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Archaeological Report

Historic Heritage Assessment and Aboriginal Cultural Heritage Assessment

180 Mockingbird Road Pheasants Nest in
Wollondilly Shire

J & R Camilleri C/-Tattersall Lander

14 November 2017
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Prepared by: Viki Gordon Senior Archaeologist

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Prepared For

J & R Camilleri C/-Tattersall Lander

Email: bob@tatland.com.au Telephone: 4987 1500, Mobile: 0408 497 657

PO Box 580 Raymond Terrace NSW 2324

Prepared By

Advitech Pty Limited t/a Advitech Environmental

ABN: 29 003 433 458

Viki Gordon, Senior Archaeologist

Email: viki.gordon@advitech.com.au, Telephone: 02 4924 5400



Facsimile: 02 4967 3772, Web: www.advitech.com.au General Email: mail@advitech.com.au

7 Riverside Drive Mayfield West NSW 2304 PO Box 207 Mayfield NSW 2304

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1. INTRODUCTION

Advitech Pty Limited (trading as Advitech Environmental) was engaged by Tattersall Lander (the customer) to undertake an archaeological assessment on behalf of J & R Camilleri (the Proponents). This report contains an archaeological assessment of both the historic heritage and Aboriginal cultural heritage (the report) of the property known as 180 Mockingbird Road, Pheasants Nest in the Wollondilly Local Government Area (LGA) (the study area; see **Figures 1 & 2**).

It should be noted that this report was prepared by Advitech Pty Limited for J & R Camilleri C/- Tattersall Lander (the customer) in accordance with the scope of work and specific requirements agreed between Advitech and the customer. This report was prepared with background information, terms of reference and assumptions agreed with the customer. The report is not intended for use by any other individual or organisation and as such, Advitech will not accept liability for use of the information contained in this report, other than that which was intended at the time of writing.

Advitech Environmental wishes to show its respect to and acknowledge the Tharawal traditional custodians, elders, and Aboriginal people, past and present of the lands that the study area forms part.

2. QUALIFICATIONS OF THE INVESTIGATOR

Viki Gordon, Senior Archaeologist has over 8 years of experience in Aboriginal archaeological assessments, excavation, research, reporting, analysis and consultation. She also has over 6 years of experience in historical archaeological assessments, excavations, research and reporting. Viki has spent time in remote communities in Arnhem Land and the Northern Territory learning from Aboriginal Elders and communities about traditional and modern Aboriginal culture, tool making, rock art and bush resources

Viki's educational qualifications include a BA (Ancient History), Macquarie University, 2009, Grad. Dip. Archaeology, Flinders University 2013, 'Drawing artefacts' intensive course (Museum of Antiquity, Macquarie University), 'The Archaeology of Stone' intensive course (Dr. Alice Gorman), Flinders University, 'Human Osteology' intensive course (Dr. Keryn Walshe), South Australian Museum, 'Aboriginal Heritage Impact Permits' short course, OEH Sydney, Heritage Advisor Training and Workshop, OEH Sydney and Advanced Lithics short course (Dr. Peter Hiscock), Sydney University.

Viki is a member of the Australian Archaeological Association, the Australia Society of Historical Archaeologists and the World Archaeological Congress. Viki is also a qualified property conveyancer with over 20 years of experience in property laws, title searching, contracts and related negotiations.

3. BACKGROUND AND OBJECTIVES

The purpose of this report is to undertake an investigation of the study area at 180 Mockingbird Lane, Pheasants Nest, for archaeological features or objects and to determine the archaeological sensitivity of the site (if any). The assessment is undertaken to provide a definitive heritage perspective of the property prior to the upgrade, development and operation of a poultry farm consisting of 7 sheds and ancillary requirements (see **Figure 1**).

This report will be appended to an Environmental Impact Statement (EIS), which addresses environmental considerations identified in the Secretary's Environmental Assessment Requirements (SEARs) 1107 relevant to heritage.

The Historic Heritage Assessment (see **Part 6**) has been prepared in accordance with:

- *Heritage Act 1977* (NSW) (Heritage Act);
- *Environmental Planning and Assessment Act 1979* (NSW) (EPA Act);
- The Burra Charter, 2013 (adopted 31.10.13); and
- NSW Heritage Manual.

The Aboriginal Cultural Heritage Assessment (see **Part 7**) has been prepared in accordance with:

- *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010A) (ACHCRP);
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW, 2010B) (CoP); and
- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW*. (NSW Office of Environment and Heritage, 2011).

4. THE STUDY AREA

The study area is situated within Lot 264 in Deposited Plan 625326 and described as 180 Mockingbird Road, Pheasants Nest (see **Figure 1**). The study area is located within the Local Council area of Wollondilly, County of Camden and the Parish of Bargo. It is approximately 70km south east of Sydney, 27km north east of Wollongong and 31km north west of Bowral (see **Figure 2**). The project area comprises approximately 16 hectares, of which approximately 8.92 hectares will be utilised for the poultry farm operation.



Figure 1: Aerial view of study area (Source: Sixmaps.nsw.gov.au)

The area of Pheasants Nest is largely rural with industries such as market gardens, existing poultry facilities and small stocks of sheep or cows being common. There is only a small community recorded in the 2011 Australian Government census consisting of 188 occupied residences and 592 people (ABS 2011).

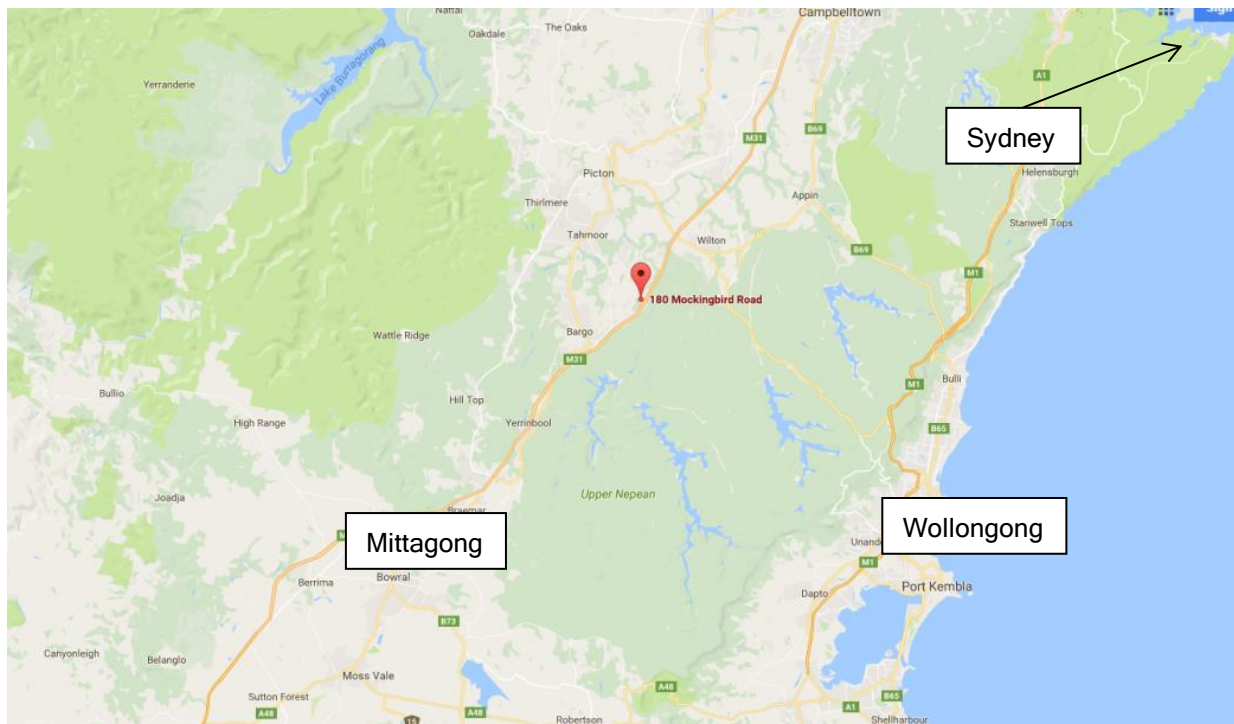


Figure 2: Regional location of study area (Source: Google maps)

5. PROPOSED IMPACTS

The principal objectives of this study were to identify, evaluate and, if necessary, propose appropriate management protocols for material cultural evidence located in the study area and or at some risk from direct or peripheral effects of the project. **Figures 3, 4 and 5** illustrate those areas that will be affected by the proposed impacts, at the time of writing this report, which will include:

- Limited clearing and removal of vegetation;
- Removal and stockpiling of topsoil;
- Earthworks to reconfigure site for construction of poultry sheds, including removal of existing dams and excavation of new dams;
- Construction of 7 tunnel-ventilated poultry sheds and associated infrastructure (feed silos, water tanks, gas supply tanks, machinery and litter sheds, worker's amenities, vegetated noise and odour mounds);
- Construction of 1 new dwelling;
- Composting of used litter material and disposal of dead birds on site;
- Haulage to site (new chicks, feed deliveries, etc) and from site (grown birds); and
- Site rehabilitation.

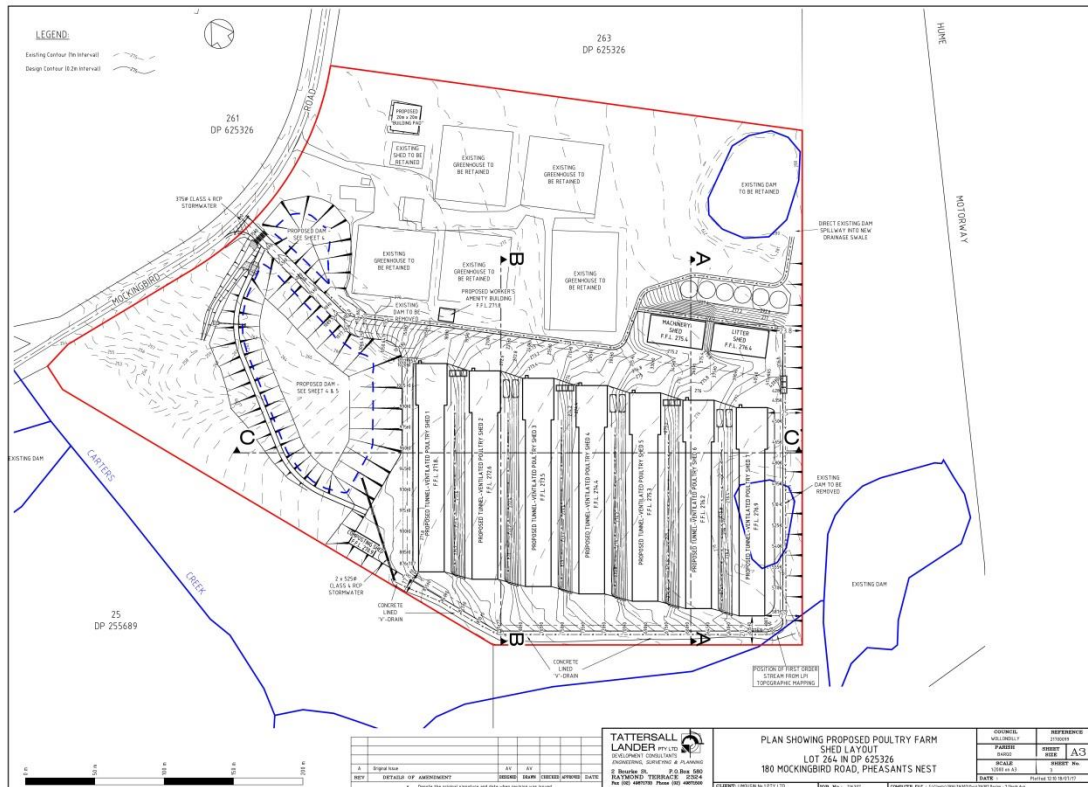


Figure 3: Proposed development design (Source: Tattersall Lander)

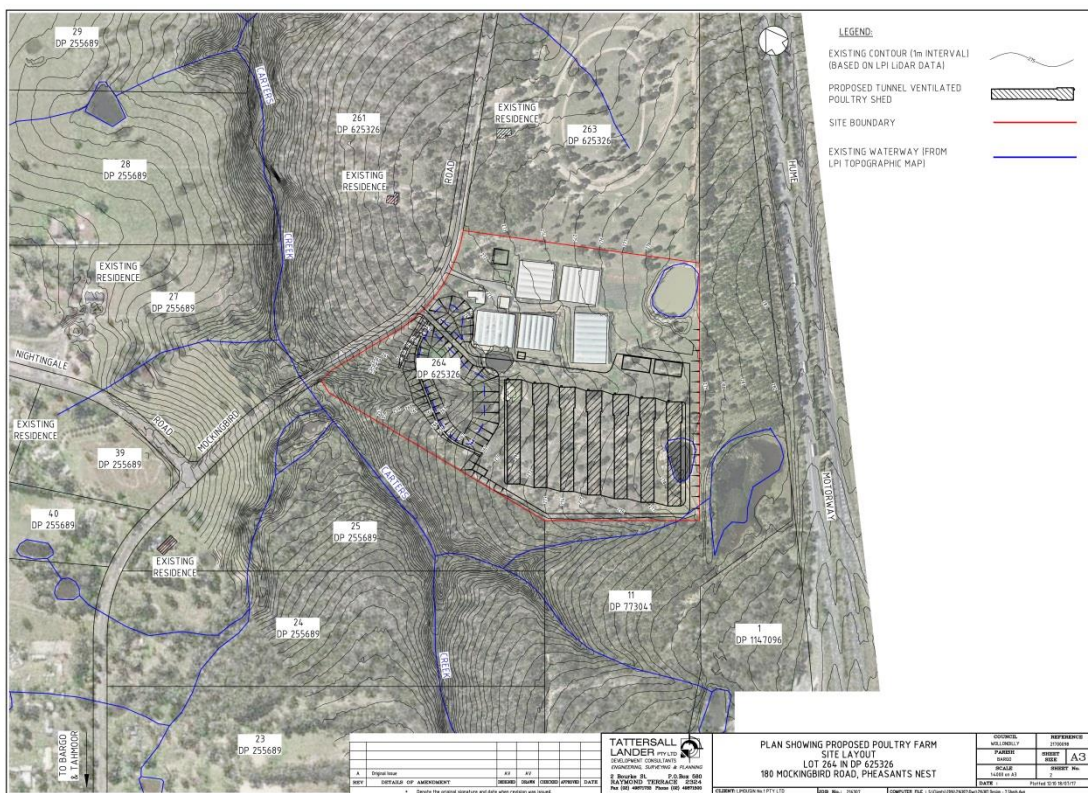


Figure 4: Aerial and topographic view of proposed development design (Source: Tattersall Lander)



LEGEND



Figure 5: Cut and fill proposed for development (Source: Tattersall Lander)

6. ENVIRONMENTAL FACTORS

Environmental factors and geomorphology affect the degree to which cultural materials have been preserved in the face of both natural and human influences. They also affect the likelihood of objects being detected during ground surface survey. It is therefore necessary to have an understanding of the geomorphology and environmental factors, processes and activities as they affect site location, preservation, and detection during surface survey. All of these contribute or negate the likelihood of finding *in situ* subsurface cultural materials being present. These factors, processes and disturbances of the surrounding environment and the specific study area are discussed below.

6.1 Landforms and Topography

Details of the landforms and specific topographical context of the study area are important to identify potential factors relating to past land use patterns and the archaeology of human cultural remains. Cultural remains are part of these systems resulting from human interactions within landscapes of the past.

From about 110,000 years ago, the global climate became colder and drier with temperatures reaching their lowest between 22,000 and 19,000 years ago during a period known as the Last Glacial Maximum (LGM) (Yokoyama *et al*/2000). There is little factual evidence for what conditions were like within lowland eastern Australia during this time. However, it is generally agreed, that sea levels were lower than present day, and the shoreline of the east coast is thought to have been at least 20km east of its current position. **Figures 6, 7 and 8** depict the current landforms and topography of the study area. The region of the study area is represented by gently undulating plateau surfaces and ridges, 200 to 1000 metres wide with level to gently inclined slope gradients of <10% and local relief of <30 metres (Hazelton and Tille 1990).

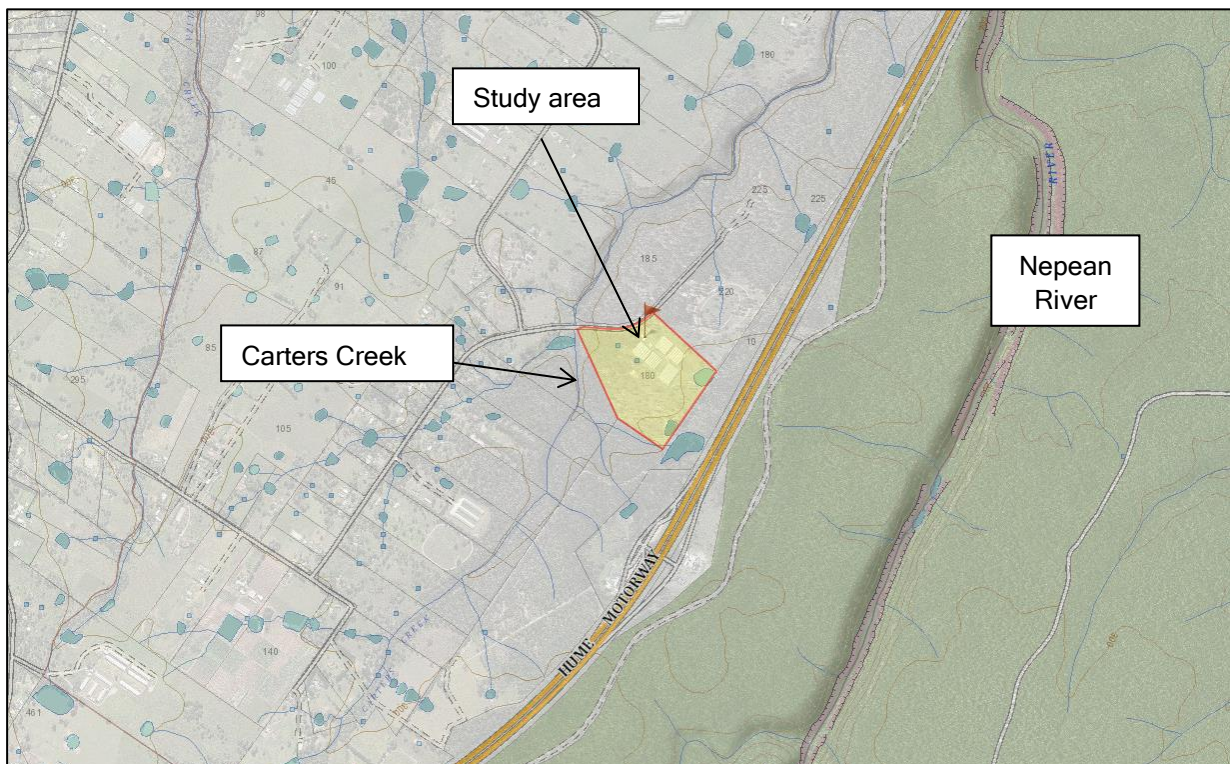


Figure 6: Topographical map of study area and surrounding locality (Source: Six Maps)

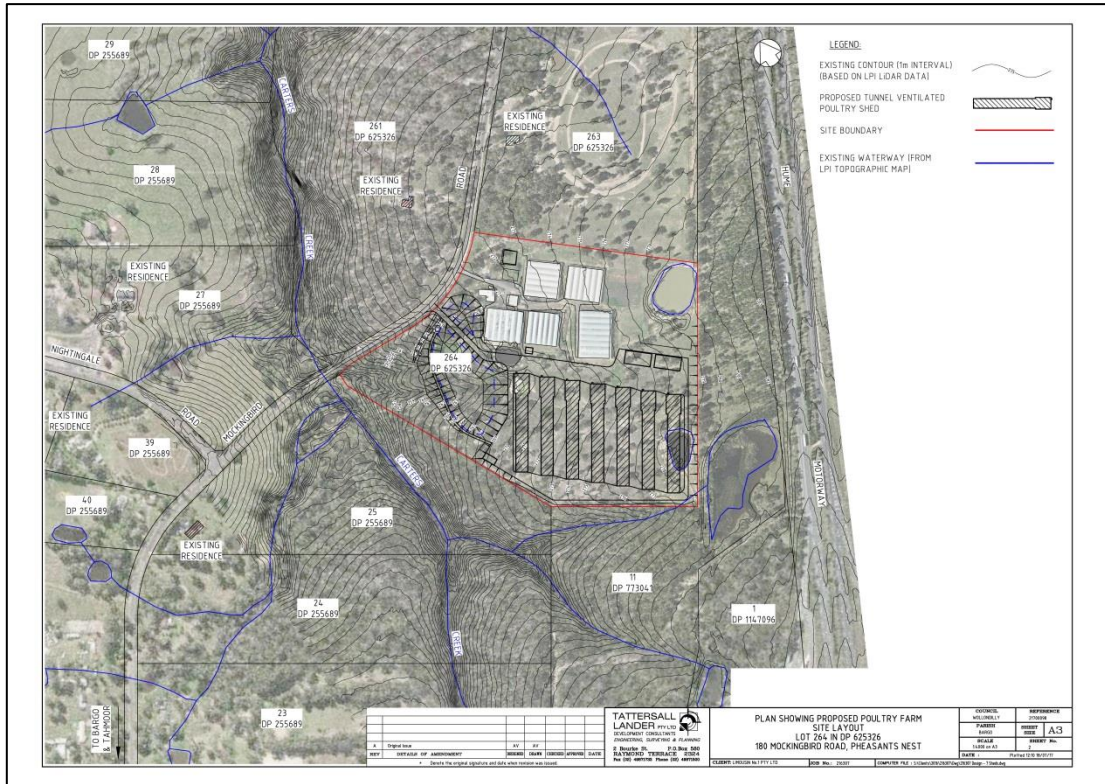


Figure 7: Aerial view of study area with contour lines (Source: Tattersall Lander)

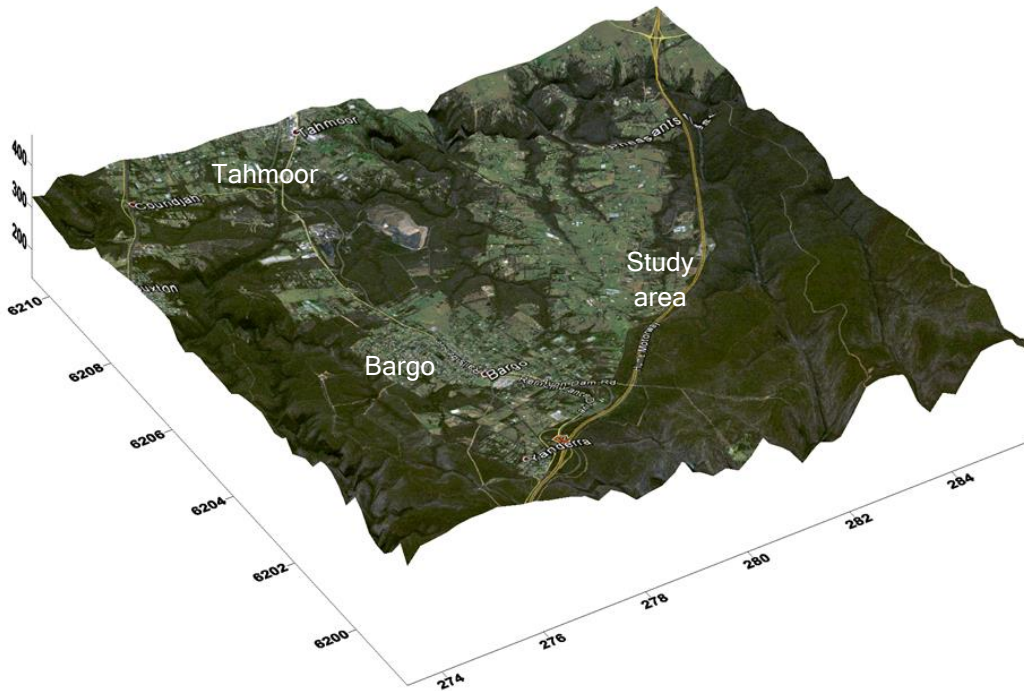


Figure 8: Topography of study area showing elevations

The physio geography of the study area belongs to the Cumberland lowlands group which extends north of Bargo and eastwards to the Blue Mountains Plateau (Hazelton and Tille 1990). With the exception of the nearby Razorback Mountain range, the Cumberland lowlands consist of low lying, gently undulating plains and low hills on Wianamatta groups, shales and sandstone. Adjoining the Cumberland lowlands to the east is the Woronora Plateau, to the south east is the Illawarra Escarpment and to the south west is the Blue Mountains Plateau. The landscape is characterised as being limited by stoniness, hard setting surfaces and low soil fertility (Hazelton and Tille 1990). The study area itself consists of a largely cleared, gently sloping, north west facing, slope. The eastern boundary is 120m west of the present Hume Highway.

Surface water from the property drains into Carter Creek, which flows northward into Nepean River. At the closest point, this creek is located within 20m of the north western corner of the property.

6.2 Geology

In regard to assessment of Aboriginal land use particularly, the location of resources or raw materials and their procurement for manufacturing and modification for stone tools assists with occupation models. Usually, evidence of stone extraction, and manufacture, can be predicted to be concentrated in the areas of stone availability. However, stone can also be transported for manufacture and/or trading across the region.

