

10 July 2014

Fiona van der Hoeven
Manager, Planning
Elton Consulting
PO Box 1488
Bondi Junction NSW 1355

Dear Fiona,

**RE: DUE DILIGENCE ABORIGINAL HERITAGE ASSESSMENT –
STATION ST, MENANGLE**

This report has been prepared by MDCA [Mary Dallas Consulting Archaeologists] at your request on behalf of Souwest Development P/L. It relates to a current proposal to rezone 38 hectares of land adjacent to Station Street at Menangle, in south-western Sydney to allow for residential development and neighbourhood centres (**Figures 1 and 2**). It presents the results of a Due Diligence Aboriginal Heritage Assessment to meet the requirements of Due Diligence as per the DECCW¹ 2010 *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*, including a determination of whether further archaeological investigation may be required in relation to the current proposal.

The rezoning proposal received a Gateway Determination on 19/12/13 which included a condition to prepare an Aboriginal heritage assessment that is consistent with the Environmental Planning & Assessment Act s117 directions for Aboriginal heritage. The s117 direction requires planning proposals to contain provisions that facilitate the conservation of

“Aboriginal objects or Aboriginal places that are protected under the National Parks and Wildlife Act 1974; and Aboriginal areas, Aboriginal objects, Aboriginal places or landscapes identified by an Aboriginal heritage survey prepared by or on behalf of an Aboriginal Land Council, Aboriginal body or public authority and provided to the relevant planning authority, which identifies the area, object, place or landscape as being of heritage significance to Aboriginal culture and people.”²

The current report is in fulfilment of this requirement and has been prepared by MDCA Principal Consultant Paul Irish, with contributions from MDCA Archaeologist Tamika Goward.

¹ Now the Office of Environment & Heritage.

² S117 Directions 1/7/2009 clause 2.3.4(b & c). See <http://www.planning.nsw.gov.au/en-au/planningyourlocalarea/localplanningdirections.aspx>



The Subject Land and Proposal

The 38 hectares proposed for rezoning consists largely of two areas east and west of the Main Southern Railway line, within Lots 201 in DP590247, Lot 21 in DP581462 and Lot 202 in DP590247 (**Figure 2**). The western area is approximately 12.8 hectares in size and is bounded by Menangle Road to the west, the grassy paddocks of Lot 201 in DP590247 and Lot 21 in DP581462 to the north, Stevens Road to the east and subdivided but vacant lands along Station Street to the south. This western area forms part of the former Camden Park Estate Central Creamery complex. The eastern area is approximately 23.6 hectares in size and is situated east of the Main Southern Railway line and west of the South Western Freeway on either side of an unnamed minor creekline that flows north into the Nepean River. It is bounded to the north and south by pasture lands and associated farm structures and fences. In addition to this 36.5 hectares, an approximately 1.5 hectare area to the north of the eastern study area is currently being considered for the location of an associated Water Treatment Plant, as indicated in **Figure 2**.

The current proposal is to change existing zoning of these areas from Primary Production (RU1) to Low Density Residential (R2) with additional provision for a Neighbourhood Centre (B1). The rezoning will allow for future residential subdivision which would involve a range of lot sizes, with a possible total of around 350 dwellings, as well as associated roadways and service infrastructure, open space areas and neighbourhood centres around the railway station.

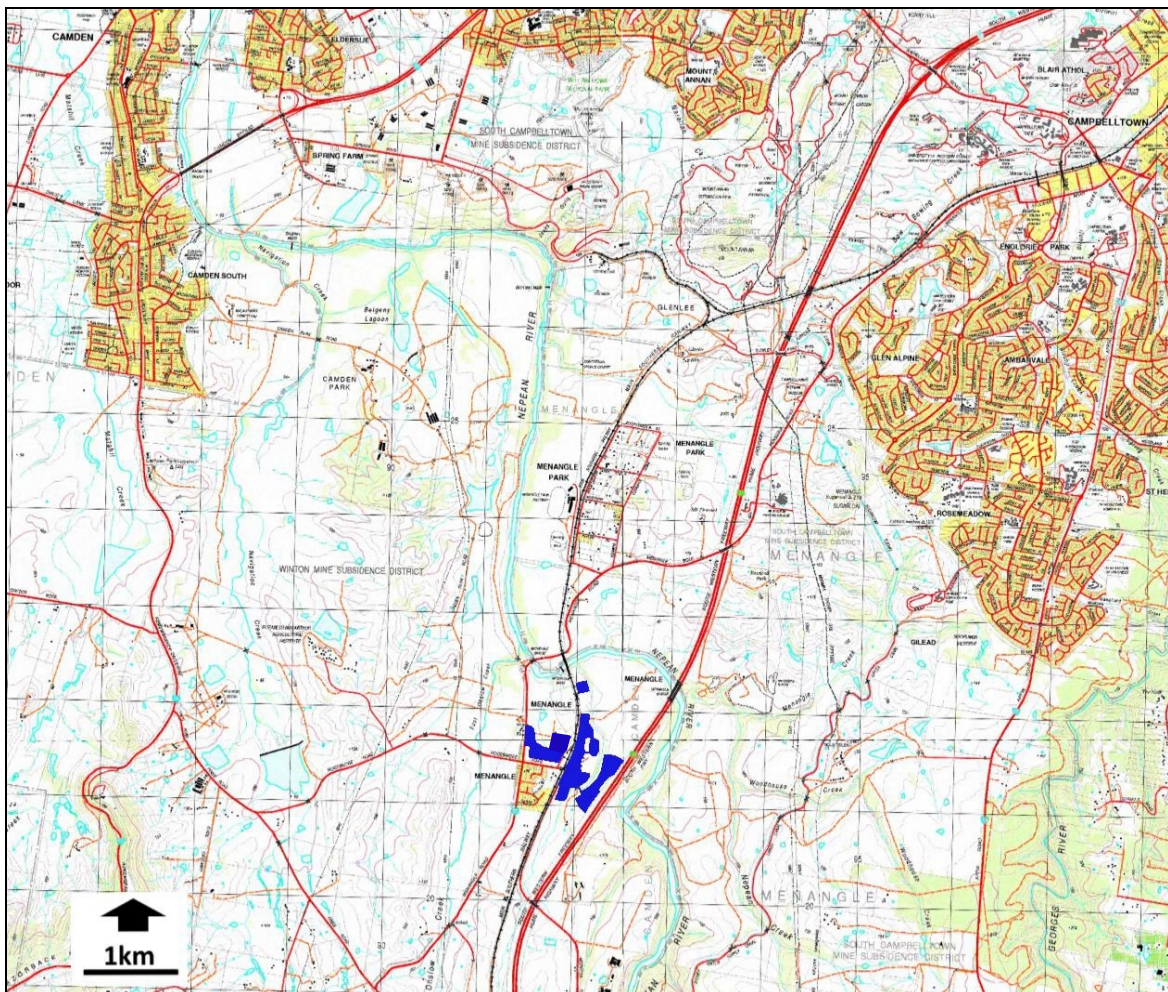


Figure 1. The subject land (blue outline) in its local context



[Base map: Camden, Picton, Appin and Campbelltown 1:25,000 topographic maps].

