Information pack | | | | 2 weeks' notice for survey & survey | | | Draft report review | | | |
| Stage 2: gathering of knowledge | | | | | | | | | | | | | | | |
| Stage 2: contextual research | | | | | | | | | | | | | | | |
| Stage 3: survey | | | | | | | | | | | | | | | |
| Stage 4: reporting | | | | | | | | | | | | | | | |
| Stage 5: finalisation | | | | | | | | | | | | | | | |

2 ENVIRONMENTAL CONTEXT

The environmental context provides an understanding of the landscape and environmental factors as well as potential resources that may have been available in the past. The land uses also assists in an understanding of potential impacts they would have had on the landscape and associated cultural materials. This information is utilised with the archaeological context in order to ascertain a reliable predictive model of not only sit location and site type, but also the likelihood of survivability within that landscape.

Consisting of the Permian Dalwood Group consisting of the Lochinvar geological formation of siltstone, sandstone, basic lava and tuff (Singleton Geological Map Sheet 1969), the presence of tuff within the geology of the project area indicates that stone materials suitable for manufacturing stone artefacts may occur in various locations throughout the project area. including a south western side of a gentle slope, drainage depressions, creeks and creek flats make up the landforms of the project area.

The southern portion and a small area along the western border consist of the Lochinvar soil landscape and the remainder the Rothbury soil landscape, both of which consist of an upper soil Horizon A and underlying B and are interpreted as being Holocene and Pleistocene in age respectively. Within the region, sites tend to occur on or within soil Horizon A or are often present at the interface of the A and B horizons. In terms of fresh water sources, one 1st order depression is located roughly through the centre of the project area, two 2nd order are located in the southern portion of the project area and a 3rd order flows through the north western part of the project area. The Hunter River (6th order) is located approximately 1.8 kilometres west of the project area. In terms of past Aboriginal land uses and survival (water is necessary for survival), the project area may be considered low to moderately resourced in terms of water availability. The areas along the 3rd order creek during wet seasons or after continuous heavy rain when water was available would likely have been utilised to support hunting and gathering opportunities for small to medium sized groups and travel to the more reliable Hunter River located 1.8 kilometres to the west.

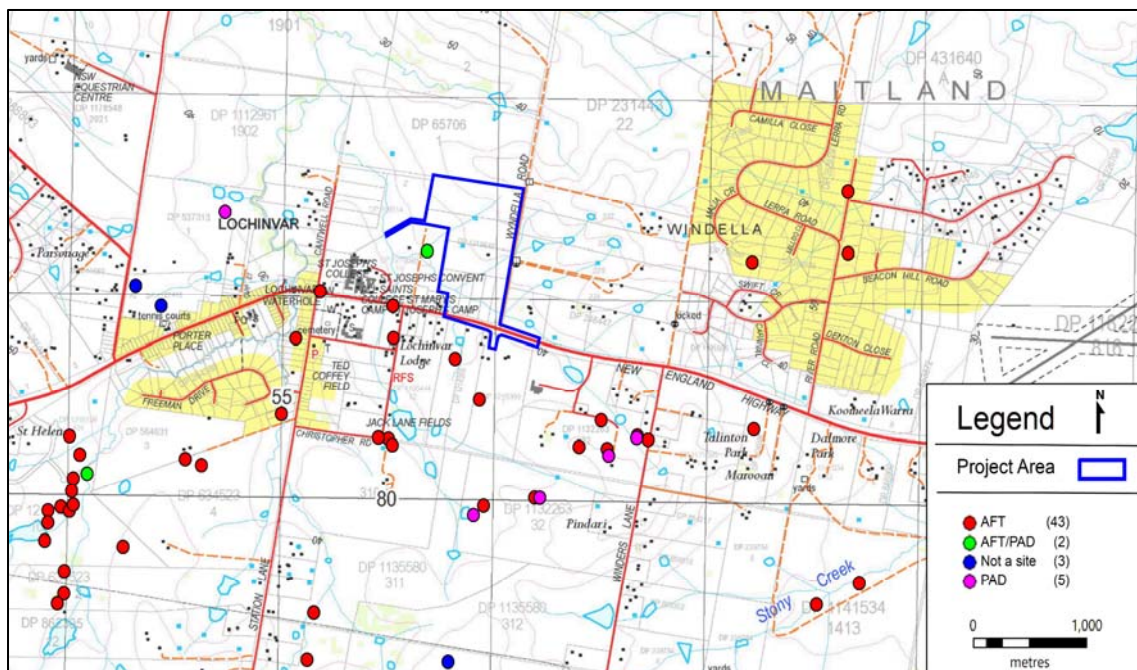
In relation to land uses and impacts on the landscape, the project area has been cleared and primarily used for pastoral purposes (grazing) with at least one ploughing event for improved pasture grasses, involving the wholesale clearance of native vegetation, the introduction of pasture grass, the construction of dams, housing, fencing, numerous tracks and the construction of dams. In addition to this, a trail of manmade dams has been constructed through the north western portion along the lower slopes creating a false drainage depression. Such land uses are considered to range from low to high, all of which impact the landscape and deposits. A number of significant natural impacts have also occurred and include the extreme flooding in recent years which results in both the erosion and sweeping away of materials as well as burring materials.

3 ARCHAEOLOGICAL CONTEXT

The archaeological background provides context to the project area and wider cultural landscape in which the project area is situated. It identifies known sites, their landform location and proximity to subsistence resources. It also provides the nature and extent of known sites as well as their distribution across the landscape, thereby enabling a site-specific predictive model to be developed.

A search of the AHIMS register has shown that that 53 known Aboriginal sites are currently recorded within five kilometres of the project area and include 43 artefact sites, 5 PADs, 2 artefact and PAD sites and 2 that are not sites.

Figure 3.1 Approximate location of AHIMS sites

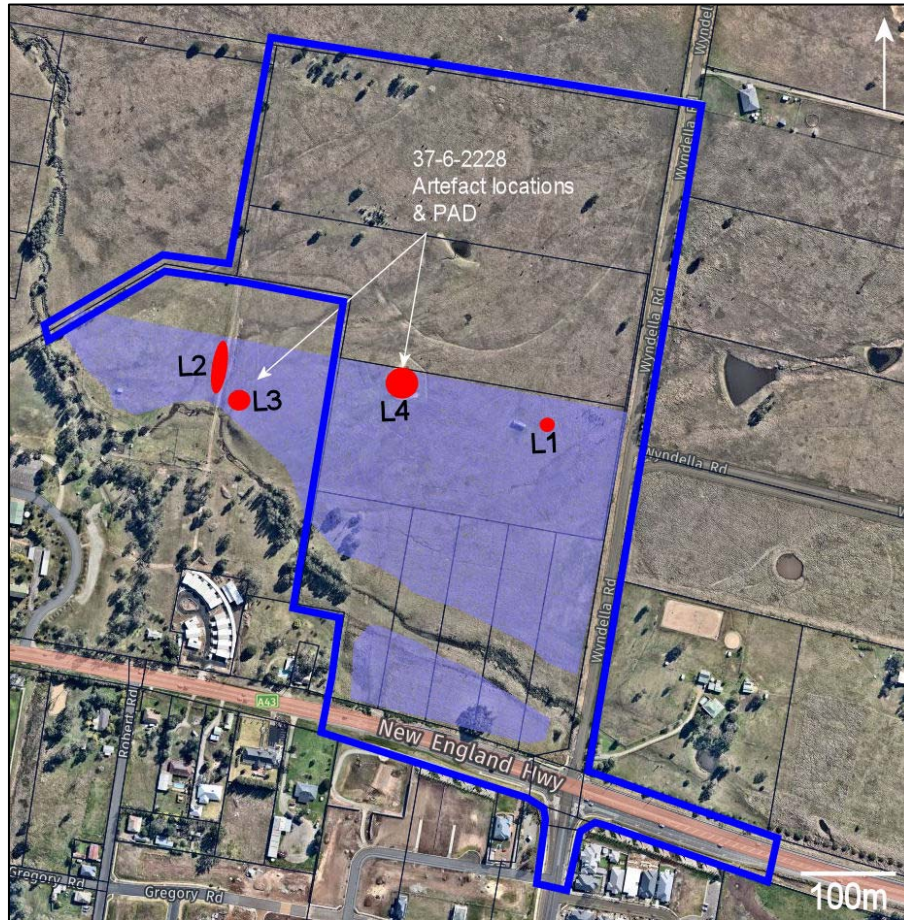


One site was identified in the project area (LCC1 – AHIMS 37-6-2228) that consisted of four loci as follows (Figure 3.2):

- Loci 1 (L1) – located on a gentle slope (basal). Isolated artefact (silcrete flake) in an exposure of 30m x 30m
- Loci 2 (L2) – located on a gentle slope (basal). Three artefacts (mudstone and silcrete flakes and a flake piece) were identified along drainage trench that was cut down slope exposing an area of 50m x 2m to a depth of 50cm.
- Loci 3 (L3) – located on a gentle slope (basal) above confluence of minor watercourses. Seven artefacts located in an area of 40m x 15m consisting of four mudstone flakes and three mudstone flake pieces
- Loci 4 (L4) – located on a gentle slope (mid). Four artefacts located in an exposure around a dam (50m x 5m) and included three mudstone flakes and one mudstone core

Associated with this site is a PAD that is on the basal slopes adjacent to Lochinvar Creek, in the vicinity of tributary confluences and in association with the four loci of artefacts.

Figure 3.2 AHIMS site in the project area



Researching both the regional and local archaeological contexts, the following archaeological patterning is evident:

- the majority of sites are located on elevated landforms (very gently inclined slopes, terraces, flats) within 50 metres of a reliable water source with a drop in site number and densities from 50 metres of water;
- sites in proximity to ephemeral water sources or located in the vicinity of headwaters of upper tributaries (1st order streams) have a sparse distribution and density and contain little more than a background scatter of discarded artefacts;
- sites located in the vicinity of the upper reaches of minor tributaries (2nd order streams) also have a relatively sparse distribution and density and may represent evidence of localised one-off behaviour;
- sites located in the vicinity of the lower reaches of tributaries (3rd order creeks) have an increased distribution and density and contain evidence that may represent repeated occupation or concentration of activity;
- sites located in the vicinity of major tributaries (4th and 5th order streams/rivers) have the highest distribution and densities. These sites tend to be extensive and complex in landscapes with permanent and reliable water and contain evidence representative of concentrated activity; and
- sites located within close vicinity at the confluence of any order stream may be a focus of activity and may contain a relatively higher artefact distribution and density.

- the data suggests that elevated landforms in close proximity to water sources were the preferred location for camping which manifests in the archaeological record as low to high density open camp sites (depends on the reliability of the water source) that may include a variety of artefact types, raw materials, heat treatment, grind stones, oven pits, hearths etc;
- the data also indicates that all landforms and unreliable water sources were utilised for transitory activities such as traveling and, or, hunting and gathering which manifests in the archaeological record as a background scatter of very low density discarded artefacts;
- a wide variety of site types are represented in the project area with open campsites and isolated artefacts by far the most common;
- lithic artefacts are primarily manufactured from mudstone and silcrete with a variety of other raw materials also utilised but in smaller proportions;
- flakes, broken flakes and flaked pieces are the most common artefact types recorded;
- the stone artefacts are usually relatively dated to within the last 5,000 years;
- the vast majority of artefactual material in the region was observed on exposures with good to excellent ground surface visibility, and
- the majority of sites have been subject to disturbances including human and natural

3.1.1 PREDICTIVE MODEL

Based on the environmental, cultural and archaeological backgrounds, it was possible that additional artefacts may be identified, or previous artefacts may have been disturbed due to the recent major flooding events (exposing, covering, washing away). Low to medium density artefacts scatters were likely to be present in close proximity to water ways and due to the drainage lines and creeks being intermittent, likely utilised for opportunistic hunting and gathering opportunities rather than large scale camping that requires a reliable fresh water source.

Just as the environmental context and the results of the regional and local archaeological contexts have assisted in formulating a predictive model, the predictive modeling has assisted in formulating the field investigation methodology (Sections 4 and 5).

4 METHODS OF INVESTIGATION

There are two methods of investigation including the gathering of cultural significance knowledge and archaeological assessment. These are outlined below.

4.1 GATHERING OF INFORMATION OF CULTURAL SIGNIFICANCE

MCH and the proponent understand that unlike the written word, Aboriginal cultural knowledge is not static, but responds to change through absorbing new information and adapting to its implications. Aboriginal cultural knowledge is handed down through oral tradition (song, story, art, language and dance) from generation to generation, and preserves the relationship to the land (DECCW 2010).

Specific details and parts of cultural knowledge are usually held and maintained by individuals or within particular family groups. Although the broader community may be aware of the general features of that knowledge, it is not a common practice within Aboriginal society for detailed cultural knowledge to be known in the broader community or within Aboriginal community organisations. However, at times these organisations may defer to particular individuals or family groups as being the knowledge-holders of particular sets of cultural knowledge about places or the environment (DECCW 2010).

All responses to the information packet will be considered in the final methods which will adapt accordingly. Any other changes to the methods may occur on site in order to adapt to unforeseen field conditions.

4.1.1 PROPOSED METHODS: GATHERING INFORMATION ABOUT CULTURAL SIGNIFICANCE

The aim of gathering of cultural knowledge and understanding any cultural significance in relation to the project area and its surrounds is to facilitate a process whereby RAPs can;

- a) Contribute culturally appropriate information
- b) Contribute to the proposed methodology
- c) Provide information that will enable the cultural significance of Aboriginal objects and/or places within the project area to be determined.

4.1.2 IDENTIFYING KNOWLEDGE HOLDERS

The aim is to identify Traditional Owners/traditional knowledge holders who have knowledge that is relevant to the project area so that any potential effects of the project or activity on the Indigenous cultural heritage values of objects and/or places can be identified.

It also aims to identify Indigenous people who may not necessarily be Traditional Owners/traditional knowledge holders but who do have interests in the area so that any effects of the project or activity on the Indigenous heritage values of objects and/or places, such as mission stations and historic buildings, will be identified.

MCH understands it is the Indigenous custom to elect knowledge holders and it is traditionally the Indigenous people who nominate who speak for country. Unfortunately, some RAPs and Government Departments have placed the onus of identifying traditional knowledge holders onto proponents and archaeologists. In order to do this, MCH are guided by the Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010) which provides guidelines to identify traditional knowledge holders. Knowledge holders are defined as follows:

- a) Traditional knowledge holder of specific, detailed knowledge passed directly by a traditional knowledge holder in a traditional manner
- b) Traditional knowledge holder of general knowledge passed directly by a traditional knowledge holder in a traditional manner

- c) Knowledge holder of recent information obtained through other means (such as, but not limited to, ethnographic sources, internet searches, assessment reports, personal experience etc).

Knowledge holders have been initially identified through the Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010), Stage 1 (S. 4.1.1 to 4.1.2) that seeks to identify, notify and register Aboriginal people who hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects and/or places in the area of the proposed project.

Additionally, knowledge holders were sought to be identified through the Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010), Stage 1 (S. 4.1.3 to 4.1.8) that sought to identify, notify and register Aboriginal people who identify as knowledge holders (using the above defined knowledge holder criteria) who hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects and/or places in the area of the proposed project.

Native Title Claimant Groups/individuals are acknowledged as knowledge holders due to the requirements through the Native Title Registration process. Native Title Claimant groups/individuals are also asked to further define the knowledge holder using the above defined knowledge holder criteria.

This process ensures consistent consultation for all RAPs and adheres to the Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010).