The study area is within the southern part of the Permian Triassic Sydney Basin. The Sydney Basin is a major structural basin containing a thick Permian-Triassic sedimentary sequence formed between 290 and 200 million years ago and containing all the known large coal fields in New South Wales and Queensland (Australia Museum 2016). The area is considered to be part of the Pheasants Nest formation which is a sub category of the Cumberland Subgroup and is in the south to south western portion of the Sydney Basin. The Sydney Basin began by crustal rifting during the Early Permian. It is filled with near horizontal sandstones and shales of Permian to Triassic age that overlie the Lachlan Fold Belt. During the middle Triassic the basin was uplifted and became dry land. Coal deposits accumulated and large braided rivers, with headwaters hundreds of kilometres away flowed from the northwest depositing quartz and Hawkesbury Sandstone (Bamberry 1991).

The natural geology underlying the site belongs to the Mittagong formation which consists of interbedded shale and fine to medium grained quartz sandstone (Hazelton and Tille 1990). The Mittagong formation is relatively shallow with minor and sporadic surface soils of Hawkesbury sandstone and Ashfield shale. Early Permian sediments were deposited during the latter phases of the longest interval of severe sustained glaciations in the Phanerozoic period which spanned approximately 30 million years. Generally, the Permian rocks are only moderately resistant. No sandstone platforms and outcrops were observed over the majority of the cleared areas of the property. However, weathered, relatively small, Sydney Hawkesbury sandstone outcrops were noted in the north western corner of the study area and particularly along 2 unnamed drainage line that feeds to the nearby Carter Creek (see **Photos 1 & 2**). The outcrops did not have any sign of Aboriginal modification such as grinding grooves and presented tessellated and weathered surfaces largely unsuitable for petroglyphs.



Photo 1: Looking south east at Hawkesbury sandstone outcrops in the north western corner of the study area (taken 2 February 2017)



Photo 2: Looking north west, towards greenhouses, from southern boundary, across area to be impacted (taken 2 February 2017)

6.3 Pedology and Soils

The soil profile belongs to the Lucas Heights (1h) residual soil landscape (NSW Department of Industry, Resources and Energy 1: 250,000 datasets). This soil landscape is characterised by moderately deep (50 to 150cm), hard setting Yellow Podzolic Soils and Yellow Soloths on ridges and plateau surfaces with earthy sands in valley flats (Hazelton and Tille 1990).

Soils in the study area are typified by topsoil (1h1) of loose greyish brown fine sandy loam. The pH ranges from very strongly acidic (pH 4.5) to slightly acidic (pH 6.5). At soil horizon 1h2, also considered to be topsoil, a bleached stony, hard setting, sandy clay loam is found. This soil sets hard when exposed, with apedal massive structure and a slowly porous earthy fabric (Hazelton and Tille 1990; see **Photos 3 & 4**). Depth varies between one and two metres. The fertility of the soil is low with low available water holding capacity and very low nutrient levels.



Photo 3: Looking north east towards drainage line at exposed topsoils of loose greyish brown fine sandy loam (taken on 2 February 2017)



Photo 4: Looking south west at stony, hard setting clay loam (taken on 2 February 2017)

6.4 Hydrology

Water supply is a significant factor influencing peoples' land use strategies. Large and permanent water supplies may have supported large numbers of people for long periods of occupation while small and ephemeral water supplies may have been able to support only small numbers of people and/or transient occupation (Veth 1993). It is thought that Aboriginal people would, normally, not have camped far from reliable sources of water except in the case of trade or in search of resources. Similarly, historic non-Aboriginal settlement of areas was only possible and sustainable if there was a reasonable supply of fresh water available. The usual main types of available water sources include permanent (rivers and soaks), semi-permanent (large streams, swamps and billabongs), ephemeral (small stream and creeks) and underground.

The study area is within the lower Nepean-Hawkesbury water catchment area. Across the property there are currently five areas of water retention incorporating dams, reservoirs and water tanks (see **Photo 5**). It was assessed that the study area itself was lowly resourced, in terms of water availability. Two identifiable drainage lines exist in the western corner which flow downslope towards Carters Creek. At the time of inspection the most eastern drainage line had a small amount of water visible in the depression. The adjoining and more westerly drainage appeared to be dry. A first order stream, in accordance with Strahler's (1952) stream order classifications, derives from the east, crosses the south eastern corner of the study area and also flows towards Carters Creek (see **Figure 9**). Carters Creek, a third order stream, does not exist within the study area but flows across the adjoining property to the south west and drains to the Nepean River. The study 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 (Strahler's (1952). On this basis, the study area has no reliable water source.



Photo 5: Large dam in the north eastern corner of the study area (taken on 2 February 2017)

Proximity to water influences not only the number of Aboriginal sites likely to be found but also the artefact densities. This assertion is supported by the regional archaeological investigations carried out where such patterns are typically within 50 metres of a reliable water source (see **Section 8.2**). When assessing the relationship between sites and water sources it must be noted that the Australian continent has undergone significant environmental changes during the past 60,000 years. Pleistocene sites (older than 10,000 years) would have been located in relation to Pleistocene water sources that may not exist today.

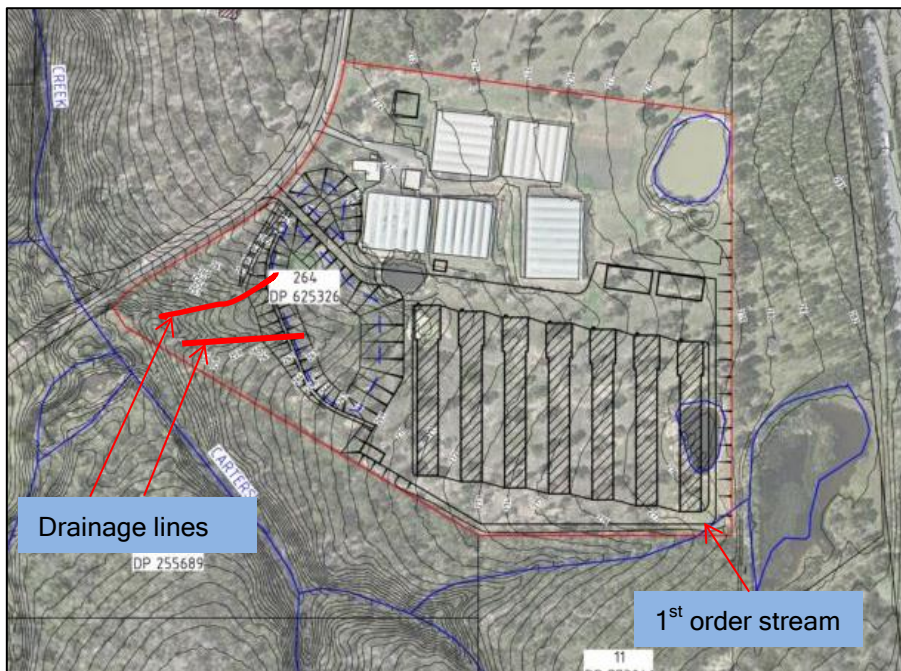


Figure 9: Drainage lines and stream within the study area

6.5 Flora and fauna

The availability of flora and fauna resources within the study area, alongside the availability of water sources (see **Section 5.4**), are factors that heavily influence patterns of past land use and occupation, both Aboriginal and non-Aboriginal.

The majority of the study area has been subjected to past vegetation removal but once consisted of a eucalypt low woodland, with a sclerophyllous shrub, sedges, forbs and grasses understorey. Eucalypt appears to be the dominant tree species. Species common to area include *Corymbia gummifera* (Red Bloodwood), *Eucalyptus punctata* (Grey Gum), *Syncarpia glomulifera* (Turpentine), *Persoonia linearis* (Narrow leaved Geebung), *Leptospermum trinervium* (Flaky barked Tea-tree), *Acacia ulicifolia* (Prickly Moses), *Lomandra obliqua* (Fishbones), *Pomax umbellate* and *Themeda australis* (Kangaroo Grass) (Hazelton and Tille 1990).

The flora and fauna, combined with the drainage throughout the study area, would have supported a limited range of faunal populations including kangaroo, wallaby, wombat, goanna, snakes, turtles, eels, fish and birds.

6.6 Landscape history, uses and disturbances

The history of the landscape and its past and present uses and disturbances, are important to the interpretation of archaeological evidence and what may remain. Occupation of Australia by Aboriginal people is currently thought to have commenced at least 20,000 to 60,000 years prior to arrival of the European settlers. The environments of five broad time periods can be reconstructed within which the archaeological resources of the eastern coast of Australia can be evaluated:

- The Late Pleistocene (>40,000 years ago) is thought to overlap with the time Aboriginal people first settled in the Hunter Valley;
- The Last Glacial Maximum (LCM) (peaked around 20,000 years ago) during which people adapted to significant climatic and environmental change;
- The Holocene (the last 10,000 years) that saw sea levels and positions stabilise at their current positions;
- The landscape in c.1790 as it was immediately before European settlers arrived; and
- The last 200 years when the landscape was dramatically altered by European settlement and land use practices.

There are very few direct lines of evidence (archaeological, ecological, and geomorphic) that document what the landscape in Pheasants Nest was like prior to European settlement. The earliest descriptions of colonists describe the nearby Bargo Brush as dense vine forests and scrub in places which formed impenetrable corridors along the banks of the rivers and creeks (SMH 1865).

Land over the majority of the property has been somewhat disturbed and modified through clearance of vegetation and previous pastoral practices. Part of the study area is currently used as a commercial market garden (see **Photos 2 to 8**). Dormer sheep currently graze on small remnant areas of grass and have access to a large area of the property (see **Photo 7**). Small areas of remnant (although secondary growth) vegetation remains. Five dams/water tanks have been excavated and retained with embankments. A variety of fences separate the study area into a residential area, market garden infrastructure, dams/water tanks and paddocks. In the area of Pheasants Nest, relatively little development has taken place and it is still a mainly semi-rural to rural area. Due to the low fertility and hard setting of the surface soils (see **Section 6.3**), surrounding development and land use consists

mainly of roadworks, dams, residences, poultry farms and market gardens. The developed part of the property is considered to be moderately to highly disturbed.

Current disturbances on the property include residential, ancillary and commercial structures, market gardens; dams and drainage lines; fencing; sheep grazing; alteration of land surfaces by grading, fill or excavation; sheet and gully erosion and historical and modern clearance of vegetation on the property (see **Photos 2 to 9**).



Photo 6: Looking north west at disturbed area proposed for impact (taken on 2 February 2017)



Photo 7: Dormer sheep and market garden facility at the north eastern boundary of the property (taken 2 February 2017)



Photo 8: Looking north east at market garden facility (taken 2 February 2017)



Photo 9: Looking south at area proposed for impact (taken 2 February 2017)

7. HISTORIC HERITAGE ASSESSMENT

Heritage places and landscapes can include natural resources, objects, customs and traditions that individuals and communities have inherited and wish to conserve for future generations. Cultural heritage comprises places and items that may have historic, scientific, cultural, social, archaeological, architectural, natural or aesthetic significance at a local, State, National or International level.

Under Sections 139 and 140 of the NSW Heritage Act, a person may not disturb or excavate land to discover, expose or move a relic without first obtaining the permission of the Heritage Council.

The Heritage Act defines a relic as being any deposit, object or material evidence:

- (a) which relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement; and
- (b) which is fifty or more years old.

The historical archaeological context refers to any remaining physical evidence of the past. This can include below ground evidence such as building foundations, occupation deposits, features and artefacts and above ground evidence including buildings that are intact or ruined, or landform features such as retaining walls or drainage lines. Once an item is considered to be a relic, its significance is then assessed (see **Section 7.6**).

This historical research is based upon the use, occupation and development of the study area and its surrounds. Research has concentrated upon facets relevant to heritage and archaeological study and has been compiled from primary source material and secondary source literature.

7.1 Methodology

The methodology undertaken for this heritage assessment included:

- Undertaking primary and secondary research on the study area in order to provide a referenced historic summary (see Sections 7.3 and 7.4);
- Conducting statutory and non-statutory heritage database;
- Searches including the NSW State Heritage Register (SHR), NSW State Heritage Inventory (SHI), Local Environmental Plans (LEP), Relevant Section 170 Registers (S170), the Commonwealth Heritage List and National Trust Heritage List (NT);
- Conducting a site inspection of the study area;
- Undertaking heritage assessments of any potential heritage items, if any, identified through the research and site inspection; and
- Providing a statement of significance for each heritage item assessed, if any.

7.2 Heritage registers and inventories

Heritage registers and inventories are lists of identified heritage items that record known archaeological resources at local, State and National levels. The registers may provide information on comparative sites which can be used to assist in the interpretation of archaeological evidence and also in the evaluation of the relative significance of historical/archaeological heritage material.

Statutory and non-statutory heritage database searches included the NSW State Heritage Register (SHR), NSW State Heritage Inventory (SHI), Wollondilly Local Environmental Plan 2011 (LEP),

Relevant Section 170 Registers (S170), Commonwealth Heritage List and National Trust Heritage List (NT). These searches revealed that there are no items of heritage at either Local, State or National level within 1 kilometre of the study area.

However, the following heritage sites are noted as being in the wider local vicinity:

- Farm at 280 Pheasants Nest Road, Pheasants Nest (late 19th century farm dwelling);
- Farm at 45 Lawson Road, Pheasants Nest (Victorian period rural cottage);
- Farmhouse at 160 Dwyers Road, Pheasants Nest (Federation period homestead);
- Wilton Park Road, Wilton (Australia thoroughbred stud established by Samuel Hordern);
- Tahmoor Railway Station Group;
- Bargo Railway Viaduct;
- The Nepean Dam; and
- The Wirrimbirra Sanctuary (natural place listed by National Trust).

7.3 Regional Historical Context

The region surrounding Pheasants Nest includes the areas of Bargo, the Nepean Dam, Picton and Bowral. European explorers first investigated the area around 1798 (Chisolm 1955). In 1815, Governor Lachlan Macquarie crossed the Bargo River near its junction with the Nepean River during a visit to the 'Cowpastures' and the nearby property of John Oxley, the Surveyor-General of New South Wales, who was running cattle near Bargo (Macquarie 1815).

A newspaper article from 1820 (Sydney Gazette), refers to Bargo as the western limits of the Cow Pastures reserve for Government Stock (see **Figure 10**). Passports were required by private citizens to cross the area so as to ensure the intermingling of Government and privately owned stock.

The name 'Bargo', is thought to have derived from the local Aboriginal name for the area, and was noted by George Caley in a letter to Sir Joseph Banks on 25 September, 1807 (Reed 1973). Early explorers and convicts found getting through the Bargo area found it a difficult experience due to the thick scrub which was dubbed the tricky 'Bargo Brush' (SMH 1865). In early Colonial times, 'Bargo Brush' became notorious among travellers as a place that harboured escaped convicts who became bushrangers (Appleton 1993).

At Appin, in 1816, European settlers forced local Aboriginal people off a cliff face and shot them if they refused (Fowler 2005). See **Section 8.4.2** for further details of Aboriginal History.

Picton Township, which lies approximately 10 kilometres to the north of the study area, was first settled in 1821 and is one of Australia's oldest town settlements. The Bargo River provided the first water supply for the settlement (Vincent, 2006). Following the opening of the Picton to Mittagong railway line in 1867, and siding in 1878 at Big Hill Upper (later called Hill Top), settlement of the local area began to expand. The railway line ran along the ridge to the west of what is now known as the Bargo River State Conservation Area, but in 1919 the line was deviated through Yerrinbool to the east of the park, and this became the new route for the main southern railway line (OEH 2015).

Bowral lies approximately 30 kilometres north west of the study area and was first settled by John Oxley under a grant of 2400 acres in 1823.

2d. As the Range of Country called and known by the Name of the “*Cow Pastures*” is to be, for a further Period, reserved for the Use of the Wild Cattle belonging to Government, the Public will take Notice that the said *Cow Pastures* extend to the Western Limits of the Country called “*Bargo;*” and it being of the utmost Importance that every Precaution should be used to guard against the Herds and Flocks of private Persons intermingling with those of Government, it is ordered and directed, that such Persons, as shall send their Herds or Flocks to the Country lying between the Cow Pastures and Cookbundoou Range, shall drive them directly, and without any unnecessary Delay, through the Entire of the *Bargo Brush* to the New Country beyond, and to the West of the said Brush; on Pain of their being seized & impounded for Trespass.

3d. That, in Compliance with the standing Orders, prohibiting Persons passing through the Cow Pastures without a special Authority from His EXCELLENCY, or his Secretary, addressed to the Constables on Duty therein, all Persons, meaning to avail themselves of the present Indulgence, are required to furnish to His EXCELLENCY’S Secretary an Account of the Number and Description of the Cattle they propose sending for Pasturage to said New Country, whereon they will receive Passports for them to proceed through the Cow Pastures. The

Figure 10: Pg.1, Government and General Orders, The Sydney Gazette, 2 December 1820

7.4 Local historical context

The study area exists within the County of Camden, the Parish of Bargo and in the locality of Pheasants Nest. Research has revealed little information about the naming of Pheasants Nest. However, given the discovery of the lyrebird in the area, and given the lyrebird was first called a ‘native pheasant’ (Lunney et. al. 2010), it is not difficult to surmise that the area was probably named for that discovery (Wollondilly Shire Council 2017).

Settlement of the area largely dates from the 1820’s when the Great South Road was built. Several land grants were made in 1822, although it is considered that growth of the area was slow due to poor soil (Wollondilly Shire Council 2017). Some growth took place from 1919, especially in Bargo, aided by the opening of the two track railway line. Bargo became a retail and service centre from the 1930s to the 1960s. However, with the building of the freeway bypass in the 1970s, population growth slowed. The population increased gradually from the early 1990s as new dwellings were added to the area.

On 1 November 1822, a Crown Grant of 700 acres, being portion 79 of the Bargo Parish, was granted to Prosper de Mestre (see Figure 11). The Crown Land Act, 1861 (NSW) was introduced by New

South Wales Premier, John Robertson, and provided for settlers to make a selection of any leasehold property before survey and introduced conditional purchase of Crown land (LPI 2013).

The western boundary of the Crown Grant portion was defined by 'The Stream or Eliza Creek'. The eastern boundary is on roughly the same alignment as that which exists for the study area (LPI Parish Map 6th edition, 1894; Certificate of Title Volume 14788 Folio 51). The grant was on the condition that de Mestre maintain and employ seven convicts on the property (Walsh 1966).

Jean Charles Prosper De Mestre (1789-1844) was a free settler who became a naturalised Australian on the basis that he was born at sea in a British ship on the way to the West Indies (Walsh 1966). However, it is thought that perhaps De Mestre was actually born in France but misinformed the British Government in order to obtain British/Australian citizenship (Walsh 1966). Prosper's commercial interests were mainly in shipping and whaling, but he also became active in other areas. Between 1823 and 1842 he was elected a director of Sydney and Van Diemen's Land Packet Company, became a member of the committee of the Agricultural Society of New South Wales, a director of the Bank of New South Wales, a director of the Australian Marine Assurance Company and the founder of the Mutual Fire Insurance Company of Sydney (Walsh 1966). Jean Charles passed away, in a bankrupt state, in 1844. However, there is no mention of the sale of his 'West Bargo' property in the payment of outstanding debt. Jean Charles had a son called Prosper John de Mestre. It is likely that the Prosper de Mestre on the Parish Maps refers to this son due to the relevant dates.

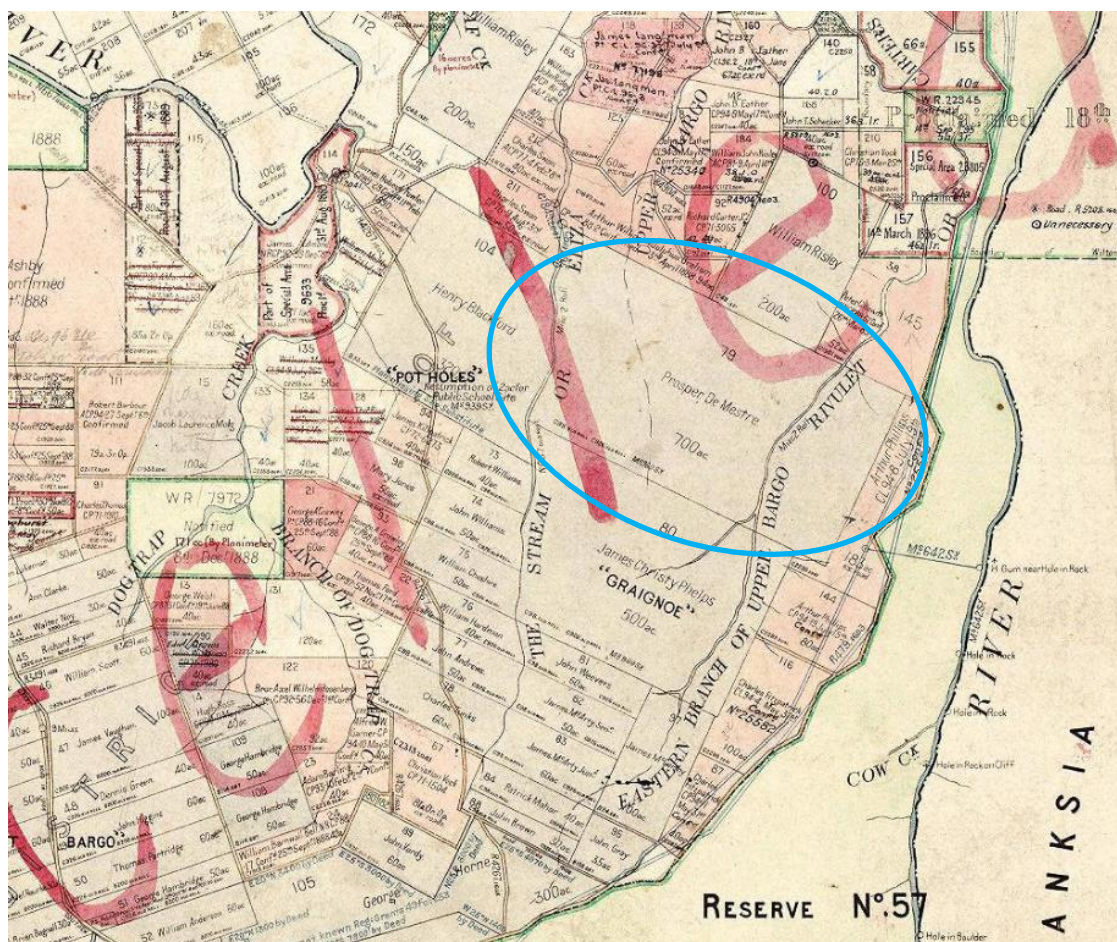


Figure 11: Parish map of Bargo 1894

In 1827, a large part of the Pheasants Nest area, incorporating Portion 79, was proclaimed as a 'Bird and Animal Protection District'. After 1901 and before 1907, the area was declared as the Nepean and Warragamba Rivers Storage Catchment Area. In 1917, the Pheasants Nest area was proclaimed as a State Coal Mine Reserve (Parish Map Bargo 1917 Edition 10). Sometime after 1973, the Eastern Australian pipeline was granted an Easement through Portion 79 although this is not running through the study area.

In 1978 the study area formed part of Lot 26 in DP255689 and was owned by Hamilton Mining Pty Limited. Nearby Nightingale Road was created from this subdivision. The property was transferred in 1980 to Colin Buckley and Robyn Blackburn. In 1982, a subdivision of this Lot 26 created the existing lot 264 in DP625326 and the property was transferred to Carol Wilma Yu. The study area was again transferred in 2000, 2011 and lastly in 2016.

Council records indicated that the existing residence and poultry sheds were constructed with Development Approval.

No items of historical significance were found within the study area and there is no historical evidence to suggest the presence of a potential archaeological deposit from previous historical use of the property.

7.5 NSW Heritage Office assessment criteria

The NSW heritage assessment criterion encompasses the four values in the Australia ICOMOS Burra Charter and these four broad values are used to assess the heritage significance of an item. It is important for items to be assessed against these values to ensure consistency across the State. While all four values should be referred to during an assessment, in most cases items will be significant under only one or two values. The four values are:

- Historic significance;
- Aesthetic significance;
- Scientific significance; and
- Social significance.

In order to apply a standardised approach to the assessment of these four values, the NSW Heritage Office (2001) has defined a series of seven criteria that will be used by the Heritage Council of NSW as an assessment format within NSW. To be assessed as having heritage significance, an item must meet at least one of the criteria detailed below. The seven criteria address:

- **Criterion (a)** the importance of an item in the course or pattern of the cultural or natural history of NSW or a local area [historical].
- **Criterion (b)** the existence of a strong or special association between an item and the life or works of a person or group of persons important in NSW or local cultural or natural history [historical].
- **Criterion (c)** the importance of an item in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW or a local area [aesthetic].
- **Criterion (d)** the existence of a strong or special association between an item and the social, cultural or spiritual essence of a particular community or cultural group within NSW or a local area [social].
- **Criterion (e)** the potential of an item to provide information that will contribute to an understanding of the cultural or natural history of NSW or a local area [scientific].

- **Criterion (f)** the quality of an item to possess uncommon, rare or endangered aspects of the cultural or natural history of NSW or a local area [rare degree of significance].
- **Criterion (g)** the demonstration by an item of the principal characteristics of a class of cultural or natural place or cultural or natural environment within NSW or a local area [representative degree of significance].

The assessment of an item's significance depends upon its identifiable cultural, community, historical or geographical context:

- Local level identifies the item as being significant within an identifiable local and/or regional cultural and/or community group and/or historical/geographical heritage context;
- State level identifies the item as being significant within an identifiable State-wide cultural and/or community group and/or historical/geographical heritage context;
- National level identifies the item as being significant within an identifiable national cultural and/or community group and/or historical/geographical heritage context; and
- International level identifies the item as having implications of significance for an identifiable cultural and/or community group both nationally and abroad and/or a world-wide historical/geographical heritage context.

7.6 Assessment of heritage items in the study area

This Section provides a discussion and explanation of the significance of the study area in relation to the criteria specified by the NSW Heritage Council as detailed above.

Criteria (a) and (b) relate to the study area and its historical beginnings. The study area has not been identified as being associated with any important item or persons important to local or State history. The study area is not considered to be significant at a local, State, National or International level.