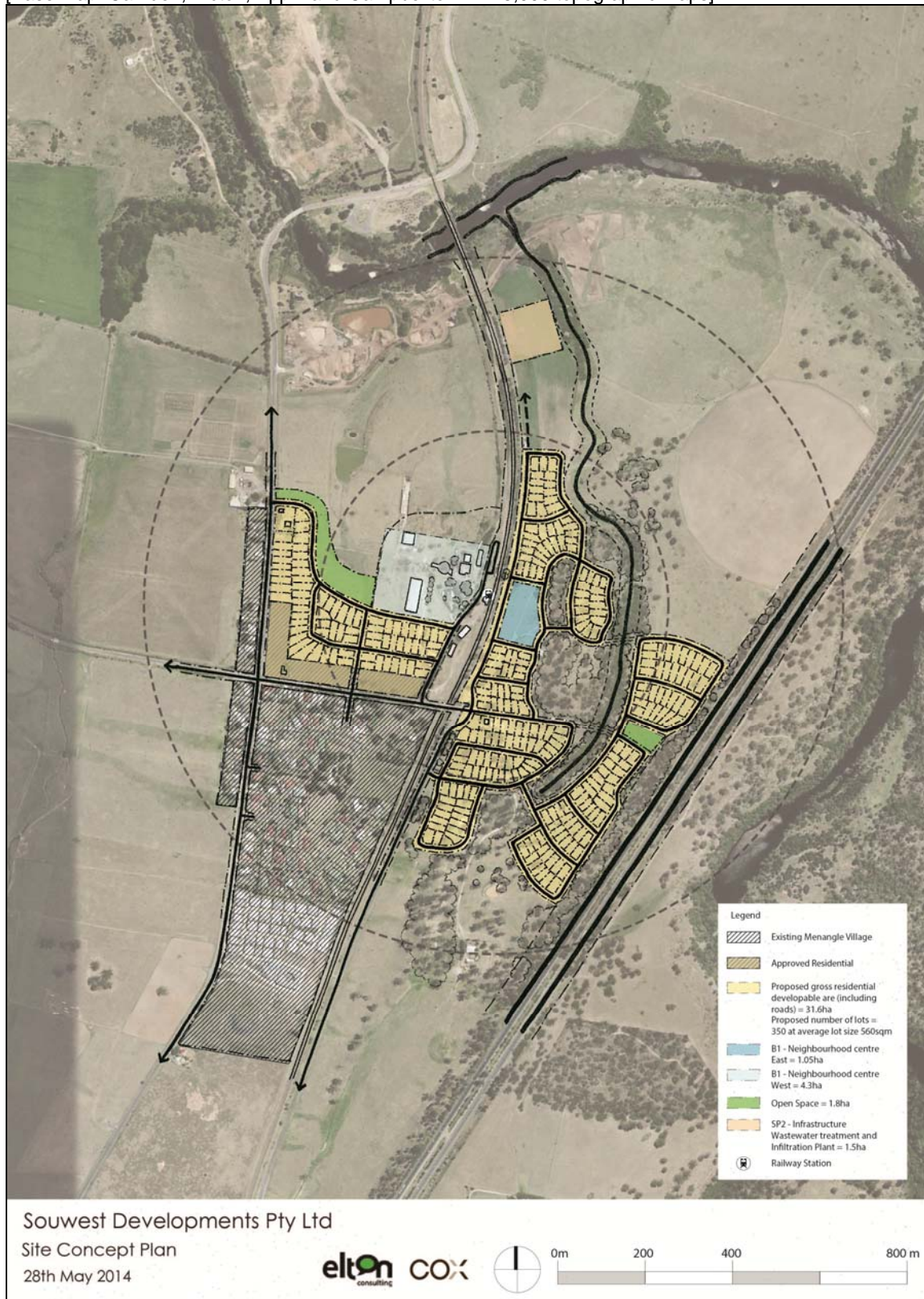


Figure 2. Current concept plan for the rezoning proposal.



Aboriginal Community Consultation

The current assessment has been undertaken in conjunction with the Tharawal Local Aboriginal Land Council (TLALC) and the Cubbitch Barta Native Title Claimants Aboriginal Corporation (CBNTCAC) to provide an Aboriginal community perspective on the assessment, particularly in relation to any cultural/historical associations with the subject land. The TLALC has a statutory responsibility “to promote the protection of Aboriginal culture and the heritage of Aboriginal persons”³ within its boundaries, which includes the Menangle area. The CBNTCAC represent registered Native Title claimants with an interest in the Menangle area.

Both the TLALC and CBNTCAC were contacted upon engagement and provided with details of the current proposal. A site inspection was undertaken on Thursday 6 March 2014, with some additional areas investigated during a subsequent inspection on Wednesday 16 April 2014. The inspections were undertaken by MDCA archaeologists Paul Irish and Tamika Goward (6/3/14) together with Abbi Whillock (TLALC Cultural & Heritage Officer) and Glenda Chalker (CBNTCAC representative). The proposed rezoning and findings of the site inspection were discussed with both representatives onsite and a draft copy of the current assessment report was provided to both organisations for comment. Their responses are attached to this report as **Appendix 1** and discussed further below.

In addition to pre-European Aboriginal use of the local area as indicated by recorded archaeological evidence, Aboriginal people continued to live in the area after the arrival of Europeans. In particular, Aboriginal people maintained an association with the Macarthur family throughout the nineteenth and twentieth centuries on the Camden Park Estate, of which the current subject land formed part. Several finds of flaked glass around the estate attest to the continued Aboriginal use of the area, which is also well-documented historically.⁴ This and more recent twentieth century use of the area of the subject land is also remembered by study participant Glenda Chalker, whose ancestors lived on the Camden Park Estate (**Figure 3**), and whose Aboriginal grandfather lived at Menangle opposite the subject land and worked at the dairy (see **Appendix 1**).



Figure 3. Aboriginal people in the local area in the mid-nineteenth century, probably on the Camden Park Estate.

Included in this photo is the great great great grandmother of Glenda Chalker (see **Appendix 1**).

[Source: Groom, B. and W. Wickman 1982. Sydney, the 1850s : the lost collections : eyewitness accounts and early photographs of Sydney (Sydney; Macleay Museum, University of Sydney):p23.

³ Aboriginal Land Rights Act 1983, s52(1)(m).

⁴ For flaked glass see Irish, P. & Goward, T. 2012. “Where’s the evidence? The archaeology of Sydney’s Aboriginal history”, *Archaeology in Oceania* 47:60-68 (Figure 1); for historical Aboriginal use see for example Atkinson, A. 1988. *Camden Farm and Village Life in Early New South Wales* (Melbourne, Oxford University Press):p228-232, and DECCW 2007 *Aboriginal Women’s Heritage: Nepean* (DECCW):p7-10.