4.1.3 IDENTIFYING CULTURAL SIGNIFICANCE

Cultural significance is embodied in the place—in its fabric, setting, use, associations and meanings. It may exist in: objects at the place or associated with it; in other places that have some relationship to the place; and in the activities and traditional and customary practices that may occur at the place or that are dependent on the place. A place may be of cultural significance if it satisfies one or more of these criteria. Satisfying more criteria does not mean a place is necessarily more significant.

Only Aboriginal people who are descendants of the people from the traditional lands in which the project is situated can identify the cultural significance of their own cultural heritage.

The cultural significance of a place is assessed by analysing evidence gathered through the physical investigation of the place, research and consultation for this project in line with the Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010), Code of Practice for Archaeological Investigations of Aboriginal Objects in New South Wales (DECCW 2010) and the ICOMS Burra Charter (2013). Part of the process is to evaluate its qualities against a set of criteria that are established for this purpose. The criteria used include those set out by the Burra Charter (see below).

4.1.4 VALUES AND QUESTIONS TO CONSIDER

The following values and questions are derived from the Burra Charter (2013) to facilitate your consideration when providing information on the cultural significance of any Aboriginal objects(s) and/or place(s). The criteria discussed below are a means to assess cultural significance in order to meet the Government Departmental requirements. MCH understands that the method of assessing cultural significance presented may not be culturally appropriate and considered offensive to some; it is not intended to be so.

There are five terms or values, which are listed alphabetically in the Burra Charter, and are often included in Australian heritage legislation. Criteria are also used to help define cultural and natural significance, and there is now a nationally agreed set of heritage assessment criteria and each of these criteria may have tangible and intangible aspects and it is essential that both are acknowledged.

The five criteria include Aesthetic value, Historic value, Scientific value, Social value and Spiritual value. These are discussed below along with some questions for consideration when you consider reporting on the cultural significance.

AESTHETIC SIGNIFICANCE

Aesthetic value includes aspects of sensory perception for which criteria can and should be stated. It is how we respond to visual and non-visual aspects such as sounds, smells and other factors that can have a strong impact on your thoughts, feelings and attitudes. It may also include consideration of the form, scale, colour, texture and material and its beauty (Australia ICOMOS 2013). When considering the aesthetic value and significance of a site and/or PAD, some questions to consider may include:

- Does the object or place have special compositional or uncommonly attractive qualities involving combinations of colour, textures, spaces, massing, detail, movement, unity, sounds, scents?
- Is the object or place distinctive within the setting or a prominent visual landmark?
- Does the object or place have qualities which are inspirational or which evoke strong feelings or special meanings?
- Is the object or place symbolic for its aesthetic qualities: for example, does it inspire artistic or cultural response, is it represented in art, photography, literature, folk art, folk lore, mythology or other imagery or cultural arts?
- Does the object or place display particular aesthetic characteristics of an identified style or fashion?
- Does the object or place show a high degree of creative or technical achievement?

HISTORIC SIGNIFICANCE

The historic value encompasses all aspects of history. For example, it may include the history of aesthetics, art, science, society and spirituality. A place may have historic value because it has influenced, or has been influenced by, an historic figure, event, phase or activity. It may also have historic value as the site of an important event. For any given place the significance will be greater where evidence of the association or event survives in situ, or where the settings are substantially intact, than where it has been changed or evidence does not survive. However, some events or associations may be so important that the place retains significance regardless of subsequent treatment (Australia ICOMOS 2013). When considering the historic value and significance of a site and/or PAD, some questions to consider may include:

- Is the object or place associated with an important event or theme in your history?
- Is the object or place important in showing patterns in the development of your history locally, in a region, or on a state-wide, or national or global basis?
- Does the object or place show a high degree of creative or technical achievement for a particular period?
- Is the object or place associated with a particular person or cultural group important in the history of the local area, state, nationally or globally?

SCIENTIFIC SIGNIFICANCE

The scientific value refers to the information content of a place and its ability to reveal more about an aspect of the past through examination or investigation of the place, including the use of archaeological techniques. The relative scientific value of a place is likely to depend on the importance of the information or data involved, on its rarity, quality or representativeness, and its potential to contribute further important information about the place itself or a type or class of place or to address important research questions (Australia ICOMOS 2013). Whilst the scientific value and significance will be discussed in detail in the Archaeological Heritage Impact Assessment report, it is important to consider this value when

assessing the cultural values and significance of an object and/or place. When considering the scientific value and significance of a site and/or PAD, you may consider:

- Would further investigation of the place have the potential to reveal substantial new information and new understandings about people, places, processes or practices which are not available from other sources?

SOCIAL VALUE

Social value refers to the associations a place has for a particular community or cultural group and the cultural or social meaning it has for that community or cultural group (Australia ICOMOS 2013). When considering the social value and significance of a site and/or PAD, some questions to consider may include:

- Is the object or place important as a local marker or symbol?
- Is the object or place important as part of your community identity or the identity of another particular cultural group?
- Is the object or place important to you, your community or other cultural group because of associations and meanings developed from long use and association?

SPIRITUAL VALUE

Spiritual value embraces the intangible values and meanings embodied in or evoked by a place which gives importance to the spiritual identity, or traditional knowledge, art and practices of a cultural group. Spiritual value may also be reflected in the intensity of aesthetic and emotional responses or community associations, and be expressed through cultural practices and related places (Australia ICOMOS 2013). The qualities of the place may inspire a strong and/or spontaneous emotional or metaphysical response in people, expanding their understanding of their place, purpose and obligations in the world, particularly in relation to the spiritual realm (Australia ICOMOS 2013). When considering the spiritual value and significance of a site and/or PAD, some questions to consider may include:

- Does the object or place contribute to the spiritual identity or belief system of you, your community or another cultural group?
- Is the place a repository of knowledge, traditional art or lore related to spiritual practice for you, your community or another a cultural group?
- Is the object or place important in maintaining the spiritual health and wellbeing of you, your community people or another culture or group?
- Do the physical attributes of the object or place play a role in recalling or awakening an understanding of an individual or a group's relationship with the spiritual realm?
- Do the spiritual values of the object or place find expression in Awabakal cultural practices or human-made structures, or inspire creative works?

4.1.5 PROVIDING YOUR KNOWLEDGE AND CULTURAL SIGNIFICANCE INFORMATION

It is difficult to provide options that will ensure every individual's needs are met. In light of this, the following proposed options are provided are in no way the only options available. If you have alternative ways of providing your knowledge and cultural significance information, please notify MCH to ensure we can facilitate your requirements where appropriate.

It is acknowledged and understood that the methods and options discussed are not traditional customs and some may take offence. MCH sincerely apologise for any offence taken as none is intended.

- 1) Discussion in the field during the field work
- 2) Written documentation (letter, e-mail)
- 3) Meeting to discuss and/or provide written documentation
- 4) Formal interview with specific questions/answers and/or discussions
- 5) Phone conversation
- 6) Internet video conversation
- 7) Using the attached form/questioner

4.2 ARCHAEOLOGICAL INVESTIGATION METHODS

4.2.1 OBJECTIVES

The objective of the investigation is to determine whether surface and, or, subsurface cultural material exists in the areas identified as having archaeological potential. The detection of surface material will drive the management recommendations and mitigation measures to ensure that any significant cultural resources are identified and protected where possible or is subject to minimal impact by the proposed development.

4.2.2 ABORIGINAL CULTURAL HERITAGE ASSESSMENT METHODOLOGY & REPORT

Overall, the ACHA will include, but not limited to, the following;

- Project background, including project description, detailed maps, legislative context, qualifications of the investigator
- Consultation outlining the process as per the Heritage NSW Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010
- Landscape context including, landforms, soils, geology, geomorphology, water sources, fauna and flora, history of land use and impacts and, natural impacts
- Archaeological context including review of previous regional and local work in the area, AHIMS search, summary and discussion of the local and regional character of Aboriginal land use and its material traces, occupation model and site-specific predictive model
- Results that will include the field work results (see below for proposed methodology), detailed descriptions of landforms (survey units), vegetation cover, exposures, land uses and disturbances, site(s) and PAD(s). It will also include any analysis and discussion
- An assessment of scientific values and significance assessment
- An impact assessment
- Management and mitigation measures
- Recommendations
- References
- Appendices will include the AHIMS results and community consultation log and communications

4.2.3 PROPOSED SURVEY METHODOLOGY

The survey methodology is in accordance with the Heritage NSW, Department of Premier & Cabinet policy - Code of Practice for Archaeological Investigations of Aboriginal Objects in New South Wales 2010, Section 2.2. This proposed methodology is subject to variation due to unforeseen field conditions/constraints.

- Survey units identified based on landforms

- Transects will be via foot with the survey team spaced at 5-10 metres apart across the investigation area
- Ground surface visibility recorded for each survey unit and given a % rating of vegetation cover
- Exposures recorded for each survey unit given a % rating of exposure and exposure type
- Using the effective coverage and exposure information, calculate the effective survey coverage for each survey unit and the entire investigation area
- Disturbances recorded for each survey unit
- Take representative photographs of survey units
- All sites and/or PADs recorded in each survey unit and accurately mapped

Sites and their boundaries will be defined as;

- The spatial extent of the visible objects or direct evidence of their location
- Obvious physical boundaries where present such as, but not limited to, mound sites, middens, ceremonial grounds, disturbances (i.e., road, building)
- Identification by the Aboriginal community on the basis of cultural information

All sites and PADs will include, but not limited to, the following:

- Site type and content
- Survey unit (landform)
- Distance from water sources
- Vegetation cover (if any)
- Exposure (if any)
- Disturbances (if any)
- GPS co-ordinates
- Identified site boundaries
- Potential for in situ deposits
- Photographs (with a metric scale)

4.3 FORMS

You will find forms attached for your convenience. However, if you prefer to use your own, please feel free to do so. Please ensure that these are either filled out in full or your own forms/letters answer the questions and return to MCH no later than 21st February 2023.

5 ROLES, RESPONSIBILITIES AND FUNCTIONS OF PARTIES

The roles, responsibilities and functions of all parties are outlined below and is taken from DECCW (2010).

5.1 HERITAGE NSW, DEPARTMENT OF PREMIER AND CABINET

The Chief Executive of Heritage NSW, Department of Premier & Cabinet is the decision-maker who decides to grant or refuse an Aboriginal Heritage Impact Permit (AHIP) application. If an AHIP is issued, conditions are usually attached and Heritage NSW, Department of Premier & Cabinet is responsible for ensuring the AHIP holder complies with those conditions. When considering an application under Part 6 of the NPW Act, the Chief Executive will review the information provided by proponents in line with its internal policies and procedures to assess potential or actual harm to Aboriginal objects or places (DECCW, 2009).

The Environment Protection and Regulation Group (EPRG) of Heritage NSW, Department of Premier & Cabinet is responsible for administering the regulatory functions under Part 6 of the NPW Act. Heritage NSW, Department of Premier & Cabinet expects that proponents and Aboriginal people should:

- be aware that Part 6 of the NPW Act establishes the Chief Executive or delegate of Heritage NSW, Department of Premier & Cabinet as the decision-maker; and
- recognise that the Chief Executive's (or delegates) decisions may not be consistent with the views of the Aboriginal community and/or the proponent. However, Heritage NSW, Department of Premier & Cabinet will consider all relevant information it receives as part of its decision-making process.

5.2 PROPONENT

All proponents operate within a commercial environment which includes:

- strict financial and management issues, priorities and deadlines;
- the need to gain community support in order to secure any necessary approval/consent/licence/permit to operate;
- the need for clearer processes and certainty of outcomes;
- the need for suitable access to land for the purpose of their development project;
- the need to work efficiently within the project's time, quality and cost planning and management parameters; and
- the need for culturally appropriate assessment findings relevant to their project.

Under these requirements, proponents should undertake the following:

- bring the RAPs or their nominated representatives together and be responsible for ensuring appropriate administration and management of the consultation process;
- consider the cultural perspectives, views, knowledge and advice of the RAPs involved in the consultation process in assessing cultural significance and developing any heritage management outcomes for Aboriginal object(s) and/or place(s);
- provide evidence to Heritage NSW, Department of Premier & Cabinet of consultation by including information relevant to the cultural perspectives, views, knowledge and advice provided by the registered Aboriginal parties; and
- accurately record and clearly articulate all consultation findings in the final ACHA report.

5.3 REGISTERED ABORIGINAL STAKEHOLDERS

The interests and obligations of Aboriginal people relate to the protection of Aboriginal cultural heritage. It is only Aboriginal people who can determine who is accepted by their community as being authorised to speak for Country and its associated cultural heritage. Where there is a dispute about who speaks for Country, it is appropriate for Aboriginal people, not Heritage NSW, Department of Premier & Cabinet or the proponent, to resolve this dispute in a timely manner to enable effective consultation to proceed.

Aboriginal people who can provide information about cultural significance are, based on Aboriginal lore and customs, the traditional owners or custodians of the land that is the subject of the proposed project area. Traditional owners or custodians with appropriate cultural heritage knowledge necessary to make informed decisions who wish to register as an Aboriginal party are those people who:

- continue to maintain a deep respect for their ancestral belief system, traditional lore and customs;
- recognise their responsibilities of their community, knowledge and obligations to protect and conserve their culture and heritage and to care for their traditional lands or country; and
- have the trust of their community, knowledge and understanding of their culture and permission to speak about it.

The registered Aboriginal parties should undertake the following;

- ensure the appropriate cultural knowledge holder is providing the appropriate information;
- uphold and respect the traditional rights, obligations and responsibilities of Aboriginal people within their own boundaries and not to infringe in other areas or Aboriginal people outside their own boundaries;
- consider and provide the proponent the cultural perspectives, views, knowledge and advice during the consultation process, assessing cultural significance and developing any heritage management outcomes for Aboriginal object(s) and/or place(s); and
- need to work efficiently within the project's time and provide feedback in a timely manner.

5.4 LOCAL ABORIGINAL LAND COUNCILS

The NSW Aboriginal Land Council (NSWALC) and Local Aboriginal Land Councils (LALCs) have statutory functions relevant to the protection of Aboriginal culture and heritage under the NSW Aboriginal Land Rights Act 1983. These requirements do not extend the role of NSWALC and LALCs in the significance assessment process. That is, these requirements do not provide NSWALC and/or LALCs any additional or specific decision-making role in the assessment of significance of Aboriginal object(s) and/or place(s) that are subject to an AHIP application under Part 6 of the NPW Act.

LALCs may choose to register an interest to be involved in the consultation process, or may assist registered Aboriginal parties to participate in the consultation process established by these requirements. In order to ensure effective consultation and the subsequent informed heritage assessment, LALCs are encouraged to identify and make contact with Aboriginal people who hold cultural knowledge in their area.

5.5 EMPLOYMENT

The proponent may engage a number of Aboriginal representatives from the registered parties (based on the size and nature of the project) to participate and assist in the fieldwork component of this project. Renumeration for any fieldwork is not part of the consultation process and MCH do not get involved in any such issues. However, please note that any renumeration offered by the proponent for any field work component of the assessment may be based on a number of factors, including but not limited to, the overall

project budget, job description, receipt of CVs and insurance certificate of currencies, and will be above the industry standard rate of pay for the specific work.

If you would like to be considered for paid field work, please answer the selection criteria attached and ensure you attach certificates of currency for the relevant insurances, CV(s), any certificates and references. MCH will then pass this information onto the proponent for their consideration to make the selection for fieldwork participants should they wish to do so. MCH will ensure all Aboriginal parties are invited to participate in fieldwork regardless of remuneration. Paid participation is determined by the proponent not MCH.

5.6 FORMS

You will find forms attached for your connivance. However, if you prefer to use your own, please feel free to do so. Please ensure that these are either filled out in full or your own forms/letters answer the questions and return to MCH no later than 21st February 2023.