Criterion (c) relates to aesthetic significance and is not demonstrated within the study area: The current improvements are of modern construction and the vistas and views afforded from the house are limited due to its lower lying position in the surrounding landscape. In the context of the overall study area, aesthetic significance is not demonstrated.

Criterion (d) relates to the social significance of the study area. This criterion is not met as there is no known association with an identifiable social group nor is the study area known to contribute to any community sense of place.

Criterion (e) relates to the scientific potential of the study area. The study area is considered to have no remaining evidence of historical development and has been modified. The study site is considered to have no significant archaeological or research potential.

Criterion (f) relates to rarity and is not relevant to the study area. The surrounding lots to the study area are also representative of rural subdivisions.

Criterion (g) relates to the study area and its position in a cultural rural landscape. The Burra Charter (1999) defines place as "site, area, land, landscape, building or other work, groups of buildings or other works, and may include components, contents, spaces and views". A setting is defined as "the area around a place, which may include the visual catchment" and may contribute to its significance. Cultural landscapes can include homesteads and farmlands, remnant vegetation, Aboriginal sites and

places, wetlands, early settlements, parklands, disused cemeteries, defunct industrial complexes and so on. There are three categories of cultural landscape to consider:

- Designed - clearly designed and created intentionally by people. Embraces garden and parkland landscapes constructed for aesthetic reasons which are often (but not always) associated with religious or other monumental buildings and ensembles;
- Evolved - a result of the connection and/or interaction between an intentional design and the landscape in which it sits, its present form developed by association with and in response to its natural environment; and
- Associative - identifiable connection between religious, artistic or cultural associations and the natural landscape rather than material cultural evidence. As urban expansion occurs, and with the pressures to develop and redevelop, cities and towns are losing open spaces, cultural landscapes, green corridors and amenity. The NSW Heritage Office has identified the depletion of cultural landscapes as an important issue threatening the cultural values and lifestyles of our cities.

The study area is an evolved landscape resulting from housing, farming structures, vegetation clearing, the construction of dams and drainage lines, pastoralism, market gardening, fencing and flooding. The landscape is not considered to be significant, rare or representativeness at local, State or National level.

7.7 Physical and Heritage Impact

As no items of historic heritage were located within the study area there will be no impacts to historic heritage as a result of the proposed development.

7.8 Statement of Heritage Impact

No Statement of Heritage Impact is required due to the absence of any historic heritage in the study area that will be impacted by the proposed development.

8. ABORIGINAL CULTURAL HERITAGE ASSESSMENT

This Aboriginal cultural heritage assessment has been prepared in order to determine and assess whether the proposed development will have any impact on Aboriginal heritage or culture within the study area. This Section has been prepared in accordance with:

- *Aboriginal Cultural Heritage Consultation Requirements for Proponents*, Department of Environment and Climate Change, 2010 (ACHCRP);
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW*, Department of Environment and Climate Change, 2010 (Code of Practice); and
- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW*, NSW Office of Environment and Heritage, 2011 (the Guide).

In order to determine the likely impacts of the project, a model of Aboriginal occupation and the study area's ensuing archaeological potential the following factors are considered:

- The environment (see **Section 6**);
- Statutory controls (see **Section 8.1**);
- Local and regional archaeological context (see **Section 8.2**);
- OEH Aboriginal Heritage Information Management System (AHIMS) (see **Section 8.3**);
- Existing predictive models of past Aboriginal land use (see **Section 8.4**); and
- The local and regional character of Aboriginal Land Use incorporating Aboriginal history, contemporary cultural accounts and cultural significance (see **Section 8.5**).

Environmental factors strongly influence the suitability of a place for human occupation as well as the duration of that use. The environment of the study area (topography, geology, landforms, climate, geomorphology, hydrology, soils and vegetation) has been described in detail in **Section 6** of this assessment.

8.1 Statutory Controls

Land managers are required to consider the effects of their activities or proposed development on the environment under several pieces of legislation. Aboriginal cultural heritage in NSW is protected and managed under both Commonwealth and State legislation. The appropriate legislation is summarised below.

The following general overview of the legislative framework is not legal advice and should not be interpreted as such. Advitech Environmental will not be liable for any actions taken by any person, body or group as a result of this broad overview of relevant legislation. Advitech Environmental always recommends that legal advice be obtained from a qualified legal practitioner in regard to law and legislation.

- *New South Wales National Parks and Wildlife Act 1974*

The *National Parks and Wildlife Act 1974* (NPW Act) administered by the Office of Environment and Heritage (OEH), is the primary legislation for the protection of Aboriginal cultural heritage in New South Wales.

Part 6 of the Act provides protection for Aboriginal objects and declared Aboriginal places through the establishment of offences of 'harm' to these objects and places. Under the Act, it is an offence to knowingly harm or desecrate an Aboriginal object or Aboriginal place. If harm to an object or place is anticipated, an Aboriginal Heritage Impact Permit (AHIP) must

be applied for. Where an AHIP Section 90 is required, they can be issued in relation to specific parcels of land, deal with multi stage developments, and there are clear provisions for variation, transfer, suspension and revocation.

Linked to the NPW Act, is the National Parks and Wildlife Regulation (2009) as well as the following Departmental guidelines:

- *Aboriginal Cultural Heritage Consultation Requirements for Proponents*, Department of Environment and Climate Change, 2010 (ACHCRP 2010);
- *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW*, Department of Environment and Climate Change, 2010 (Due Diligence Code);
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW*, Department of Environment and Climate Change, 2010 (Code of Practice); and
- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW*, NSW Office of Environment and Heritage, 2011 (the Guide).

The above legislation provides guidance about Aboriginal heritage in New South Wales. It also provides steps in which individuals or organisations that own, use or manage land can undertake in order to identify the likely presence of Aboriginal objects, if the proposed activities will harm Aboriginal objects and to determine if an AHIP is required.

If harm to Aboriginal object or places cannot be avoided, then an AHIP is required. The CoP assists in establishing the requirements for undertaking test excavations as part of an archaeological investigation without an AHIP. It also establishes the requirements that must be followed when undertaking an archaeological investigation in NSW where an AHIP application is likely to be made.

■ *Environmental Planning and Assessment Act 1979*

The Environmental Planning and Assessment Act 1979 (EPA Act) establishes the statutory framework for planning and environmental assessment in New South Wales. The implementation of the EPA Act is the responsibility of the Minister for Planning and Environment and is implemented by statutory authorities and local councils. The consideration of potential impacts of a development on Aboriginal heritage is a key component of the environmental impact assessment process. The EPA Act contains the following parts which impose requirements for planning approval:

- Part 4 generally provides for the control of local development that requires development consent from the local Council.
- Part 5 provides for the control of 'activities' that do not require development consent and are undertaken or approved by a determining authority.

This project falls under Part 4 of the EP&A Act.

■ *Heritage Act 1977*

The Heritage Act protects the natural and cultural history of NSW with emphasis on non-Aboriginal cultural heritage through protection provisions and the establishment of a Heritage Council. While Aboriginal heritage sites and objects are protected primarily by the NPW Act, if an Aboriginal site, object or place is of great significance it can be protected by a heritage order issued by the Minister on the advice of the Heritage Council.

■ *Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Commonwealth)*

The Commonwealth protects areas and/or objects which are of significance to Aboriginal people and which are under threat of destruction. A significant area or object is defined as

one that is of particular importance to Aboriginal people according to Aboriginal tradition. The Act can, in certain circumstances override State and Territory provisions, or it can be implemented in circumstances where State or Territory provisions are lacking or are not enforced. The Act must be invoked by or on behalf of an Aboriginal or Torres Strait Islander or organisation.

8.2 Local and Regional Archaeological Context

A review of the context of local and regional archaeological assessments, when combined with environmental factors (see **Section 6**), provides the broad basis of a predictive archaeological model for the study area (see **Section 8.6**). The broader cultural landscape (as discussed in **Section 8.5**) is highlighted when there is a modelling of expected site types, frequency of their occurrence and spatial distribution patterns across the wider area.

However, previous archaeological investigations are somewhat limited in their utility regarding site locations, lithic artefact quantities and type. These limitations arise from the variable way archaeologists have previously identified, classified and recorded Aboriginal objects, particularly lithic materials, and Aboriginal sites. Owing to these variations in the amount of data that is included in reports and the terms different archaeologists used to describe artefact types, a comparison of objects and tool types from each site is not considered to be representative or reliable for the purposes of predictive modelling other than on a broad and generalised basis.

Overall, there is a lack of substantial archaeological data for the local and regional area. Many of the existing studies relate to the more northern or western portions of the Cumberland Plain. Cultural heritage assessments have been undertaken near to the study area however investigations in search of those assessments have revealed that the assessments were never completed published or are unavailable for review. The following is a review of reports produced during previous archaeological assessments within the general region of the study area and in regard to the Cumberland Plain.

8.2.1 Australian Museum Business Services (1997)

This report had three objectives:

- To examine and assess the concept of representativeness for Aboriginal sites on the Cumberland Plain;
- To critically assess the planning framework for Aboriginal heritage management; and
- To produce guidelines on the recognition of silcrete artefacts.

For the purposes of this archaeological assessment, only the concept of representativeness of Aboriginal sites has been reviewed. AMBS's study found that previous archaeological investigations in the area had not contributed significantly to a cognitive understanding of Aboriginal occupation and settlement in the region. The previous modelling undertaken by Kohen (1986) had not been sufficiently tested. It is noted that the extensive development of the region had degraded the environment and 'undoubtedly' destroyed a large portion of the Aboriginal heritage.

The conclusion reached by the report is that previous archaeological examination and potential modelling of the region does not provide sufficient 'complexity or quality' in site assessment and the ensuing related conservation management decision making. Investigations undertaken in the 1980's relied upon surface survey results alone. There was no correlation between site content, human behaviours, ethnographic or historic information and site location in regard to the landscape.

Aside from Kohen (1986), one of the main regional archaeological investigations relied upon by Local Councils was undertaken by Smith (1989). Predictive site modelling arising from this study was summarised as follows:

- Sites will be found all over the Cumberland Plain with the possible exception of creek and river banks which are prone to flooding;
- Site density is expected to be 10% higher in the northern parts of the Cumberland Plain than in the south;
- At least 50% of all sites will be found clustered or within 50 metres of water sources;
- Sites will be found in all topographic units;
- Site density will be higher in open forest than in woodlands; and
- A larger number of sites will be found in areas of good surface visibility.

In 1993, McDonald and Rich conducted the Rouse Hill Testing Program. The AMBS report is highly critical of the project research design and states that the Program appears to have been designed in order to facilitate the development of the release area infrastructure. AMBS consider the approach used as simplistic and reflective of the 1980's modelling. The predictive modelling arising from this Program is summarised as follows:

- Most of the areas tested contained sub-surface deposits without surface assemblages;
- Site patterning relates to gross environmental factors i.e. complex sites are found mainly in association with major creeks or a confluence of water sources;
- There is a complex relationship between the environment, site content and distributions. For example, sparse sites also occur on major creeks and not all major confluences are prime site locations;
- Alluvial terraces contain the best potential for intact archaeological deposits. Some hillslope zones have potential and sites are found below the plough zone in alluvial deposits.
- Hillslope areas show more limited patterns of occupation tending to reflect on off activities or events;
- Temporary and minor gullies tend to have on off occupations or occasional repeated visits culminating in low artefact densities;
- Backed blade knapping floors, heat treatment locations and general camping sites were all located alongside evidence of plant and animal processing;
- Artefact density variations correlated with site function;
- Sites possessing a range of raw materials can be classified as complex and were most probably used over a longer period of time. Whilst sites with only a few types or raw materials may represent one off occupations or specialised site types; and
- There may be a chronological pattern to the relative use of raw material.

AMBS summarise their findings, in regard to archaeological assessment in the Cumberland Plain region as follows:

- Archaeological modelling has been limited and primarily intuitive with a general lack of research design; and
- Representativeness tends to be based on broad assessments of site types with a presence/absence of observable techniques.

8.2.2 Bluff, Warren (1988).

Bluff (1988) created a 'National Report'. A search for this report reveals that there is no actual report. The report is a collection of site cards recorded in the study area and each card must be purchased separately.

8.2.3 Coomber, J (2005)

Coomber (2005) undertook a Cultural Heritage Assessment and Archaeological Survey, Maldon to Tahmoor Electricity Line Upgrade. Report to Integral Energy. No Aboriginal objects or places were located during this survey.

8.2.4 Kohen (1986)

Kohen (1986) undertook an alleged archaeological investigation of prehistoric settlement in the Western Cumberland Plains: Resources, Environment and Technology. Kohen made a number of findings about site locations, which were reliant on surface investigations only, as follows:

- Sites will be found all over the Cumberland Plain with the possible exception of creek and river banks which are prone to flooding;
- Site density is expected to be 10% higher in the northern parts of the Cumberland Plain than in the south;
- At least 50% of all sites will be found clustered or within 50 metres of water sources;
- Sites will be found in all topographic units;
- Site density will be higher in open forest than in woodlands; and
- A larger number of sites will be found in areas of good surface visibility.

8.2.5 OEH (2015) Plan of Management, Bargo River State Conservation Area

OEH (2015) undertook a Plan of Management for the Bargo River State Conservation Area. This Plan of Management was created to conserve both the natural and cultural values of the Bargo River State Conservation Area. The Bargo River State Conservation Area lies at the interface between the Nattai Plateau and the Woronora Plateau, two of the major dissected sandstone plateaux of the Sydney Basin, and within the Bargo River sub catchment of the Hawkesbury Nepean Catchment. The landscape is hilly to mountainous with an elevation range of 360 to 630 metres. The geology was predominantly Hawkesbury Sandstone formed in the Triassic period. This geology generates a coarse-grained sandy soil that is very infertile and often shallow and rocky (Hazelton & Tille 1990). The river and its tributaries have carved the sandstone tableland, forming valleys and gorges and spectacular erosional features including waterfalls and cascades and long, still pools. A number of creeks join the river as it flows generally unrestricted until it meets the Picton Weir approximately half-way along the length of the river.

A large range of native animals are known to occur in the Bargo River catchment with over 202 native vertebrate species recorded including 28 species of frog, 24 reptiles, 122 birds and 24 mammals.

The Plan notes that the land, water, plants and animals within the landscape are central to Aboriginal spirituality and contribute to Aboriginal identity. Aboriginal communities associate natural resources with the use and enjoyment of foods and medicines, caring for the land, passing on cultural knowledge, kinship systems and strengthening social bonds. Aboriginal heritage and connection to

nature are inseparable and need to be managed in an integrated manner across the landscape. Aboriginal sites are places with evidence of Aboriginal occupation or that are related to other aspects of Aboriginal culture. The physical evidence of Aboriginal use of the landscape (such as campsites and art sites), stories and mythology, cultural resources and the landscape itself provide strong cultural links with the past for the present day Aboriginal community.

The Plan notes that limited surveying of the area has only recorded a small number of Aboriginal sites in the park, including an art site. The area is likely to contain other occupation sites. Aboriginal artwork can be found along the Bargo River gorge to the north of the park. Aboriginal sites in the area are potentially at risk from management activities such as the use of heavy machinery for fire suppression.

8.2.6 Sefton, C (1995)

Sefton, C. (1995), following an initial assessment, undertook the recording of rock art for a Tahmoor Mine Long Wall 14-18 Application. This recording of rock art in the Tahmoor area was undertaken as a recommendation from the initial archaeological assessment. Despite attendances on AHIMS, the original assessment cannot be located or provided.

8.2.7 White, B & McDonald J (2010)

White, B & McDonald J (2010), Lithic Artefact Distribution in the Rouse Hill Development Area, Cumberland Plain, New South Wales. Over several years systematic test excavations were conducted in the open landscape of the Rouse Hill Development Area. This area is approximately 90km from the study area but within the Cumberland Plain region. Data on artefact distribution and density from these projects were combined in this report to identify patterns which might signal Aboriginal people's preferences for artefact discard in their landscape. Topographic and stream order variables correlate with artefact density and distribution. The results of McDonald's study clearly highlight the limitations of surface survey in identifying archaeological deposits in this landscape. The study also shows the importance of test excavation in establishing the nature and density of archaeological material on the Cumberland Plain. White & McDonald summarised this model as follows:

- Topographic and stream order variables correlate with artefact density and distribution;
- High artefact density concentrations may have resulted from large number of artefact discard activities and/or from intensive stone flaking;
- Highest artefact densities occur on terraces and lower slopes associated with fourth and second order streams, especially 50 - 100 m from 4th order streams;
- Upper slopes have sparse discontinuous artefact distributions but artefacts are still found in these landscape settings; and
- As artefacts are found in all tested areas and site boundaries are not identified, most of the Rouse Hill Development Areas could be regarded as cultural lands.

8.2.8 Williams, D (1992)

Williams, D. (1992) conducted an archaeological investigation of the proposed route of the Optus Fibre Optic Cable between Goulburn and Campbelltown, NSW, part of which (Area 2) passed near to the study area and approximately within a parallel route to the Hume Highway. Mr Williams conducted a desk top assessment of the whole survey area, followed by field surveys over those areas with medium to high potential for the presence of Aboriginal objects. These sections were identified as the Chain of Ponds Creek, Sutherland Park; and Rosedale. **Table 1** summarises the Aboriginal objects located by Williams in 'Area 2'.

Table 1: Aboriginal objects located by Williams in 'Area 2'

Section	Objects recorded	Surface or sub-surface	Landform
Chain of Ponds Creek	5 stone artefacts	Surface	Forest Track
Sutherland Park	3 conjoining stone artefacts 17 stone artefacts	Surface Sub-surface	Cattle track, sandy rise on lower slopes of ridge
Rosedale	17 stone artefacts Scar trees	Surface	Erosion scar

Williams (1992) noted that there were insufficient artefacts recovered to conduct statistical analysis. The most common site type found during this study was that of open artefact scatters. The scatters consisted of both tools and debitage produced in the tool making process of extracting flakes from a core.

The report, based on previous studies of the region, suggests that open artefact scatters generally occur on gentle well drained lower slopes within 100m of a water course and also along the tops of ridges and spurs.

Other site types known to the region are burials, scarred trees, axe grinding grooves, stone arrangements, ceremonial grounds, stone quarries and rock shelters. Underlying sandstone formations associated with deep river gorges are the most common areas conducive to rock shelter formation. Large and stratified sites commonly occur in sand bodies with associated water courses. Sandstone boulders may also provide suitable rock shelters. Williams (1992) cites Koettig and Lance (1986) as noting that ceremonial (bora) grounds may have traditionally been located some distance from general camping sites and that a hill top location was preferred.

8.2.9 Advitech (2016)

Advitech (2016) undertook an archaeological assessment of 290 Arina Road Bargo. No Aboriginal objects or sites were found. The following predictive model was determined for the property:

- The likelihood of locating sites increases with proximity to the branch of Dog Trap Creek to the south west;
- The likelihood of finding large sites increases markedly with proximity to water or a confluence of water sources;
- The likelihood that a variety of raw materials will be represented though the majority of sites but will be predominated by silcrete. Quartz, chert and indurated mudstone tuff (IMT) may also be found;
- If any artefact types were located in the study area they would most likely have been tools and related debitage arising from the opportunistic discard or repair due to breakage;
- The likelihood of finding scarred trees is moderate to high given that a registered scarred tree is noted within close proximity to the study area; and
- Any sites found will be subject to disturbances including human and natural.

8.3 OEH Aboriginal Heritage Information Management System (AHIMS)

A search of the OEH AHIMS register has shown that no Aboriginal sites or objects are currently recorded within a 1 km radius of the study area. The lack of registered sites within or close to the study area is attributed to a lack of archaeological development and ensuing environmental assessment, owing to the basically rural nature of the area, as opposed to a lack of previous Aboriginal occupation. A wider extensive search reveals many registered sites within a 5km radius which are generally associated with the construction of roads, power infrastructure and mines. The basic details of the known registered sites within 5km are itemised below in **Table 2**.

Table 2. Summary results of AHIMS Extensive search

Site ID	Site Name	Aboriginal site/object
52-2-2048	CC 1;Sydney Water Metropolitan Catchment;	Art: Grinding Groove
52-2-0009	Bargo;Dog Trap Creek;	Art
52-2-1600	Carties Creek;	Art
52-2-1601	Carties Creek;	Art
52-2-1602	Carties Creek;	Art
52-2-1520	Dogtrap Creek;	Art
52-2-1521	Dogtrap Creek;	Art
52-2-1522	Dogtrap Creek;	Art
52-2-1523	Dogtrap Creek;	Art
52-2-1524	Dogtrap Creek;	Art
52-2-1525	Dogtrap Creek;	Art
52-2-1526	Dogtrap Creek;	Art
52-2-1527	Dogtrap Creek;	Art
52-2-1528	Dogtrap Creek;	Art
52-2-1529	Dogtrap Creek;	Artefact
52-2-1530	Dogtrap Creek;	Modified Tree
52-2-1531	Dog Trap Creek;	Art
52-2-1532	Dog Trap Creek;	Art
52-2-1533	Dog Trap Creek;	Art
52-2-1534	Dog Trap Creek;	Art
52-2-1538	Bargo;	Art
52-2-1539	Bargo;	Art
52-2-2259	WADE No15	PAD, Art
52-2-3358	Nicola No 14	Grinding Groove : 11
52-2-3359	Nicola No 15	Art: 41
52-2-3360	Nicola No 16	Art: 2
52-2-3361	Nicola No 17	PAD, Artefact : 5
52-2-3362	Nicola No 18	Art: 7, Artefact : 1
52-2-3363	Nicola No 19	Artefact : 5, PAD
52-2-3371	Nicola No 27	Art: 13, Artefact : 1
52-2-3372	Nicola No 28	Art: 1, Artefact : 1
52-2-3373	Nicola No 29	Art: 1
52-2-3849	Nepean River Gorge	Grinding Groove : 12
52-2-1993	Tahani Lea 34	Art
52-2-3921	Dogtrap Creek AGG-1	Grinding Groove : 2
52-2-3938	Eliza Creek OAS 1	Artefact : 1

Site ID	Site Name	Aboriginal site/object
52-2-3944	Dry Creek GG 1	Grinding Groove : 1
52-2-3942	Dry Creek OAS 1	Artefact : 1
52-2-3943	Dry Creek IA 1	Artefact : 1
52-2-3971	Dogtrap Creek 2013.2	Art
52-2-3972	Dry Creek 2013.1	Artefact
52-2-3960	Dog Trap Creek 2013.1	Art

The full AHIMS results, details of their specific locations and mapping, are provided in **Appendix 1**. These detailed results have been separated in order to enable the easy detachment of the Appendix and prevent the unnecessary public disclosure of these details.

Reliance on the locations provided by the AHIMS searches is tentative. There are many variables that must be considered when using the Aboriginal Heritage Information System (AHIMS). More particularly, site coordinates, and descriptions are not always correct due to the following:

- Errors resulting from the evolution of subsequent computer systems used by OEH that have failed to account for or correctly translate old coordinate systems, such as topographic map references, to new systems;
- Errors resulting from human error or incorrect descriptions of locality on the site cards submitted to AHIMS;
- Errors resulting from data input. Most commonly the naming of the correct mapping system used; and
- Few sites have been updated on the AHIMS register to record if they have been subject to a s87 or s90 permit and, as such, what sites remain in the local area and what sites have been destroyed is unknown.

As discussed in **Section 8.2**, variation in the classificatory definitions employed by archaeologists will significantly influence the range of artefact types identified in an assessment. Due to differences in recording techniques it is difficult to determine how many of each artefact type is represented across the region. Artefact types noted include flakes (broken, retouched, debitage, waste, chips), cores (multi-platform, single and bipolar), geometric microliths, backed blades, bondi points, scrapers, eloueras, burrins, blades, hatchets, choppers (unifacial and bifacial), pebble tools, edge-ground axes, anvils and hammer stones. 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. It is therefore not productive to attempt to quantify the proportionate representation of artefact types identified in previous studies. 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, there are various factors influencing these results, including, not limited to:

- A lack of substantial archaeological investigation of privately owned properties surrounding the study area. As the study area and the surrounding locations are part of the earliest properties to be developed and the active protection of Aboriginal heritage has only occurred within the last thirty years, insufficient investigative results are present to make an informed analysis of trends;
- 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 and 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. In addition, it was not possible to obtain sufficient information from a large number of site cards and reports; 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 very few artefacts are visible away from these exposures.

In the case of this assessment and the study area, little reliance should be placed on the archaeological context due to the lack of information available by way of comparable studies in the locality and on the same landforms. However, some modelling of past Aboriginal use can be derived from the surrounding registered Aboriginal sites. See **Sections 8.4** and **8.5** for further discussion.

8.4 The Landscape and Cultural Heritage

The way that perceptions, beliefs, stories, experiences and practices give shape, form and meaning to a landscape is termed a cultural landscape. An Aboriginal cultural landscape is 'a place or area valued by an Aboriginal group (or groups) because of their long and complex relationship with that land. It expresses their unity with the natural and spiritual environment and embodies their traditional knowledge of spirits, places, land uses, and ecology'. Material remains of the association may be prominent, but will often be minimal or absent (DECCW, 2010). The physical evidence of Aboriginal use of the landscape (such as campsites and art sites), stories and mythology, cultural resources and the landscape itself provide strong cultural links with the past for the present day Aboriginal community (OEH, 2015).