Contextual Information

The local environment

The subject land is situated on relatively flat elevated lands above a bend in the Nepean River, varying in elevation from around 40m (asl) to 70m (asl). Two minor unnamed north flowing creeklines drain the western and eastern portions of the subject land respectively. Neither creek is permanent, but the eastern creekline is sufficiently incised through underlying sandstone bedrock to have a channel up to 4m in depth below the surrounding banks. Geological mapping for the area demonstrates that the subject land is underlain by Hawkesbury Sandstone, which is capped in the western portion of the subject land by Ashfield Shale.⁵ North towards the Nepean River, this is overlain in turn by quaternary alluvium, some of which is evident in sandmining operations along the river. The southern extent of the alluvium is poorly defined at this scale of mapping, however geotechnical testing and field observations during the current project demonstrate that the only area currently proposed for future development impact that is likely to contain alluvium is the possible future site of a water treatment plant (see **Figure 2**).

Soil landscape mapping is of a similarly gross scale, and suggests that alluvial soils of the Theresa Park soil landscape are present across the western portion of the subject land,⁶ however field observations of outcropping shale in this area suggest that this mapping is inaccurate. Alluvial Theresa Park soils are more likely restricted to areas further north towards the Nepean River, corresponding with the extent of quaternary alluvium. In these areas, upper soil horizons with the potential to contain Aboriginal archaeological remains may be of considerable depth (a metre or more), though this would require confirmation. The majority of the subject land is associated with residual soils in which archaeological remains are likely to be associated with the upper (A1/A2) soil horizons of perhaps up to 50cm depth (and more likely less). The majority of the subject land is currently characterized by cleared paddocks with some sparse stands of mature trees as well as more recent regrowth, but would originally have contained open eucalypt woodland prior to the arrival of Europeans. The river, related creeks and intervening forest environments would have supplied Aboriginal people with a diverse range of foods and raw materials.

Analysis of historic aerial photography reveals that by the 1940s (and most likely considerably earlier) most of the subject land had been completely or selectively cleared of original timber.⁷ The western portion of the subject land was completely cleared and in use as paddocks associated with the adjacent dairy. In subsequent years this area was highly impacted by the construction of dams, earthworks and watercourse channelling at its southern end, as well as ploughing and repeated cattle trampling. The area between the railway and eastern creekline has also been used intensively over the last sixty years or more, with a range of buildings evident at various times, as well as ploughing and other earthworks as well as a network of tracks, all associated with diverse farming use of the area. The area between the eastern creekline and the South Western Freeway has been less intensively used historically. Though originally selectively logged, the area retained considerable tree cover until at least the late 1970s. One area towards the northern end of the area proposed for rezoning contained abattoir buildings, the remains of which are still present (see **Figure 13**).⁸ In recent decades, several vehicular tracks have been created across this area, and some localised areas appear to have been ploughed.

⁵ Sherwin, L. & G. Holmes 1982. *Geology of the Wollongong and Port Hacking 1:100 000 sheets* (Sydney; New South Wales Geological Survey).

⁶ Hazelton, PA & Tille, P.J. 1990 *Soil Landscapes of the Wollongong-Port Hacking 1:100,000 Sheet* (Soil Conservation Service of NSW, Sydney).

⁷ Historical aerial photographs from 1947, 1956, 1965, 1975, 1984, 1994 and 2005 were examined.

⁸ The use of these buildings as an abattoir was recalled by Glenda Chalker (pers. comm. 16/4/14).



Background research

For the current assessment, the Office of Environment and Heritage ('OEH') Aboriginal Heritage Information Management System Aboriginal Sites Register ('the AHIMS Register') and Catalogue of Archaeological Reports were consulted. An online search of the AHIMS Register of a 5km x 5km area centred on the subject land revealed that, of the thirty recorded sites within the search area (see **Figure 4**), no Aboriginal sites have previously been recorded within or immediately adjacent to the subject land (**Appendix 2**). The vast majority of recorded sites in the vicinity have been open campsites (stone artefact scatters) with or without associated subsurface archaeological potential, as well as two culturally modified (scarred) trees, and two rockshelter sites with art and/or deposit located to the southeast of the subject land.