Appendix A

MCH would like to clearly state that, should you wish to provide feedback in another form, you are encouraged to do so. You are under no obligation to complete the current form.

However, should you wish to use this form, please complete, sign and return to MCH using one of the following;

E-mail: penny@mcheritage.com.au

Postal address: MCH

PO Box 166

Adamstown, NSW 2289

ABORIGINAL STAKEHOLDER SITE OFFICER APPLICATION

Position description

A site officer must demonstrate that they have satisfactorily participated in previous archaeological fieldwork with an archaeologist. A trainee site officer does not need to demonstrate previous archaeological experience. Site officers must be able to:

- undertake direction from the project archaeologist
- work in a range of climates wearing the required PPE
- work in teams with a wide range of people
- identify a broad range of Aboriginal objects across the landscape

To qualify as a site officer, appropriate training in identifying Aboriginal objects must have been undertaken (such as the NPWS sites awareness training course, or other relevant secondary or tertiary studies) or equivalent knowledge or experience must be demonstrated. The duties of the site officer under the direction of the project archaeologist may include, but not limited to:

- walking the project area
- meeting general and site-specific Occupational Health and Safety requirements

Selection criteria

The proponent will offer positions based on the following key selection criteria:

- an individual's ability to undertake the tasks specified above
- an individual's availability to undertake the activity (physically able to undertake field work)
- an individual's experience in undertaking similar activities. Applications may be subject to a reference check
- individuals with demonstrated cultural knowledge relevant to the local area
- individuals who can demonstrate they can communicate the results of the field work back to their managers and RAPs
- in addition to a consideration of the key selection criteria, the Proponent may give preference to applicants who live locally

The proponent is under no obligation to offer site officer positions based on an individual's association with a cultural group or area. The proponent makes no guarantee that registered parties will be engaged to undertake archaeological field activities. The number of site officer positions available will be based on need as described in the archaeological methodology. However, MCH will ensure all registered stakeholders are invited to participate in the fieldwork regardless of engagement arrangements between the stakeholder(s) and the proponent. Applicants will be notified whether they have been successful or unsuccessful in their application for remuneration for fieldwork.

Engagement & Payment

The Proponent selects and has final approval on who will be engaged as a site officer. Successful applicants will be engaged to provide the services through a written contract that will be provided at a later date. The proponent will only engage Service Providers with NSW workers compensation insurance, public liability insurance, and comprehensive motor vehicle insurance or third-party property damage insurance. Engagement of the Service Provider will be a rate that may be based on a number of factors, including but not limited to, the overall project budget, job description, receipt of CVs and insurance certificate of currencies, and will be above the industry standard rate of pay for the specific work.

The quoted rate is the rate to be paid by the Proponent to the Service Provider - not to the individual site officer/trainee site officer. Payment will only be made for the provision of the services (actual hours worked), not for the time spent travelling to and from site, and there is no daily or half daily rate. Payment will be made upon the receipt of a cultural heritage report and receipt of your response to the draft report.

ABORIGINAL SITE OFFICER APPLICATION FORM

Lochinvar residential subdivision

| | |
|--|---|
| An Aboriginal site officer application form must be filled out for each individual seeking engagement as a site officer. | |
| Name of organisation (if relevant) | |
| Name | |
| Contact number | |
| Mailing address | |
| Email address | |
| Position applied for | Site officer <input type="checkbox"/> Trainee Site Officer <input type="checkbox"/> |
| Please list any formal qualifications or relevant experience to the position applied for (attach documentation as required) | |
| Please list any previous archaeological, sites, survey, excavation or other relevant experience (attach additional sheets as required) | |
| Please provide the contact details of at least one archaeologist (other than the project archaeologist) who can be contacted as a referee | |
| INSURANCES | |
| Public Liability | Expiry date: (attach certificate of currency) |
| Worker Compensation | Expiry date: (attach certificate of currency) |
| Comprehensive Motor Vehicle | Expiry date: (attach certificate of currency) |
| Failure to provide up to date Certificate of Currencies will prevent you participating in any fieldwork. MCH may have received copies previously, however, they must be provided for each project. | |
| OCCUPATIONAL HEALTH & SAFETY (OH&S) | |
| <p>All participants are required to comply with MCH and the proponents OH&S requirements, including PPE requirements (long pants, long sleeved shirt, high visibility clothing, hat, sunscreen and steel caped boots) You will be advised of any additional requirements.</p> <p>This also includes appropriate and acceptable behaviour at all times.</p> <p>Failure to comply will prevent you from participating in the field work.</p> | |

COMMENTS ON PROPOSED METHODOLOGY

Lochinvar residential subdivision

I, _____ (please insert your name) of _____ (please insert the name of your group), **agree to the methodology** outlined by MCH in the information packet for the above-named project.

Signed: _____ Date: _____

Position within organisation: _____

I, _____ (please insert your name) of _____ (please insert the name of your group), **do not agree to the methodology** outlined by MCH in in the information packet for the above-named project for the following reasons (please explain your reasons for disagreeing):

I would like to suggest the following (please provide your reasoning):

Signed: _____ Date: _____

Position within organisation: _____

PROVIDING KNOWLEDGE ABOUT CULTURAL SIGNIFICANCE

Lochinvar residential subdivision

Company Name): _____

Contact: _____

Postal address: _____

Mobile No: _____

E-Mail: _____

Date: _____

I would like to provide knowledge about cultural significance using the following method(s). Please tick your preferred method(s):

- 1) Discussion in the field during field work
- 2) Written documentation (letter, e-mail)
- 3) Meeting to discuss and/or provide written documentation
- 4) Formal interview with specific questions/answers and/or discussions
- 5) Phone conversation
- 6) Internet video conversation
- 7) Using the attached form/questioner

Other: Please provide details:

ABORIGINAL SITE OFFICER APPLICATION FORM

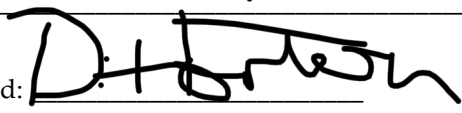
Lochinvar residential subdivision

| | |
|--|--|
| An Aboriginal site officer application form must be filled out for each individual seeking engagement as a site officer. | |
| Name of organisation (if relevant) | Gomery |
| Name | David Horton |
| Contact number | 0458532707 |
| Mailing address | 22 Cabernet st, Muswellbrook 2333 |
| Email address | Leannekirkman1964@gmail.com |
| Position applied for | Site officer <input checked="" type="checkbox"/> Trainee Site Officer <input type="checkbox"/> |
| Please list any formal qualifications or relevant experience to the position applied for (attach documentation as required) | |
| Please list any previous archaeological, sites, survey, excavation or other relevant experience (attach additional sheets as required) | |
| Please provide the contact details of at least one archaeologist (other than the project archaeologist) who can be contacted as a referee | Liz Wyatt- strataum archeology 0448064483 |
| INSURANCES | |
| Public Liability | Expiry date: (attach certificate of currency) |
| Worker Compensation | Expiry date: (attach certificate of currency) |
| Comprehensive Motor Vehicle | Expiry date: (attach certificate of currency) |
| Failure to provide up to date Certificate of Currencies will prevent you participating in any fieldwork. MCH may have received copies previously, however, they must be provided for each project. | |
| OCCUPATIONAL HEALTH & SAFETY (OH&S) | |
| <p>All participants are required to comply with MCH and the proponents OH&S requirements, including PPE requirements (long pants, long sleeved shirt, high visibility clothing, hat, sunscreen and steel caped boots) You will be advised of any additional requirements.</p> <p>This also includes appropriate and acceptable behaviour at all times.</p> <p>Failure to comply will prevent you from participating in the field work.</p> | |

COMMENTS ON PROPOSED METHODOLOGY

Lochinvar residential subdivision

I, David Horton (please insert your name) of Gomery (please insert the name of your group), **agree to the methodology** outlined by MCH in the information packet for the above-named project.

Signed:  Date: 26/01/2023

Position within organisation: Site officer

I, _____ (please insert your name) of _____ (please insert the name of your group), **do not agree to the methodology** outlined by MCH in in the information packet for the above-named project for the following reasons (please explain your reasons for disagreeing):

I would like to suggest the following (please provide your reasoning):

Signed: _____ Date: _____

Position within organisation: _____

PROVIDING KNOWLEDGE ABOUT CULTURAL SIGNIFICANCE

Lochinvar residential subdivision

Company Name): Gomery
Contact: David Horton
Postal address: 22 Cabernet st, Muswellbrook 2333

Mobile No: 0458532707
E-Mail: Leannekirkman1964@gmail.com
Date: 26/01/2023

I would like to provide knowledge about cultural significance using the following method(s). Please tick your preferred method(s):

- 1) Discussion in the field during field work
 2) Written documentation (letter, e-mail)
 3) Meeting to discuss and/or provide written documentation
 4) Formal interview with specific questions/answers and/or discussions
 5) Phone conversation
 6) Internet video conversation
 7) Using the attached form/questioner

Other: Please provide details:

ABORIGINAL SITE OFFICER APPLICATION FORM


Lochinvar residential subdivision

| | | | | | | | | | | | | | |
|---|---|------|------------------|---------------------|------------|---------------------|-------------|-------------------------|------------|--------------------|-----------|-------------|--|
| An Aboriginal site officer application form must be filled out for each individual seeking engagement as a site officer. | | | | | | | | | | | | | |
| Name of organisation (if relevant) | A1 INDIGENOUS SERVICES PTY LTD | | | | | | | | | | | | |
| Name | CAROLYN HICKEY | | | | | | | | | | | | |
| Contact number | 0411650057 | | | | | | | | | | | | |
| Mailing address | 10 MARIE PITT PL, GLENMORE PARK, NSW 2745 | | | | | | | | | | | | |
| Email address | cazadirect@live.com | | | | | | | | | | | | |
| Position applied for | Site officer <input checked="" type="checkbox"/> Trainee Site Officer <input type="checkbox"/> | | | | | | | | | | | | |
| Please list any formal qualifications or relevant experience to the position applied for (attach documentation as required) | I HAVE HAD OVER 25 YEARS EXPERIENCE IN CULTURAL HERITAGE WORK. ASBESTOS AWARENESS CERTIFICATE OHS SAFETY OFFICER CERTIFICATE | | | | | | | | | | | | |
| Please list any previous archaeological, sites, survey, excavation or other relevant experience (attach additional sheets as required) | <table border="0"> <tr> <td>2023</td> <td>Claymore renewal</td> </tr> <tr> <td>Hunter River School</td> <td>Rouse hill</td> </tr> <tr> <td>Muswellbrook Bypass</td> <td>Summer hill</td> </tr> <tr> <td>Muswellbrook solar farm</td> <td>Rouse hill</td> </tr> <tr> <td>Gillieston Heights</td> <td>Mittagong</td> </tr> <tr> <td>Fennell Bay</td> <td></td> </tr> </table> | 2023 | Claymore renewal | Hunter River School | Rouse hill | Muswellbrook Bypass | Summer hill | Muswellbrook solar farm | Rouse hill | Gillieston Heights | Mittagong | Fennell Bay | |
| 2023 | Claymore renewal | | | | | | | | | | | | |
| Hunter River School | Rouse hill | | | | | | | | | | | | |
| Muswellbrook Bypass | Summer hill | | | | | | | | | | | | |
| Muswellbrook solar farm | Rouse hill | | | | | | | | | | | | |
| Gillieston Heights | Mittagong | | | | | | | | | | | | |
| Fennell Bay | | | | | | | | | | | | | |
| Please provide the contact details of at least one archaeologist (other than the project archaeologist) who can be contacted as a referee | Type text here Yolanda Pavincich 0488774337 Dominic Steele 0411884232 | | | | | | | | | | | | |
| INSURANCES | | | | | | | | | | | | | |
| Public Liability | Expiry date: 13/2/2022 (attach certificate of currency) | | | | | | | | | | | | |
| Worker Compensation | Expiry date: 31 / 3 /2021 (attach certificate of currency) | | | | | | | | | | | | |
| Comprehensive Motor Vehicle | Expiry date: (attach certificate of currency) | | | | | | | | | | | | |
| Failure to provide up to date Certificate of Currencies will prevent you participating in any fieldwork. MCH may have received copies previously, however, they must be provided for each project. | | | | | | | | | | | | | |
| OCCUPATIONAL HEALTH & SAFETY (OH&S) | | | | | | | | | | | | | |
| <p>All participants are required to comply with MCH and the proponents OH&S requirements, including PPE requirements (long pants, long sleeved shirt, high visibility clothing, hat, sunscreen and steel capped boots) You will be advised of any additional requirements.</p> <p>This also includes appropriate and acceptable behaviour at all times.</p> <p>Failure to comply will prevent you from participating in the field work.</p> | | | | | | | | | | | | | |

COMMENTS ON PROPOSED METHODOLOGY

Lochinvar residential subdivision

I, carolyn hickey (please insert your name) of A1 INDIGENOUS SERVICES PTY LTD (please insert the name of your group), **agree to the methodology** outlined by MCH in the information packet for the above-named project.

Signed:  Date: 12/2/23

Position within organisation: _____

I, _____ (please insert your name) of _____ (please insert the name of your group), **do not agree to the methodology** outlined by MCH in in the information packet for the above-named project for the following reasons (please explain your reasons for disagreeing):

I would like to suggest the following (please provide your reasoning):

Signed: _____ Date: _____

Position within organisation: _____

PROVIDING KNOWLEDGE ABOUT CULTURAL SIGNIFICANCE

Lochinvar residential subdivision

Company Name): A1 INDIGENOUS SERVICES PTY LTDContact: CAROLYN HICKEYPostal address: 10 MARIE PITT PL, GLENMORE PARK, NSW 2745Mobile No: 0411650057E-Mail: cazadirect@live.comDate: 12/2/23

I would like to provide knowledge about cultural significance using the following method(s). Please tick your preferred method(s):

- 1) Discussion in the field during field work ✓
- 2) Written documentation (letter, e-mail)
- 3) Meeting to discuss and/or provide written documentation ✓
- 4) Formal interview with specific questions/answers and/or discussions
- 5) Phone conversation
- 6) Internet video conversation
- 7) Using the attached form/questioner

Other: Please provide details:



MCCARDLE
CULTURAL HERITAGE

5 March 2023

PO Box 166
Adamstown 2289 NSW
penny@mcheritage.com.au
P: 0412 702 396

mcheritage.com.au

A1 Indigenous Services Pty Ltd
Att: Carolyn Hickey

Dear Carolyn,

RE: Heritage NSW Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Stage 3) –Survey invitation and letter of engagement- Proposed residential subdivision of land located at Lochinvar

The proponent (Lochinvar Developments Pty Ltd) has received a number of applications and after careful consideration has selected whom they wish to engage in a paid capacity. The proponent and MCH would like to advise that your application for paid participation has been successful. MCH would like to organise the survey for the above-named project for the 21st March starting at 8am at the corner of the New England Highway and Windella Road, Lochinvar. We anticipate work will be complete within half a day, however, please be advised this time may change.

As part of the assessment process the proponent require an appropriate person from your organisation to participate in the survey of the study area to identify known or potential cultural heritage features. A cultural heritage report must be prepared following the survey and receipt of the draft archaeological report within the required 28 days review period. The cultural heritage report will identify known or potential Aboriginal objects or places and/or any other cultural heritage matters that may be affected by the project.

Lochinvar Developments Pty Ltd and MCH wishes to reiterate our intent to positively engaging with the local Aboriginal community. In this spirit an invitation has been extended to all registered applicants to attend the survey. If you accept the terms outlined in the Letter of Engagement (attached) please sign the Letter of Engagement and return to MCH. Participation in the program is dependent on the receipt of the Letter of Engagement and insurance certificate of currencies (Workers Comp, Public Liability and Comprehensive Motor vehicle).