The landscape scale of cultural heritage is similar to the concept of 'whole-of-landscape' in ecosystem conservation - just as there is connectivity between all parts of natural ecosystems (plants, animals, soils and water), there is connectivity between cultural objects and places through past human behaviour patterns. The cultural landscape concept emphasises the landscape scale of history and the connectivity between people, places and heritage items. It recognises that the present landscape is the product of long term and complex relationships between people and the environment. Aboriginal cultural landscapes are comprised of:

- Significant biodiversity and a diverse range of ecological systems and associations, all of which contributed to the continuing existence of Aboriginal peoples in the region over many thousands of years, and which are valued in different ways by Aboriginal communities today;
- Material remains of this continuing occupation in the form of a diverse array of Aboriginal sites and places known to the Aboriginal communities, some of which will be recorded on the Aboriginal Heritage Information Management System;
- Extensive historical records from 1788 through to today which record observations of Aboriginal people and lifestyles, wars, massacres, social and cultural events, population census, social interactions, language, and which influence Aboriginal community values today; and
- An Aboriginal population made up of people who have traditional association and knowledge of the region, as well as others who live, work and play within the region, all of whom may attribute various values with the area, derived from the distant and recent past, through to the present day.

For Aboriginal people, the significance of individual landscape features is derived from their inter-relatedness within the cultural landscape. This means features cannot be assessed in isolation and any assessment must consider the feature and its associations in a holistic manner. This may require

a range of assessment methods and will always require the close involvement and participation of Aboriginal people. By consulting with Aboriginal people and using the concept of cultural landscapes, the story behind the features can be told which demonstrates the associations that may exist between Aboriginal objects and other features within the landscape (DECCW, 2010).

Landscapes had social and symbolic dimensions for people and some locations with unusually high or low artefact densities may represent the influence of non-environmental (social and or symbolic) factors (White *et al*, 2010). Aboriginal people have cultural associations with the landscape of the Cobbitty area deriving from a long pre-contact history, historical interactions during settlement and contemporary attachments.

Consultation was undertaken with Aboriginal Stakeholders in the area and in accordance with the ACHCRP. The contemporary submissions regarding the cultural landscape and previous use of the area are limited and discussed in **Section 8.4.3**. However, as so eloquently stated by Wonaruah descendant, James Miller (1985):

The land held the key to life's secrets. Man was given the knowledge to read the land and for every rock, tree and creek he found an explanation for existence. He did not own the land, the land owned him.

This statement summarises the interconnectedness that Aboriginal people have felt, and continue to feel, to their ancestral lands and accompanying cultural landscape.

8.4.1 Local and Regional Character of Aboriginal Land Use and its Material Traces

The environment of the study area (topography, geology, landforms, climate, geomorphology, hydrology, soils and vegetation) has been described in detail in **Section 6** of this assessment. Environmental factors strongly influence the suitability of a place for human occupation as well as the duration of that use. The known nature and distribution of cultural materials and resources derived from historical studies and existing known sites, combined with the environmental factors and contemporary cultural accounts, assist in forming a local and regional character of Aboriginal use.

Academic investigation and research has expounded a variety of theories regarding the immigration route and timing of Aboriginal people's arrival in Australia (Bowdler, 1977; Horton, 1981, Smith, 1987). However, it is traditionally believed, in accordance with the dreamtime belief system, by Aboriginal people that they have evolved in Australia and did not immigrate from anywhere else. Archaeological investigation in the wider region has provided evidence of occupation at Burrill Lake 20,000 years BP, in the southern Tablelands, 10,000 years BP, in Birragai, 21,000 years BP and in the lower Blue Mountains, 17,000 years BP (Rich, 1988). Bowdler (1981) and Koettig (1985) submit that sites south of Sydney increased around 2,500 years ago and that this was indicative of changes in stone tool technology.

About 19,000 years ago, after the Last Glacial Maxim, global temperatures began to warm. Approximately 10,000 years ago the climate is likely to have become broadly similar to that of today. While the fluctuations in the climate during the last 10,000 years is likely to have been complex, the sea reached its present level around 7,000 years ago and environmental changes after that time are likely to have been relatively minor when they are compared with those during the preceding Aboriginal occupation of the region. It is likely that, during this time, Aboriginal populations were small and use of the local area was transient, especially during the severe winter conditions that would have prevailed. Populations may have preferred to live near the coast, where the year-round climate would possibly have been more temperate, although occupation in the interior landscapes is not discounted and was also probable at different times and in different places over this long geomorphic time period.

Archaeologists, historians and ethnographers have regularly considered why Aboriginal people chose specific locations for camps. Predominantly and generally it is considered that camp sites were chosen for:

- Their proximity to fresh water;
- Availability of food supply or other required resource;
- A vantage ground in case of attack from an enemy;
- For spiritual reasons and to be close to areas of ceremony and tribal gatherings; and
- Movement between resource zones, as well as territory and rights of access by and to such resources.

Other uses of the local landscape by Aboriginal people may have included ceremonial sites, corroboree sites, rock shelters (which may have been used for habitation, ceremony, signage and teaching); rock and ochre extraction quarries, fish traps within streams and rivers, trade routes, walking lines and burials.

A general model of forager settlement patterning in the archaeological record has been established by Foley (1981). Foley's model distinguishes the 'home base' site with peripheral 'activity locations'. Home base sites generally occur in areas with good access to a wide range of resources (reliable water, raw materials, and so on). The degree of environmental reliability of these resources may influence the rate of return and length of occupation of sites. Further, Foley (1981) suggests that home base sites generally show a greater diversity of artefacts and raw material types reflecting that they are representative of a greater array of activities performed at both the site and immediate area.

Activity locations occur within the foraging radius (approximately 10 km) of a home base camp and served as a focus of a specific activity (Renfrew and Bahn, 1991). Activity locations will show a low diversity in artefacts and are not likely to contain features reflecting a base camp (such as hearths). However, the location of certain activities cannot be predicted or identified.

Kuskie and Kamminga (2000) established a general model of occupation strategies based primarily upon ethnographic research (see **Table 3**). 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. For example, the presence of features that required a considerable amount of labour investment, such as stone-lined ovens, heat-treatment pits or grinding grooves, are likely to occur at places where occupation occurred for extended periods of time. Where band 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. **Table 3** has been adapted from Kuskie and Kamminga (2000).

Table 3: Site Descriptions (adapted from 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

Hunting would have comprised the major economic role of the men (Kohen 1986). Along the rivers, traps and snares would have been set for bandicoots and wallabies, while decoys for snaring birds were also a commonly employed technique, 'these are formed of underwood and reeds, long and narrow, shaped like a mound raised over a grave, with a small aperture at one end for the admission of the prey' (Tench 1793). Possums and gliders were particularly common in the open woodland across the Cumberland Plain, and probably formed the main sources of animal food. Hunting methods included smoking out the animal by lighting a fire in the base of a hollow tree, burning large tracts of land and gathering the stranded animals, as well as cutting toe-holds in trees (Tench 1793).

Kohen (1986) records that Aboriginal people of the Sydney region, based inland of the coastal groups, would have had access to small animals and plant foods in addition to seasonally available freshwater mullet and eels. Tench (1793) observed that Aboriginal people, at the time of colonisation and in regard to the western Sydney Basin, did not depend on fish 'as the river yields only mullets, and that their principal support is derived from small animals which they kill, and some roots (a species of wild yam chiefly) which they dig out of the earth'. These wild yams were found in considerable quantities along the banks of the Nepean and Hawkesbury Rivers. Berries, Banksia flowers and wild honey were also recorded as foods of the local inhabitants (Kohen 1986).

The wider local vegetation is likely to have provided Aboriginal people in the area with raw materials such as bark and wood for shelters, canoes, containers, fires as well as a limited variety of medicinal and food sources. This vegetation would also have supported the habitation of a variety of small land mammals, reptiles and birds which may have been eaten by Aboriginal people.

A sense of the potential range of plants and animals utilised by Aboriginal people can be gleaned by comparing lists of species known to occur in the area with those known regionally to have been utilised by Aboriginal people. Only remnants of the original native vegetation and their associated resources currently exist within the study area today (see **Section 6.5**). With the loss of this habitat only a few of the faunal species likely to have been utilised by Aboriginal people remain within the study area. The availability of fresh water in the study area would have been tentative and reliant upon rainfall. However, the nearby Carter's Creek would have provided a more reliable and accessible source of fresh water.

There was no real local or district outlook from the study area due to the landscape and surrounding tree canopy. No evidence of significant cultural or spiritual aspects of the study area was found.

Overall, based on the environmental and archaeological context and using Kuskie and Kaminga's model it is considered that the study area would have been most likely suitable for transitory hunting and foraging as opposed to any lengthy occupation. More preferable areas for occupation with richer resources, such as Carters Creek, Branch of Dog Trap Creek, the Nepean River and the more elevated Bargo area are easily accessible from the study area.

8.4.2 Aboriginal History

Some discussion of Aboriginal history and associated land use within the region and local area is made in **Section 8.4.1** above. The use of ethno historical records is often useful in attempting to reconstruct Aboriginal life at the time of the colonisation of Australia. However, these historical observations are from non-Aboriginal people incorporating their own bias and perspectives possibly leading to misinterpretation. Usual ethnographic information recorded about Aboriginal people, at the time of European arrival; include observations about Aboriginal material culture, such as clothing, adornments, body painting and piercings, weapons and tools. Hunting practices, foods consumed, ceremonial gatherings and associated practices, such as funerary beliefs and rites of passage, are also noted throughout the historical and anthropological record.

Records in regard to Aboriginal occupation of the region, during the mid to late 1880's, are minimal with evidence suggesting that some Aboriginals were engaged as trackers, guides and policemen post European contact. A local Tharawal Aboriginal man tracked and found three lost children in the bush near Appin in 1851 (Sydney Morning Herald 1815).

As indicated in non-Aboriginal history (see **Section 7.4**), during the initial contact period with European settlers the local Aboriginal people were heartlessly pursued by order of Governor Macquarie. In an attempt to gain retribution for the attacks on European settlers, Governor Macquarie sent three detachments of the 43rd regiment against 'hostile natives' throughout Nepean, Grose and Hawkesbury rivers. A list of names, of the supposedly 'hostile' was provided by Macquarie.

All Aboriginals encountered were made prisoners, whilst 'native' men killed were hung on trees near where they fell. The Tharawal men who assisted the expedition, Bundle and Budbury, supposedly escaped with assistance of John Warby, who gained a close relationship with the Tharawal after exploring the Cowpastures previously. There is also evidence that Warby fled the expedition on April 13 to warn the Tharawal. On the evening of April 16, the expedition encountered a group of Aborigines camping near Broughton's farm, near Appin. After forming rank lines, and marching toward a cliff, the regiment killed at least 14 Aboriginal people. Some individuals were shot, whilst others fled over the cliff, falling to their death (Fowler 2000, see **Figure 12**).

Despite this, Tharawal people still reside in their traditional lands to the present day. There does not appear to be any oral or documentary evidence of any specific culturally significant areas within or immediately adjacent to the study area. However, significant occupation and ceremonial sites exist approximately 5km north east of the study area.

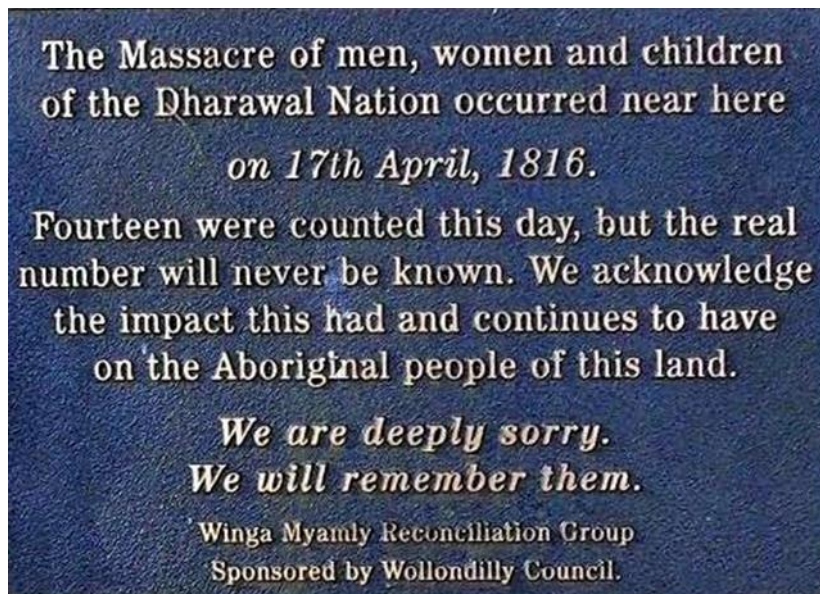


Figure 12: Memorial plaque of Appin massacre

8.4.3 Contemporary Cultural Accounts

The physical evidence of Aboriginal use of the landscape (such as campsites and art sites), stories and mythology, cultural resources and the landscape itself provide strong cultural links with the past for the present day Aboriginal community (OEH, 2015). Tharawal and many other Aboriginal people have long cultural associations with the landscape of the region deriving from a long pre-contact history, historical interactions during settlement and contemporary attachments. Local Aboriginal people are currently researching and reclaiming their cultural practices of the past (pers. comm. Glenda Chalker 9 June, 2016). Aboriginal people still reside in the area and continue to appreciate, care for and conserve their cultural practices. The presence of numerous rock art sites and a scar tree in the 'Branch of Dog Trap Creek' and grinding grooves in Carters Creek (see Appendix I) indicates that the general area was occupied and used by Aboriginal people on subsequent occasions over many years.

Dog Trap Creek, with its abundant rockshelters containing art sites, was a significant place within the Aboriginal cultural landscape (pers. comm. Glenda Chalker 9 June, 2016). Aboriginal people have cultural associations with the landscape of the Bargo River deriving from a long pre-contact history, historical interactions during settlement and contemporary attachments.

Many of the local Aboriginal people identify as being part of the Tharawal or Dharawal nation. The Tharawal Local Aboriginal Land Council members are the Aboriginal custodians of the study area. The Gandangara people hold an Indigenous Land Use Agreement over areas close to, but not within, the study area region. It must also be considered that Aboriginal cultures were not static and that clan and tribal boundaries, language groups and dialects most likely changed over many thousands of years.

For the purposes of this archaeological assessment, and in accordance with current cultural practices, we will refer to the local Aboriginal people as the Tharawal Aboriginal people. Advitech Environmental means no offence to any Aboriginal person in this regard and believes that identification of Aboriginal peoples, their traditional lands and their families are a cultural matter for Aboriginal people and separate from this archaeological assessment.

8.4.4 Cultural significance

The Burra Charter (2013) defines 'cultural significance' very broadly to include 'aesthetic, historical, scientific, social or spiritual value for past, present or future generations'. This definition captures places of cultural significance to Indigenous cultures. It also includes places that provide a physical location that is integral to the existence, observation and practice of intangible heritage. The Burra Charter definition of cultural significance encompasses all forms of spirituality, regardless of the culture from which it emanates. Similarly, aesthetic value is not limited to a 'western' perception of aesthetics (taken from ICOMOS Practice Note: The Burra Charter and Indigenous Cultural Heritage Management).

Glenda Chalker, the attending sites officer for Cubbitch Bartha, advised that the cultural significance of all creek lines was high to the local Aboriginal People. In particular, Dog Trap Creek (approximately 5km north west of the study area) was highly significant. The indications of the significance and importance of the area were advised to the archaeologist; however, for the purposes of this report it will be sufficient to state that the area was used for various ceremonial reasons.

Aboriginal storylines, such as the story of Migadan the spirit of the river, often extend across the landscape of the river catchment and over various land tenures. The Bargo River gorge is an important part of the mythology of the local people. A number of other Aboriginal storylines have their origins in the Bargo River area (OEH, 2015).

No items or places of cultural significance were noted or considered to exist within the actual study area.

During Stages 1 and 2 of the consultation process (see **Section 8.7**) the following statements were made by the Registered Aboriginal Parties in regard to the cultural significance of the study area:

- Cubbitch Barta. *Modified quartz cores are significant cultural objects to the local Aboriginal people; and*
- Didge Ngunawal Clan. *The objects that hold cultural knowledge would mainly contain silcrete; creek lines are of cultural value as they may contain camp sites and artwork. The Dharawal people hold the areas of Campbelltown, Appin and Mt. Gilead down to Pheasants Nest as culturally significant. Previous generations of family members used to gather and camp in areas of Appin, Campbelltown, Illawarra, Camden and Warragamba.*

8.5 Nature and Distribution of Evidence

Taking into account the environmental context of the study area (see **Section 6**), the archaeological context (**Section 8.2**), the OEH AHIMS register (**Section 8.3**) and cultural heritage and significance associated with the area of Pheasants Nest, a predictive model of site types and site patterning for the study area is generally achieved. From these reviews 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 likely presence of any sites within the study area. It is then possible to establish an archaeological predictive model for the study area. The aim of a predictive model is to understand the nature of previous Aboriginal occupation and determine the nature of land use.

8.5.1 Predictive Model for the Study Area

The following predictive model of occupation is proposed:

- The study area would have been suitable for use by Aboriginal people for transient camping, hunting and associated resource gathering activities for at least a few thousand years prior to settlement by non-Aboriginal people;
- Open campsites/isolated finds are more likely to occur within 50 metres of reliable water sources or near a confluence of water of sources;
- Complex sites are unlikely as they are found mainly in association with major creeks or a confluence of water sources which are not present within the study area;
- Sites may be present in all landform contexts but are most likely to be near water sources;
- Sites may be located on slopes, crests or ridges;
- A larger number of sites will be found in areas of good surface visibility;
- A wide variety of site types are represented in the region with open campsites (artefact scatters) and isolated artefacts being the most common sites identified. However, in the locality of the study area the predominant site type are rock shelters with art and or a PAD, grinding grooves and solitary artefacts;
- Creek lines, crest/ridges and slopes are the most archaeologically sensitive landforms;
- Sandstone based archaeological sites such as grinding grooves or rock shelter and art sites may occur in areas of suitable geology but these resources were absent from the study area;
- Scarred or carved (modified) trees may occur in areas where mature, native vegetation survives;
- If any artefact types were located in the study area they would most likely have been tools and related debitage arising from the opportunistic discard or repair due to breakage; and
- Any sites found will have likely been subject to disturbances including human and natural.

8.5.2 Limitations on Predictive Model

Predicative modelling can provide a good indication of site types and site patterning in the area. However, it can also be influenced by a variety of factors, including the following:

- Aboriginal people involved in previous studies or surveys may not have disclosed the existence of places with cultural heritage values as they may not have been under immediate threat when the earlier study was undertaken;
- The distribution of surface archaeological material does not necessarily reflect that of subsurface deposits;
- The number of studies recorded or published in the local area. Fewer studies suggest that sites were possibly developed prior to introduction of the current regulations and guidelines or that little development has been undertaken in the area;
- The number of sites may reflect the number of surveys done. For example, a large percentage of sites found along creek lines may be, at least partially, representative of how many cultural heritage surveys focused on these landforms;
- An AHIMS report does not represent a comprehensive list of all Aboriginal objects or places in the local or region of the study area as it lists recorded sites only and is mostly a record of survey effort (OEH, 2011);

- Ground surface visibility and vegetation hinders the finding of site locations;
- The distribution of surface archaeological material does not necessarily reflect that of subsurface deposits;
- Biases due to differential sampling of landforms based on decisions made by archaeologists;
- Levels of exposure on different landforms;
- Artefact counts can be skewed due to factors such as differing levels of fragmentation of material and levels of ground surface visibility. A very large number of sites and artefacts can be located on exposures with either no or very few artefacts visible and away from the exposures;
- 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; and
- Variation in the classificatory definitions employed by archaeologists will significantly influence the range of artefact types identified within a study area. 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.

8.5.3 Predictive Model results

Based on the predictive modelling above, and following an inspection of the study area, a final predictive model for the study area and its archaeological potential, reveals that there is a nil to low likelihood of Aboriginal object(s) being present within the developed and disturbed portions of the study area. However, there is low potential for Aboriginal object(s) to be present in the south western corner of the study area. More particularly:

- There is a nil to low likelihood that Aboriginal object(s) will be present within the areas to be impacted (see survey units 1 & 3 described in **Section 8.6.2**). This conclusion is based on:
 - The landscape and landforms of the area proposed for impact. The results of contextual archaeological studies indicate a preference for sites within 50 metres of reliable water sources or a confluence of water sources, on ridge lines, spurs and on crests. There are no ridges or crests within the study area. The closest reliable water source is approximately 100m, at its closest point, from the proposed impact zone;
 - The moderately disturbed nature of the area proposed for impact due to erosion, intensive clearing, grading, dams, fencing and pastoral practices;
 - The lack of nearby registered Aboriginal sites. The closest registered sites (shelters with art) exist downstream on Carters Creek at a distance of approximately 500 and 750m;
 - The lack of suitable geological material i.e. sandstone overhangs for occupation or art sites and water adjacent platforms for grinding grooves. These outcrops are not usually suitable for petroglyphs or grinding grooves;
 - The limited results of past archaeological studies;
 - The cultural perspectives of Registered Stakeholders (see **Section 8.4.4**);
 - Any 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;

- The areas of the property where the topsoil has been removed and bleached stony, hard setting, sandy, clay loam remains is unlikely to contain subsurface artefacts; and
 - It is unlikely that burials, grinding grooves and scar trees are located in the study area due to the lack of suitable reliable water surfaces, geological features and highly disturbed ground surfaces and the absence of mature vegetation remaining.
- There is a low potential for the presence of Aboriginal objects within the south western corner of the property (see survey unit 2 described in **Section 8.6.2**) which is not proposed for impact. This conclusion is based on:
- The results of contextual archaeological studies indicate a preference for sites within 50 metres of reliable water sources or a confluence of water sources, on ridge lines, spurs and on crests. There are no ridges, crests or confluences of water sources within the survey unit. The closest reliable water source is at Carters Creek, a 3rd order stream (Strahler 1952) which is approximately 30m, at its closest point, from the southern boundary of Survey Unit 2. Therefore, there is a low potential for Aboriginal objects to exist in the lower 20m in the south western corner of the property;
 - Two unnamed drainage lines exist within Survey Unit 2 and drain southwards towards Carters Creek. These drainage lines would have provided an intermittent source of freshwater during times of rainfall. Whilst it is highly unlikely, due to the nearby presence of Carters Creek, Aboriginal use of these drainage lines cannot be completely discounted (see **Photo 11**);
 - The vegetation appears to have been previously cleared as there are no mature trees remaining. There is no potential for the presence of trees modified by Aboriginal people;
 - The lack of nearby registered Aboriginal sites. The closest registered sites (shelters with art) exist downstream on Carters Creek at a distance of approximately 500 and 750m;
 - The lack of suitable geological material i.e. sandstone overhangs for occupation or art sites and water adjacent platforms for grinding grooves. Small outcrops exist along the unnamed drainage lines but they are not considered suitable for petroglyphs or grinding grooves;
 - The limited results of past archaeological studies;
 - The cultural perspectives of Registered Stakeholders (see **Section 8.4.4**);
 - No artefacts were located on the ground surface during survey. However, the existence of sub-surface deposits within the sandy south western corner of the study area cannot be completely discounted; and
 - Any artefact types located in this area would most likely be tools and related debitage arising from the opportunistic discard or repair due to breakage.

In summary, the study area would have provided little by the way of suitable resources for Aboriginal people due to the environmental factors. The limited previous assessments within a similar environmental context indicate that, within an area with limited water availability, as is the case of the majority of the study area, there is a low potential for isolated finds and/or low density artefact scatters. This is due to the fact that water is essential for survival and as such occupation and regular camping in areas with reduced and unreliable water supply would not have been suitable for extended stays or base camps. However, Carters Creek, a third order stream and considered to be a reliable water source, is approximately only 30m distant from the south western corner of the study area. Previous

assessments have noted that elevated landforms above reliable water sources within 50m are preferred camp site locations. Therefore, a low potential remains for isolated finds or artefact scatters remains in the relatively undeveloped western corner of the study area. This area is not proposed for impact by the development.



Photo 11: Looking north west at dry unnamed drainage line (Taken 2 February 2017)

8.6 Archaeological assessment, survey and data collection

8.6.1 Methodology

The purpose of an archaeological assessment is to record all material traces and evidence of Aboriginal land use that are visible on the ground surface or exposed otherwise. It is also important to physically identify where areas may be inferred as being likely to contain Aboriginal objects beneath the ground surface.

The methodology proposed was provided in the Information package sent to all Registered Aboriginal Parties. **Table 4** is a summary of the Registered Aboriginal Parties limited comment on the methodology proposed.

Table 4: Comments on methodology proposed

Registered Aboriginal Party	Comment received
L Carroll & P Boyd, Didge Ngunawal Clan	Agreed to methodology
Newton Carriage, Nundagurri	Agreed to methodology
Cubbitch Barta	Agreed to methodology

The study area was surveyed on foot by two persons in transects of approximately 5 m apart (see **Figure 13**). The survey was undertaken by Viki Gordon (archaeologist) and Mrs Glenda Chalker (Cubbitch Barta). Mrs Chalker is a local resident with firsthand knowledge of the area and the landscape. This area is part of her ancestral Tharawal Country and she has undertaken many surveys and assessments of Aboriginal heritage, over many years, throughout the area.

Areas with the greatest exposure of ground surface and with landforms suitable for occupation across the study area were targeted in the field survey. **Figure 13** below denotes the walking transects taken during the survey.