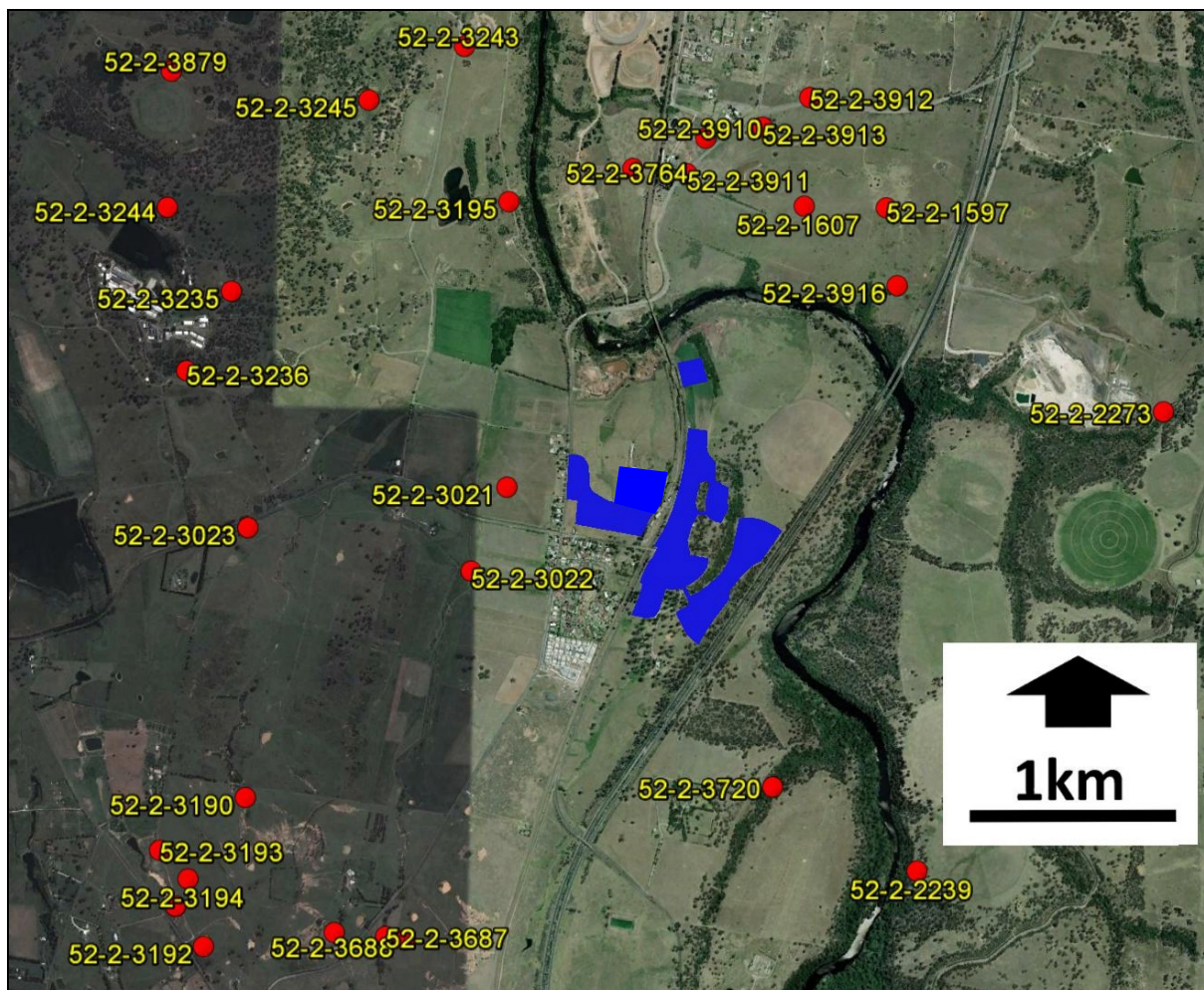


Figure 4. Locations of recorded Aboriginal sites in the vicinity of the subject land.

[Subject land indicated in blue]



The most relevant recorded sites to the current project are:

- AHIMS#52-2-3022 (MT6) and #52-2-3021 (MT3) were two areas of Potential Archaeological Deposit (PAD) identified during survey in 2004 for gas wells several hundred metres west of the subject land along Foot Onslow Creek.⁹ They were therefore in a similar landform to the subject land, around a minor creek tributary in a ploughed and cleared paddock. Five 1m x 1m test pits were subsequently excavated within each PAD area, which retrieved 16 artefacts in MT3 and nine artefacts in MT6, mostly from within the uppermost 20-30cm of deposit. These were interpreted as low density scatter of artefacts representing occasional use by Aboriginal people.
- AHIMS #52-2-3720 (Bulli Site 40) is a rockshelter with art located along a tributary about one kilometre to the south-east of the subject land. This represents a similar landform to the eastern creekline within the current subject land and suggests that even minor creeklines in this area can be sufficiently incised to contain outcropping sandstone of sufficient size to form sandstone overhangs used by Aboriginal people.

There have been no previous Aboriginal archaeological surveys within the subject land, however the area was considered as part of a broader desktop study of the broader Menangle area undertaken by ERM in 2008.¹⁰ Based on known geology, regional archaeological patterning and land use history (including a review of 1966 and 2005 aerial photography), the study concluded that past Aboriginal use of the area was possibly extensive but archaeological evidence of this use was likely to have been impacted to varying degrees (from low to high) by historical land use. It divided the study area into areas of varying archaeological potential based on perceived levels of historical disturbance and likely intensity of past Aboriginal use. In relation to the current subject land, the study assessed the two minor creeklines and their banks as retaining moderate potential (partially impacted but landforms likely to contain Aboriginal sites), with the remaining areas as low potential (indicating impacted lands in landforms that do not contain Aboriginal sites in comparable contexts). One of the aims of the current assessment was to examine this broad scale desktop assessment in more detail, including specific groundtruthing through site inspection within the subject land.

In surrounding areas, several studies over the last decade have provided archaeological contextual information relevant to the subject land. In particular, a detailed Aboriginal heritage assessment was undertaken in 2004 for the proposed rezoning of lands at Menangle Park on the northern side of the Nepean River opposite the subject land.¹¹ It involved detailed sample survey (transects and landscape unit sample) of lands in a similar landform context to the current subject land, situated around and above a bend in the Nepean River and containing similar soils, geology and topography. The study identified a number of Aboriginal sites (some of which are illustrated in **Figure 4**), mostly open artefact scatters, and found these to be distributed across a range of landform and geological contexts. The study then considered the archaeological sensitivity and potential of the study area. Of particular relevance to the current study was the finding that in low relief (flat/gently undulating) contexts like the subject land, open artefacts scatters were associated with ridge tops and upper drainage line catchments associated with the Blacktown Soil landscape, and some areas of subsurface archaeological potential were defined in these landform contexts. In areas underlain by alluvial deposits (associated with the Theresa Park soil landscape), subsurface archaeological potential was also identified in areas that had not undergone significant scales of historical disturbance (such as sandmining), and the study also noted the potential for human burials within such sandy deposits.

⁹ Dibden, J. 2004. *Sydney Gas Proposed Gas Wells and Gathering Lines at Mt Taurus, Menangle, NSW. Subsurface Test Excavation. Preliminary Research Permit #1915* (Report to Sydney Gas Operations Pty Ltd).

¹⁰ ERM 2008. *Constraints and Opportunities Mapping for the Wollondilly Development Site, NSW* (Report to Macquarie Bank Limited).

¹¹ HLA Envirosciences Pty Ltd 2004. *Indigenous Heritage Assessment Menangle Park Rezoning* (Report to APP Corporation Pty Ltd).



Archaeological excavations have been undertaken in surrounding areas in contexts of relevance to the current subject land. As mentioned above, excavations were undertaken at two locations along Foot Onslow Creek about 500m to the west of the subject land, within a historically and currently ploughed paddock.¹² The excavations were limited in scale due to the localised nature of the proposed impacts (gas wells) and so do not fully illustrate the archaeological potential of these landforms, but it is significant that archaeological evidence, albeit in low density, was found to have survived in a historically disturbed context.

Artefact Heritage recently conducted archaeologist test excavation at AHIMS site #52-2-3764, located in a similar elevated topographic position to the current subject land on the north side of the Nepean River at Menangle Park.¹³ The excavations involved sixty 0.5m x 0.5m pits, half of which contained a combined total of 89 artefacts. The site was interpreted as a sparse scatter of artefacts, with a more concentrated focus in the northern section of the site. The site was recommended for further archaeological salvage in the event that development impact could not be avoided.

Excavations were also recently undertaken within an alluvial context along Howes Creek about four kilometres to the north of the subject land, and found that artefacts were more likely to be found in slightly elevated contexts above Howes Creek rather than closer to the Nepean River.¹⁴

Archaeological Implications

Based on the above contextual information, the following can be concluded about the likely nature of archaeological remains within the subject land. In general terms, archaeological remains may occur within the subject land, however their condition will be strongly influenced by the degree of historical impact sustained in particular areas. The areas most intensively used by Aboriginal people in the past, are likely to be associated with relatively flat areas above creeklines, and also in association with the nearby Nepean River. The types of archaeological evidence that could be anticipated include:

- Stone artefacts in isolation or combination. These could occur as surface scatters which may or may not be associated with subsurface archaeological deposits. Within the subject land, these may occur anywhere, but are more likely to be associated with relatively flat areas above creeks or the Nepean River. In areas of residual soils, which characterise the majority of the subject land, subsurface artefacts are likely to be restricted to the uppermost horizons of the soil profile (A1 horizon or A2 by downward movement), which in the subject land is likely to be 20-50cm in depth. Where historical land use has significantly impacted these soils, Aboriginal archaeological remains are unlikely to remain *in situ*. In alluvial contexts closer to the Nepean River (which in the subject land appears to be restricted to the northernmost potential water treatment plant site), deeper deposits may occur in which stone artefacts may have survived below uppermost ploughed horizons.
- Rockshelters with art and/or archaeological deposit may occur where sandstone outcrops of sufficient slope and size to form such shelters are present. Within the subject land, this appears possible only within the eastern creekline. Use of these shelters, and survival of archaeological deposit will be closely related to elevation above the creek bed.