As all communications, including phone calls, faxes, letters, and e-mails must be included in the consultation component of the report as per the Heritage NSW, Department of Premier & Cabinet requirements, please ensure that any items that you or your group deem confidential are made apparent to your field representative prior to field work to ensure that information remains confidential if required. Failure to disclose that information is confidential may result in the information being included in the report.



McCARDLE
CCULTURAL HERITAGE

Should you have any questions regarding these terms and conditions or the project please contact myself on 0412 702 396.

Yours sincerely,
for McCardle Cultural Heritage Pty Ltd

Dr. Penny McCardle
Principal Archaeologist
Forensic Anthropologist



Aboriginal Site Officer/Trainee Site Officer

Letter of Engagement

Lochinvar Developments Pty Ltd wishes to engage A1 Indigenous Services Pty Ltd to provide one Site Officer to undertake an archaeological survey of the proposed residential subdivision of land located at Lochinvar.

The proponent and Service Provider agree to the terms and conditions of the engagement as follows:

Services

The Service Provider will engage one Site Officer to undertake the following:

- Survey (walking) of the project area
- a cultural heritage report and invoice within 28 days of receiving the draft report from MCH

Fees

The proponent has determined the rate of pay based on the overall project budget and job description. The proponent will pay the following Fees to the Service Provider for Services:

- \$80.00 + GST per person per hour for work undertaken by a Site Officer (inclusive of travel)

Payment will be within 28 days of receipt of a correct invoice and cultural heritage report. Invoices are to be provided at the end of the month.

Invoices are to be addressed to:

Lochinvar Developments Pty Ltd
C/o- MCH
penny@mcheritage.com.au

Time sheets

The Service provider must ensure that the Site Officers sign a time sheet at the start and finish of each day the Services are provided. Fees will not be paid unless time sheets for each Site Officer has been completed. The archaeologist will have a time sheet that may be used.

Work performance

The Service Provider must ensure that the Site Officers are fit for work, undertake the Services in a timely manner, with reasonable care, skill and professionalism and in accordance with all applicable laws and any reasonable directions or requirements made by the proponent and/or MCH.

Absences

All field staff must call MCH the evening before work to notify their absence for the following day and organise for a replacement. If no notice is provided, that staff members place in the field team will be suspended until MCH are notified they will be back at work. It is the responsibility of the Service Provider to organise a replacement site officer from the list of persons provided to MCH at the start of the project.



Proponent and MCH property

All materials and equipment provided by MCH or the proponent during the term of engagement remain the property of MCH or the proponent and must be returned upon completion of the Services or termination of the agreement.

Confidentially

All information provided by MCH or the proponent to the Service Provider and/or Site Officer in relation to the services or the business or operations of the proponent and MCH are confidential. The Service Provider will ensure the Site Officer keep such information confidential at all times (including after the completion of the Services) and must not disclose it to any other person without the prior written consent from the proponent and/or MCH.

OH&S Requirements

Before commencement of work, you must provide MCH with certificate of currencies for Workers Comp, Public Liability and Comprehensive Motor Vehicle insurances. Field representatives participating in the field work will be required to wear PPE including steel cap boots, long pants and long shirt (hi-visibility) with appropriate sun protection including a hat. It is recommended that participants bring adequate amounts of food and water for the day. If field staff attend the site without the required PPE, they will not be permitted on site or to participate in the field work. It is the responsibility of the Service Provider to ensure all field staff are made aware of this.

COVID-19 requirements

All field staff will be required to be double vaccinated, a negative COVID test no more than 3 days prior to commencing field work, and adhere to the required NSW Health orders at time of all field work. Proof of vaccination and negative COVID test will be required at the start of field work. In order to ensure the safety of all staff, any field staff who do not provide the required information will not be permitted on site or to participate in the field work.

Bullying, harassment and unacceptable behaviour

All field staff are required to treat others with dignity, courtesy and respect at all times. Behaviours that are unacceptable and may be against the law, include (but not limited to) discrimination, bullying, sexual harassment, racial and religious vilification are unacceptable and are covered by federal and state legislation, abusive language and threats in any form. Field staff found to have engaged in such conduct will be asked to leave the site immediately and their manager contacted. Failure to leave the site may result in the local Police being contacted. It is the responsibility of the Service Provider to ensure all field staff are made aware of this.

Early termination

The proponent reserves the right to terminate this agreement at any time by giving 1-week written notice to the Service Provider. If the proponent terminates this agreement under this clause, then, subject to satisfactory performance of the Services, the proponent will pay the Service provider a proportionate part of the Fee according to the amount or proportion of Services supplied up to the date of termination.

No subcontracting

The Service Provider must not subcontract the provision of the Services without the proponent's prior written consent.



Insurances

The Service Provider must provide certificates of currency for Workers Comp, Public Liability and Comprehensive Motor Vehicle insurances prior to the Services being provided.

Indemnity and release

The Service Provider undertakes the Services at its sole risk and the proponent and MCH will not be liable for any loss, damage, injury or death sustained by any person as a result of the Services being provided. The Service provider indemnifies and releases the proponent and MCH against any loss the proponent or MCH suffers or any claims made against the proponent or MCH by any person arising out of the provisions of the Services except to the extent that any loss or claims arise from any negligence by the proponent or MCH.

Variations

No changes to these terms can be made without the prior written agreement with the proponent.

Exclusion of other terms

This letter contains the sole agreement of the parties and all other terms are excluded.

If you agree that the contents of this letter correctly set out the terms of engagement between the proponent and your organisation then please sign two copies, keep one for yourself, and return the other signed copy to MCH within 10 days.

Acceptance (Proposed residential subdivision of land located at Lochinvar)

Signed by [A1 Indigenous Services Pty Ltd](#)

I/we agree to the terms set out in this letter and acknowledge that it forms a binding legal contract. I/we declare that I/we are authorised to sign this letter on behalf of [A1 Indigenous Services Pty Ltd](#).

Please provide your ABN:

Signature of Witness

Signature of authorised person

Print name of Witness

Print name of authorised person

Print title and position of authorised person

Date:

Date:

From: penny@mheritage.com.au
Sent: Sunday, 5 March 2023 9:58 AM
To: 'corroboreecorp@bigpond.com'; 'tracey@marrung-pa.com.au'; 'leannekirkman1964@gmail.com'; 'Widescope.group@live.com'; 'hto.palette@gmail.com'; 'BS'; 'Amanda De Zwart'
Subject: Lochinvar survey

RE: Heritage NSW Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Stage 3) –Survey invitation - Proposed residential subdivision of land located at Lochinvar

The proponent received a number of applications and after careful consideration we regret to advise that your application for paid participation has been unsuccessful due to a lack of providing a response to the information packet, CVs or insurances. If you wish to still participate in the survey on an unpaid basis, or be kept up-to-date on the progress of the survey, please contact Penny McCardle. Please note that if you intend to participate in the site survey then:

- Before commencement you must notify MCH for access arrangements and notification and provide MCH with a Certificate of Currency for Workers Compensation, Public Liability and Comprehensive Motor Vehicle insurances. MCH will also provide you with our OH&S requirements for field staff and request that you ensure all field staff participating in the project have read and understood the document fully prior to going out on site; and
- All field participants must wear covered shoes, long pants and long shirt (hi-visibility) with appropriate sun protection including hat. It is recommended that participants bring adequate amounts of food and water for the day.

COVID requirements

All field staff will be required to be double vaccinated, a negative COVID test no more than 3 days prior to commencing field work, and adhere to the required NSW Health orders at time of all field work (e.g. face masks, social distancing, quarantining if required). Proof of vaccination and negative COVID test will be required at the start of field work. In order to ensure the safety of all staff, any field staff who do not provide the required information will not be permitted on site or to participate in the field work.

As all communications, including phone calls, faxes, letters, and e-mails must be included in the consultation component of the report as per the Heritage NSW, Department of Premier & Cabinet requirements, please ensure that any items that you or your group deem confidential are made apparent to your field representative prior to field work to ensure that information remains confidential if required. Failure to disclose that information is confidential may result in the information being included in the report.

Following the completion of the field work, a draft copy of the assessment will be made available to you for comment. Should you have any further questions, please do not hesitate to contact Penny McCardle on 0412 702 396.

Kind regards,

Dr. Penny McCardle

Archaeologist

Forensic Anthropologist



PO Box 166,
Adamstown 2289 NSW
P: 0412 702 396
mcheritage.com.au

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This email and any files transmitted with it are confidential and are intended solely for the use of the individual or entity to whom it is addressed. If you are not the intended recipient, or the person responsible for delivering the email to the intended recipient, you have received this email in error. If so, please immediately notify us by reply email to the sender and delete from your computer the original transmission and its contents. Any use, dissemination, forwarding, printing or copying of this email and any file attachments is strictly prohibited. Thank you for your assistance.

From: penny@mheritage.com.au
Sent: Wednesday, 22 March 2023 1:39 PM
To: 'Cazadirect@live.com'; 'corroboreecorp@bigpond.com'; 'tracey@marrung-pa.com.au'; 'leannekirkman1964@gmail.com'; 'Widescope.group@live.com'; 'hto.paulette@gmail.com'; 'BS'; 'Amanda De Zwart'
Subject: Lochinvar draft report
Attachments: Lochinvar Residential Subdivision Draft 22 3 2023.pdf

RE: Heritage NSW Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Stage 3 & 4 – Review of Draft Cultural Heritage Assessment - Proposed residential subdivision of land located at Lochinvar

Please find enclosed a copy of the draft Aboriginal Cultural Heritage Assessment (ACHA) for the above-named project for your review.

The ACHA includes information provided by the knowledge holders and is included with their permission. As required by the Heritage NSW, Department of Premier & Cabinet Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010), Stage 3 (S. 4.3.5; 4.3.6; 4.3.7) and Stage 4 (S. 4.4.1; 4.4.2; 4.4.3) and based on the information provided by knowledge holders throughout the project, the cultural significance will be included in the final report.

MCH would like to provide further opportunity to provide your further input and request your comments on the draft ACHA. Additionally, any concerns you may have, are also important, and we would like to provide another opportunity to address any concerns you may have.

As outlined in the Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010), Stage 4 (S. 4.4.3) MCH would appreciate your input and your comments on the draft report, no later than C.O.B. 24th April 2023 (additional time added due to Easter).

As all communications, including phone calls, faxes, letters, and e-mails must be included in the consultation component of the report as per the Heritage NSW, Department of Premier & Cabinet requirements, please ensure that if any response to the draft report is deemed confidential that this is either stated at the beginning of a conversation or stamped/written on each piece of paper communicate.

Please note that in order to adhere to time constraints, the absence of a response by the requested timeline, will be taken by the proponent as your indication that your organisation has no comments.

Kind regards,

Dr. Penny McCardle
Archaeologist
Forensic Anthropologist



PO Box 166,
Adamstown 2289 NSW
P: 0412 702 396
mheritage.com.au

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This email and any files transmitted with it are confidential and are intended solely for the use of the individual or entity to whom it is addressed. If you are not the intended recipient, or the person responsible for delivering the email to the intended recipient, you have received this email in error. If so, please immediately notify us by reply email to the sender and delete from your computer the original transmission and its contents. Any use, dissemination, forwarding, printing or copying of this email and any file attachments is strictly prohibited. Thank you for your assistance.

penny@mheritage.com.au

From: BS <bobsam1@bigpond.net.au>
Sent: Wednesday, 12 April 2023 12:03 PM
To: penny@mheritage.com.au
Subject: RE: Lochinvar draft report

Dear Penny

I have had a read looks great thank you
Kind regards bob

From: penny@mheritage.com.au <penny@mheritage.com.au>
Sent: Wednesday, 22 March 2023 1:09 PM
To: Cazadirect@live.com; corroboreecorp@bigpond.com; tracey@marrung-pa.com.au; leannekirkman1964@gmail.com; Widescope.group@live.com; hto.paulette@gmail.com; 'BS' <bobsam1@bigpond.net.au>; 'Amanda De Zwart' <Amandahickey@live.com.au>
Subject: Lochinvar draft report

RE: Heritage NSW Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Stage 3 & 4 – Review of Draft Cultural Heritage Assessment - Proposed residential subdivision of land located at Lochinvar

Please find enclosed a copy of the draft Aboriginal Cultural Heritage Assessment (ACHA) for the above-named project for your review.

The ACHA includes information provided by the knowledge holders and is included with their permission. As required by the Heritage NSW, Department of Premier & Cabinet Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010), Stage 3 (S. 4.3.5; 4.3.6; 4.3.7) and Stage 4 (S. 4.4.1; 4.4.2; 4.4.3) and based on the information provided by knowledge holders throughout the project, the cultural significance will be included in the final report.

MCH would like to provide further opportunity to provide your further input and request your comments on the draft ACHA. Additionally, any concerns you may have, are also important, and we would like to provide another opportunity to address any concerns you may have.

As outlined in the Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010), Stage 4 (S. 4.4.3) MCH would appreciate your input and your comments on the draft report, no later than C.O.B. 24th April 2023 (additional time added due to Easter).

As all communications, including phone calls, faxes, letters, and e-mails must be included in the consultation component of the report as per the Heritage NSW, Department of Premier & Cabinet requirements, please ensure that if any response to the draft report is deemed confidential that this is either stated at the beginning of a conversation or stamped/written on each piece of paper communicate.

Please note that in order to adhere to time constraints, the absence of a response by the requested timeline, will be taken by the proponent as your indication that your organisation has no comments.

Kind regards,

Dr. Penny McCardle
Archaeologist
Forensic Anthropologist



McCARDLE
CULTURAL HERITAGE

25 April 2023

PO Box 166
Adamstown 2289 NSW
penny@mcheritage.com.au
P: 0412 702 396

mcheritage.com.au

Dear all

Via email

Dear All,

RE: Heritage NSW Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Stage 4 –Final Cultural Heritage Assessment - Proposed residential subdivision of land located at Lochinvar

MCH and Lochinvar Developments Pty Ltd (Proponent) would like to take this opportunity to thank you for your involvement in the above-named project. Your time and input has been instrumental throughout the project

As outlined in the Heritage NSW, Department of Premier & Cabinet Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010), Stage 4 (S. 4.4.5), please find a copy of the final report attached.

We look forward to continue working with you in the future.

Yours sincerely,
for McCardle Cultural Heritage Pty Ltd

Dr. Penny McCardle
Principal Archaeologist
Forensic Anthropologist

penny@mheritage.com.au

From: penny@mheritage.com.au
Sent: Tuesday, 5 September 2023 2:47 PM
To: 'Cazadirect@live.com'; 'corroboreecorp@bigpond.com'; 'tracey@marrung-pa.com.au'; 'leannekirkman1964@gmail.com'; 'Widescope.group@live.com'; 'hto.paulette@gmail.com'; 'BS'; 'Amanda De Zwart'
Subject: RE: Lochinvar final report

HI All,

Just a quick project update.

The client has approved the next stage and we will be in touch soon.

Kind regards,

Dr. Penny McCardle

Archaeologist

Forensic Anthropologist



McCARDLE
CULTURAL HERITAGE

**PO Box 166,
Adamstown 2289 NSW
P: 0412 702 396
mheritage.com.au**

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penny@mheritage.com.au

From: penny@mheritage.com.au
Sent: Wednesday, 6 September 2023 9:01 AM
To: 'Cazadirect@live.com'; 'corroboreecorp@bigpond.com'; 'tracey@marrung-pa.com.au';
'leannekirkman1964@gmail.com'; 'Widescope.group@live.com'; 'hto.paulette@gmail.com'; 'BS';
'Amanda De Zwart'
Subject: Lochinvar residential development
Attachments: Proposed test excavation methodology.pdf

Dear all,

Please find attached the draft methods for the above named project. Also included is a pro-forma if you wish to use that for your response.