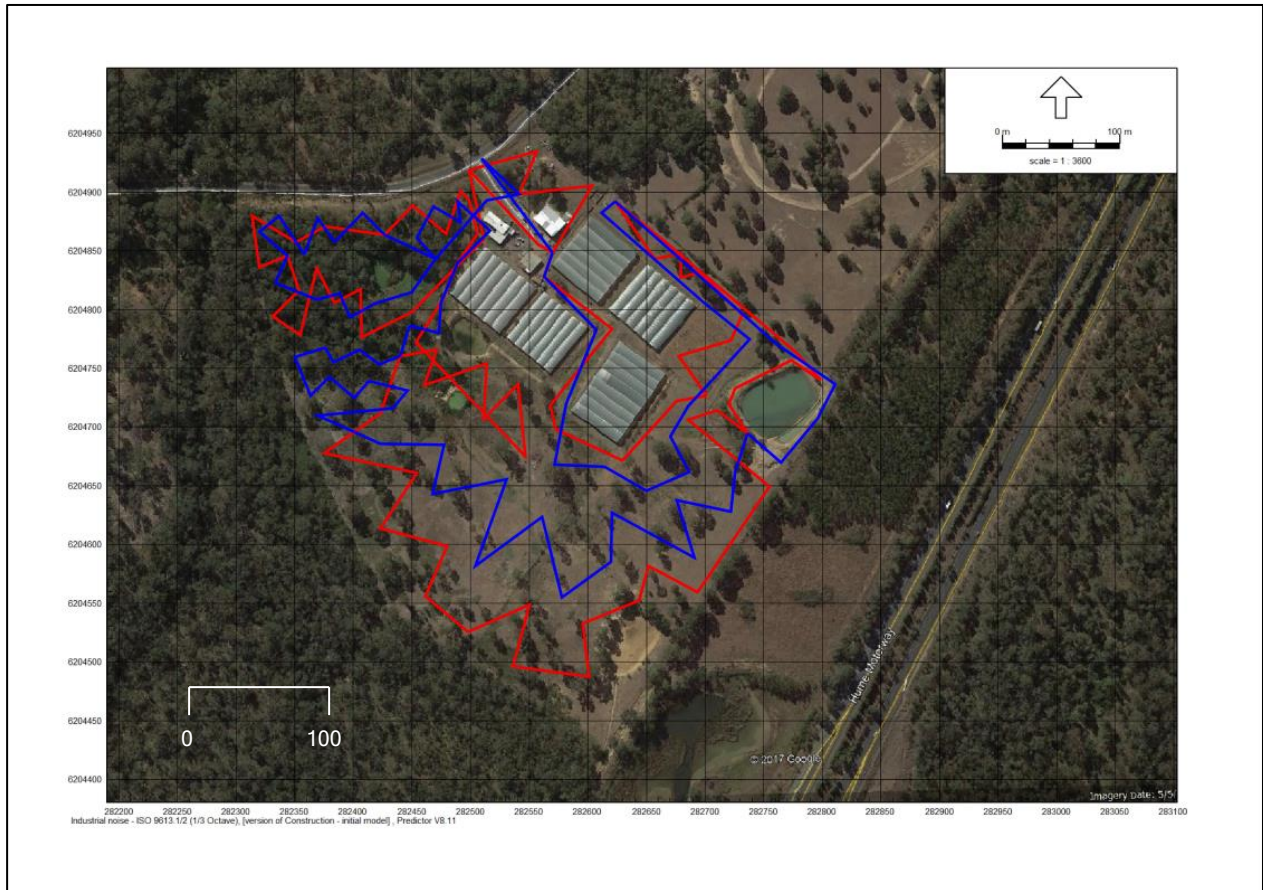


Figure 13: Transects taken during survey illustrated on GPS layer

8.6.2 Survey Units

Landscape forms were divided into survey units (see Section 8.6.2). Survey units within the study area are defined in **Table 5** and illustrated in **Figure 14**.

Table 5: Survey Units

Survey Unit No.	Definition	Landforms	Disturbance
1	The highly developed portion of the study area as indicated in Figure 14 .	A waxing south west facing mid slope.	Highly disturbed. Erosion (loss of topsoil), cleared and graded for development of residence, market gardens, driveways, waste piles, dams, fencing, and farming structures. Pastoral use.

Survey Unit No.	Definition	Landforms	Disturbance
2	The relatively undisturbed portion of the study area as indicated in Figure 14 .	A waxing lower slope with two unnamed drainage lines.	Previous vegetation clearing with secondary growth, access tracks, dam and waste piles.
3	Cleared and moderately disturbed portion of the study area as indicated in Figure 14 .	A waxing south west facing mid slope.	Moderately disturbed. Surface erosion (loss of topsoil), clearance of vegetation, dams, waste piles, fencing and pastoral use.

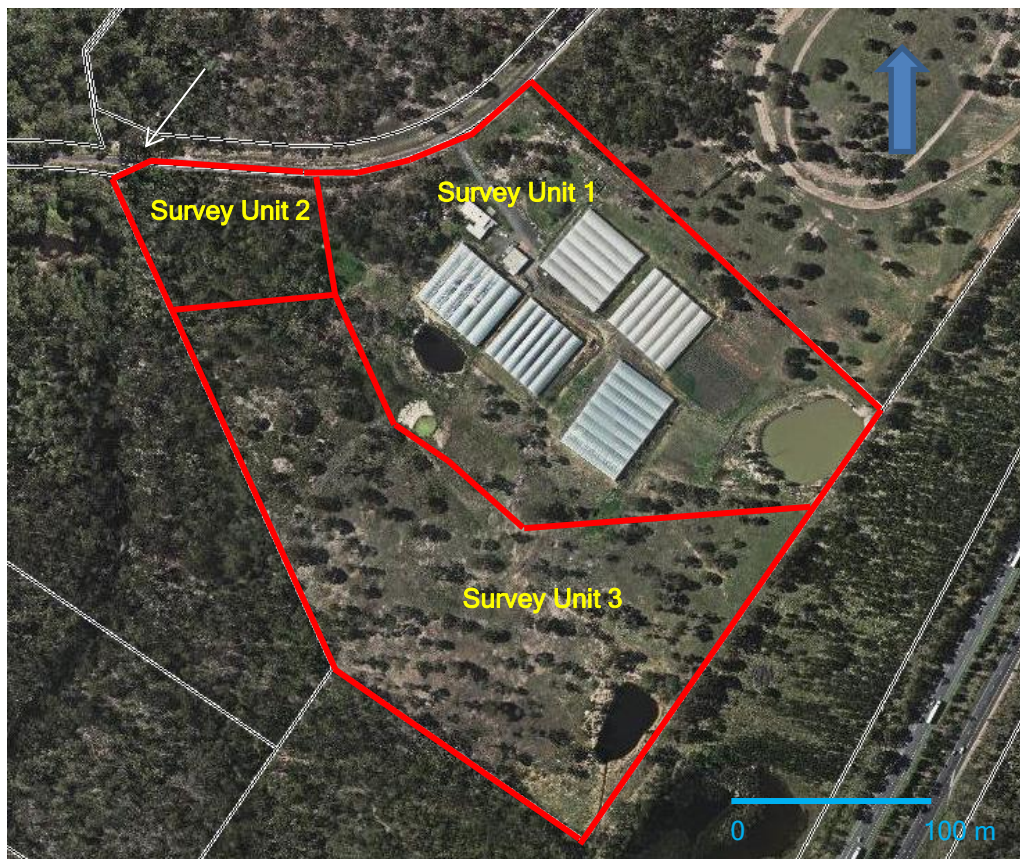


Figure 14: Survey units.

8.6.3 Effective survey coverage

The detection of Aboriginal objects 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 and so on);
- the survival of the original land surface and associated cultural materials; and
- the exposure of the original landscape and associated cultural materials (by water, sheet and gully erosion, ploughing, vehicle tracks and so on),

Combined, these processes and activities are used in determining the likelihood of both surface and subsurface cultural materials surviving and being detected. Effective coverage is known as an estimate of the amount of ground that could be observed during the survey taking into account local

constraints on site discovery such as development, vegetation and soil cover. There are two components used to determine the percentage of the survey's effective coverage: visibility and exposure.

The first component in establishing effective coverage is to calculate the amount of ground exposure. Exposure is an estimate of 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 (OEH 2010).

The second component is visibility. This is the amount of bare ground visible on exposures which may reveal artefacts or other cultural materials. 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 (OEH 2010).

The effective coverage for the study area, on a survey unit basis, was determined for both visibility and exposure and **Table 6** details the calculations used. As indicated in **Table 6**, the effective coverage for the study area illustrates the overall effectiveness of the survey.

Table 6. Effective coverage

SU	Landform	Area (ha)	Vis. %	Exp. %	Effective coverage area (ha)	Effective coverage (%)	% of landform effectively surveyed
1	A waxing south west facing mid slope.	8.00	85%	75%	5.10	64	32
2	A waxing lower slope with two unnamed drainage lines.	1.50	25%	50%	0.19	13	1
3	A waxing south west facing mid slope.	6.50	95%	90%	5.56	86	35
Total effective coverage					10.85 ha	68%	

A discussion of each survey unit, effective coverage and disturbances, past and present follows:

Survey Unit 1

This survey unit relates to the northern and north eastern part of the study area (see **Figure 15; Photo 12**). This survey unit has been extensively cleared, graded and highly developed. It contains the existing residence, several shade houses with crops, 3 dams/water tanks and assorted ancillary farming structures. A herd of Dorper sheep graze throughout the unit where grass is available. It has been levelled in the developed areas with a gentle south west facing slope being the overriding landform. Effective survey coverage for this survey unit was calculated at 64%. Disturbances included land clearance, grading and excavation, the construction of structures (farming, residential and ancillary), access roads and paths, fencing and irrigation. The limiting factors to visibility were the structures, dams, waste, sheep manure and grasses.



Photo 12: Looking south east from Mockingbird Road at road side portion of survey unit 1 containing residence and ancillary structures (taken on 2 February 2017)

Survey Unit 2

This survey unit relates to the unnamed drainage lines and relatively undeveloped western corner of the property. The remainder of the property gently falls to this survey unit. It contains a waxing south west facing mid to lower slope which eventually falls to Carters Creek. The vegetation in this survey unit has been historically cleared as evidenced by the lack of mature vegetation. Some waste piles and items of discarded equipment were noted in the upper north of the survey unit during the survey. Effective survey coverage for this survey unit was only 13%. However, apart from the construction of an earthen mound for a proposed dam (see Figures 3, 4 & 5), no other impacts are proposed to this survey unit. Apart from minor erosion occurring during times of high rainfall, little other disturbances have occurred. The limiting factors to visibility were the sandstone outcrops, grasses, shrubs, trees and leaf litter.

Survey Unit 3

This survey unit relates to that part of the study area which is the main area proposed for impact and consists of a largely cleared paddock, some remnant scattered trees and a dam. It contains a waxing south west facing mid slope with a ground surface. Disturbances include erosion and/or clearing evidenced by a lack of top soil. It currently contains no structures other than fencing. Effective survey coverage for this survey unit was 86%. The limiting factors to visibility were grasses, the dam and some waste disposal piles.



Photo 13: Survey Unit 2. Looking north west upslope. Unnamed drainage line running to right hand corner of Figure



Photo 14: Looking south east across Survey unit 3. Dam in left hand corner.

8.6.1 Results

Overall, 68% of the land was effectively surveyed. Current disturbances on the property include residential, ancillary and commercial structures, market gardens; dams and drainage lines; fencing; sheep grazing; alteration of land surfaces by grading, fill or excavation; sheet and gully erosion and historical and modern clearance of vegetation on the property.

Effective coverage was considered acceptable in survey units 1 and 3. Whilst effective coverage was lower in survey unit 2 (due to ground cover), further investigation has not been considered as the proposed impacts to this survey unit will be limited to fill for an earthen mound to house the proposed dam. It is considered that there is nil to low potential for the presence of Aboriginal objects in survey units 1 and 3. However, there is low potential for Aboriginal objects in survey unit 2.

8.6.2 Sites and Potential Archaeological Deposits recorded

A 'site' can be defined by various factors. For this study a 'site' was defined on the combination of the following interrelated factors:

- Landform;
- Exposure and visibility;
- Predictive modelling; and
- A feature identified by the Aboriginal community on the basis of their own cultural knowledge and significance.

Site complex refers to sites that occur in groups. For example, complexes may consist of burial grounds and carved trees, artefact scatters that represent different stages of procurement and manufacture or artefact scatters and shell middens. Complexes may also consist of artefact scatters that are connected across a landscape with the scatters being either specific activity centres (such as tool manufacturing sites) or larger base camp areas (with more artefacts and a variety of artefacts). No sites or site complexes were recorded during this survey.

The term 'Potential Archaeological Deposit (PAD)' and 'area(s) of archaeological sensitivity' are used to describe areas that are likely to contain subsurface 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 a PAD. 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.

No PADs or areas of archaeological sensitivity were noted during the survey. During the survey three pebble size pieces of quartz were recorded in the area as indicated in **Figure 15**.

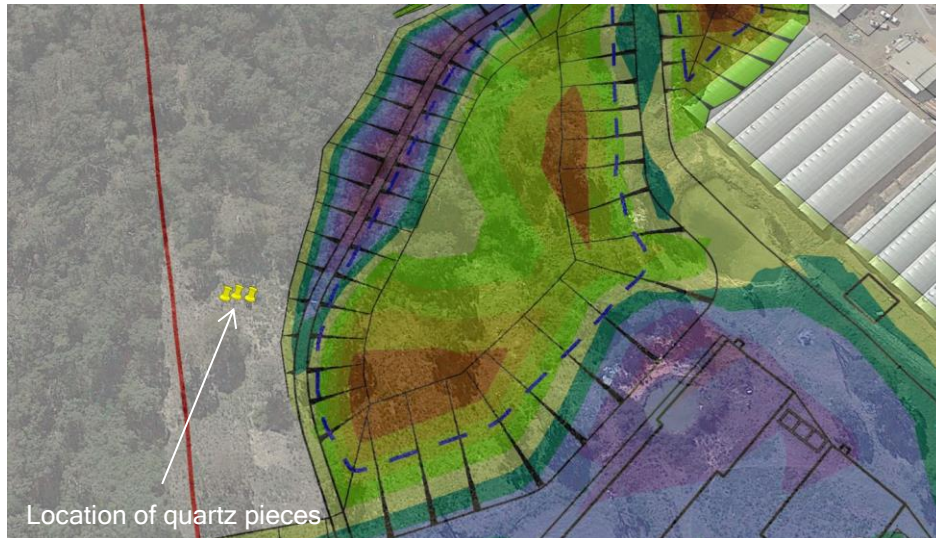


Figure 15: Location of quartz pieces with overlay of proposed impact areas

The pieces of quartz were examined on site for evidence of Aboriginal modification. Whilst the initial piece of quartz located did have a positive scar on one side, no other indicator of the stone knapping process was noted as present. The remainder two pieces of quartz were 'square' cut indicating that they may have been mechanically modified. There was no evidence of Aboriginal modification on these pieces. The area in which the quartz pieces were found had been recently cleared (see **Photo 16**). This would indicate that the pieces of quartz were not *in situ*.

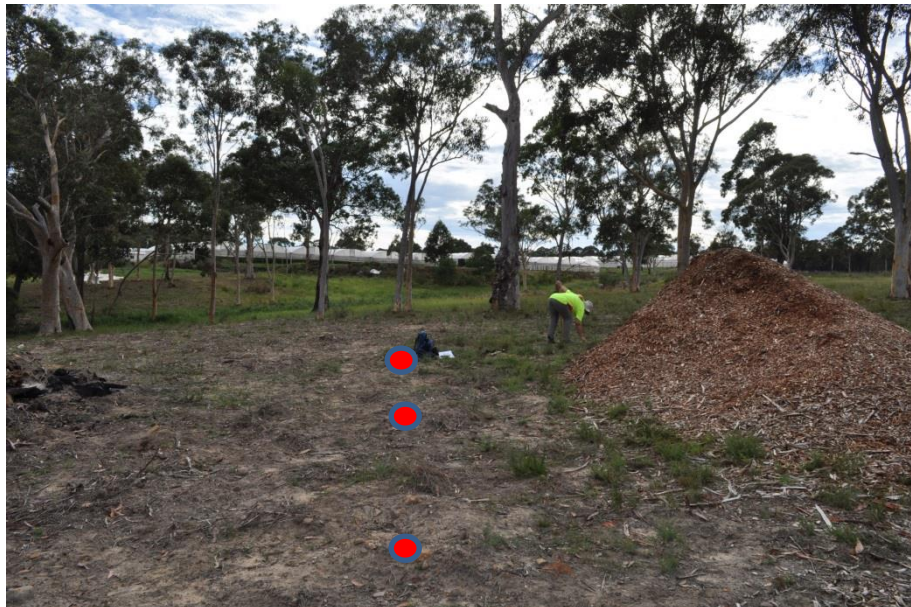


Photo 15: Area that quartz pieces were found (Mrs Glenda Chalker pictured).

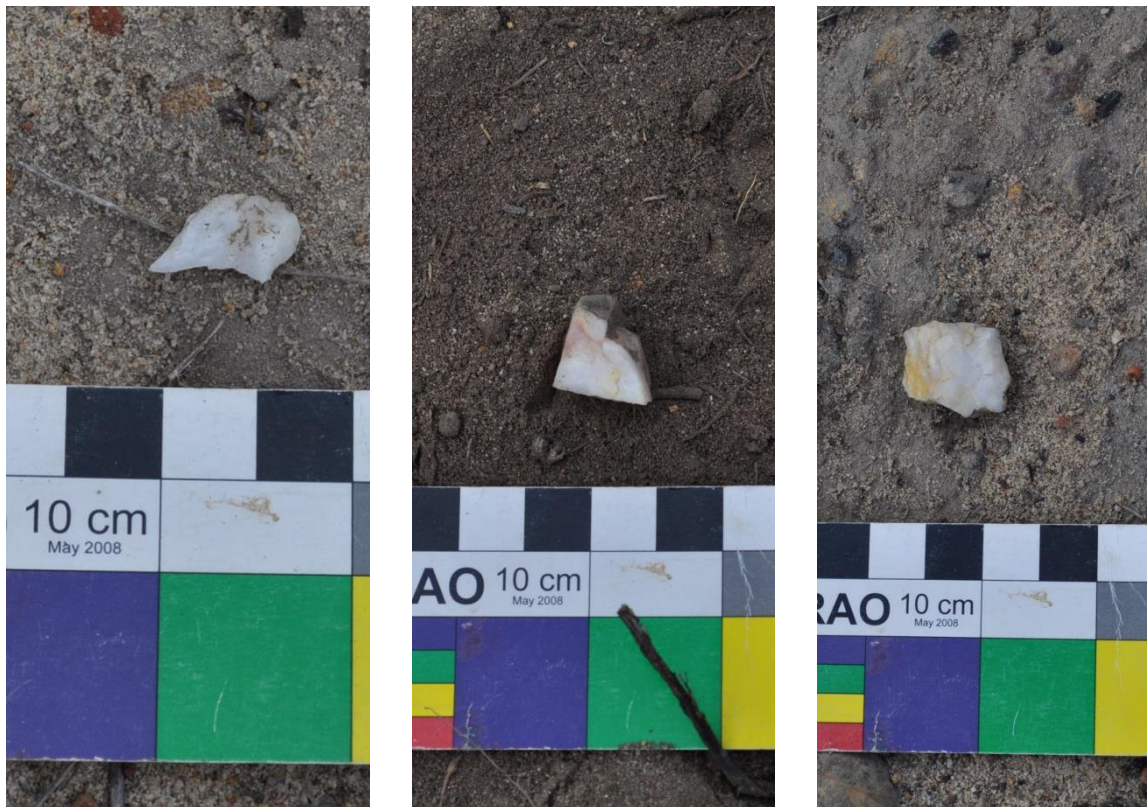


Photo 16: Quartz pieces 1 to 3 (left to right). (Taken 2 February 2017)

Mrs. Glenda Chalker of Cubbitch Barta stated that quartz was a common artefact material found in the area. Mrs Chalker believes that the initial piece of quartz located (piece 1 above) is an Aboriginal artefact and that the quartz pieces were found in an area of the property with high potential for Potential Archaeological Deposits based on the landscape context and local knowledge. Mrs Chalker submitted that the recent clearing of trees has disturbed the ground surface and subsequently revealed the quartz. Mrs Chalker has requested that the quartz artefact be recorded as an Aboriginal object and the immediate surrounding area be registered as a Potential Archaeological Deposit (PAD).

However, quartz piece 1 has not been recorded as an Aboriginal object and a PAD has not been recorded, notwithstanding the high degree of respect we hold for Mrs Chalker's local and cultural knowledge, for the following reasons:

- The absence of more than one scientific indicator confirming that Aboriginal modification has taken place;
- The presence of square cuts to the latter two pieces of quartz which were located within close proximity and in line with the first piece;
- No other pieces of quartz, or suitable knapping material, was observed on the ground surface throughout the study area despite the high visibility of the ground surface due to recent clearing;
- The ground surface had been recently disturbed by clearance and contained assorted gravels, fill material and rubbish. The possibility that the quartz has derived from other unknown locations as fill cannot be overlooked; and
- Predictive modelling, based on contextual evidence, indicates that the open sites most usually occur within 50 to 100 metres of reliable water sources i.e. Carters Creek.

However, and as a safeguard, it is recommended that the following occur in regard to all future works impacting ground surfaces as follows:

- The persons responsible for on site management 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 Amendment (Aboriginal Objects and Aboriginal Places) Regulation 2010, under the National Parks and Wildlife Act 1974;
- In case of unexpected potential Aboriginal objects identified during any excavation works, an 'Unexpected Aboriginal Object Procedure' should be created and provided to all workers, contractors, sub-contractors and employees at their time of their work induction to the site. The 'Unexpected Heritage Items Procedure' should:
 - Define an Aboriginal object in accordance with the Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH, 2011); and
 - Contain provisions that if an Aboriginal object is incidentally discovered and it is likely to be disturbed damaged or destroyed by excavation, works must be suspended in that area and an archaeologist and a Registered Aboriginal party should be contacted to assess and, if necessary, register the find; and should any skeletal remains be found, all works should cease and the NSW Police Service and the Office of Environment and Heritage be immediately contacted.

8.6.3 Assessment of Impacts

The archaeological record is a non-renewable resource that is affected by many processes and activities. The OEH Code of Practice describes impacts to be rated as follows:

- A Type of harm: is either direct, indirect or none;
- B Degree of harm is defined as total, partial or none; and
- C Consequence of harm is defined as either total loss, partial loss, or no loss of value.

As no Aboriginal objects or potential archaeological deposits were recorded prior to or during the archaeological investigation no impacts or harm to Aboriginal heritage or the wider Aboriginal cultural landscape are considered to occur as a result of the development.

8.6.4 Cumulative Impacts

As no Aboriginal objects or potential archaeological deposits were recorded prior to or during the archaeological investigation, the proposed development will not impact any archaeological resources. The cumulative impact to Aboriginal heritage in the area is considered to be nil.

8.6.5 Management and Mitigation Measures

Specific strategies, as outlined through the Code of Practice, are suggested below for the management of any unexpected finds within the study area:

- In case of unexpected potential Aboriginal objects identified during any excavation works, an 'Unexpected Aboriginal Object Procedure' should be created and provided to all workers, contractors, sub-contractors and employees at their time of their work induction to the site. The 'Unexpected Heritage Items Procedure' should:

- Define an Aboriginal object in accordance with the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011); and
 - Provide that if an Aboriginal object is incidentally discovered and it is likely to be disturbed damaged or destroyed by excavation, works must be suspended in that area and an archaeologist contacted to assess and, if necessary, register the find; and
 - Provide that should any skeletal remains be found, all works should cease and the NSW Police Service and the Office of Environment and Heritage be immediately contacted; and
- A copy of this assessment should be lodged with the Aboriginal Heritage Information Management System.

8.6.6 Further Investigation

As no Aboriginal objects or potential archaeological deposits were found during the archaeological investigation and no Aboriginal parties have advised that cultural significance is attached to the study area (see **Section 8.7**), no further archaeological investigation is required.

8.7 Consultation

In relation to cultural significance, Advitech Environmental and the proponent recognise and support the Indigenous system of knowledge. The following is extracted from the ACHCRP:

Aboriginal 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).

If knowledge is shared, that information must be used correctly as 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 Advitech to engage in effective 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.

Advitech Environmental and the proponent also recognise that archaeologists do not have the capability or 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 assessment in the appropriate manner that is stipulated by those with the information.

8.7.1 Stage 1: Notification of Project Proposal & Registration of Interest

The aim of this stage was 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 the ACHCRP and listed in **Table 7**, were contacted by letter requesting details of interested Aboriginal persons.

Table 7: Requests for details of interested Aboriginal persons.

Action	Who	Address	When
Letter and email request for details of interested Aboriginal persons	OEH Greater Sydney region		03.11.16
Letter and email request for details of interested Aboriginal persons	Aboriginal Land Rights (NSW)		03.11.16
Letter and email request for details of interested Aboriginal persons	Greater Sydney Local Land Services		03.11.16
Letter and email request for details of interested Aboriginal persons	Native Title Tribunal		03.11.16
Letter and email request for details of interested Aboriginal persons	NTSCORP		03.11.16
Letter and email request for details of interested Aboriginal persons	Wollondilly Shire Council		03.11.16
Letter and email request for details of interested Aboriginal persons	Tharawal LALC		03.11.16

The Native Title Tribunal advised that there were no Native Title claims registered within the Wollondilly Shire Council area. However, they did advise that there is an Indigenous Land Use Agreement with the Gundungurra people within the Wollondilly Shire Council area. The Gundungurra Land Use Agreement is over areas close to, but not within, the study area region (see Figure 9). As there were no Native Title holders over the study area, consultation was undertaken with any interested Aboriginal persons who wish to register as an interested party in accordance with the ACHCRP 2010.

Following these enquiries, the archaeologist compiled a list of people/groups to contact. A total of 21 groups were identified and are listed in **Table 8**. As per the ACHCRP, all of the identified groups were contacted by letter asking if they would like to register their interest in the project. A period of more than 28 days was given for registration of interest.

Table 8: Letters and emails of invitation to register interest.