¹² Dibden, J. 2004. *Sydney Gas Proposed Gas Wells and Gathering Lines at Mt Taurus, Menangle, NSW. Subsurface Test Excavation. Preliminary Research Permit #1915* (Report to Sydney Gas Operations Pty Ltd).

¹³ Artefact Heritage 2013. *Menangle Park Horse Stable Complex. Archaeological Test Excavation Results* (Report to Cardno).

¹⁴ Jo McDonald CHM Pty Ltd 2009. *Test excavation and archaeological assessment of proposed soil and sand extraction on Aboriginal PAD #52-2-3676, Menangle Park West, NSW* (Report to Harvest Scientific Services and Landcom).



- Axe grinding grooves may also occur where sandstone outcrops close to a flowing or pooling water source, such as along creeklines or on sandstone outcrops which collected water in rock pools or depressions. Within the subject land, these are also likely to be restricted to areas along and adjacent to the eastern creekline.
- Trees of suitable types to have been used by Aboriginal people were most likely present within the study area but are most are unlikely to have survived at least 150 years through natural attrition, bushfires, tree clearance, other development and the destabilising effects of increased erosion.
- Artefacts relating to the historical use of the area by Aboriginal people are also possible, and may include items such as flaked glass.

Site Inspection

An inspection of the subject land was undertaken in fine weather over two days on Thursday 6 March 2014 and Wednesday 16 April 2014. The inspections were undertaken by MDCA archaeologists Paul Irish and Tamika Goward (6/3/14 only) together with Abbi Whillock (TLALC Cultural & Heritage Officer) and Glenda Chalker (CBNTCAC representative). The inspection examined the entirety of the subject lands and focussed on the recording of any Aboriginal archaeological material, as well as assessing levels of historical disturbance and likely archaeological sensitivity or potential. The following observations were made.

West of Great Southern Rail Line

This area is characterised by mildly sloping paddocks around a minor north flowing drainage line. It has been highly impacted by historical land use associated with the adjacent dairy. The southern end has had topsoil removed, possibly to create the raised levels in the adjacent subdivided area along Station St to the south (**Figure 5**). The drainage line has been impacted by these works, and the construction of farm dams further downstream, which also show exposed shale and sandstone bedrock (**Figure 6**). The banks of the drainage line have all been used for grazing cattle for the adjacent dairy which has resulted in considerable trampling and disturbance of soils in this area. A number of current and former vehicular tracks traverse the area, and a dwelling on the western edge and dairy buildings to the east have also resulted in significant subsurface disturbance.

East of Railway, West of Creek

This area contains open as well as sparsely timbered paddocks, as well as a dwelling and the locations of current and former sheds, fences and other structures, and a number of vehicular tracks associated with the agricultural use of this area over the last sixty years or more (**Figure 7**). Historical aerial photographs reveal the extent of disturbance from recent land use in this area. The presence of exposures along tracks, within fenced enclosures, around trees and in other locations provided regular surface visibility across this area, and also demonstrates that original soil profiles across most of the area have been largely disturbed (**Figure 8**). The northern end of the area contains exposed sandstone, confirming the absence of alluvial deposits in this area (**Figure 9**).

The area generally slopes gently down to the east towards the north flowing creek which is incised 3-4m below the adjacent banks and is characterised by outcropping sandstone. On the tops of the immediate banks of this creek are exposures of sandstone which represent the interface of the creekline with the original soil deposits from the areas upslope. These areas offered good exposure and an opportunity to detect stone artefacts eroding out of adjacent deposits and were inspected in detail. Three stone artefacts were found at one location above the creek, in an area that has been grossly disturbed by historical land use. The artefacts were located on exposed sandstone amongst introduced material such as blue metal gravel. The artefacts were recorded as open campsite SSM1 and are described in **Table 1** (see **Figures 10 & 11**).



East of Railway, Between Creek and Freeway

This area consists largely of open grassed paddocks with occasional trees. It forms the western part of a north trending spur between the creek and Nepean River bisected by the South Western Freeway and slopes gently down to the creek to the west (**Figure 12**). There was little surface exposure across the paddocks, though along the eastern edge sandstone was exposed at several locations. Evidence of historical disturbance across this area includes several gravel lined vehicular tracks, localised dumping of vegetation and rubble and the site of former abattoir outbuildings (**Figure 13**). As on the opposite bank, within about 50m of the top of the creek bank are extensive exposures of sandstone representing the interface of the incised creek channel and the adjacent soil-covered slopes (**Figure 14**). Evidence of localised quarrying was found along the eastern bank, particularly immediately north of the area proposed for rezoning. Sandstone outcrops were extensively examined and at two locations isolated stone artefacts were located and named SSM2 and SSM3 respectively (see **Figures 15, 16 & 20** and **Table 1**). These are likely to represent artefacts eroding out of the deposit upslope. Although some portions of this upslope area has been subject to localised disturbance, in comparison to equivalent areas on the western bank, it is broadly in a much less disturbed condition and in a landform that nearby excavations have demonstrated can contain subsurface archaeological evidence. Accordingly, this area, corresponding to the extent of the slope observed, has been assessed as retaining Potential Archaeological Deposit and is coded as SSM PAD2 (**Figures 12 & 20**).

The creekline is incised several metres into the surrounding plain, sufficient at several locations to contain sandstone outcrops of sufficient size to form overhangs of habitable size. The creekline was traversed and several overhangs were located at creek level which were flood scoured and do not appear to contain art. One shelter was located along the eastern bank about 1m above the creek and containing floor deposit that did not appear to be flood scoured. It is about 1.8m in height, 13m long and 3.7m deep and has a partial rock floor with a sandy deposit which extends beyond the drip line toward the creek. Two areas reveal that at least 10cm of deposit is extant in the shelter floor. It was recorded as a shelter with Potential Archaeological Deposit, coded SSM4 (**Figures 17 & 20**). The creekbed was also examined for evidence of axe grinding grooves, though effective survey coverage was low in parts due to thick vegetation. One broad and suitable location towards the upper end of the creek was examined however and did not contain any such evidence (**Figure 18**).

East of Railway, Proposed water treatment plant site

This area is located relatively close to the river adjacent to the Main Southern Railway Line. It has been ploughed and is currently covered with lucerne and has no ground surface visibility. It is however in an area associated with alluvial deposits and which may therefore be characterised by soils of considerable depth with the potential to contain artefacts below the ploughline, as has been noted in other excavations in surrounding areas. Accordingly, this area has been recorded as an area of Potential Archaeological Deposit and coded SSM PAD1 (**Figure 19 & 20**).