Please make your written submission to MCH by close of business 4th October 2023.

The absence of a response by the requested timeline will be taken as your indication that your organisation has no comments regarding the above.

We look forward to working with you again on this project.

Kind regards,

Dr. Penny McCardle

Archaeologist

Forensic Anthropologist



PO Box 166,
Adamstown 2289 NSW
P: 0412 702 396
mheritage.com.au

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1.1 PROPOSED TEST EXCAVATION METHODOLOGY

The test excavation methodology will be in accordance with the Heritage NSW, Department of Premier & Cabinet policy - Code of Practice for Archaeological Investigations of Aboriginal Objects in New South Wales 2010, Section 2.2. This proposed methodology is subject to variation due to unforeseen field conditions/constraints. The area to be subject to a test excavation program will include the area clarified as having archaeological potential and will include:

- the test excavation units will be placed on a 30m x 30m systematic grid system across the PAD (ensuring that the maximum surface area of all test excavation pits is no greater than .5% the PAD areas;
- the test excavation will be pegged by a surveyor who will also provide a plan and coordinated of each test pit;
- test excavations units will be excavated using hand tools only;
- test excavations will be excavated in 50 cm x 50 cm units. If the pits are deeper than 1m, due to safety, the pits will be battered to allow safe access and batters excavated and sieved as the test excavation;
- the first excavation unit will be excavated and documented in 5 cm spits. Based on the evidence of the first excavation unit, 10 cm spits or sediment profile/stratigraphic excavation (whichever is smaller) will then be implemented;
- all material excavated from the test excavation units will be sieved using a 5-mm wire-mesh sieve;
- test excavation units will be excavated to the base of the identified Aboriginal object-bearing units, or until the B horizon is reached;
- if more than 10 artefacts are uncovered in one pit, then additional test pits will be located north, south, east and west of that pit and placed at 5m from the original pit so long as the total area excavated did not exceed 0.5% of the PAD;
- the test excavation will cease if the first two transects of test pits from the creek yield no cultural materials;
- test excavations will cease when enough information has been recovered to adequately characterise the objects/site(s) present with regard to their nature and significance;
- photographic and scale-drawn records of the stratigraphy/soil profile, features and informative Aboriginal objects will be made for each excavation point;
- test excavations units will be backfilled as completed; and
- all artefacts will be removed at the end of each day for security and held with MCH until the artefact analysis is complete and will be handed to the RAPs (care and control to be determined).
-

Following the completion of the test excavation, an artefact analysis will be undertaken and the details of the methods used will include, but not limited to, the block method of measuring artefacts (measures the greatest length from the platform and perpendicular to the platform), the greatest width perpendicular to the length and the greatest thickness).

Artefact will be classified based on the materialist approach as opposed to the typological approach. Materialist classifications do not concentrate on the purpose or intention of the artefact maker but focus on how morphological features came into being. Raw materials will also be noted as well as heat treatment of artefacts, use-wear and re-touch. Artefact counts will be made, cortex and breakage will also be included in the analysis. Any other cultural materials uncovered will also be analysed and included in the report.

1.2 TEST EXCAVATION RESEARCH QUESTIONS

The assessment is designed to address a number of research hypothesis. The research questions listed below derive from Kuskies (2005) detailed work in the region and are used here for consistency in analysis and discussions as well as local and regional comparative research.

- What past Aboriginal activities occurred within the project area?
- What types of past Aboriginal occupation occurred within the project area (e.g., transitory movement, hunting, gathering, camping etc)?
- Were the types of activity and nature of occupation related to environmental factors (e.g., landforms, proximity to reliable water)?
- Does spatial patterning of activity areas occur within the project area?
- Did single or multiple episodes of occupation occur within the project area?
- Did episodes of occupation occur at different times over the whole time-span of occupation in the region within the project area?
- Is there potential for older evidence of occupation (i.e., early Holocene)?
- How intensive was occupation of the sites, in both a local and regional context?
- Did microblade and microlith production occur on the sites?
- Were other tools manufactured on the sites?
- Was maintenance of tools conducted on site?
- Was knapping of flakes largely casual and opportunistic, meeting requirements on 'as needed' basis?
- What raw materials were favoured for use on site within the project area and why?
- Did thermal alteration of raw materials occur within the project area?
- How does the evidence and inferred human behaviour represented within the project area compare with evidence from other locations in the region?
- How does the evidence relate to the regional and local models of occupation?

COMMENTS ON PROPOSED METHODOLOGY

Lochinvar residential subdivision

I, _____ (*please insert your name*) of _____ (*please insert the name of your group*), **agree to the methodology** outlined by MCH in the information packet for the above-named project.

Signed: _____ Date: _____

Position within organisation: _____

I, _____ (*please insert your name*) of _____ (*please insert the name of your group*), **do not agree to the methodology** outlined by MCH in the information packet for the above-named project for the following reasons (*please explain your reasons for disagreeing*):

I would like to suggest the following (please provide your reasoning):

Signed: _____ Date: _____

Position within organisation: _____

COMMENTS ON PROPOSED METHODOLOGY

Lochinvar residential subdivision

I, Tracey Skene (please insert your name) of Culturally Aware (please insert the name of your group), **agree to the methodology** outlined by MCH in the information packet for the above-named project.

Signed: Tracey Skene Date: 6/9/23

Position within organisation: Director

I, _____ (please insert your name) of _____ (please insert the name of your group), **do not agree to the methodology** outlined by MCH in the information packet for the above-named project for the following reasons (please explain your reasons for disagreeing):

I would like to suggest the following (please provide your reasoning):

Signed: _____ Date: _____

Position within organisation: _____

penny@mheritage.com.au

From: Leanne Kirkman <leannekirkman1964@gmail.com>
Sent: Wednesday, 6 September 2023 5:06 PM
To: penny@mheritage.com.au
Subject: Re: Lochinvar residential development
Attachments: image001.png

Hi penny I agree with test methodology, thank you.

On Wed, 6 Sep 2023, 9:00 am , <penny@mheritage.com.au> wrote:

Dear all,

Please find attached the draft methods for the above named project. Also included is a pro-forma if you wish to use that for your response.

Please make your written submission to MCH by close of business 4th October 2023.

The absence of a response by the requested timeline will be taken as your indication that your organisation has no comments regarding the above.

We look forward to working with you again on this project.

Kind regards,

Dr. Penny McCardle
Archaeologist

Forensic Anthropologist

From: Carolyn .H <cazadirect@live.com>
Sent: Sunday, 17 September 2023 4:20 PM
To: penny@mheritage.com.au
Subject: Re: Lochinvar residential development
Attachments: A1.PL2024.pdf; A1.WC2024.pdf; Proposed test excavation methodology (1).pdf



Contact: Carolyn Hickey
Mobile: 0411650057
Email: Cazadirect@live.com
Address: 10 Marie Pitt Place, Glenmore Park, NSW 2745
ABN: : 20 616 970 327

Hi Penny,
Please find attached the signed document supporting the proposed test excavation methodology.
Kind Regards
Carolyn Hickey

When Selecting Groups for Engagement:

Please consider that **A1 INDIGENOUS SERVICES** is a member of the **NSW INDIGENOUS CHAMBER OF COMMERCE**.

We carry the NSWICC Assured logo showing that **A1 Indigenous Services** has met National Policy requirements as upheld by the First Australians Chamber of Commerce and Industry (FACCI) for being identified as a **100% First Nations Owned Indigenous Business** That has demonstrate compliance with Government and Industry Regulators.

A1 INDIGENOUS SERVICES is now a member of the NSW INDIGENOUS CHAMBER OF COMMERCE

A business or enterprise carrying the NSWICC Assured logo has met National Policy requirements as upheld by the First Australians Chamber of Commerce and Industry (FACCI) for being identified as a First Nations Business Owner or Entrepreneur and the business must demonstrate compliance with Government and Industry Regulators.

(Certificate attached) A certificate confirms that the Enterprise listed above has met all requirements of the NSWICC's Assured Program , operating as a100% Aboriginal Owned, Operated and Controlled Business. The NSW Indigenous Chamber of Commerce (NSWICC) is the Peak body for Aboriginal Business in New South Wales and a member of the First Australians Chamber of Commerce and Industry (FACCI)

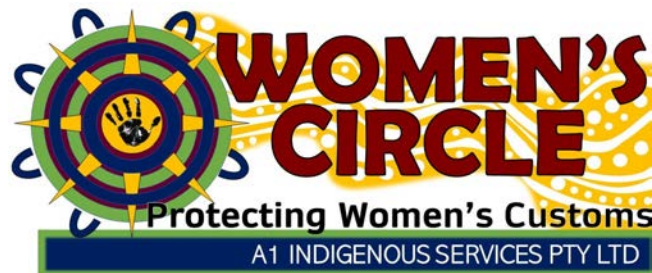
A1 Indigenous Services is 100%, Indigenous Owned Australian Company

which offers a range of services to the construction industry.

It is our mission to commit to an innovative approach to a better future for Indigenous employment and community.

While improving ways to close the gap in Aboriginal participation in the construction Industry.

Building strength in aboriginal communities and our Indigenous labour force.



From: penny@mheritage.com.au <penny@mheritage.com.au>

Sent: Wednesday, 6 September 2023 9:00 AM


To: Cazadirect@live.com <Cazadirect@live.com>; corroboreecorp@bigpond.com <corroboreecorp@bigpond.com>; tracey@marrung-pa.com.au <tracey@marrung-pa.com.au>; leannekirkman1964@gmail.com <leannekirkman1964@gmail.com>; Widescope.group@live.com <Widescope.group@live.com>; hto.paulette@gmail.com <hto.paulette@gmail.com>; 'BS' <bobsam1@bigpond.net.au>; 'Amanda De Zwart' <Amandahickey@live.com.au>

Subject: Lochinvar residential development

COMMENTS ON PROPOSED METHODOLOGY

Lochinvar residential subdivision

I, CAROLYN HICKEY (please insert your name) of A1 INDIGENOUS SERVICES (please insert the name of your group), **agree to the methodology** outlined by MCH in the information packet for the above-named project.

Signed:  Date: 15.9.23

Position within organisation: MANAGER

I, _____ (please insert your name) of _____ (please insert the name of your group), **do not agree to the methodology** outlined by MCH in the information packet for the above-named project for the following reasons (please explain your reasons for disagreeing):

I would like to suggest the following (please provide your reasoning):

Signed: _____ Date: _____

Position within organisation: _____

penny@mheritage.com.au

From: penny@mheritage.com.au
Sent: Friday, 6 October 2023 8:18 AM
To: 'cazadirect@live.com'; 'tracey@marrung-pa.com.au'; 'leannekirkman1964@gmail.com';
'Widescope.group@live.com'; 'hto.paulette@gmail.com'
Subject: Lochinvar residential development
Attachments: Invitation Letter of Eng 2023.pdf

Dear all,

Please find the letter of engagement attached for the above named project.

Kind regards,

Dr. Penny McCardle

Principal & Forensic Archaeologist

Forensic Anthropologist



PO Box 166,
Adamstown 2289 NSW
P: 0412 702 396
mheritage.com.au

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MCCARDLE
CULTURAL HERITAGE

6 October 2023

PO Box 166
Adamstown 2289 NSW
penny@mcheritage.com.au
P: 0412 702 396

mcheritage.com.au

Via Email

Dear all,

RE: Heritage NSW Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Stage 3) –Survey invitation and letter of engagement- Proposed residential subdivision of land located at Lochinvar

The proponent (Lochinvar Developments Pty Ltd) has received a number of applications and after careful consideration has selected whom they wish to engage in a paid capacity. The proponent and MCH would like to advise that your application for paid participation has been successful. MCH would like to organise the test excavation for the above-named project for the 13th November 2023 at 8am at the corner of the New England Highway and Windella Road, Lochinvar. We anticipate work will be complete within 3 days, however, please be advised this time may change.

As part of the assessment process the proponent require an appropriate person from your organisation to participate in the survey of the study area to identify known or potential cultural heritage features. A cultural heritage report must be prepared following the survey and receipt of the draft archaeological report within the required 28 days review period. The cultural heritage report will identify known or potential Aboriginal objects or places and/or any other cultural heritage matters that may be affected by the project.

Lochinvar Developments Pty Ltd and MCH wishes to reiterate our intent to positively engaging with the local Aboriginal community. In this spirit an invitation has been extended to all registered applicants to attend the survey. If you accept the terms outlined in the Letter of Engagement (attached) please sign the Letter of Engagement and return to MCH. Participation in the program is dependent on the receipt of the Letter of Engagement and insurance certificate of currencies (Workers Comp, Public Liability and Comprehensive Motor vehicle).

As all communications, including phone calls, faxes, letters, and e-mails must be included in the consultation component of the report as per the Heritage NSW, Department of Premier & Cabinet requirements, please ensure that any items that you or your group deem confidential are made apparent to your field representative prior to field work to ensure that information remains confidential if required. Failure to disclose that information is confidential may result in the information being included in the report.



McCARDLE
CULTURAL HERITAGE

Should you have any questions regarding these terms and conditions or the project please contact myself on 0412 702 396.

Yours sincerely,
for McCardle Cultural Heritage Pty Ltd

Dr. Penny McCardle
Principal Archaeologist
Forensic Anthropologist



Aboriginal Site Officer/Trainee Site Officer

Letter of Engagement

Lochinvar Developments Pty Ltd wishes to engage you to provide one Site Officer to undertake an archaeological survey of the proposed residential subdivision of land located at Lochinvar.

The proponent and Service Provider agree to the terms and conditions of the engagement as follows:

Services

The Service Provider will engage one Site Officer to undertake the following:

- Survey (walking) of the project area
- a cultural heritage report and invoice within 28 days of receiving the draft report from MCH

Fees

The proponent has determined the rate of pay based on the overall project budget and job description. The proponent will pay the following Fees to the Service Provider for Services:

- \$80.00 + GST per person per hour for work undertaken by a Site Officer (inclusive of travel)

Payment will be within 28 days of receipt of a correct invoice and cultural heritage report. Invoices are to be provided at the end of the month.

Invoices are to be addressed to:

Lochinvar Developments Pty Ltd
C/o- MCH
penny@mcheritage.com.au

Time sheets

The Service provider must ensure that the Site Officers sign a time sheet at the start and finish of each day the Services are provided. Fees will not be paid unless time sheets for each Site Officer has been completed. The archaeologist will have a time sheet that may be used.

Work performance

The Service Provider must ensure that the Site Officers are fit for work, undertake the Services in a timely manner, with reasonable care, skill and professionalism and in accordance with all applicable laws and any reasonable directions or requirements made by the proponent and/or MCH.

Absences

All field staff must call MCH the evening before work to notify their absence for the following day and organise for a replacement. If no notice is provided, that staff members place in the field team will be suspended until MCH are notified they will be back at work. It is the responsibility of the Service Provider to organise a replacement site officer from the list of persons provided to MCH at the start of the project.



Proponent and MCH property

All materials and equipment provided by MCH or the proponent during the term of engagement remain the property of MCH or the proponent and must be returned upon completion of the Services or termination of the agreement.

Confidentially

All information provided by MCH or the proponent to the Service Provider and/or Site Officer in relation to the services or the business or operations of the proponent and MCH are confidential. The Service Provider will ensure the Site Officer keep such information confidential at all times (including after the completion of the Services) and must not disclose it to any other person without the prior written consent from the proponent and/or MCH.