Invitations to register sent to
Tharawal Local Aboriginal Land Council
Seli Storer, Biamanga Cultural Heritage Technical Services
Robert Brown, Bilinga Cultural Heritage Technical Services
Corey Smith, Cullendulla Cultural Heritage Technical Services
D'harawal Mens Aboriginal Corporation
Andrew Bond, Dharug Cultural Heritage Technical Services
Wendy Smith, Gulaga Cultural Heritage Technical Services
Darlene Hoskins-McKenzie, Gunyuu Cultural Heritage Technical Services
Kawul Cultural Services
Suzannah McKenzie, Munyunga Cultural Heritage Technical Services
Levi McKenzie-Kirkbright, Murrumbul Cultural Heritage Technical Services

Invitations to register sent to

Peter Falk Consultancy

Glenda Chalker, Cubbitch Barta

Shane Carriage, Thauaira Cultural Heritage Technical Services

Ronald Stewart, Walgalu Cultural Heritage Technical Services

Wandai Kirkbright, Wingikara Cultural Heritage Technical Services

Jennifer Beale, Butucarbin Aboriginal Corporation

L Carroll & P Boyd, Didge Ngunawal Clan

Darren Duncan, Duncan Suey & Associates

Steven Johnson and Krystle Carroll, Ginninderra Aboriginal Corporation

Roxanne Smith, Murramarang Cultural Heritage Technical Services

Public advertisements were placed in the Macarthur Chronicle on 22 November, 2016 (see **Figure 16**). The advertisement included the following information:

- The name and contact details of the proponent;
- An overview of the proposed project including the location of the proposed project;
- A statement that the purpose of community consultation with Aboriginal people is to assist the proposed applicant in the preparation of an application for an AHIP and to assist the Director General of OEH in his or her consideration and determination of the application should an AHIP be required;
- An invitation for 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 a process of community consultation;
- The closing date for the registration of interests (Thursday 8 December, 2016);
- That unless otherwise specified that those who are registering their interest that their details will be provided to OEH and the LALC;
- That LALCs 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, and who wish to register must do so as an Aboriginal organisation not an individual; and
- 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.

0247724

Cultural Heritage Assessment

Registration of Interest for Aboriginal people who hold cultural knowledge

PROJECT: Aboriginal Cultural Heritage Assessment at 180 Mockingbird Road Pheasants Nest

The purpose of community consultation with Aboriginal people is to assist the proposed application in the preparation of an application for an AHIP, if required, and to assist the Director General of OEH in his or her consideration and determination of the application.

This is an invitation for Aboriginal people who hold cultural knowledge relevant to determining 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 with the proposed applicant regarding the proposed activity.

As per the Aboriginal Culture Heritage Consultation Requirements for Proponents (2010), interested parties are advised of the following:

- Unless otherwise specified, if you register your interest your details will be provided to OEH and the LALC;
- The LALC's who hold cultural knowledge relevant to the proposed project area and 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 as an individual;
- Where an Aboriginal organisation representing Aboriginal people who hold cultural knowledge relevant to the proposed project area (such as the LALC) 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 person.

PROPONENT: J & R Camilleri C/- PO Box 580 Raymond Terrace NSW 2324

Registration from Aboriginal people and or Aboriginal groups wishing to be consulted must be received by phone, email or in writing no later than:

THURSDAY 8th DECEMBER 2016.

To register your interest, please contact: Viki Gordon, Senior Archaeologist, Advitech Environmental, PO Box 20, Mayfield NSW 2304.
Email: viki.gordon@advitech.com.au or Phone: 02 4924 5400/Fax: 02 4967 3772

Figure 16: Newspaper Advertisement from the MacArthur Chronicle dated 22 November 2016.

The Registered Stakeholders arising from the invitation to register interest and the newspaper advertisements are listed in **Table 9**.

Table 9: Registered stakeholders

Registrations of interest	Contact
Peter Falk Consultancy	Peter Falk
Cubbitch Barta	Glenda Chalker
Didge Ngunawal Clan	L Carroll and P Boyd
Badu Cultural Heritage Technical Services	Karia Bond
Bidawal Cultural Heritage Technical Services	Stella Brierly
Bilinga Cultural Heritage Technical Services	Simalene Carriage
Dharug Cultural Heritage Technical Services	Andrew Bond
Djiringanj Cultural Heritage Technical Services	Keith Nye
Elouera Cultural Heritage Technical Services	Leonard Nye
Eora Cultural Heritage Technical Services	Kahu Brennan
Gangangarra Cultural Heritage Technical Services	Kim Carriage
Gunyu Cultural Heritage Technical Services	William Henry
Kuringgai Cultural Heritage Technical Services	Toni Brierley
Munyunga Cultural Heritage Technical Services	Shaylee Henry
Murrin Cultural Heritage Technical Services	Tarlarra Te Kowhai
Murrumbul	Steven McCarron
Ngario Cultural Heritage Technical Services	Newton Bond
Ngunawal Cultural Heritage Technical Services	Mitchell Freeman
Nundagurri	Newton Carriage
Tharawal Cultural Heritage Technical Services	Violet Carriage
Thauaira Cultural Heritage Technical Services	Shane Carriage

Registrations of interest	Contact
Walbunja	Hika Tekowhai
Walgalu Cultural Heritage Technical Services	Ronald Stewart
Wandandian Cultural Heritage Technical Services	William Bond
Wingikara Cultural Heritage Technical Services	Izahya Henry
Yerramurra	Owen Carriage
Kamilaroi-Yankunijatjara Working Group	Pollowan Philip Kahn

8.7.2 Stage 2: Presentation of Information about the Proposed Project

The Registered Stakeholders were then provided with an information pack detailing the scope of the proposed project and the cultural heritage assessment process. The following information was provided:

- An outline of the project details including the nature, scope and methodology of the field survey, maps and proposed impacts;
- An outline of the impact assessment process;
- An outline of critical timelines and milestones for the completion of the assessment and delivery of reports;
- To clearly define agreed roles, functions and responsibilities of the OEHL, the Proponent, and the LALC,
- To allow for opportunities for the registered Aboriginal parties to identify, raise and discuss their cultural concerns, perspectives and assessment requirements (if any);
- Requested the preferred option for the gathering of information about cultural significance;
- A written response to the methodology and the preferred method of sharing traditional knowledge methods was due no later than four weeks after the date the information package was sent; and
- This pack also stipulated that consultation was not employment.

8.7.3 Stage 3: Gathering Information about Cultural Significance

The aim of this stage is to facilitate a process whereby the registered Aboriginal stakeholders can contribute to culturally appropriate information gathering and the research methodology, provide information that will enable the cultural significance of any Aboriginal objects and or/places within the proposed project area to be determined and to have input into the development of any cultural heritage management options and mitigation measures. Included in the information pack sent was information pertaining to the gathering of cultural knowledge as follows:

- Information provided by registered Aboriginal parties may be sensitive and Advitech Environmental and the proponent will not share that information with all registered Aboriginal parties or others without the express permission of the individual. Advitech Environmental 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;
- A request for traditional/cultural knowledge or information associated with ceremonial, spiritual, mythological beliefs, traditions and known sites from the pre-contact period;

- A 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 (for example, plant and animal resource use areas, known camp sites); and
- A 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.

The registered Aboriginal stakeholders disclosed cultural information during consultation as indicated in **Table 10**.

Table 10: Information gathered during consultation

Registered Aboriginal Group	Information provided	Notes
Didge Nungawall	The objects that hold cultural knowledge would mainly contain silcrete. [Aboriginal Cultural Places] Possibly down in creek lines as it may contain camp sites (artwork). Europeans would also have trekked through here. The Dharawal people hold a lot of significance in this area from Campbelltown, Appin, Mt Gilead down to Pheasants Nest. Previous generations of family members used to gather and camp in areas of Appin, Campbelltown, Illawarra, Camden and Warragamba	
Cubbitch Barta	Quartz cores are highly significant objects to the Tharawal people.	

The stakeholders did not disclose any further information pertaining to sites or places of cultural significance associated with the historic or contemporary periods within the study 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 Advitech Environmental by those consulted.

8.7.4 Review of draft Cultural Heritage Assessment Report

The draft Cultural Heritage Assessment Report was sent to all registered Stakeholders on 26 September, 2017. It was requested that submissions, concerns or comments about the report be provided within 28 days. The following submissions were provided:

Mrs Glenda Chalker from Cubbitch Bartha:

Thank you for the opportunity of commenting on the draft Archaeological assessment of the above address.

Firstly, I would like to say that I live locally and nearby to this proposed development, and know my Country, and the landscape in it extremely well.

I do not agree with the comment that I supposedly made on page 49. I believe what I actually said was that quartz was a common artefact material in this area, and although two pieces may or may not have been artefactual, I believed that one of them was an artefact. I did also say that quartz cores were significant artefacts. All three pieces were found in an area where I actually predicted we would find artefacts. The ground surface has been recently disturbed by clearing of trees and tea tree in the area, and one can see from the photos the piles of mulch from the process. In my opinion I believe the area where the artefacts were found has the potential for sub surface artefacts based on other recorded

scatters in the same context as to what was found. The map in Figure 15, is hard to say what the other impact is, other than the proposed seven sheds. There appears to be some other impact but it is not defined on the map or in the report.

I believe that the artefact should be recorded on AHIMS, and an immediate area to be defined as a PAD. This area is immediately behind a small tributary that runs into Carters Creek, and is similarly placed as is other recorded sites in the area. If this area is to be impacted then it will require further investigation.

The following response was sent by letter and email to Mrs Chalker on 17 October 2017:

We acknowledge receipt of your letter dated 6 October 2017 and thank you for same. Your comments on the draft archaeological assessment are greatly appreciated. Your letter will be reproduced in full in the assessment together with a copy of this response.

In order to reflect your comments and requests the assessment has been altered as follows:-

- 1. On page 42 (Section 8.6.1 'Methodology'), the following words have been inserted: "Mrs Chalker is a local resident with firsthand knowledge of the area and the landscape. This area is part of her ancestral Tharawal Country and she has undertaken many surveys and assessments of Aboriginal heritage, over many years, throughout the area" has been added;*
- 2. The previous page 49 (now 50), has been amended by deletion of the previous wording and the insertion of the following:*

"Mrs. Glenda Chalker of Cubbitch Barta stated that quartz was a common artefact material found in the area. Mrs Chalker believes that the initial piece of quartz located (piece 1 above) is an Aboriginal artefact and that the quartz pieces were found in an area of the property with high potential for Potential Archaeological Deposits based on the landscape context and local knowledge. Mrs Chalker submitted that the recent clearing of trees has disturbed the ground surface and subsequently revealed the quartz. Mrs Chalker has requested that the quartz artefact be recorded as an Aboriginal object and the immediate surrounding area be registered as a Potential Archaeological Deposit (PAD).

However, quartz piece 1 has not been recorded as an Aboriginal object and a PAD has not been recorded, notwithstanding the high degree of respect we hold for Mrs Chalker's local and cultural knowledge, for the following reasons:

- The absence of more than one scientific indicator confirming that Aboriginal modification has taken place;*
- The presence of square cuts to the latter two pieces of quartz which were located within close proximity and in line with the first piece;*
- No other pieces of quartz, or suitable knapping material, was observed on the ground surface throughout the study area despite the high visibility of the ground surface due to recent clearing;*
- The ground surface had been recently disturbed by clearance and contained assorted gravels, fill material and rubbish. The possibility that the quartz has derived from other unknown locations as fill cannot be overlooked; and*
- Predictive modelling, based on contextual evidence, indicates that the open sites most usually occur within 50 to 100 metres of reliable water sources i.e. Carters Creek.*

However, and as a safeguard, it is recommended that the following occur in regard to all proposed future works impacting ground surfaces as follows:

- *The persons responsible for on site management 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 Amendment (Aboriginal Objects and Aboriginal Places) Regulation 2010, under the National Parks and Wildlife Act 1974;*
- *In case of unexpected potential Aboriginal objects identified during any excavation works, an 'Unexpected Aboriginal Object Procedure' should be created and provided to all workers, contractors, sub-contractors and employees at their time of their work induction to the site. The 'Unexpected Heritage Items Procedure' should:*
 - *Define an Aboriginal object in accordance with the Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH, 2011); and*
 - *Contain provisions that if an Aboriginal object is incidentally discovered and it is likely to be disturbed damaged or destroyed by excavation, works must be suspended in that area and an archaeologist and a Registered Aboriginal party should be contacted to assess and, if necessary, register the find; and should any skeletal remains be found, all works should cease and the NSW Police Service and the Office of Environment and Heritage be immediately contacted.*

In regard to the proposed impacts and Figure 15, we note as follows:

- *Figures 7, 9 & 15 of the report had not been updated to reflect the current development plans. Please accept our apologies for this omission. The current plan, which was correctly represented in Figures 3, 4 & 5, does not impact the area we are discussing. We enclose herewith:-*
- *A blown up A3 image of the location of the quartz objects and the proposed impacts (Figure 15); and*
- *An A3 version of Figure 5 and its key, indicating that cut and fill impacts of the proposed development.*

We hope that these proposed amendments will accord with your requirements. However, please do not hesitate to contact Viki Gordon or Rod Bennison on 02 4924 5400 should you have any questions or wish to discuss this assessment further.

An email, as follows, was received from Mrs Chalker on 18 October, 2018:

I disagree with there being no impact to the area. Perhaps not by the sheds themselves, but the whole area is to be cut and filled, is that not an impact.

The following response was sent by letter and email to Mrs Chalker on 19 October 2017:

Thank you for your email. However, I'm not sure what you mean by the 'whole' area is to be cut and filled? The area where the quartz pieces were found is not being impacted by any cut or fill. No area within 115m of Carters Creek will be impacted. The western side of the new dam will be completely fill (no cut). Only the areas marked in orange and fluro green will be cut.

Due to your lengthy experience of working with archaeologists, I'm sure it doesn't surprise you that, from a scientific perspective and context, and as justified in the report, I cannot warrant recording the

quartz as an artefact or recording a PAD on the basis of the ephemeral drainage lines or further than 50-100 metres from Carters Creek.

Although I have not yet spoken to the Proponent about it, would you like me to investigate the possibilities of whether the Proponent would be prepared to allow a further inspection of the property in the area of concern or, alternatively, allow some further paid hours for you to prepare an Aboriginal Cultural Heritage report to support your assertions from an Aboriginal cultural perspective?

Mr Pollowan Philip Kahn of Kamilaroi-Yankuntjatjara Working Group provided the following letter dated 7 October, 2017 which was received on 23 October, 2017:

Thank you for the Draft Cultural Heritage Assessment at 180, Mockingbird Road Pheasants Nest and it's hard for us Aboriginal People to make comments on areas and sites that we haven't been given the chance to look at.

I have read your Report and am disappointed that this particular site has been given a lack of Aboriginal Objects found during the survey and a lack of registered sites or places found within the study area. Remember this land has been changed over the last 200 years by farmers and if there was stone arrangements or burial grounds which would of had stones over them to keep the dingos from digging up the remains, if there was these stones over a supposedly burial site then these stones would of been removed by the farmers for their own use many years ago without any thoughts of wot they represents back in those days.

It is also documented that Jo McDonald has found moor artefacts in areas with no surface artefacts found than were artefact scatterers were found, and also that under the ploughing for gardens there is still artefact found in situe. As the old Aboriginal person have said if we don't look now when we have the chance and when its destroyed its gone forever and cannot be replaced. There could be areas around the sides of this particular development that may be highly significant and if its not been looked at then it is lost forever. All areas were significant to our old Aboriginal people and had a spiritual relationship to all areas. I would like to see further investigation in the form of Test Excavations, Regards Philip Khan.

The following response was sent by letter and email to Mr Khan on 19 October 2017:

We acknowledge receipt of your letter dated 7 October 2017, which was received on 24 October 2017, and thank you for same. Your comments on the draft archaeological assessment are greatly appreciated. We certainly respect your Aboriginal ancestry, experience and knowledge in Aboriginal heritage. Your letter will be reproduced in full in the assessment together with a copy of this response.

We note and understand your concern about a lack of Aboriginal objects found during the survey and a lack of registered sites or places within the study area. We further note your comment as to how the land has changed over the last 200 years and your particular concern about the possibility of burial sites or the loss of stone arrangements which may have indicated burial or ceremonial sites. In regard to this issue, we refer to the historic assessment of the study area. The area has never been farmed as the soil type is unsuitable for farming, crop production or orchards. There has been some pastoral use and clearing of vegetation, alongside the development of the current buildings and dam areas. The soil, in the areas to be impacted, and as depicted in the photographs within the assessment, largely lacks topsoil due to its erodibility and content. There is little capacity for the retention of any sub surface objects in the areas to be impacted.

Jo McDonald's predictive modelling of the Cumberland Plain is discussed within the assessment on a regional context and the potential modelling of the study area does include the notation that sub surface artefacts may be present anywhere and without surface artefacts being present. However, on this basis alone, it is unacceptable to test pit an area. Given that a reliable water source, (Carters

Creek) with suitable and occupiable, elevated areas is present on the adjoining properties to the south and east, and taking into account all aspects of the predictive modelling it is more likely that Aboriginal objects or sites would be present on elevated areas within 50 to 100 metres of the water source, a confluence of water sources or on ridge lines. The assessment notes that there is a low potential for Aboriginal objects to be found in the lower, south eastern, corner of the property which does contain some relatively undisturbed top soil and is closer to water. However, this area will not be impacted by the proposed development and therefore further archaeological investigation was not warranted.

We acknowledge and entirely accept your statement that all areas were spiritually significant to your ancestors. However, without any specific stipulation or contextual reason as to why this study area, from a cultural perspective, forms part of a significant Aboriginal landscape then we must rely on the archaeological assessment. Based on regional modelling, the study area lacks suitable landforms, resources and objects, indicative of repeated occupation. However, if there is a specific cultural significance of the area that we are unaware of, we request that you contact the writer, as a matter of urgency, to discuss the best way to assess and present its cultural significance in accordance with your protocols.

We note that the following safeguards have been added to the assessment:

- The persons responsible for on site management 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 Amendment (Aboriginal Objects and Aboriginal Places) Regulation 2010, under the National Parks and Wildlife Act 1974;
- In case of unexpected potential Aboriginal objects identified during any excavation works, an 'Unexpected Aboriginal Object Procedure' should be created and provided to all workers, contractors, sub-contractors and employees at their time of their work induction to the site. The 'Unexpected Heritage Items Procedure' should:
 - Define an Aboriginal object in accordance with the Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH, 2011); and
 - Contain provisions that if an Aboriginal object is incidentally discovered and it is likely to be disturbed damaged or destroyed by excavation, works must be suspended in that area and an archaeologist and a Registered Aboriginal party should be contacted to assess and, if necessary, register the find; and should any skeletal remains be found, all works should cease and the NSW Police Service and the Office of Environment and Heritage be immediately contacted.

We hope that the above discussion will somewhat relieve your concern about the proposed development and any possible effect it may have on Aboriginal heritage. However, please do not hesitate to contact Viki Gordon or Rod Bennison on 02 4924 5400 should you have any questions or wish to discuss this assessment further.

No further response was received from either Cubbitch Barta or the Kamilaroi-Yankuntjatjara Working Group. A further email was sent to both companies on 31 October, 2017, reiterating the above offers for further consultation and asking for an urgent response by Friday 2 November, 2017. No response to the later emails was received from either party.

9. CONCLUSIONS AND RECOMMENDATIONS

The principal objectives of the study were to identify, evaluate and, if necessary, propose appropriate management protocols for material cultural evidence located in the study area and or at some risk from direct or peripheral effects of the project. It is concluded that there are no constraints, on archaeological or cultural grounds, to the proposed development in the current areas proposed for impact. This conclusion and the following recommendations are made on the basis of:

- The legal requirement under the NPW Act which states that it is illegal to knowingly deface, damage or destroy a relic or Aboriginal place in New South Wales without first obtaining the written consent;
- The legal requirement of the Heritage Act which states that it is an offence to damage, disturb or despoil any relic, deposit or place listed on the State Heritage Register; and
- Research into the archaeological, environmental and historical record of the study area as detailed in this report.

However, should the current areas proposed for impact be varied causing further direct or peripheral impacts to subsurface areas further into the south western corner of the property, further archaeological and cultural investigation will be required.

9.1 Historic or Natural Heritage

The study area is an evolved landscape resulting from housing, farming structures, vegetation clearing, the construction of dams and drainage lines, pastoralism, fencing and erosion. The study area is not considered to be significant, rare or representative at local, State or National level.

No items of historical or natural heritage, as defined by the NSW Heritage Office under the requisite criteria, were found to be located within the study area. Therefore, no approvals are required under the Heritage Act to proceed with the development.

It is recommended that:

- In case of unexpected potential heritage items identified during any excavation works, that an 'Unexpected Heritage Items Procedure' be created and provided to all workers, contractors, sub-contractors and employees at their time of their work induction to the site. The 'Unexpected Heritage Items Procedure' should:
 - Define a relic;
 - Provide that, if a relic is discovered in the course of excavation, that is likely to be disturbed damaged or destroyed by works, then all works must be suspended in that area and an archaeologist contacted to assess the find; and
 - Provide that if the proponent must notify the Heritage Branch, Office of Environment and Heritage, or its delegate and suspend work in the vicinity of the object that might have the effect of disturbing, damaging or destroying such relic until the requirements of the Heritage Branch have been satisfied; and
- A copy of this assessment should be lodged with the NSW Department of Heritage.

9.2 Aboriginal Heritage

Based on this Aboriginal cultural heritage assessment, taking into account previous archaeological surveys and Aboriginal consultation, it is possible to identify a number of trends in site location and patterning expected in the study area (see **Section 8.5**). It is concluded that the study area would have

been suitable for transitory or opportunistic hunting or gathering of resources. It is considered that the remainder of the study area has nil to low potential for Aboriginal objects on the following basis:

- The lack of Aboriginal objects found during the survey;
- The lack of registered Aboriginal sites or places found within the study area;
- The topography, landforms and landscape within the study area;
- Consultation undertaken with local Aboriginal people and in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*;
- The archaeological context; and
- The highly disturbed nature of the majority of the study area due to historical pastoral and market garden development and infrastructure.

No further investigation in regard to Aboriginal objects in the study area is required under the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*.

It is recommended that:

- The persons responsible for on site management 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 Amendment (Aboriginal Objects and Aboriginal Places) Regulation 2010*, under the *National Parks and Wildlife Act 1974*;
- In case of unexpected potential Aboriginal objects identified during any excavation works, an 'Unexpected Aboriginal Object Procedure' should be created and provided to all workers, contractors, sub-contractors and employees at their time of their work induction to the site. The 'Unexpected Heritage Items Procedure' should:
 - Define an Aboriginal object in accordance with the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011); and
 - Contain provisions that if an Aboriginal object is incidentally discovered and it is likely to be disturbed damaged or destroyed by excavation, works must be suspended in that area and an archaeologist contacted to assess and, if necessary, register the find; and should any skeletal remains be found, all works should cease and the NSW Police Service and the Office of Environment and Heritage be immediately contacted; and
- A copy of this assessment should be lodged with the Aboriginal Heritage Information Management System.