Table 1. Recorded Aboriginal stone artefacts within the subject land.

Site Code	Raw Material	Artefact Type	Dimensions (mm)
SSM1	Quartz	Flake	19 x 12 x 6
SSM1	Chert	Flake	19 x 5 x 5
SSM1	Chert	Flaked piece	16 x 7 x 4
SSM2	Petrified Wood	Broken flake	17 x 23 x 5
SSM3	Silcrete	Broken flake	18 x 20 x 4
SSM3	Quartz	Possible debitage	<5mm



Figure 5. Channelised upper drainage line and landscaping at southern end of western study area.



Figure 6. Exposed bedrock around dam to the immediate north of the western study area.



Figure 7. Disturbed paddock and farm sheds/enclosures in eastern study area, west of the creekline.



Figure 8. Network of tracks in eastern study area, west of creekline.



Figure 9. Exposed sandstone on the western banks of the eastern creekline.



Figure 10. Stone artefacts recorded as SSM1.



Figure 11. Mounded earth and general disturbance adjacent to site SSM1.



Figure 12. The eastern study area east of the creekline with vehicular track in mid frame. Area of SSM PAD2.



Figure 13. Former abattoir buildings in the eastern study area near the South Western Freeway.



Figure 14. Sandstone exposed along eastern bank of the eastern creekline at location of isolated artefact SSM2.



Figure 15. Isolated artefact SSM2.



Figure 16. Silcrete flake and possible quartz debitage at SSM3.



Figure 17. View north into shelter with PAD SSM4.



Figure 18. The broadest sandstone exposure within the eastern creekline. No evidence of axe grinding grooves were located.



Figure 19. View north over area of SSM PAD1.

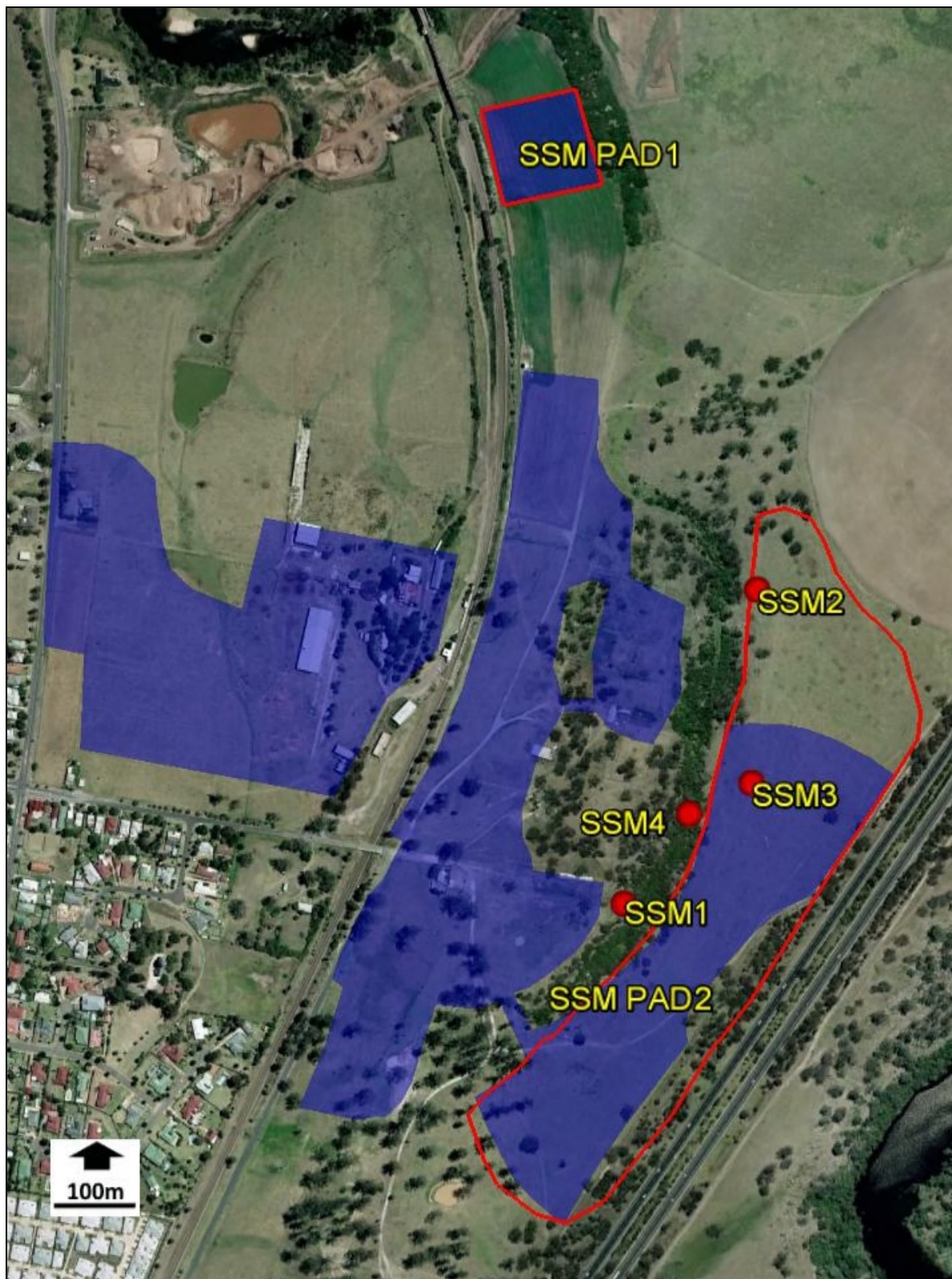


Figure 20. Recorded Aboriginal heritage sites and areas of potential (red) in relation to the subject land (blue).



Discussion and Conclusions

The current assessment has involved a consideration of the environmental, historical and archaeological context of the subject land, and the results of field inspection, to determine whether there are any Aboriginal heritage issues in relation to the current rezoning proposal. As a result of the site inspection, stone artefacts were located in three locations associated with the interface between the eastern creekline and the adjacent soil covered slopes (see **Figure 20**). In addition a rockshelter with Potential Archaeological Deposit, and two open areas of Potential Archaeological Deposit have been defined on the basis of observed archaeological evidence and/or archaeological and environmental context. No further Aboriginal archaeological sites or areas of Aboriginal archaeological sensitivity or potential were located within the subject land. Specifically, no cultural modified trees or additional stone artefacts were located, and no sandstone outcrops inspected were found to contain axe grinding grooves.