OH&S Requirements

Before commencement of work, you must provide MCH with certificate of currencies for Workers Comp, Public Liability and Comprehensive Motor Vehicle insurances. Field representatives participating in the field work will be required to wear PPE including steel cap boots, long pants and long shirt (hi-visibility) with appropriate sun protection including a hat. It is recommended that participants bring adequate amounts of food and water for the day. If field staff attend the site without the required PPE, they will not be permitted on site or to participate in the field work. It is the responsibility of the Service Provider to ensure all field staff are made aware of this.

COVID-19 requirements

All field staff will be required to be double vaccinated and adhere to the required NSW Health orders at time of all field work. Proof of vaccination will be required at the start of field work. In order to ensure the safety of all staff, any field staff who do not provide the required information will not be permitted on site or to participate in the field work.

Bullying, harassment and unacceptable behaviour

All field staff are required to treat others with dignity, courtesy and respect at all times. Behaviours that are unacceptable and may be against the law, include (but not limited to) discrimination, bullying, sexual harassment, racial and religious vilification are unacceptable and are covered by federal and state legislation, abusive language and threats in any form. Field staff found to have engaged in such conduct will be asked to leave the site immediately and their manager contacted. Failure to leave the site may result in the local Police being contacted. It is the responsibility of the Service Provider to ensure all field staff are made aware of this.

Early termination

The proponent reserves the right to terminate this agreement at any time by giving 1-week written notice to the Service Provider. If the proponent terminates this agreement under this clause, then, subject to satisfactory performance of the Services, the proponent will pay the Service provider a proportionate part of the Fee according to the amount or proportion of Services supplied up to the date of termination.

No subcontracting

The Service Provider must not subcontract the provision of the Services without the proponent's prior written consent.



Insurances

The Service Provider must provide certificates of currency for Workers Comp, Public Liability and Comprehensive Motor Vehicle insurances prior to the Services being provided.

Indemnity and release

The Service Provider undertakes the Services at its sole risk and the proponent and MCH will not be liable for any loss, damage, injury or death sustained by any person as a result of the Services being provided. The Service provider indemnifies and releases the proponent and MCH against any loss the proponent or MCH suffers or any claims made against the proponent or MCH by any person arising out of the provisions of the Services except to the extent that any loss or claims arise from any negligence by the proponent or MCH.

Variations

No changes to these terms can be made without the prior written agreement with the proponent.

Exclusion of other terms

This letter contains the sole agreement of the parties and all other terms are excluded.

If you agree that the contents of this letter correctly set out the terms of engagement between the proponent and your organisation then please sign two copies, keep one for yourself, and return the other signed copy to MCH within 10 days.

Acceptance (Proposed residential subdivision of land located at Lochinvar)

Signed by

I/we agree to the terms set out in this letter and acknowledge that it forms a binding legal contract.
I/we declare that I/we are authorised to sign this letter on behalf of _____.

Please provide your ABN:

Signature of Witness

Signature of authorised person

Print name of Witness

Print name of authorised person

Print title and position of authorised person

Date:

Date:

From: penny@mheritage.com.au
Sent: Friday, 6 October 2023 8:19 AM
To: 'corroboreecorp@bigpond.com'; 'BS'; 'Amanda De Zwart'
Subject: Lochinvar residential development

Dear all,

RE: Heritage NSW Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Stage 3) –Survey invitation – Proposed subdivision at Lochinvar

The proponent received a number of applications and after careful consideration we regret to advise that your application for paid participation has been unsuccessful. We do appreciate the time taken to submit an application and wish to reconfirm our intention to positively engage with the local Aboriginal community. In this spirit, if you wish to still participate in the survey on an unpaid basis, or be kept up-to-date on the progress of the survey, please contact Penny McCardle. Please note that if you intend to participate in the site survey then:

- Before commencement you must notify MCH for access arrangements and notification and provide MCH with a Certificate of Currency for Workers Compensation, Public Liability and Comprehensive Motor Vehicle insurances. MCH will also provide you with our OH&S requirements for field staff and request that you ensure all field staff participating in the project have read and understood the document fully prior to going out on site; and
- All field participants must wear covered shoes, long pants and long shirt (hi-visibility) with appropriate sun protection including hat. It is recommended that participants bring adequate amounts of food and water for the day.

COVID requirements

All field staff will be required to be double vaccinated, a negative COVID test no more than 3 days prior to commencing field work, and adhere to the required NSW Health orders at time of all field work (e.g. face masks, social distancing, quarantining if required). Proof of vaccination and negative COVID test will be required at the start of field work. In order to ensure the safety of all staff, any field staff who do not provide the required information will not be permitted on site or to participate in the field work.

As all communications, including phone calls, faxes, letters, and e-mails must be included in the consultation component of the report as per the Heritage NSW, Department of Premier & Cabinet requirements, please ensure that any items that you or your group deem confidential are made apparent to your field representative prior to field work to ensure that information remains confidential if required. Failure to disclose that information is confidential may result in the information being included in the report.

Following the completion of the field work, a draft copy of the assessment will be made available to you for comment. Should you have any further questions, please do not hesitate to contact Penny McCardle on 0412 702 396.

Kind regards,

Dr. Penny McCardle

Principal & Forensic Archaeologist

Forensic Anthropologist



**PO Box 166,
Adamstown 2289 NSW
P: 0412 702 396
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penny@mheritage.com.au

From: penny@mheritage.com.au
Sent: Friday, 6 October 2023 8:18 AM
To: 'cazadirect@live.com'; 'tracey@marrung-pa.com.au'; 'leannekirkman1964@gmail.com';
'Widescope.group@live.com'; 'hto.paulette@gmail.com'
Subject: Lochinvar residential development
Attachments: Invitation Letter of Eng 2023.pdf

Dear all,

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Kind regards,

Dr. Penny McCardle

Principal & Forensic Archaeologist

Forensic Anthropologist



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MCCARDLE
CULTURAL HERITAGE

6 October 2023

PO Box 166
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penny@mcheritage.com.au
P: 0412 702 396

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Via Email

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McCARDLE
CULTURAL HERITAGE

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Yours sincerely,
for McCardle Cultural Heritage Pty Ltd

Dr. Penny McCardle
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Forensic Anthropologist



Aboriginal Site Officer/Trainee Site Officer

Letter of Engagement

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Proponent and MCH property

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Confidentially

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OH&S Requirements

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The proponent reserves the right to terminate this agreement at any time by giving 1-week written notice to the Service Provider. If the proponent terminates this agreement under this clause, then, subject to satisfactory performance of the Services, the proponent will pay the Service provider a proportionate part of the Fee according to the amount or proportion of Services supplied up to the date of termination.

No subcontracting

The Service Provider must not subcontract the provision of the Services without the proponent's prior written consent.



Insurances

The Service Provider must provide certificates of currency for Workers Comp, Public Liability and Comprehensive Motor Vehicle insurances prior to the Services being provided.

Indemnity and release

The Service Provider undertakes the Services at its sole risk and the proponent and MCH will not be liable for any loss, damage, injury or death sustained by any person as a result of the Services being provided. The Service provider indemnifies and releases the proponent and MCH against any loss the proponent or MCH suffers or any claims made against the proponent or MCH by any person arising out of the provisions of the Services except to the extent that any loss or claims arise from any negligence by the proponent or MCH.

Variations

No changes to these terms can be made without the prior written agreement with the proponent.

Exclusion of other terms

This letter contains the sole agreement of the parties and all other terms are excluded.

If you agree that the contents of this letter correctly set out the terms of engagement between the proponent and your organisation then please sign two copies, keep one for yourself, and return the other signed copy to MCH within 10 days.

Acceptance (Proposed residential subdivision of land located at Lochinvar)

Signed by

I/we agree to the terms set out in this letter and acknowledge that it forms a binding legal contract.
I/we declare that I/we are authorised to sign this letter on behalf of _____.

Please provide your ABN:

Signature of Witness

Signature of authorised person

Print name of Witness

Print name of authorised person

Print title and position of authorised person

Date:

Date:

From: penny@mheritage.com.au
Sent: Friday, 6 October 2023 8:19 AM
To: 'corroboreecorp@bigpond.com'; 'BS'; 'Amanda De Zwart'
Subject: Lochinvar residential development

Dear all,

RE: Heritage NSW Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Stage 3) –Survey invitation – Proposed subdivision at Lochinvar

The proponent received a number of applications and after careful consideration we regret to advise that your application for paid participation has been unsuccessful. We do appreciate the time taken to submit an application and wish to reconfirm our intention to positively engage with the local Aboriginal community. In this spirit, if you wish to still participate in the survey on an unpaid basis, or be kept up-to-date on the progress of the survey, please contact Penny McCardle. Please note that if you intend to participate in the site survey then:

- Before commencement you must notify MCH for access arrangements and notification and provide MCH with a Certificate of Currency for Workers Compensation, Public Liability and Comprehensive Motor Vehicle insurances. MCH will also provide you with our OH&S requirements for field staff and request that you ensure all field staff participating in the project have read and understood the document fully prior to going out on site; and
- All field participants must wear covered shoes, long pants and long shirt (hi-visibility) with appropriate sun protection including hat. It is recommended that participants bring adequate amounts of food and water for the day.

COVID requirements

All field staff will be required to be double vaccinated, a negative COVID test no more than 3 days prior to commencing field work, and adhere to the required NSW Health orders at time of all field work (e.g. face masks, social distancing, quarantining if required). Proof of vaccination and negative COVID test will be required at the start of field work. In order to ensure the safety of all staff, any field staff who do not provide the required information will not be permitted on site or to participate in the field work.

As all communications, including phone calls, faxes, letters, and e-mails must be included in the consultation component of the report as per the Heritage NSW, Department of Premier & Cabinet requirements, please ensure that any items that you or your group deem confidential are made apparent to your field representative prior to field work to ensure that information remains confidential if required. Failure to disclose that information is confidential may result in the information being included in the report.

Following the completion of the field work, a draft copy of the assessment will be made available to you for comment. Should you have any further questions, please do not hesitate to contact Penny McCardle on 0412 702 396.

Kind regards,

Dr. Penny McCardle

Principal & Forensic Archaeologist

Forensic Anthropologist



**PO Box 166,
Adamstown 2289 NSW
P: 0412 702 396
mcheritage.com.au**

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Insurances

The Service Provider must provide certificates of currency for Workers Comp, Public Liability and Comprehensive Motor Vehicle insurances prior to the Services being provided.

Indemnity and release

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Variations

No changes to these terms can be made without the prior written agreement with the proponent.

Exclusion of other terms

This letter contains the sole agreement of the parties and all other terms are excluded.

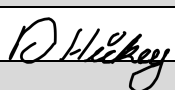

If you agree that the contents of this letter correctly set out the terms of engagement between the proponent and your organisation then please sign two copies, keep one for yourself, and return the other signed copy to MCH within 10 days.

Acceptance (Proposed residential subdivision of land located at Lochinvar)

Signed by Steven Hickey

I/we agree to the terms set out in this letter and acknowledge that it forms a binding legal contract.
I/we declare that I/we are authorised to sign this letter on behalf of _____.

Please provide your ABN:

| | |
|---|---|
| Signature of Witness | Signature of authorised person |
| Donna Hickey | Steven Hickey |
| Print name of Witness | Print name of authorised person |
|  |  |
| | Print title and position of authorised person |
| | Owner |
| Date: 10.10.23 | Date: 10.10.23 |



Insurances

The Service Provider must provide certificates of currency for Workers Comp, Public Liability and Comprehensive Motor Vehicle insurances prior to the Services being provided.

Indemnity and release

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Variations

No changes to these terms can be made without the prior written agreement with the proponent.

Exclusion of other terms

This letter contains the sole agreement of the parties and all other terms are excluded.

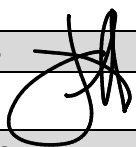
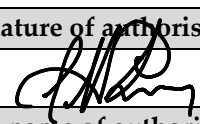
If you agree that the contents of this letter correctly set out the terms of engagement between the proponent and your organisation then please sign two copies, keep one for yourself, and return the other signed copy to MCH within 10 days.

Acceptance (Proposed residential subdivision of land located at Lochinvar)

Signed by **Carolyn Hickey**

I/we agree to the terms set out in this letter and acknowledge that it forms a binding legal contract.
I/we declare that I/we are authorised to sign this letter on behalf of _____.

Please provide your ABN: 20 616 970 327

| | | | |
|-----------------------|---|---|--|
| Signature of Witness |  | Signature of authorised person |  |
| Print name of Witness | Julie Hickey | Print name of authorised person | Carolyn Hickey |
| | | Print title and position of authorised person | Owner |
| Date: | 10.10.23 | Date: | 10.10.23 |

Insurances

The Service Provider must provide certificates of currency for Workers Comp, Public Liability and Comprehensive Motor Vehicle insurances prior to the Services being provided.

Indemnity and release

The Service Provider undertakes the Services at its sole risk and the proponent and MCH will not be liable for any loss, damage, injury or death sustained by any person as a result of the Services being provided. The Service provider indemnifies and releases the proponent and MCH against any loss the proponent or MCH suffers or any claims made against the proponent or MCH by any person arising out of the provisions of the Services except to the extent that any loss or claims arise from any negligence by the proponent or MCH.

Variations

No changes to these terms can be made without the prior written agreement with the proponent.

Exclusion of other terms

This letter contains the sole agreement of the parties and all other terms are excluded.

If you agree that the contents of this letter correctly set out the terms of engagement between the proponent and your organisation then please sign two copies, keep one for yourself, and return the other signed copy to MCH within 10 days.

Acceptance (Proposed residential subdivision of land located at Lochinvar)

Signed by

L Kirkman

I/we agree to the terms set out in this letter and acknowledge that it forms a binding legal contract.

I/we declare that I/we are authorised to sign this letter on behalf of Leanne Kirkman.

Please provide your ABN: 436 269 24 240

Signature of Witness

K Pascoe

Print name of Witness

KYLIE PASCOE

Signature of authorised person

D Holt

Print name of authorised person

DAVID HOLT

Print title and position of authorised person

owner

Date:

10-10-23

Date:

10-10-23

penny@mheritage.com.au

From: penny@mheritage.com.au
Sent: Monday, 13 November 2023 4:10 PM
To: 'cazadirect@live.com'; 'tracey@marrung-pa.com.au'; 'leannekirkman1964@gmail.com';
'Widescope.group@live.com'; 'hto.paulette@gmail.com'
Subject: RE: Lochinvar residential development

Hi all,

The test excavation has been re-scheduled to 15 – 17th January 2024. Same meeting place at 8am.

Kind regards,

Dr. Penny McCardle

Principal & Forensic Archaeologist
Forensic Anthropologist



PO Box 166,
Adamstown 2289 NSW
P: 0412 702 396
mheritage.com.au

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From: penny@mheritage.com.au <penny@mheritage.com.au>
Sent: Monday, 6 November 2023 7:35 AM
To: 'cazadirect@live.com' <cazadirect@live.com>; 'tracey@marrung-pa.com.au' <tracey@marrung-pa.com.au>;
'leannekirkman1964@gmail.com' <leannekirkman1964@gmail.com>; 'Widescope.group@live.com'
<Widescope.group@live.com>; 'hto.paulette@gmail.com' <hto.paulette@gmail.com>
Subject: RE: Lochinvar residential development
Importance: High

Hi all,

Can you please confirm your attendance next Monday no later than Wednesday this week (8/11/2023)..