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Appendix I

AHIMS extensive search for 180 Mockingbird Road Pheasants Nest

THE FOLLOWING PAGES ARE NOT FOR
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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
52-2-2048	CC 1;Sydney Water Metropolitan Catchment;	AGD	56	280380	6201300	Closed site	Valid	Art (Pigment or Engraved) : -, Grinding Groove : -	Axe Grinding Groove,Shelter with Art	
	Contact							Permits		
52-2-0009	Bargo;Dog Trap Creek;	AGD	56	279210	6203580	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	
	Contact							Permits		
52-2-1600	Carties Creek;	AGD	56	283160	6205700	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	1333
	Contact							Permits		
52-2-1601	Carties Creek;	AGD	56	282770	6205310	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	1333
	Contact							Permits		
52-2-1602	Carties Creek;	AGD	56	282350	6205120	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	1333
	Contact							Permits		
52-2-1520	Dogtrap Creek;	AGD	56	279100	6203290	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	1333
	Contact							Permits		
52-2-1521	Dogtrap Creek;	AGD	56	279100	6203260	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	1333
	Contact							Permits		
52-2-1522	Dogtrap Creek;	AGD	56	278950	6203110	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	1333
	Contact							Permits		
52-2-1523	Dogtrap Creek;	AGD	56	279290	6203620	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	1333
	Contact							Permits		
52-2-1524	Dogtrap Creek;	AGD	56	279300	6204250	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	1333
	Contact							Permits		
52-2-1525	Dogtrap Creek;	AGD	56	279310	6203830	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	1333
	Contact							Permits		
52-2-1526	Dogtrap Creek;	AGD	56	279250	6203970	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	1333
	Contact							Permits		
52-2-1527	Dogtrap Creek;	AGD	56	279250	6204020	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	1333
	Contact							Permits		

Report generated by AHIMS Web Service on 17/01/2017 for Viki Gordon for the following area at Lat, Long From : -34.294, 150.6059 - Lat, Long To : -34.2664, 150.6498 with a Buffer of 1000 meters. Additional Info : EIS. Number of Aboriginal sites and Aboriginal objects found is 42

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
52-2-1528	Dogtrap Creek;	AGD	56	279250	6203740	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	1333
	<u>Contact</u>	<u>Recorders</u>	Warren Bluff					<u>Permits</u>		
52-2-1529	Dogtrap Creek;	AGD	56	279320	6203920	Open site	Valid	Artefact : -	Open Camp Site	1333
	<u>Contact</u>	<u>Recorders</u>	Warren Bluff					<u>Permits</u>		
52-2-1530	Dogtrap Creek;	AGD	56	279290	6204100	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	1333
	<u>Contact</u>	<u>Recorders</u>	Warren Bluff					<u>Permits</u>		
52-2-1531	Dog Trap Creek;	AGD	56	279560	6206350	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	1333
	<u>Contact</u>	<u>Recorders</u>	Warren Bluff					<u>Permits</u>		
52-2-1532	Dog Trap Creek;	AGD	56	278870	6205830	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	1333
	<u>Contact</u>	<u>Recorders</u>	Warren Bluff					<u>Permits</u>		
52-2-1533	Dog Trap Creek;	AGD	56	279050	6204410	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	1333
	<u>Contact</u>	<u>Recorders</u>	Warren Bluff					<u>Permits</u>		
52-2-1534	Dog Trap Creek;	AGD	56	279150	6204350	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	1333
	<u>Contact</u>	<u>Recorders</u>	Warren Bluff					<u>Permits</u>		
52-2-1538	Bargo;	AGD	56	278780	6204460	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	
	<u>Contact</u>	<u>Recorders</u>	Warren Bluff					<u>Permits</u>		
52-2-1539	Bargo;	AGD	56	278750	6204350	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	1333
	<u>Contact</u>	<u>Recorders</u>	Warren Bluff					<u>Permits</u>		
52-2-2259	WADE No15	AGD	56	283240	6203060	Closed site	Valid	Potential Archaeological Deposit (PAD) : -, Art (Pigment or Engraved) : -		
	<u>Contact</u>	<u>Recorders</u>	Mrs.Caryll Sefton					<u>Permits</u>		
52-2-3358	Nicola No 14	GDA	56	280185	6201600	Closed site	Valid	Grinding Groove : 11		
	<u>Contact</u> Searle	<u>Recorders</u>	Mrs.Caryll Sefton					<u>Permits</u>		
52-2-3359	Nicola No 15	GDA	56	280423	6201504	Closed site	Valid	Art (Pigment or Engraved) : 41		
	<u>Contact</u> Searle	<u>Recorders</u>	Mrs.Caryll Sefton					<u>Permits</u>		
52-2-3360	Nicola No 16	GDA	56	281414	6201957	Closed site	Valid	Art (Pigment or Engraved) : 2		

Report generated by AHIMS Web Service on 17/01/2017 for Viki Gordon for the following area at Lat, Long From : -34.294, 150.6059 - Lat, Long To : -34.2664, 150.6498 with a Buffer of 1000 meters. Additional Info : EIS. Number of Aboriginal sites and Aboriginal objects found is 42

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
52-2-3361	Nicola No 17	GDA	56	281899	6202876	Closed site	Valid	Potential Archaeological Deposit (PAD) : -, Artefact : 5		
	Contact									Permits
52-2-3362	Nicola No 18	GDA	56	282121	6202926	Closed site	Valid	Art (Pigment or Engraved) : 7, Artefact : 1		
	Contact									Permits
52-2-3363	Nicola No 19	GDA	56	282465	6202851	Closed site	Valid	Artefact : 5, Potential Archaeological Deposit (PAD) : -		
	Contact									Permits
52-2-3371	Nicola No 27	GDA	56	281657	6202294	Closed site	Valid	Art (Pigment or Engraved) : 13, Artefact : 1		
	Contact									Permits
52-2-3372	Nicola No 28	GDA	56	282346	6202187	Closed site	Valid	Art (Pigment or Engraved) : 1, Artefact : 1		
	Contact									Permits
52-2-3373	Nicola No 29	GDA	56	282780	6201990	Closed site	Valid	Art (Pigment or Engraved) : 1		
	Contact									Permits
52-2-3849	Nepean River Gorge	GDA	56	283814	6204637	Open site	Valid	Grinding Groove : 12		
	Contact									Permits
52-2-1993	Tahani Lea 34	GDA	56	283867	6201653	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	
	Contact									Permits
52-2-3921	Dogtrap Creek AGG-1	GDA	56	278867	6205321	Open site	Valid	Grinding Groove : 2		
	Contact									Permits
52-2-3938	ELIZA CREEK OAS 1	GDA	56	280851	6205658	Open site	Valid	Artefact : 1		
	Contact									Permits
52-2-3944	Dry Creek GG 1	GDA	56	281626	6205669	Open site	Valid	Grinding Groove : 1		
	Contact									Permits
52-2-3942	DRY CREEK OAS 1	GDA	56	280851	6205658	Open site	Valid	Artefact : 1		
	Contact									Permits

Report generated by AHIMS Web Service on 17/01/2017 for Viki Gordon for the following area at Lat, Long From : -34.294, 150.6059 - Lat, Long To : -34.2664, 150.6498 with a Buffer of 1000 meters. Additional Info : EIS. Number of Aboriginal sites and Aboriginal objects found is 42

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AHIMS Web Services (AWS)

Extensive search - Site list report

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
52-2-3943	Dry Creek IA 1	GDA	56	281523	6205328	Open site	Valid	Artefact : 1		
	Contact	Recorders	Niche Environment and Heritage							Permits
52-2-3971	Dogtrap Creek 2013.2	GDA	56	279412	6204552	Closed site	Valid	Art (Pigment or Engraved) : -		
	Contact	Recorders	Niche Environment and Heritage,Ms.Renee Regal							Permits
52-2-3972	Dry Creek 2013.1	GDA	56	281560	6205800	Open site	Valid	Artefact : -		
	Contact	Recorders	Niche Environment and Heritage,Mr.Jamie Reeves							Permits
52-2-3960	Dog Trap Creek 2013.1	GDA	56	279334	6203792	Closed site	Valid	Art (Pigment or Engraved) : -		
	Contact	Recorders	Niche Environment and Heritage,Ms.Renee Regal							Permits

Report generated by AHIMS Web Service on 17/01/2017 for Viki Gordon for the following area at Lat, Long From : -34.294, 150.6059 - Lat, Long To : -34.2664, 150.6498 with a Buffer of 1000 meters. Additional Info : EIS. Number of Aboriginal sites and Aboriginal objects found is 42

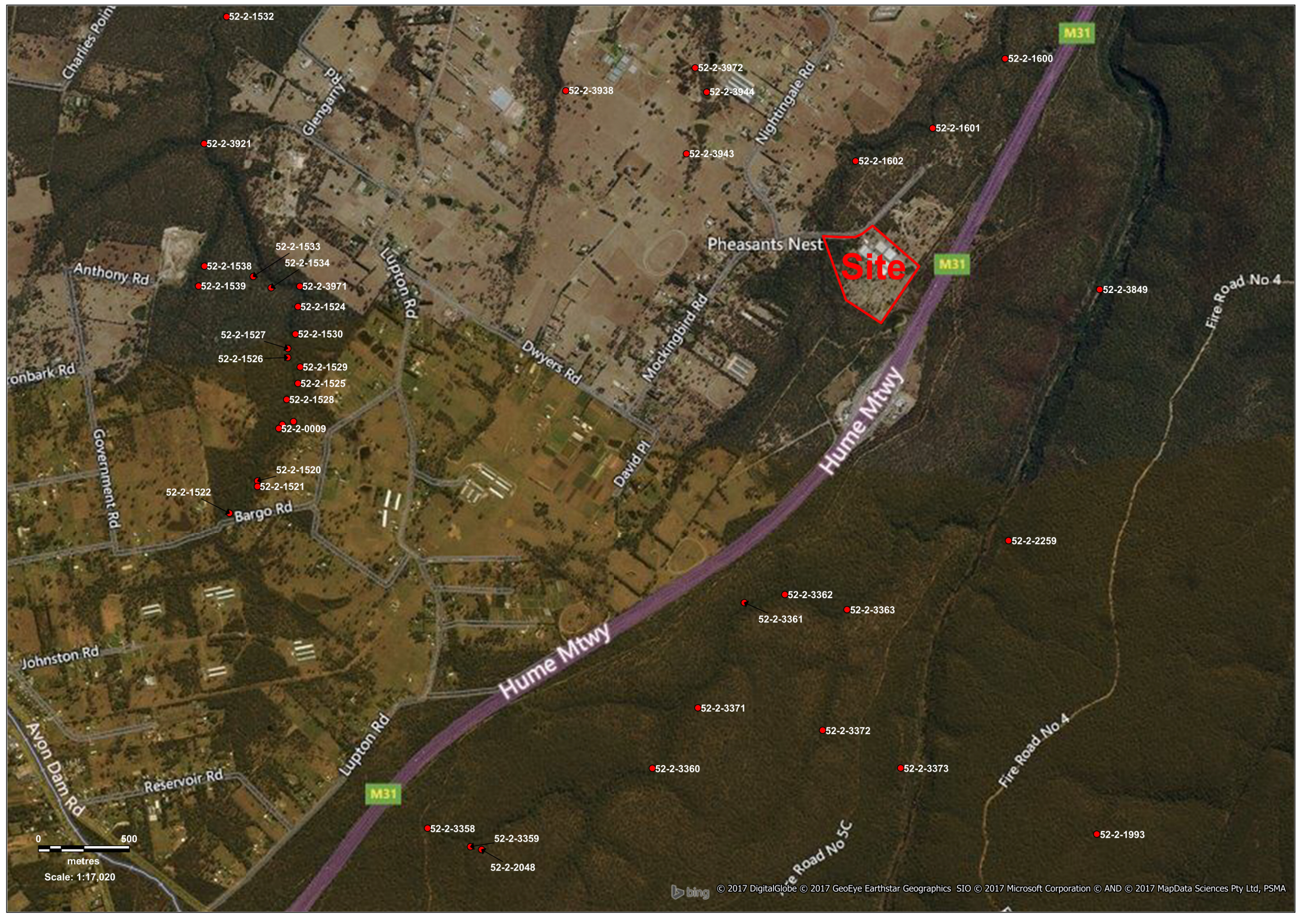
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Appendix II

Aboriginal registered sites location map

THE FOLLOWING PAGES ARE NOT FOR
PUBLIC DISCLOSURE



Site

0 500 metres
Scale: 1:17,020



Appendix III

Aboriginal Consultation Log



THE FOLLOWING PAGES ARE NOT FOR
PUBLIC DISCLOSURE

Stakeholder Consultation Record

Client:	Tattersall Lander Poultry Pty Ltd	Date commenced:	3.11.16
Author:	Viki Gordon	Job #:	J0160298
Topic:	Poultry farm at Pheasants Nest	Folder #:	F14719

Actions/form	Who	Action/response	When
STAGE 1			
Letter and email request for details of interested Aboriginal persons	Local Land Services (Greater Syd/Penrith)	Email and letter received 9.11.16	3.11.16
Letter request for details of interested Aboriginal persons	NTSCORP	No response	3.11.16
Letter request for details of interested Aboriginal persons	Native Title Tribunal	Email received 10.11.16	3.11.16
Letter request for details of interested Aboriginal persons	Aboriginal Land Rights (NSW)	Email and letter received 9.11.16	3.11.16
Letter and email request for details of interested Aboriginal persons	Tharawal LALC	Nil	3.11.16
Letter request for details of interested Aboriginal persons	Wollondilly Local Council	Email received 8.11.16	3.11.16
Letter request for details of interested Aboriginal persons	OEH Sydney	List of invitees received on 14 November 2016	3.11.16
Letter advising of interested Aboriginal parties	Office of the Registrar Aboriginal Land Rights	Contact Tharawal LALC	Date on letter incorrect (19.05.2017)
Email advising receipt of letter	Native Title Tribunal	Advising letter forwarded to enquiries Dept.	8.11.16
Email advising of interested Aboriginal parties	Wollondilly Local Council	Cubbitch Barta and Tharawal LALC	8.11.16
Email advising of interested Aboriginal Parties	Local Land Services (Greater Syd/Penrith)	Contact OEH	9.11.16
Email advising of interested Aboriginal parties	Native Title Tribunal	Gundungurra ILA	10.11.16

Email advising of interested Aboriginal parties	OEH		14.11.16
Email and letter invitation sent to Tharawal LALC	reception@tharawal.com.au; heritage@tharawal.com.au P O Box 168 PICTON NSW 2571		16.11.16
Email invitation to register sent	Seli Storer Biamanga biamangachts@gmail.com		17.11.16
Email invitation to register sent	Robert Brown Bilinga Cultural Heritage Technical Services bilinga@mirramajah.com		17.11.16
Email invitation to register sent	Corey Smith Cullendulla cullendullachts@gmail.com		17.11.16
Letter invitation to register sent	D'harawal Mens Aboriginal Corporation 187 Riverside Drive Airds NSW 2560		17.11.16
Email invitation to register sent	Dharug Andrew Bond dharugchts@gmail.com		17.11.16
Email invitation to register sent	Wendy Smith Gulaga gulagachts@gmail.com		17.11.16
Email invitation to register sent	Darlene Hoskins-McKenzie Gunya Cultural Heritage Technical Services gunyuu@mirramajah.com ; management@mirramajah.com		17.11.16
Letter invitation to register sent	Kawul Cultural Services 89 Pyramid Street Emu Plains NSW 2750		17.11.16
Email invitation to register sent	Suzannah McKenzie Munyunga Cultural Heritage Technical Services munyunga@mirramajah.com ; munyunga@mirrmajah.com		17.11.16
Email invitation to register sent	Levi McKenzie-Kirkbright Murrumbul Cultural Heritage Technical Services murrumbul@mirramajah.com		17.11.16
Email and letter invitation sent to	Peter Falk Consultancy P O Box 1018 Mittagong NSW 2575		17.11.16

	kanga26@live.com.au		
Email and letter invitation to register sent to	Cubbitch Barta kgchalker@bigpond.com Glenda Chalker 55 Nightingale Road, Pheasants Nest NSW 2574		17.11.16
Email invitation to register sent	Thauaira Shane Carriage Thauairachts@gmail.com		17.11.16
Email invitation to register sent	Walgalu Ronald Stewart walgaluchts@gmail.com		17.11.16
Email invitation to register sent	Wandai Kirkbright Wingikara Cultural Heritage Technical Services wingikara@mirramajah.com		17.11.16
Email and letter invitation to register sent	Jennifer Beale Butucarbin Aboriginal Corporation P O Bo E18 EMERTON NSW 2770 koori@ozemail.com.au		17.11.16
Email invitation to register sent	L Carroll & P Boyd Didge Ngunawal Clan 7 Siskin Street QUAKERS HILL NSW 2763		17.11.16
Email invitation to register sent	Darren Duncan Duncan Suey & Associates darrenjohnduncan@gmail.com		17.11.16
Email invitation to register sent	Steven Johnson and Krystle Carroll Ginninderra Aboriginal Corporation 1 Smallwood Road McGraths Hill NSW 2756 Ginninderra.corp@gmail.com		17.11.16
Email invitation to register sent	Roxanne Smith Murramarang murramarangchts@gmail.com		17.11.16
Registration of interest received	Peter Falk Consultancy P O Box 1018 Mittagong NSW 2575 kanga26@live.com.au		17.11.16
Registration of interest received	Cubbitch Barta kgchalker@bigpond.com Glenda Chalker 55 Nightingale Road, Pheasants Nest NSW 2574		17.11.16
Registration of interest received	L Carroll & P Boyd Didge Ngunawal Clan 7 Siskin Street	Includes comments on cultural significance	21.11.16

	QUAKERS HILL NSW 2763 PH. 0426823944		
Registration of interest received	Karia Bond Badu C/- Murrin Administrative Services 15 Renee Crescent MORUYA HEADS NSW 2537 PH. 0412630841 baduchts@gmail.com		01.12.16
Registration of interest received	Stella Brierley Bidawal C/- Murrin Administrative Services 15 Renee Crescent MORUYA HEADS NSW 2537 PH. 0411526183 bidawalchts@gmail.com		01.12.16
Registration of interest received	Simalene Carriage Bilinga C/- Murrin Administrative Services 15 Renee Crescent MORUYA HEADS NSW 2537		01.12.16
Registration of interest received	Andrew Bond Dharug C/- Murrin Administrative Services 15 Renee Crescent MORUYA HEADS NSW 2537 PH. 0434176340 dharugchts@gmail.com		01.12.16
Registration of interest received	Keith Nye Djiringanj djiringanjchts@gmail.com>		01.12.16
Registration of interest received	Lenard Nye Elouera C/- Murrin Administrative Services 15 Renee Crescent MORUYA HEADS NSW 2537 PH. 0402730612		01.12.16
Registration of interest received	Kahu Brennan Eora eorachts@gmail.com		01.12.16
Registration of interest received	Kim Carriage Gangangarra C/- Murrin Administrative Services 15 Renee Crescent MORUYA HEADS NSW 2537 ganangarra@gmail.com		01.12.16

Registration of interest received	William Henry Gunyuu 10/144 Kelly Road, Bingi, NSW 2537 0466002049 gunyuuchts@gmail.com		01.12.16
Registration of interest received	Toni Brierley Kuringgai C/- Murrin Administrative Services 15 Renee Crescent MORUYA HEADS NSW 2537 Ph. 0402 730612 kuringgaichts@gmail.com		01.12.16
Registration of interest received	Shaylee Henry Munyunga C/- Murrin Administrative Services 15 Renee Crescent MORUYA HEADS NSW 2537 Ph. 0423 491543 Munyungachts@gmail.com		01.12.16
Registration of interest received	Tarlarra Te Kowhai Murrin C/- Murrin Administrative Services 15 Renee Crescent MORUYA HEADS NSW 2537 murrinchts@gmail.com Ph. 0402 730612		01.12.16
Registration of interest received	Steven McCarron Murrumbul C/- Murrin Administrative Services 15 Renee Crescent MORUYA HEADS NSW 2537 0432 432965 murrumbul@gmail.com		01.12.16
Registration of interest received	Newton Bond Ngarigo C/- Murrin Administrative Services 15 Renee Crescent MORUYA HEADS NSW 2537 Ph. 0431 137597 ngarigochts@gmail.com		01.12.16
Registration of interest received	Mitchel Freeman Ngunawal C/- Murrin Administrative Services 15 Renee Crescent MORUYA HEADS NSW 2537		01.12.16

	Ph. 0421 624380 ngunawalchts@gmail.com		
Registration of interest received	Newton Carriage Nundagurri C/- Murrin Administrative Services 15 Renee Crescent MORUYA HEADS NSW 2537 0413693987 nundagurri@gmail.com		01.12.16
Registration of interest received	Violet Carriage Tharawal C/- Murrin Administrative Services 15 Renee Crescent MORUYA HEADS NSW 2537 0244738201 0402730612 tharawalchts@gmail.com		01.12.16
Registration of interest received	Shane Carriage Thauaira C/- Murrin Administrative Services 15 Renee Crescent MORUYA HEADS NSW 2537 0421473744		01.12.16
Registration of interest received	Hika Tekowhai Walbunja PO BOX 535 10/144 Kelly Road BINGIE, NSW, 2537 walbunja@gmail.com 0402730612 0244738201		01.12.16
Registration of interest received	Ronald Stewart Walgalu C/- Murrin Administrative Services 15 Renee Crescent MORUYA HEADS NSW 2537 0421473744 walgaluchts@gmail.com		01.12.16
Registration of interest received	William Bond Wandandian C/- Murrin Administrative Services 15 Renee Crescent MORUYA HEADS NSW 2537 0412630841 wandandianchts@gmail.com		01.12.16
Registration of interest received	Izahya Henry Wingikara		01.12.16

	C/- Murrin Administrative Services 15 Renee Crescent MORUYA HEADS NSW 2537 0402376131 wingikarachts@gmail.com		
Registration of interest received	Owen Carriage Yerramurra C/O Murrin Administrative Services 15 Renee Crescent Moruya Heads NSW 2537 yerramurra@gmail.com		01.12.16
Acknowledgement of registration of interest	Stella Brierly Bidawal bidawalchts@gmail.com 0411 526183		05.12.16
Acknowledgement of registration of interest	Keith Nye Diringanj djiringanjchts@gmail.com		05.12.16
Acknowledgement of registration of interest	Violet Carriage Tharawal tharawalchts@gmail.com		05.12.16
Acknowledgement of registration of interest	Karia Bond Badu baduchts@gmail.com C/- Murrin Administrative Services 15 Renee Crescent MORUYA HEADS NSW 2537		05.12.16
Acknowledgement of registration of interest	Simalene Carriage Bilinga C/- Murrin Administrative Services 15 Renee Crescent MORUYA HEADS NSW 2537		05.12.16
Acknowledgement of registration of interest	Andrew Bond Dharug C/- Murrin Administrative Services 15 Renee Crescent MORUYA HEADS NSW 2537		5.12.16
Acknowledgement of registration of interest	William Bond Wandandian 0412630841 wandandianchts@gmail.com		05.12.16
Acknowledgement of registration of interest	Lenard Nye Elouera C/- Murrin Administrative Services 15 Renee Crescent MORUYA HEADS NSW 2537		05.12.16

	0402 730612/0244738201		
Acknowledgement of registration of interest	Kahu Brennan Eora eorachts@gmail.com		05.12.16
Acknowledgement of registration of interest	Kim Carriage Gangangarra ganangarra@gmail.com		05.12.16
Acknowledgement of registration of interest	William Henry Gunyu 10/144 Kelly Road, Bingi, NSW 2537 0466002049 gunyuuchts@gmail.com		05.12.16
Acknowledgement of registration of interest	Toni Brierley Kuringgai C/- Murrin Administrative Services 15 Renee Crescent MORUYA HEADS NSW 2537		05.12.16
Acknowledgement of registration of interest	Shaylee Henry Munyunga C/- Murrin Administrative Services 15 Renee Crescent MORUYA HEADS NSW 2537 Munyangachts@gmail.com		05.12.16
Acknowledgement of registration of interest	Tarlarra Te Kowhai Murrin C/- Murrin Administrative Services 15 Renee Crescent MORUYA HEADS NSW 2537		05.12.16
Acknowledgement of registration of interest	Newton Bond Ngarigo 0431137597 C/- Murrin Administrative Services 15 Renee Crescent MORUYA HEADS NSW 2537 ngarigochts@gmail.com		05.12.16
Acknowledgement of registration of interest	Mitchel Freeman Ngunawal C/- Murrin Administrative Services 15 Renee Crescent MORUYA HEADS NSW 2537 0421 624380		05.12.16
Acknowledgement of registration of interest	Newton Carriage Nundagurri nundagurri@gmail.com C/- Murrin Administrative		05.12.16

	Services 15 Renee Crescent MORUYA HEADS NSW 2537		
Acknowledgement of registration of interest	Shane Carriage Thauaira C/- Murrin Administrative Services 15 Renee Crescent MORUYA HEADS NSW 2537 0421473744		05.12.16
Acknowledgement of registration of interest	Hika Tekowhai Walbunja PO BOX 535 10/144 Kelly Road BINGIE, NSW, 2537 walbunja@gmail.com 0402730612 0244738201		05.12.16
Acknowledgement of registration of interest	Walgalu Ronald Stewart C/- Murrin Administrative Services 15 Renee Crescent MORUYA HEADS NSW 2537 walgaluchts@gmail.com		05.12.16
Acknowledgement of registration of interest	Izahya Henry Wingikara wingikarachts@gmail.com C/- Murrin Administrative Services 15 Renee Crescent MORUYA HEADS NSW 2537		05.12.16
Acknowledgement of registration of interest	Owen Carriage Yerramurra C/O Murrin Administrative Services 15 Renee Crescent Moruya Heads NSW 2537 yerramurra@gmail.com		05.12.16
Registration of interest received	Kamilaroi-Yankunijatjara Working Group Pollowan Phillip Kahn 78 Forbes St Emu Plains NSW 2750	By fax (08.12.16) and phone (12.12.16)	08.12.16
Telephone message	Phil Kahn	Confirming registration of interest was received by fax	09.12.16
STAGE 2			
Information package sent by email	Karia Bond Badu baduchts@gmail.com		12.12.16
Information package	Stella Brierly		12.12.16

sent by email	Bidawal bidawalchts@gmail.com		
Information package sent by mail and email	Cubbitch Barta kgchalker@bigpond.com Glenda Chalker 55 Nightingale Road, Pheasants Nest NSW 2574		12.12.16
Information package sent by email	Keith Nye Djiringanj djiringanjchts@gmail.com		12.12.16
Information package sent by email	Kim Carriage Gangangarra ganangarrachts@gmail.com		12.12.16
Information package sent by email	William Henry Gunyuu gunyuuchts@gmail.com		12.12.16
Information package sent by email	Toni Brierley Kuringgai kuringgaichts@gmail.com		12.12.16
Information package sent by email	Steven McCarron Murrumbul murrumbul@gmail.com		12.12.16
Information package sent by email	Kahu Brennan Eora eorachts@gmail.com		12.12.16
Information package sent by email	Tarlarra Te Kowhai Murrin		12.12.16
Information package sent by email	Newton Bond Ngarigo ngarigochts@gmail.com		12.12.16
Information package sent by email	Mitchel Freeman Ngunawal 0421624380 ngunawalchts@gmail.com		12.12.16
Information package sent by email	Newton Carriage Nundagurri nundagurri@gmail.com		12.12.16
Information package sent by email	Violet Carriage Tharawal tharawalchts@gmail.com		12.12.16
Information package sent by email	Thauaira Shane Carriage Thauairachts@gmail.com		12.12.16
Information package sent by email and mail	Hika Tekowhai Walbunja PO BOX 535 10/144 Kelly Road BINGIE, NSW, 2537 walbunja@gmail.com 0402730612 0244738201		12.12.16

Information package sent by email	Ronald Stewart Walgalu 0421473744 walgaluchts@gmail.com		12.12.16
Information package sent by email	Izahya Henry Wingikara wingikarachts@gmail.com		12.12.16
Information package sent by email	Andrew Bond Dharug Cultural Heritage Technical Services dharugchts@gmail.com		12.12.16
Information package sent by email	Gunyu Cultural Heritage Technical Services 10/144 Kelly Road Bingi NSW 2537 gunyuuchts@gmail.com		12.12.16
Information package sent by email	Pollowan Philip Kahn Kamilaroi-Yankunijatjara Working Group 78 Forbes St Emu Plains NSW 2750		12.12.16
Email	Owen Carriage Yerramurra C/O Murrin Administrative Services 15 Renee Crescent Moruya Heads NSW 2537 yerramurra@gmail.com	Chasing information package	18.01.17
Information package sent by email	Owen Carriage Yerramurra C/O Murrin Administrative Services 15 Renee Crescent Moruya Heads NSW 2537 yerramurra@gmail.com	Providing information package	19.01.17
Email	Owen Carriage Yerramurra C/O Murrin Administrative Services 15 Renee Crescent Moruya Heads NSW 2537 yerramurra@gmail.com	Asking to be considered for any site work	23.01.17
Telephone call	Hike Tekowhai Walbunja PO BOX 535 10/144 Kelly Road BINGIE, NSW, 2537 walbunja@gmail.com	Mr Tekowhai telephoned as head representative for the Murrin Group of Stakeholders and as a result of a complaint received from Yerramurra which is one of their members and one of the Registered Aboriginal parties. Mr Tekowhai wanted to talk to me about his concerns about our employment of	24.1.17