On the basis of the current assessment, the following conclusions can be made:

- The western area (west of the railway line), has been subjected to substantial historical disturbance in the past and retains no Aboriginal archaeological sensitivity. There are considered to be no archaeological grounds for further investigation within this area in relation to the current rezoning proposal or any future development proposals within this area.
- The eastern area between the railway line and eastern creekline, is similarly highly disturbed by past land use. An open campsite (SSM1, **Figure 20**) was recorded near the creekline, close to (but outside of) the area currently proposed for rezoning. It most likely reflects the remnants of the archaeological evidence that has been highly impacted by historical land use, and is not associated with any subsurface archaeological potential extending into the area currently proposed for rezoning. Despite frequent surface exposure, no additional stone artefacts or other evidence of Aboriginal use was located in this area, and not areas of subsurface archaeological potential were identified. Consequently, there are considered to be no archaeological grounds for further investigation within this area in relation to the current rezoning proposal. Future development proposals similarly do not require further investigation, but will require a strategy for appropriately managing potential impacts to site SSM1, as per the recommendations below.
- The eastern area between the creekline and South Western Freeway is in a similar landform context to the western creekbank, but also forms part of a spur between the creek and Nepean River several hundred metres to the east. Archaeological evidence from surrounding areas in the form of surface and subsurface scatters of stone artefacts as well as shelters with art and occupation deposit, attest to the use of similar minor creekline locations in the general area, and the survival of archaeological evidence despite some historical disturbance. Within this specific area, two stone artefacts were located eroding out of the deposit upslope at location SSM3, and in a similar context to the north of the area proposed for rezoning, at SSM2. These artefact suggest that the adjacent deposit may contain further archaeological evidence in the form of subsurface deposits of flaked stone artefacts (**Figure 20**).

Accordingly, the extent of the examined area in this landform has been assessed as retaining Potential Archaeological Deposit (SSM PAD2). This area is approximately 150m by 800m metres in size, as illustrated in **Figure 20**, and is bounded to the west by the interface of soil deposits with exposed sandstone above the creek, to the north by a ploughed and irrigated paddock which was not inspected as part of the current study, to the east by the South Western Freeway and to the south by further paddock beyond the area assessed in the current study. Within this area is evidence of localised disturbance, and tree clearance has resulted in some level of disturbance across the entire area. The intensity of past Aboriginal use of such areas is poorly defined. Along minor creeklines away from major watercourses, archaeological evidence is typically less dense than along more permanent water, but the presence of the Nepean River in the immediate vicinity



may have caused the area to be used more intensively in the past. It is considered likely that SSM PAD2 will contain one or more areas which were the focus of past Aboriginal use, rather than continuous evidence across its extent. A similar finding has been recorded during archaeological test excavation of AHIMS site #52-2-3764 about a kilometre north in a similar context on the northern side of the Nepean River (see discussion above). In the case of SSM PAD2 it is also likely that this evidence has been disturbed or disrupted to some extent by past land use.

Any portions of SSM PAD2 which are proposed for future development impact will require further investigation through archaeological test excavation to determine the presence/absence, extent and significance of any Aboriginal archaeological remains that may be present within this area. As discussed below, it is most appropriate to undertake test excavation in conjunction with a specific future Development Application, such that specific proposed impacts are known, and excavation can be targeted to recover the information required without unnecessarily disturbing areas which may not be subject to future development. Accordingly, there are no archaeological grounds for not proceeding with the current rezoning proposal in this location.

- The area of the proposed water treatment plant appears to be in an area associated with alluvial soils of the Theresa Park soil landscape, which have been shown to contain Aboriginal archaeological remains in similar contexts in the local area. Accordingly it has been assessed as an area of Potential Archaeological Deposit (SSM PAD1) (**Figure 20**). The depth of deposit with archaeological potential in this area is not currently known, but the alluvial nature of the deposit suggests that it is likely to extend below the current ploughline and may therefore retain evidence of Aboriginal use despite recent disturbance. As with SSM PAD2 above, it would be most appropriate to investigate this area further in conjunction with a specific Development Application, and it does not present any impediment to the current proposed rezoning and concept plan for this location.
- The eastern creekline is not proposed for rezoning or future development impact. It contains one rockshelter with PAD (SSM4) and two locations of stone artefact finds outside of but close to the extent of proposed future residential subdivision (SSM1 and SSM2) (**Figure 20**). The presence of these features does not affect the current rezoning proposal. However, it is considered appropriate that in conjunction with a future Development Application, a management plan should be developed for these three recorded Aboriginal sites to ensure that they are appropriately managed in relation to proposed future development impacts.

Further Investigations

As discussed above, it is proposed that archaeological test excavations should be undertaken within the two identified areas of PAD (SSM PAD1 and SSM PAD2/SSM3) and that a management plan be developed for the other Aboriginal sites and areas of potential (SSM1, SSM2 and SSM4) to ensure that they are appropriately managed in relation to future development impacts. The most appropriate time to undertake these further actions is in relation to a specific future Development Application for the development of the subject lands in the applicable areas. As such, there are no archaeological grounds for not proceeding with the proposed rezoning as currently planned, as long as provision is made for the further investigations outlined below to occur at a future Development Application stage.

The *National Parks & Wildlife Act* (1974), administered by the *Office of Environment & Heritage* (OEH), provides statutory protection for all Aboriginal 'objects' where an object is defined as:

"any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains" [Section 5(1)]



Impacts to Aboriginal objects generally require an Aboriginal Heritage Impact Permit (AHIP), applications for which must be accompanied by an Aboriginal Cultural Heritage Assessment report. An exception is the undertaking of archaeological test excavations, which in certain circumstances can be undertaken without an AHIP provided such works are undertaken in full compliance with the 2010 DECCW *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW*. The archaeological test excavations of SSM PAD2 could be undertaken using the Code of Practice, and potentially also of SSM PAD1, though the depth of deposit in this area may preclude the manual excavation techniques and pit sizes mandated under the Code. If so, an Aboriginal Heritage Impact Permit would be required for the test excavation of this area.

Whether undertaken under the Code of Practice or an AHIP, test excavations require a prescribed process of Aboriginal community consultation in accordance with current regulation.¹⁵ This requires placing a public advertisement to seek expressions of interest in the project as well as directly notifying Local Aboriginal Land Councils and government agencies dealing with Aboriginal communities in the area. People or organisations can register as “Registered Aboriginal Parties” and are then provided with project information and methodology for their review and comment and as an opportunity for them to identify any Aboriginal cultural or historical information relevant to the project. Code of Practice excavations can proceed after comments are received from this process, whilst excavations under an AHIP must proceed to the production of a Draft Aboriginal Cultural Heritage Assessment report which is then reviewed by the Registered Aboriginal Parties before being submitted with the relevant AHIP application to the OEH for processing.

The time factors involved with both types of test excavation are significant. From initiation to the completion of a Code of Practice excavation could be three-four months and six-seven months for an excavation under an AHIP. The results of these excavations will determine final management recommendations for the project, which would be documented in an Aboriginal Cultural Heritage Assessment report. These may include the complete or partial preservation of Aboriginal heritage remains identified through the test excavations or impact with or without further archaeological salvage excavation. For these reasons, it is considered prudent to undertake the excavations as early as possible in the planning process for specific future development proposals, to enable the results of the test excavations to be accommodated within the final proposed development layout, and to allow appropriate time to obtain any further AHIP approvals that may be required to facilitate development. It would be most efficient to undertake management plans for the other sites within the subject lands at this time such that these could be incorporated into a single set of final management recommendations in the Aboriginal Cultural Heritage Assessment report.