Also, for those of you who have not sent through your insurances, please do so before Monday.

penny@mheritage.com.au

From: penny@mheritage.com.au
Sent: Sunday, 14 January 2024 1:53 PM
To: 'cazadirect@live.com'; 'tracey@marrung-pa.com.au'; 'leannekirkman1964@gmail.com';
'Widescope.group@live.com'; 'hto.paulette@gmail.com'
Subject: RE: Lochinvar residential development

Hi all,

The test excavation has been re-scheduled to 23rd January 2024 due to forecast rain. Same meeting place at 8am.

Kind regards,

Dr. Penny McCardle

Principal & Forensic Archaeologist
Forensic Anthropologist



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Adamstown 2289 NSW
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From: penny@mheritage.com.au <penny@mheritage.com.au>
Sent: Monday, 13 November 2023 4:10 PM
To: 'cazadirect@live.com' <cazadirect@live.com>; 'tracey@marrung-pa.com.au' <tracey@marrung-pa.com.au>;
'leannekirkman1964@gmail.com' <leannekirkman1964@gmail.com>; 'Widescope.group@live.com'
<Widescope.group@live.com>; 'hto.paulette@gmail.com' <hto.paulette@gmail.com>
Subject: RE: Lochinvar residential development

Hi all,

The test excavation has been re-scheduled to 15 – 17th January 2024. Same meeting place at 8am.

Kind regards,

penny@mheritage.com.au

From: penny@mheritage.com.au
Sent: Monday, 22 January 2024 4:44 PM
To: 'cazadirect@live.com'; 'tracey@marrung-pa.com.au'; 'leannekirkman1964@gmail.com';
'Widescope.group@live.com'; 'hto.paulette@gmail.com'
Subject: RE: Lochinvar residential development

Hi all,

I'm am sorry to say that we have to reschedule the project again. We will now be starting 13th February.

Kind regards,

Dr. Penny McCardle

Principal & Forensic Archaeologist
Forensic Anthropologist



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Adamstown 2289 NSW
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mheritage.com.au

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From: penny@mheritage.com.au <penny@mheritage.com.au>
Sent: Sunday, 14 January 2024 1:53 PM
To: 'cazadirect@live.com' <cazadirect@live.com>; 'tracey@marrung-pa.com.au' <tracey@marrung-pa.com.au>;
'leannekirkman1964@gmail.com' <leannekirkman1964@gmail.com>; 'Widescope.group@live.com'
<Widescope.group@live.com>; 'hto.paulette@gmail.com' <hto.paulette@gmail.com>
Subject: RE: Lochinvar residential development

Hi all,

The test excavation has been re-scheduled to 23rd January 2024 due to forecast rain. Same meeting place at 8am.

Kind regards,

From: penny@mheritage.com.au
Sent: Tuesday, 19 March 2024 7:31 AM
To: 'Cazadirect@live.com'; 'corroboreecorp@bigpond.com'; 'tracey@marrung-pa.com.au'; 'leannekirkman1964@gmail.com'; 'Widescope.group@live.com'; 'hto.paulette@gmail.com'; 'bobsam1@bigpond.net.au'; 'Amandahickey@live.com.au'
Subject: Lochinvar draft report
Attachments: Lochinvar Residential Subdivision - Archaeological Test Excavation DRAFT 19 3 2024.pdf

Dear All,

RE: Heritage NSW Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Stage 3 & 4 – Review of Draft Cultural Heritage Assessment - Proposed residential subdivision of land located at Lochinvar

Please find enclosed a copy of the draft Aboriginal Cultural Heritage Assessment (ACHA) for the above-named project for your review.

The ACHA includes information provided by the knowledge holders and is included with their permission. As required by the Heritage NSW, Department of Premier & Cabinet Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010), Stage 3 (S. 4.3.5; 4.3.6; 4.3.7) and Stage 4 (S. 4.4.1; 4.4.2; 4.4.3) and based on the information provided by knowledge holders throughout the project, the cultural significance will be included in the final report.

MCH would like to provide further opportunity to provide your further input and request your comments on the draft ACHA. Additionally, any concerns you may have, are also important, and we would like to provide another opportunity to address any concerns you may have.

As outlined in the Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010), Stage 4 (S. 4.4.3) MCH would appreciate your input and your comments on the draft report, no later than C.O.B. 18th April 2023.

As all communications, including phone calls, faxes, letters, and e-mails must be included in the consultation component of the report as per the Heritage NSW, Department of Premier & Cabinet requirements, please ensure that if any response to the draft report is deemed confidential that this is either stated at the beginning of a conversation or stamped/written on each piece of paper communicate.

Please note that in order to adhere to time constraints, the absence of a response by the requested timeline, will be taken by the proponent as your indication that your organisation has no comments.

Kind regards,

Dr. Penny McCardle

Principal & Forensic Archaeologist
Forensic Anthropologist



PO Box 166,
Adamstown 2289 NSW
P: 0412 702 396
mheritage.com.au

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McCARDLE
CULTURAL HERITAGE

22 April 2024

PO Box 166
Adamstown 2289 NSW
penny@mcheritage.com.au
P: 0412 702 396

mcheritage.com.au

Via Email

Dear All,


RE: Heritage NSW Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Stage 4 –Final Cultural Heritage Assessment - Proposed residential subdivision of land located at Lochinvar

MCH and Lochinvar Developments Pty Ltd (Proponent) would like to take this opportunity to thank you for your involvement in the above-named project. Your time and input has been instrumental throughout the project

As outlined in the Heritage NSW, Department of Premier & Cabinet Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010), Stage 4 (S. 4.4.5), please find a copy of the final report for your records attached.

We look forward to continue working with you in the future.

Yours sincerely,
for McCardle Cultural Heritage Pty Ltd


Dr. Penny McCardle
Principal Archaeologist
Forensic Anthropologist

APPENDIX B

AHIMS search results

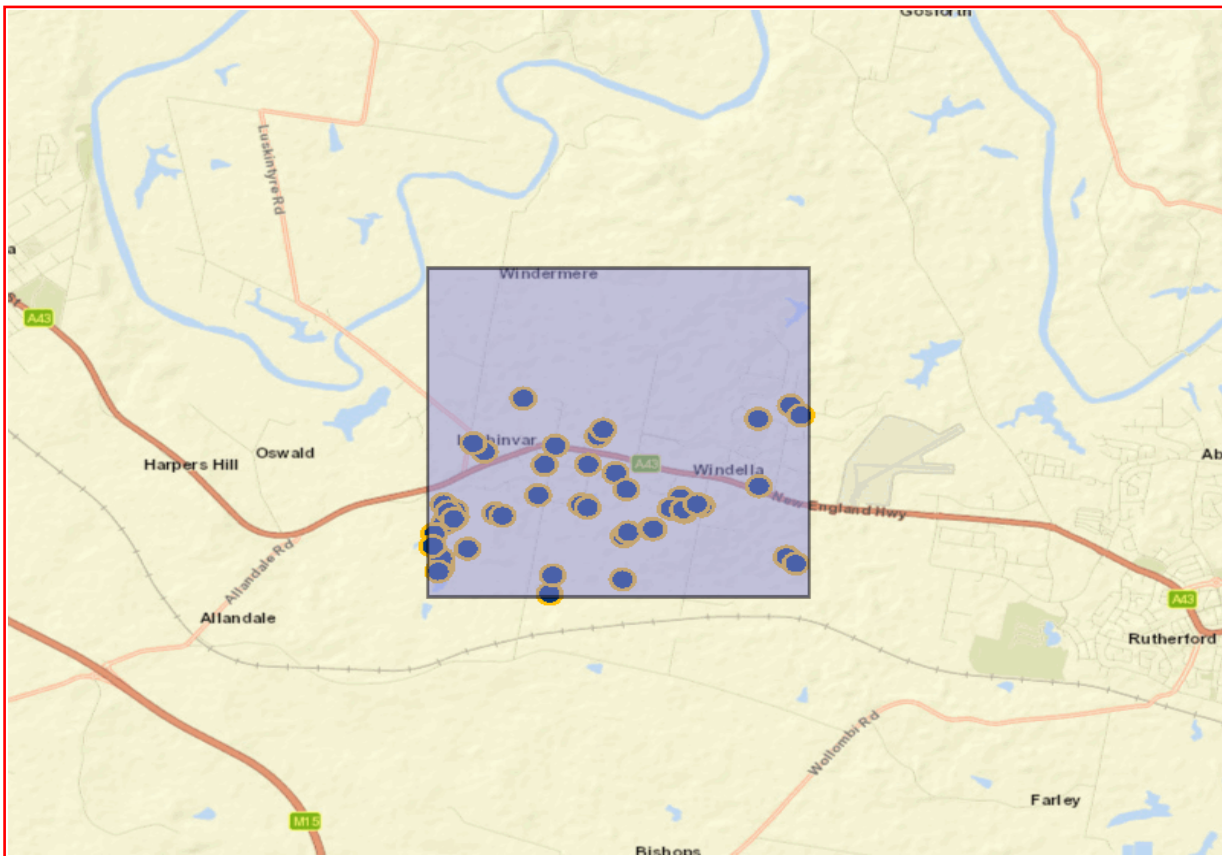
Penny Mccardle
Po Box 166
Adamstown New South Wales 2289
Attention: Penny Mccardle
Email: penny@mcheritage.com.au

Date: 13 October 2022

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 353850.0 - 357820.0, Northings : 6379200.0 - 6383200.0 with a Buffer of 0 meters, conducted by Penny Mccardle on 13 October 2022.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

| | |
|-----------|--|
| 53 | Aboriginal sites are recorded in or near the above location. |
| 0 | Aboriginal places have been declared in or near the above location. * |

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(https://www.legislation.nsw.gov.au/gazette\)](https://www.legislation.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Heritage NSW upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not to be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Heritage NSW and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

| SiteID | SiteName | Datum | Zone | Easting | Northing | Context | Site Status ** | SiteFeatures | SiteTypes | Reports | |
|-----------|--------------------------|------------------|--|---------|----------|-----------|----------------|---------------------|----------------|---------------------------|--|
| 37-6-0670 | Loch-1 (St Helena) | GDA | 56 | 354006 | 6380291 | Open site | Destroyed | Artefact : - | Isolated Find | 2985,100792,102646,104572 | |
| | Contact | Recorders | Iain Stuart,Mrs.Angela Besant,Insite Heritage Pty Ltd | | | | Permits | 2183,2421,3053,4168 | | | |
| 37-6-0122 | Lochinvar;Farley;H; | AGD | 56 | 357526 | 6379503 | Open site | Valid | Artefact : - | Open Camp Site | 102646 | |
| | Contact | Recorders | Len Dyall | | | | Permits | | | | |
| 37-6-0989 | Penn Park 1 | AGD | 56 | 357220 | 6380370 | Open site | Valid | Artefact : - | | 4102 | |
| | Contact | Recorders | Jim Ring | | | | Permits | 2279 | | | |
| 37-6-1607 | Lochinvar 1 | AGD | 56 | 355515 | 6380960 | Open site | Valid | Artefact : 2 | | 99841 | |
| | Contact Searle | Recorders | Ms.Penny Mccardle | | | | Permits | 2456,3963 | | | |
| 37-6-1122 | ISF 1 Rutherford | AGD | 56 | 357650 | 6381250 | Open site | Valid | Artefact : 1 | | | |
| | Contact | Recorders | Mary Dallas Consulting Archaeologists (MDCA) | | | | Permits | | | | |
| 37-6-1123 | ISF 2 Rutherford | AGD | 56 | 357200 | 6381200 | Open site | Valid | Artefact : 1 | | | |
| | Contact | Recorders | Mary Dallas Consulting Archaeologists (MDCA) | | | | Permits | | | | |
| 37-6-1423 | Lochinvar 4?A | GDA | 56 | 353990 | 6379510 | Open site | Destroyed | Artefact : 1 | | 100792 | |
| | Contact | Recorders | Mr.Peter Kuskie,MCH - McCardle Cultural Heritage Pty Ltd,Ms.Penny Mccardle | | | | Permits | 2421,3053 | | | |
| 37-6-1425 | Lochinvar 10/A | GDA | 56 | 353910 | 6379920 | Open site | Destroyed | Artefact : 1 | | 100792,104572 | |
| | Contact Searle | Recorders | Mr.Peter Kuskie,Mrs.Angela Besant,Insite Heritage Pty Ltd | | | | Permits | 2421,3053,4168 | | | |
| 37-6-1426 | Lochinvar 20/A | GDA | 56 | 353960 | 6379460 | Open site | Destroyed | Artefact : 1 | | 100792 | |
| | Contact Searle | Recorders | Mr.Peter Kuskie,MCH - McCardle Cultural Heritage Pty Ltd,Ms.Penny Mccardle | | | | Permits | 2421 | | | |
| 37-6-1427 | Lochinvar 20/B | GDA | 56 | 353990 | 6379620 | Open site | Destroyed | Artefact : 1 | | 100792 | |
| | Contact Searle | Recorders | Mr.Peter Kuskie,MCH - McCardle Cultural Heritage Pty Ltd,Ms.Penny Mccardle | | | | Permits | 2421,3053 | | | |
| 37-6-1428 | Lochinvar 21/A | AGD | 56 | 354020 | 6380020 | Open site | Valid | Artefact : 1 | | 100792,104572 | |
| | Contact Searle | Recorders | Mr.Peter Kuskie | | | | Permits | 2421,3053 | | | |
| 37-6-1429 | Lochinvar 21/B | AGD | 56 | 353970 | 6379940 | Open site | Valid | Artefact : 1 | | 100792,104572 | |
| | Contact Searle | Recorders | Mr.Peter Kuskie | | | | Permits | 2421,3053 | | | |
| 37-6-1430 | Lochinvar 21/C | AGD | 56 | 354010 | 6379920 | Open site | Valid | Artefact : - | | 100792,104572 | |
| | Contact Searle | Recorders | Mr.Peter Kuskie | | | | Permits | 2421,3053 | | | |
| 37-6-1431 | Lochinvar 22/A | GDA | 56 | 354026 | 6380081 | Open site | Destroyed | Artefact : - | | 100792,104572 | |
| | Contact Searle | Recorders | Mrs.Angela Besant,South East Archaeology,Insite Heritage Pty Ltd | | | | Permits | 2421,3053,4168 | | | |
| 37-6-1432 | Lochinvar 22/B | AGD | 56 | 353910 | 6379860 | Open site | Valid | Artefact : 3 | | 100792,104572 | |
| | Contact S Scanlon | Recorders | South East Archaeology | | | | Permits | 2421,3053 | | | |
| 37-6-1433 | Lochinvar 22/C | GDA | 56 | 353896 | 6379771 | Open site | Destroyed | Artefact : 19 | | 100792,104572 | |
| | Contact S Scanlon | Recorders | Mrs.Angela Besant,South East Archaeology,Insite Heritage Pty Ltd | | | | Permits | 2421,3053 | | | |

Report generated by AHIMS Web Service on 13/10/2022 for Penny Mccardle for the following area at Datum :GDA, Zone : 56, Eastings : 353850.0 - 357820.0, Northings : 6379200.0 - 6383200.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 53