		<p>Cubbitch Barta for our recent field surveys and possible nepotism. Mr Tekowhai explained that the Murrin group had made an application for a Native Title claim over some of the area in December. He also went to some extent to explain why it was important that all members of the Aboriginal community be given the opportunity to be employed on site works i.e. on a share basis. He advised me that other members of the group lived in the area of the assessments. In response I advised Mr Tekowhai that I understood his concerns but explained that I was regulated by the relevant consultation legislation. I confirmed that as a non-Aboriginal person I neither sought nor involved myself in matters of discussion or decision as to who or what groups had knowledge or should rightfully be employed. I explained that in the first 3 instances of assessments in the Council area, and despite the Proponent not being obligated to employ Aboriginal parties, all Registered Aboriginal parties were invited to apply for employment as a field officer. All applications were placed into a list of applicants, as would a normal application for employment, and they were chosen in order of merit based on correct insurances supplied, any information provided about knowledge or ancestry of the area, previous jobs done and references from other archaeologists they had worked with i.e. the same way a normal job application would be assessed. Cubbitch Barta's application had, in each case, been the one with most merit</p>	
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		<p>and subsequently was therefore chosen by the applicant on each occasion. The last job and resultant call for applications for field officers resulted in only 3 applications being received. For this subsequent assessment, employment was not advertised due to the results of the previous assessments (all done in within the last 6 months) as it would seem inappropriate, or even calculating, to use another group particularly as members of Cubbitch Barta reside in the immediate vicinity of the development i.e. it may appear that we were alternating between groups to suit ourselves. I advised Mr Tekowhai that the only applications I received from members of the Murrin stakeholders in the past had fallen well short of the information provided by Cubbitch Barta and therefore they had not been chosen previously. I also noted that the Tharawal LALC had never applied for employment and I was led to believe that this was because they currently had no sites officer on staff. I confirmed that should I have another assessment in the Wollondilly council area or thereabouts in the future that I would re-open the application process for employment as a field officer and I suggested that the Murrin stakeholders address the opportunity as a normal job application and provide as much information as possible in order to be placed higher than any other Applicants. Mr Tekowhai and I both agreed that the current legislation and regulations were insufficient in order to cope with the determination of who had the</p>	
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		right and should be employed for the purposes of assessment. I thanked Mr Tekowhai for making me aware of the new Native Title application but also discussed with him that until there was an approved Native Title Claim, the legislation still required that I consult with any and all Registered Aboriginal Parties.	
Telephone message	Phil Khan 0434545982	Just wanted to check he was registered as a RAP. Advised he was. Will send assessment for comment when it has been done.	06.03.2017
Email	L Carroll & P Boyd Didge Ngunawal Clan 7 Siskin Street QUAKERS HILL NSW 2763 paulboyd@y7mail.com	Advising of recent job completed in the area	23.02.17
Telephone message	L Carroll & P Boyd Didge Ngunawal Clan 7 Siskin Street QUAKERS HILL NSW 2763		28.02.2017
Telephone call	L Carroll & P Boyd Didge Ngunawal Clan 7 Siskin Street QUAKERS HILL NSW 2763 paulboyd@y7mail.com	Tried to call but there was no phone connection.	06.03.2017
Email	L Carroll & P Boyd Didge Ngunawal Clan 7 Siskin Street QUAKERS HILL NSW 2763 paulboyd@y7mail.com	Further to my attempt to call above I wrote an email advising that I have been off, that assessment had not yet been finished and that I would call as soon as I was fully back on deck	06.03.17
Email	L Carroll & P Boyd Didge Ngunawal Clan 7 Siskin Street QUAKERS HILL NSW 2763 paulboyd@y7mail.com	Querying about field work	06.03.17
STAGE 3			
Email	L Carroll & P Boyd Didge Ngunawal Clan 7 Siskin Street QUAKERS HILL NSW 2763 paulboyd@y7mail.com	Query about how the job is going	12.05.17
Email	Karia Bond Badu baduchts@gmail.com	Submission of draft archaeological assessment for review	26.09.17
Email	Stella Brierly	Submission of draft	26.09.17

	Bidawal bidawalchts@gmail.com	archaeological assessment for review	
Email	Cubbitch Barta kgchalker@bigpond.com Glenda Chalker 55 Nightingale Road, Pheasants Nest NSW 2574	Submission of draft archaeological assessment for review	26.09.17
Email	L Carroll & P Boyd Didge Ngunawal Clan 7 Siskin Street QUAKERS HILL NSW 2763 paulboyd@y7mail.com	Submission of draft archaeological assessment for review	16.09.17
Email	Keith Nye Djiringanj djiringanjchts@gmail.com	Submission of draft archaeological assessment for review	26.09.17
Email	Kim Carriage Gangangarra ganangarrachts@gmail.com	Submission of draft archaeological assessment for review	26.09.17
Email	Toni Brierley Kuringgai kuringgaichts@gmail.com	Submission of draft archaeological assessment for review	26.09.17
Email	Steven McCarron Murrumbul murrumbul@gmail.com	Submission of draft archaeological assessment for review	26.09.17
Email	Kahu Brennan Eora eorachts@gmail.com	Submission of draft archaeological assessment for review	26.09.17
Email	Tarlarra Te Kowhai Murrin	Submission of draft archaeological assessment for review	26.09.17
Email	Newton Bond Ngarigo ngarigochts@gmail.com	Submission of draft archaeological assessment for review	26.09.17
Email	Mitchel Freeman Ngunawal 0421624380 ngunawalchts@gmail.com	Submission of draft archaeological assessment for review	26.09.17
Email	Newton Carriage Nundagurri nundagurri@gmail.com	Submission of draft archaeological assessment for review	26.09.17
Email	Violet Carriage Tharawal tharawalchts@gmail.com	Submission of draft archaeological assessment for review	26.09.17
Email	Thauaira Shane Carriage Thauairachts@gmail.com	Submission of draft archaeological assessment for review	26.09.17
Email	Hika Tekowhai Walbunja PO BOX 535 10/144 Kelly Road BINGIE, NSW, 2537 walbunja@gmail.com	Submission of draft archaeological assessment for review	26.09.17

	0402730612 0244738201		
Email	Ronald Stewart Walgalu 0421473744 walgaluchts@gmail.com	Submission of draft archaeological assessment for review	26.09.17
Email	Izahya Henry Wingikara wingikarachts@gmail.com	Submission of draft archaeological assessment for review	26.09.17
Email	Andrew Bond Dharug Cultural Heritage Technical Services dharugchts@gmail.com	Submission of draft archaeological assessment for review	26.09.17
Email	William Henry Gunya Cultural Heritage Technical Services 10/144 Kelly Road Bingi NSW 2537 gunyuuchts@gmail.com	Submission of draft archaeological assessment for review	26.09.17
Email and mail	Polowan Philip Kahn Kamilaroi-Yankunijatjara Working Group 78 Forbes St Emu Plains NSW 2750	Submission of draft archaeological assessment for review	26.09.17
Email	Owen Carriage Yerramurra C/O Murrin Administrative Services 15 Renee Crescent Moruya Heads NSW 2537 yerramurra@gmail.com	Submission of draft archaeological assessment for review	26.09.17
Email	Peter Falk Consultancy kanga26@live.com.au	I am sad to say that I have retired (72) from doing any further archaeology work and now live in QLD. If you could advise all within your organisation that I no longer am a registered Aboriginal Consultant. Also my son Duncan Falk (Duncan Falk Consultancy) has removed himself from doing any archaeology work and has removed himself from university and is pursuing other work. It has been a wonderful 18 years of working in the field with some wonderful people, but I now see that there are SO MANY groups popping up and all members of the same organisation, it is a shame, they are just screwing it up for us who have the knowledge and experience.	26.09.17

		So I say, Goodbye enjoy life and your work.	
Email received	L Carroll & P Boyd Didge Ngunawal Clan 7 Siskin Street QUAKERS HILL NSW 2763 paulboyd@y7mail.com	DNC agrees to the new proposals of the lesser sheds out at Pheasants Nest. Please let us know when the field work commences,	26.09.17
Email received	Cubbitch Barta kgchalker@bigpond.com Glenda Chalker 55 Nightingale Road, Pheasants Nest NSW 2574	<p>Thank you for the opportunity of commenting on the draft Archaeological assessment of the above address.</p> <p>Firstly, I would like to say that I live locally and nearby to this proposed development, and know my Country, and the landscape in it extremely well.</p> <p>I do not agree with the comment that I supposedly made on page 49. I believe what I actually said was that quartz was a common artefact material in this area, and although two pieces may or may not have been artefactual, I believed that one of them was an artefact. I did also say that quartz cores were significant artefacts. All three pieces were found in an area where I actually predicted we would find artefacts. The ground surface has been recently disturbed by clearing of trees and tea tree in the area, an one can see from the photos the piles of mulch from the process. In my opinion I believe the area where the artefacts were found has the potential for sub surface artefacts based on other recorded scatters in the same context as to what was found. The map in Figure 15, is hard to say what the other impact is, other than the proposed seven sheds. There appears to be some other impact but it is not defined on the map or in the report.</p>	06.10.17

		<p>I believe that the artefact should be recorded on AHIMS, and an immediate area to be defined as a PAD. This area is immediately behind a small tributary that runs into Carters Creek, and is similarly placed as is other recorded sites in the area. If this area is to be impacted then it will require further investigation.</p>	
Letter received	<p>Pollowan Philip Kahn Kamilaroi-Yankunijatjara Working Group 78 Forbes St Emu Plains NSW 2750</p>	<p>Thank you for the Draft Cultural Heritage Assessment at 180, Mockingbird Road Pheasants Nest and its hard for us Aboriginal People to make comments on areas and sites that we haven't been given the chance to look at.</p> <p>I have read your Report and am disappointed that this particular site has been given a lack of Aboriginal Objects found during the survey and a lack of registered sites or places found within the study area. Remember this land has been changed over the last 200 years by farmers and if there was stone arrangements or burial grounds which would of had stones over them to keep the dingos from digging up the remains, if there was these stones over a supposedly burial site then these stones would of been removed by the farmers for their own use many years ago without any thoughts of wot they represents back in those days.</p> <p>It is also documented that Jo McDonald has found moor artefacts in areas with no surface artefacts found than were artefact scatterers were found, and also that under the plauging for gardens there is still artefact found in situe . As the old Aboriginal person have</p>	07.10.17

		<p>said if we don't look now when we have the chance and when its destroyed its gone forever and cannot be replaced. There could be areas around the sides of this particular development that may be highly significant and if its not been looked at then it is lost forever. All areas were significant to our old Aboriginal people and had a spiritual relationship to all areas. I would like to see further investigation in the form of Test Excavations, Regards Philip Khan.</p>	
Email and letter sent	<p>Cubbitch Barta kgchalker@bigpond.com Glenda Chalker 55 Nightingale Road, Pheasants Nest NSW 2574</p>	<p>We acknowledge receipt of your letter dated 6 October 2017 and thank you for same. Your comments on the draft archaeological assessment are greatly appreciated. Your letter will be reproduced in full in the assessment together with a copy of this response.</p> <p>In order to reflect your comments and requests the assessment has been altered as follows:-</p> <p>1. On page 42 (Section 8.6.1 'Methodology'), the following words have been inserted: "Mrs Chalker is a local resident with firsthand knowledge of the area and the landscape. This area is part of her ancestral Tharawal Country and she has undertaken many surveys and assessments of Aboriginal heritage, over many years, throughout the area" has been added;</p> <p>2. The previous page 49 (now 50), has been amended by deletion of the previous wording and the insertion of the following: "Mrs. Glenda Chalker of Cubbitch Barta stated that</p>	17.10.17

		<p>quartz was a common artefact material found in the area. Mrs Chalker believes that the initial piece of quartz located (piece 1 above) is an Aboriginal artefact and that the quartz pieces were found in an area of the property with high potential for Potential Archaeological Deposits based on the landscape context and local knowledge. Mrs Chalker submitted that the recent clearing of trees has disturbed the ground surface and subsequently revealed the quartz. Mrs Chalker has requested that the quartz artefact be recorded as an Aboriginal object and the immediate surrounding area be registered as a Potential Archaeological Deposit (PAD).</p> <p>However, quartz piece 1 has not been recorded as an Aboriginal object and a PAD has not been recorded, notwithstanding the high degree of respect we hold for Mrs Chalker's local and cultural knowledge, for the following reasons:</p> <ul style="list-style-type: none"> ▪ The absence of more than one scientific indicator confirming that Aboriginal modification has taken place; ▪ The presence of square cuts to the latter two pieces of quartz which were located within close proximity and in line with the first piece; ▪ No other pieces of quartz, or suitable knapping material, was observed on the ground surface throughout the study area despite the high visibility of the ground surface due to recent clearing; ▪ The ground surface had been recently disturbed by clearance and contained assorted gravels, fill material and rubbish. The possibility that the quartz has derived from other unknown locations as fill cannot be overlooked; and ▪ Predictive modelling, based on contextual evidence, indicates 	
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		<p>that the open sites most usually occur within 50 to 100 metres of reliable water sources i.e. Carters Creek.</p> <p>However, and as a safeguard, it is recommended that the following occur in regard to all proposed future works impacting ground surfaces as follows:</p> <ul style="list-style-type: none"> ▪ The persons responsible for on site management 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 Amendment (Aboriginal Objects and Aboriginal Places) Regulation 2010, under the National Parks and Wildlife Act 1974; ▪ In case of unexpected potential Aboriginal objects identified during any excavation works, an 'Unexpected Aboriginal Object Procedure' should be created and provided to all workers, contractors, sub-contractors and employees at their time of their work induction to the site. The 'Unexpected Heritage Items Procedure' should: ▪ Define an Aboriginal object in accordance with the Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH, 2011); and ▪ Contain provisions that if an Aboriginal object is incidentally discovered and it is likely to be disturbed damaged or destroyed by excavation, works must be suspended in that area and an archaeologist and a Registered Aboriginal party should be contacted to assess and, if necessary, register the find; and should any skeletal remains be found, all works should cease and the NSW Police Service and the Office of Environment and Heritage be immediately contacted. <p>In regard to the proposed impacts and Figure 15, we note as follows:</p>	
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		<ul style="list-style-type: none"> ▪ Figures 7, 9 & 15 of the report had not been updated to reflect the current development plans. Please accept our apologies for this omission. The current plan, which was correctly represented in Figures 3, 4 & 5, does not impact the area we are discussing. We enclose herewith:- ▪ A blown up A3 image of the location of the quartz objects and the proposed impacts (Figure 15); and ▪ An A3 version of Figure 5 and its key, indicating that cut and fill impacts of the proposed development. <p>We hope that these proposed amendments will accord with your requirements. However, please do not hesitate to contact Viki Gordon or Rod Bennison on 02 4924 5400 should you have any questions or wish to discuss this assessment further.</p>	
Email sent	Karia Bond Badu baduchts@gmail.com	Email sent reminding groups of close of submissions/consultation date	17.10.17
Email sent	Stella Brierly Bidawal bidawalchts@gmail.com	Email sent reminding groups of close of submissions/consultation date	17.10.17
Email sent	Cubbitch Barta kgchalker@bigpond.com Glenda Chalker 55 Nightingale Road, Pheasants Nest NSW 2574	Email sent reminding groups of close of submissions/consultation date	17.10.17
Email sent	Keith Nye Djiringanj djiringanjchts@gmail.com	Email sent reminding groups of close of submissions/consultation date	17.10.17
Email sent	Kim Carriage Gangangarra ganangarrachts@gmail.com	Email sent reminding groups of close of submissions/consultation date	17.10.17
Email sent	Toni Brierley Kuringgai kuringgaichts@gmail.com	Email sent reminding groups of close of submissions/consultation date	17.10.17
Email sent	Steven McCarron Murrumbul murrumbul@gmail.com	Email sent reminding groups of close of submissions/consultation date	17.10.17
Email sent	Kahu Brennan Eora eorachts@gmail.com	Email sent reminding groups of close of submissions/consultation date	17.10.17
Email sent	Tarlarra Te Kowhai Murrin	Email sent reminding groups of close of	17.10.17

		submissions/consultation date	
Email sent	Newton Bond Ngarigo ngarigochts@gmail.com	Email sent reminding groups of close of submissions/consultation date	17.10.17
Email sent	Mitchel Freeman Ngunawal 0421624380 ngunawalchts@gmail.com	Email sent reminding groups of close of submissions/consultation date	17.10.17
Email sent	Newton Carriage Nundagurri nundagurri@gmail.com	Email sent reminding groups of close of submissions/consultation date	17.10.17
Email sent	Violet Carriage Tharawal tharawalchts@gmail.com	Email sent reminding groups of close of submissions/consultation date	17.10.17
Email sent	Thauaira Shane Carriage Thauairachts@gmail.com	Email sent reminding groups of close of submissions/consultation date	17.10.17
Email sent	Hika Tekowhai Walbunja PO BOX 535 10/144 Kelly Road BINGIE, NSW, 2537 walbunja@gmail.com 0402730612 0244738201	Email sent reminding groups of close of submissions/consultation date	17.10.17
Email sent	Ronald Stewart Walgalu 0421473744 walgaluchts@gmail.com	Email sent reminding groups of close of submissions/consultation date	17.10.17
Email sent	Izahya Henry Wingikara wingikarachts@gmail.com	Email sent reminding groups of close of submissions/consultation date	17.10.17
Email sent	Andrew Bond Dharug Cultural Heritage Technical Services dharugchts@gmail.com	Email sent reminding groups of close of submissions/consultation date	17.10.17
Email sent	William Henry Gunyu Cultural Heritage Technical Services 10/144 Kelly Road Bingi NSW 2537 gunyuchts@gmail.com	Email sent reminding groups of close of submissions/consultation date	17.10.17
Email sent	Pollowan Philip Kahn Kamilaroi-Yankunijatjara Working Group 78 Forbes St Emu Plains NSW 2750	Email sent reminding groups of close of submissions/consultation date	17.10.17
Email sent	Owen Carriage Yerramurra C/O Murrin Administrative Services	Email sent reminding groups of close of submissions/consultation date	17.10.17

	15 Renee Cresent Moruya Heads NSW 2537 yerramura@gmail.com		
Email received	Cubbitch Barta kgchalker@bigpond.com Glenda Chalker 55 Nightingale Road, Pheasants Nest NSW 2574	I disagree with there being no impact to the area. Perhaps not by the sheds themselves, but the whole area is to be cut and filled, is that not an impact.	18.10.17
Email sent	Cubbitch Barta kgchalker@bigpond.com Glenda Chalker 55 Nightingale Road, Pheasants Nest NSW 2574	<p>Thank you for your email. However, I'm not sure what you mean by the 'whole' area is to be cut and filled? The area where the quartz pieces were found is not being impacted by any cut or fill. No area within 115m of Carters Creek will be impacted. The western side of the new dam will be completely fill (no cut). Only the areas marked in orange and fluro green will be cut.</p> <p>Due to your lengthy experience of working with archaeologists, I'm sure it doesn't surprise you that, from a scientific perspective and context, and as as justified in the report, I cannot warrant recording the quartz as an artefact or recording a PAD on the basis of the ephemeral drainage lines or further than 50-100 metres from Carters Creek.</p> <p>Although I have not yet spoken to the Proponent about it, would you like me to investigate the possibilities of whether the Proponent would be prepared to allow a further inspection of the property in the area of concern or, alternatively, allow some further paid hours for you to prepare an Aboriginal Cultural Heritage report to support your assertions from an Aboriginal cultural perspective?</p>	19.10.17
Email	Pollowan Philip Kahn Kamilaroi-Yankunijatjara Working Group 78 Forbes St	We acknowledge receipt of your letter dated 7 October 2017, which was received on 24 October 2017, and thank you for	

	Emu Plains NSW 2750	<p>same. Your comments on the draft archaeological assessment are greatly appreciated. We certainly respect your Aboriginal ancestry, experience and knowledge in Aboriginal heritage. Your letter will be reproduced in full in the assessment together with a copy of this response.</p> <p>We note and understand your concern about a lack of Aboriginal objects found during the survey and a lack of registered sites or places within the study area. We further note your comment as to how the land has changed over the last 200 years and your particular concern about the possibility of burial sites or the loss of stone arrangements which may have indicated burial or ceremonial sites. In regard to this issue, we refer to the historic assessment of the study area. The area has never been farmed as the soil type is unsuitable for farming, crop production or orchards. There has been some pastoral use and clearing of vegetation, alongside the development of the current buildings and dam areas. The soil, in the areas to be impacted, and as depicted in the photographs within the assessment, largely lacks topsoil due to its erodibility and content. There is little capacity for the retention of any sub surface objects in the areas to be impacted.</p> <p>Jo McDonald's predictive modelling of the Cumberland Plain is discussed within the assessment on a regional context and the potential modelling of the study area does include the notation that</p>	
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		<p>sub surface artefacts may be present anywhere and without surface artefacts being present. However, on this basis alone, it is unacceptable to test pit an area. Given that a reliable water source, (Carters Creek) with suitable and occupiable, elevated areas is present on the adjoining properties to the south and east, and taking into account all aspects of the predictive modelling it is more likely that Aboriginal objects or sites would be present on elevated areas within 50 to 100 metres of the water source, a confluence of water sources or on ridge lines. The assessment notes that there is a low potential for Aboriginal objects to be found in the lower, south eastern, corner of the property which does contain some relatively undisturbed top soil and is closer to water. However, this area will not be impacted by the proposed development and therefore further archaeological investigation was not warranted.</p> <p>We acknowledge and entirely accept your statement that all areas were spiritually significant to your ancestors. However, without any specific stipulation or contextual reason as to why this study area, from a cultural perspective, forms part of a significant Aboriginal landscape then we must rely on the archaeological assessment. Based on regional modelling, the study area lacks suitable landforms, resources and objects, indicative of repeated occupation. However, if there is a specific cultural significance of the area that we are unaware of, we request that you contact the writer, as a matter of</p>	
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		<p>urgency, to discuss the best way to assess and present its cultural significance in accordance with your protocols. We note that the following safeguards have been added to the assessment:</p> <ul style="list-style-type: none"> ▪ The persons responsible for on site management 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 Amendment (Aboriginal Objects and Aboriginal Places) Regulation 2010, under the National Parks and Wildlife Act 1974; ▪ In case of unexpected potential Aboriginal objects identified during any excavation works, an 'Unexpected Aboriginal Object Procedure' should be created and provided to all workers, contractors, sub-contractors and employees at their time of their work induction to the site. The 'Unexpected Heritage Items Procedure' should: ▪ Define an Aboriginal object in accordance with the Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH, 2011); and ▪ Contain provisions that if an Aboriginal object is incidentally discovered and it is likely to be disturbed damaged or destroyed by excavation, works must be suspended in that area and an archaeologist and a Registered Aboriginal party should be contacted to assess and, if necessary, register the find; and should any skeletal remains be found, all works should cease and the NSW Police Service and the Office of Environment and Heritage be immediately contacted. <p>We hope that the above discussion will somewhat relieve your concern about the proposed development and any possible effect it may have on</p>	
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		Aboriginal heritage. However, please do not hesitate to contact Viki Gordon or Rod Bennison on 02 4924 5400 should you have any questions or wish to discuss this assessment further.	
Email	Cubbitch Barta kgchalker@bigpond.com Glenda Chalker 55 Nightingale Road, Pheasants Nest NSW 2574	<p>I refer to our previous emails and letter discussions about the Aboriginal Heritage Assessment on this property. As you are aware, the formal consultation period ended last Friday.</p> <p>I have recently resigned from Advitech and will be finishing up here on 17 November. It is important that I finalise this assessment and associated consultation prior to my departure. I note that my previous email suggested some ways to move forward i.e. a further inspection of the property or submission of your own Aboriginal heritage cultural report (if the Proponent is agreeable to same). However, I have not received, to date, any response to these suggestions. At this stage, Advitech will not be employing another Archaeologist and therefore the opportunity to undertake either of these scenarios is fast running out. If I do not hear anything further from you by this Friday 3 November, 2017, I will assume that you will rely on your objections as they stand and I confirm that they are now also written into the final assessment.</p> <p>I am also concerned that I have had not heard from you as to whether you have sent your invoice elsewhere for payment or whether you have just not yet submitted same? If your invoice is still outstanding, please</p>	31.10.17

		provide to me by this Friday so that I can submit it to the Proponent together.	
By email	<p>Pollowan Philip Kahn Kamilaroi-Yankunijatjara Working Group 78 Forbes St Emu Plains NSW 2750</p>	<p>We refer to our previous emails and letter discussions about the Aboriginal Heritage Assessment on this property. As you are aware, the formal consultation period ended last Friday.</p> <p>I have recently resigned from Advitech and will be finishing here on 17 November. It is important that I finalise this assessment and attached consultation prior to my departure. I note that our last email requested that if there was a specific cultural significance of the area that you contact the writer, as a matter of urgency, to discuss the best way to assess and present its cultural significance in accordance with your cultural protocols. At this stage, Advitech will not be employing another Archaeologist and therefore the time to attend to this is fast running out.</p> <p>If I do not hear anything further from you by this Friday 3 November, 2017, I will assume that you will rely on your objections as they stand and I confirm that they have now also been written into the final assessment.</p>	31.10.17
No further correspondence or contact was received.			