This information is not guaranteed to be free from error omission. Heritage NSW and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

| SiteID | SiteName | Datum | Zone | Easting | Northing | Context | Site Status ** | SiteFeatures | SiteTypes | Reports |
|-----------|-------------------------------------|------------------|--|---------|----------|-----------|---------------------|--|-----------|---------|
| 37-6-1824 | East Lochinvar Site 6 | GDA | 56 | 356724 | 6380310 | Open site | Destroyed | Artefact : - | | |
| | Contact | Recorders | Umwelt (Australia) Pty Limited - Individual users,Mr.Giles (dup ID#12832) Hamm, Permits 3963 | | | | | | | |
| 37-6-1825 | East Lochinvar Site 7 | GDA | 56 | 356673 | 6380330 | Open site | Destroyed | Artefact : - | | |
| | Contact | Recorders | Mr.Giles (dup ID#12832) Hamm,RPS Australia East Pty Ltd - York Street Sydney ,M Permits 4482 | | | | | | | |
| 37-6-1826 | East Lochinvar Site 8 | GDA | 56 | 356532 | 6380262 | Open site | Destroyed | Artefact : - | | |
| | Contact | Recorders | Mr.Giles (dup ID#12832) Hamm,RPS Australia East Pty Ltd - York Street Sydney ,M Permits 3963,4482 | | | | | | | |
| 37-6-1827 | East Lochinvar Site 9 | GDA | 56 | 356502 | 6380405 | Open site | Destroyed | Artefact : - | | |
| | Contact | Recorders | Mr.Giles (dup ID#12832) Hamm,RPS Australia East Pty Ltd - York Street Sydney ,M Permits 4482 | | | | | | | |
| 37-6-1828 | East Lochinvar Site 10 | GDA | 56 | 356400 | 6380271 | Open site | Destroyed | Artefact : - | | |
| | Contact | Recorders | Mr.Giles (dup ID#12832) Hamm,RPS Australia East Pty Ltd - York Street Sydney ,M Permits 3963,4482 | | | | | | | |
| 37-6-1830 | East Lochinvar Site 2 | GDA | 56 | 355928 | 6380499 | Open site | Valid | Artefact : - | | |
| | Contact | Recorders | Mr.Giles (dup ID#12832) Hamm Permits 4704 | | | | | | | |
| 37-6-1831 | East Lochinvar Site 3 | GDA | 56 | 355955 | 6379972 | Open site | Destroyed | Artefact : - | | |
| | Contact | Recorders | Mr.Giles (dup ID#12832) Hamm,RPS Australia East Pty Ltd - York Street Sydney ,M Permits 4482 | | | | | | | |
| 37-6-1832 | East Lochinvar Site 4 | GDA | 56 | 355955 | 6379972 | Open site | Destroyed | Artefact : - | | |
| | Contact | Recorders | Mr.Giles (dup ID#12832) Hamm,RPS Australia East Pty Ltd - York Street Sydney ,M Permits 4482 | | | | | | | |
| 37-6-1834 | East Lochinvar Site 5 | GDA | 56 | 356195 | 6380016 | Open site | Destroyed | Artefact : - | | |
| | Contact | Recorders | Mr.Giles (dup ID#12832) Hamm,RPS Australia East Pty Ltd - York Street Sydney ,M Permits 4482 | | | | | | | |
| 37-6-1835 | East Lochinvar Site 1 | GDA | 56 | 355811 | 6380701 | Open site | Valid | Artefact : - | | |
| | Contact | Recorders | Mr.Giles (dup ID#12832) Hamm Permits 4704 | | | | | | | |
| 37-6-1944 | Rutherford Employment Area 5 (REA5) | GDA | 56 | 357726 | 6379611 | Open site | Valid | Artefact : 16 | | 101300 |
| | Contact | Recorders | Ms.Penny Mccardle Permits | | | | | | | |
| 37-6-2213 | Christopher Road 1 | GDA | 56 | 355520 | 6380800 | Open site | Destroyed | Artefact : 2 | | |
| | Contact | Recorders | Umwelt (Australia) Pty Limited - Individual users,Mr.Giles (dup ID#12832) Hamm, Permits 3963 | | | | | | | |
| 37-6-2214 | Christopher Road 2 | GDA | 56 | 355457 | 6380305 | Open site | Partially Destroyed | Artefact : 6 | | |
| | Contact | Recorders | Umwelt (Australia) Pty Limited - Individual users,Mr.Paul Irish,Ms.Mary Dallas,Mr. Permits 3963 | | | | | | | |
| 37-6-2217 | LIF3 | GDA | 56 | 354627 | 6380156 | Open site | Destroyed | Artefact : 1 | | |
| | Contact | Recorders | MCH - McCardle Cultural Heritage Pty Ltd,Mr.Paul Irish,Ms.Penny Mccardle,Ms.Mar Permits 3963 | | | | | | | |
| 37-6-2218 | PAD 1 Lochinvar URA | AGD | 56 | 355800 | 6379200 | Open site | Not a Site | Potential Archaeological Deposit (PAD) : 1 | | |
| | Contact | Recorders | Mr.Paul Irish,Ms.Mary Dallas,RPS Australia East Pty Ltd - York Street Sydney Permits | | | | | | | |
| 37-6-2219 | PAD 2 Lochinvar URA | AGD | 56 | 354720 | 6381415 | Open site | Valid | Potential Archaeological Deposit (PAD) : 1 | | |
| | Contact | Recorders | Mr.Paul Irish,Ms.Mary Dallas Permits | | | | | | | |
| 37-6-2220 | St Helena OC1 | AGD | 56 | 354028 | 6379951 | Open site | Valid | Artefact : 2 | | |

Report generated by AHIMS Web Service on 13/10/2022 for Penny Mccardle for the following area at Datum :GDA, Zone : 56, Eastings : 353850.0 - 357820.0, Northings : 6379200.0 - 6383200.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 53

This information is not guaranteed to be free from error omission. Heritage NSW and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

| SiteID | SiteName | Datum | Zone | Easting | Northing | Context | Site Status ** | SiteFeatures | SiteTypes | Reports |
|-----------|--------------------------------|------------------|------|---------|----------|-------------|------------------------|---|---------------------|---------|
| | Contact | Recorders | | | | | | Permits | | |
| 37-6-2221 | Station Lane OC1 | GDA | 56 | 355061 | 6380792 | Open site | Valid | Artefact : 1 | | |
| | Contact | Recorders | | | | | | Permits | | |
| 37-6-2222 | LOC2 | GDA | 56 | 355137 | 6379201 | Closed site | Destroyed | Artefact : 10 | | |
| | Contact | Recorders | | | | | | Permits | 4482 | |
| 37-6-2223 | LOC1 | GDA | 56 | 354091 | 6380106 | Open site | Destroyed | Potential Archaeological Deposit (PAD) :-, Artefact : 11 | | 104572 |
| | Contact | Recorders | | | | | | Permits | 3963,4168 | |
| 37-6-2225 | LOC4 | GDA | 56 | 354551 | 6380185 | Open site | Destroyed | Artefact : 3 | | |
| | Contact | Recorders | | | | | | Permits | 3963 | |
| 37-6-2228 | LCC1 and PAD | GDA | 56 | 355673 | 6381234 | Open site | Partially Destroyed | Artefact : 15, Potential Archaeological Deposit (PAD) :- | | |
| | Contact | Recorders | | | | | | Permits | 3936,3963,4694,4697 | |
| 37-6-2963 | 26 Windemere Rd Site 1 (PAD 1) | GDA | 56 | 354426 | 6380945 | Open site | Not a Site | Potential Archaeological Deposit (PAD) :- | | |
| | Contact | Recorders | | | | | | Permits | | |
| 37-6-2964 | 26 Windemere Rd Site 2 (PAD 2) | GDA | 56 | 354305 | 6381044 | Open site | Not a Site | Potential Archaeological Deposit (PAD) :- | | |
| | Contact | Recorders | | | | | | Permits | | |
| 37-6-2861 | Christopher Road Site 1 | GDA | 56 | 355504 | 6380299 | Open site | Destroyed | Artefact : 1 | | |
| | Contact | Recorders | | | | | | Permits | 3963,4080 | |
| 37-6-2862 | Christopher Road Site 2 | GDA | 56 | 355456 | 6380305 | Open site | Partially Destroyed | Artefact : 1 | | |
| | Contact | Recorders | | | | | | Permits | 3963,4080 | |
| 37-6-2863 | Christopher Road Site 3 | GDA | 56 | 354999 | 6380414 | Open site | Valid | Artefact : 1 | | |
| | Contact | Recorders | | | | | | Permits | 3963,4080 | |
| 37-6-3569 | Anambah SAC 12 | GDA | 56 | 357645 | 6381559 | Open site | Valid | Artefact : - | | |
| | Contact | Recorders | | | | | | Permits | | |
| 37-6-3830 | SITE 11 LOT 310 LOCHINVAR | GDA | 56 | 355523 | 6380268 | Open site | Valid | Artefact : 1 | | 104406 |
| | Contact | Recorders | | | | | | Permits | 4693 | |
| 37-6-3654 | Cantwell Rd 1 | GDA | 56 | 355173 | 6381028 | Open site | Destroyed | Artefact : - | | |
| | Contact | Recorders | | | | | | Permits | | |
| 37-6-3863 | St Helena 2 | GDA | 56 | 354055 | 6380200 | Open site | Destroyed | Artefact : - | | 104572 |

| SiteID | SiteName | Datum | Zone | Easting | Northing | Context | Site Status ** | SiteFeatures | SiteTypes | Reports |
|-----------|--------------------------|------------------|--|---------|----------|-----------|----------------|---|-----------|---------|
| 37-6-3864 | St Helena 3 | GDA | 56 | 354265 | 6379745 | Open site | Destroyed | Artefact : - | | 104572 |
| | <u>Contact</u> | <u>Recorders</u> | Mrs.Angela Besant,Mrs.Angela Besant,Insite Heritage Pty Ltd,Insite Heritage Pty Ltd <u>Permits</u> | | | | | | | |
| 37-6-4189 | Airds of lochinvar PAD1 | GDA | 56 | 356670 | 6380319 | Open site | Valid | Potential Archaeological Deposit (PAD) :- | | |
| | <u>Contact</u> | <u>Recorders</u> | Archaeological Risk Assessment Services (ARAS),Mr.Giles Hamm <u>Permits</u> | | | | | | | |
| 37-6-4190 | Airds of lochinvar PAD 2 | GDA | 56 | 356540 | 6380229 | Open site | Valid | Potential Archaeological Deposit (PAD) :- | | |
| | <u>Contact</u> | <u>Recorders</u> | Archaeological Risk Assessment Services (ARAS),Mr.Giles Hamm <u>Permits</u> | | | | | | | |
| 37-6-4191 | Airds of lochinvar PAD 3 | GDA | 56 | 355909 | 6379924 | Open site | Valid | Potential Archaeological Deposit (PAD) :- | | |
| | <u>Contact</u> | <u>Recorders</u> | Archaeological Risk Assessment Services (ARAS),Mr.Giles Hamm <u>Permits</u> | | | | | | | |
| 37-6-4192 | Airds of lochinvar PAD 4 | GDA | 56 | 356219 | 6380015 | Open site | Valid | Potential Archaeological Deposit (PAD) :- | | |
| | <u>Contact</u> | <u>Recorders</u> | Archaeological Risk Assessment Services (ARAS),Mr.Giles Hamm <u>Permits</u> | | | | | | | |
| 37-6-4231 | HN-SL-A07 | GDA | 56 | 355166 | 6379431 | Open site | Valid | Artefact : - | | |
| | <u>Contact</u> | <u>Recorders</u> | Heritage Now - Belmont, Miss.Lara Tooby <u>Permits</u> | | | | | | | |

**** Site Status**

Valid - The site has been recorded and accepted onto the system as valid

Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

APPENDIX C

Test excavation data

| Pit No | Strat. Unit | Depth | Spit # | Average depth below surface (cm) | Soil pH | Munsell | Disturbances |
|--------|-------------|-------|--------|----------------------------------|---------|-------------|---|
| A1 | 1 | 9 | 1 | 9 | 6.00 | 7.5YR 2.5/1 | grass roots, ants nest, clay nodules throughout, plough ridge |
| A2 | 1 | 21 | 1 | 10 | 7 | 7.5YR 2.5/1 | grass roots, insects, clay nodules throughout, few small rocks |
| | | | 2 | 21 | | | grass roots, insects, clay nodules throughout, few small rocks |
| A3 | 1 | 9 | 1 | 9 | 8.00 | 7.5YR 2.5/1 | grass roots, insects, clay nodules throughout, plough ridge, few small rocks |
| A4 | 1 | 9 | 1 | 9 | 8.00 | 7.5YR 2.5/1 | grass roots, insects, beetles, clay nodules throughout, few small rocks |
| A5 | 1 | 8 | 1 | 8 | 8.00 | 7.5YR 2.5/1 | grass roots, insects, clay nodules throughout, few small rocks |
| B1 | 1 | 14 | 1 | 10 | 7 | 7.5YR 2.5/1 | grass roots, insects, clay nodules throughout, few small rocks |
| | | | 2 | 14 | | | grass roots, insects, clay nodules, slight increase in small rocks |
| B2 | 1 | 14 | 1 | 10 | 7 | 7.5YR 2.5/1 | grass roots, clay nodules throughout, broken glass bottle |
| | | | 2 | 14 | | | grass roots, insects, clay nodules throughout, broken glass, few small rocks |
| C1 | 1 | 8 | 1 | 8 | 6.50 | 7.5YR 4/3 | grass roots, clay nodules throughout, ironstone |
| C2 | 1 | 8 | 1 | 8 | 7.00 | 7.5YR 4/3 | grass roots, insects, broken ceramic pieces, clay nodules throughout, plough furrow |
| C3 | 1 | 14 | 1 | 10 | 7 | 7.5YR 4/3 | grass roots, clay nodules throughout, ironstone pieces |
| | | | 2 | 14 | | | grass roots, insects, clay nodules throughout, few small rocks |
| C4 | 1 | 6 | 1 | 6 | 6.50 | 7.5YR 4/3 | grass roots, clay nodules throughout, ironstone |
| C5 | 1 | 11 | 1 | 11 | 7.00 | 7.5YR 4/3 | grass roots, clay nodules throughout, ironstone |
| C6 | 1 | 12 | 1 | 10 | 7 | 7.5YR 4/3 | grass roots, clay nodules throughout |
| | | | 2 | 12 | | 7.5YR 4/3 | grass roots, insects, clay nodules throughout, few small rocks |
| D1 | 1 | 13 | 1 | 10 | 6 | 7.5YR 4/3 | grass roots, insects, clay nodules throughout, few small rocks |
| | | | 2 | 13 | | 7.5YR 4/3 | grass roots, insects, clay nodules throughout, few small rocks |
| D2 | 1 | 33 | 1 | 10 | 6 | 7.5YR 4/3 | grass roots, clay nodules throughout, plough ridge |
| | | | 2 | 20 | | | grass roots, clay nodules throughout, insects, few small rocks |
| | | | 3 | 30 | | | decrease in roots, small pieces of weathered ironstone |
| | | | 4 | 33 | | | decrease in roots, small pieces of weathered ironstone |
| D3 | 1 | 18 | 1 | 10 | 6.5 | 7.5YR 4/3 | grass roots, clay nodules throughout, ironstone pieces |
| | | | 2 | 18 | | | grass roots, clay nodules throughout, ironstone pieces |
| D4 | 1 | 16 | 1 | 10 | 6 | 7.5YR 4/3 | grass roots, clay nodules throughout, very few small rocks |
| | | | 2 | 16 | | | grass roots, clay nodules throughout, ironstone pieces, plough ridge |
| D5 | 1 | 15 | 1 | 10 | 6 | 7.5YR 4/3 | grass roots, clay nodules throughout, very few small rocks |
| | | | 2 | 15 | | | grass roots, clay nodules throughout, ironstone pieces |
| D6 | 1 | 14 | 1 | 10 | 6 | 7.5YR 3/2 | grass roots, clay nodules throughout, very few small rocks |
| | | | 2 | 14 | | | grass roots, clay nodules throughout, ironstone pieces |
| E1 | 1 | 17 | 1 | 10 | 6 | 7.5YR 4/3 | grass roots, clay nodules throughout, broken ceramic, very few small rocks |
| | | | 2 | 17 | | | grass roots, clay nodules throughout, ironstone pieces |