In summary, there are no archaeological reasons why the current rezoning proposal should not proceed as currently planned. Archaeological test excavation will need to be undertaken should future impacts be proposed within the areas of potential archaeological deposit (SSM PAD1 and SSM PAD2) identified in the current study to determine final management recommendations in relation to these areas. The most appropriate timing for such investigations, as well as the management plans recommended for the other documented Aboriginal sites within the subject land, is in conjunction with a specific future development proposal within the subject land.

This recommended approach has been reviewed by the Tharawal Local Aboriginal Land Council and Cubbitch Barta Native Title Claimants Aboriginal Corporation. Both organisations have endorsed the approach as discussed further in **Appendix 1**.

¹⁵ *National Parks and Wildlife Amendment (Aboriginal Objects and Aboriginal Places) Regulation 2010* (s80C). Excavations under the Code require only some of the steps outlined in the Regulation.



Recommendations

The following recommendations are based upon:

- the legal requirements and automatic statutory protection provided to items of Aboriginal heritage under the terms of the National Parks and Wildlife Act 1974 (as amended), where it is an offence to knowingly or unknowingly harm an Aboriginal object;
- the results of the current study which are documented in this report, with reference to currently available information on Aboriginal site locations and distributions in the region; and
- the views and concerns expressed by the Aboriginal community representatives as outlined in this report.

It is recommended that:

1. There are no archaeological grounds for the proposed rezoning not to proceed as currently planned.
2. Should impacts to the two open areas of Potential Archaeological Deposit (SSM PAD1 and SSM PAD2 as shown in **Figure 20**) be proposed as part of a future development application within the subject land, these areas will require archaeological test excavation by a suitably qualified archaeologist to determine appropriate management recommendations in relation to these areas.
3. Should future development occur within the eastern study area (between the Main Southern Railway line and South Western Freeway), an Aboriginal Heritage Management Plan should be developed by a suitably qualified archaeologist to determine appropriate recommendations for the identified sites SSM1, SSM2, SSM3 and shelter with Potential Archaeological Deposit (SSM4) in relation to future development impacts.
4. The further archaeological works described in **Recommendations 2 and 3** above, should be undertaken in conjunction with the Tharawal Local Aboriginal Land Council, Cubbitch Barta Native Title Claimants Aboriginal Corporation, and in consultation with any other local Aboriginal individuals or organisations as required by current regulation and policy.
5. Providing that these recommendations are incorporated into future planning requirements for specific development proposals within the subject land, there are no further *archaeological* investigations or actions required in relation to the proposed rezoning as currently proposed.
6. One copy of this report should be forwarded to the Tharawal Local Aboriginal Land Council and to the Cubbitch Barta Native Title Claimants Aboriginal Corporation.
7. One copy of this report should be forwarded to:

The Manager
Aboriginal Heritage Information Management System
NSW Office of Environment and Heritage
P.O. Box 1967
Hurstville NSW 2770



If you require any further information, please do not hesitate to contact us.

Yours sincerely,

Paul Irish

Principal Heritage Consultant

Mary Dallas Consulting Archaeologists

Appendix 1

Aboriginal Community Consultation Records



THARAWAL LOCAL ABORIGINAL LAND COUNCIL

Gibber Gunyah
50 Matthews Lane, Picton NSW 2571

Wednesday 16th March 2014

Paul Irish
Mary Dallas Consulting Archaeologists
PO Box A281
Arncliffe NSW 2205
Ph: (02) 4465 2546 Fax: (02) 8520 2006
Mob 0418 450 490
Email: paul@mdca.com.au

RE: Menangle Survey Extension

Dear Paul,

Thank you for your invitation on this survey. Wednesday 16th of March 2014 located at Menangle. We commenced the days work at 8.00am and completed the work by 11.30pm.

Recommendations:

We are happy with the draft report recommendations and am happy to follow on with all works until the PAD areas are to be disturbed and then I think that the test excavations would be a great idea for both of the Potential Archaeological Deposit (SSM PAD1 and SSM PAD2).

Attended: Myself, Glenda Chalker and Paul Irish.

Yours Sincerely,

Abbi Whillock
Cultural Heritage Officer
Tharawal Local Aboriginal Land Council
M: 0448 002 042

PO Box 168
PICTON NSW 2571
Phone: 02 4681 0059 Fax: 02 4683 1375 ABN: 60 693 210 407
tharawa@bigpond.net.au

Cubbitch Barta Native Title Claimants
Aboriginal Corporation
55 Nightingale Road,
PHEASANTS NEST. N.S.W. 2574.
4th June, 2014.

Mary Dallas Consultings Archaeologists,
P.O. Box A281,
ARNCLIFFE. N.S.W. 2205.

Dear Paul,

RE; STATION STREET
MENANGLE.

Thank you for the opportunity of participating in the Due Dilligence assessment and the opportunity of commenting on the DRAFT report.

Walking over that land bought back lots of memories, as a child and teenager, with my grandfather, even though in some places there has been changes to the landscape itself. My family have lived, died and worked on Camden Park from 1816, following the Appin Massacre through to 1973, when the largest part of Camden Park was sold. The photograph on Page 4 includes my great great great grandmother, when she would have been approximately 35 years old.

1. West of the rail line; The Rotolactor is the main focus in this area. The nice green paddocks that are there now, where in the 60s and 70s long narrow holding paddocks for the dairy cows that were being milked at the Rotolactor. They were mostly mud and cow poo at any given time. Hard to imagine how deep that layer would now be after so many years of intensive dairy farming. I do not have any issues with this area, as I believe the area has been so intensively farmed, there would be now a very thick layer over any original deposit. The Rotolactor was where my grandfather worked maintaining the boilers, making sure the pumps were working that were down on the river, as well as being a carpenter, who could fix anything.
2. East of the rail line; My memories of the highly pasture improved paddocks that exist now where of mainly large river red gums, and grey box with natural grass lands, that was traversed by at least three tracks, two of went to two different locations along the river, one of which was to the large pump, that my grandfather maintained. The other track went to Gilbulla. The remains of these tracks are still vaguely visible today, but are now cut by the Freeway that was built in the early 80s.
3. There was little surface exposure over much of the area to the East, due to long thick pasture improved grasses. Despite the vegetation, in areas along the creek where there was some exposure where several artefacts were located. The locations of these artefacts were to be expected due to their place in that particular type of landscape. It would also be expected that there be further potential for sub surface material to exist within the areas that have been identified in this report.
4. I would therefore recommend that prior to any earthworks taking place that a testing program under the Code of Practice take place, if any of the areas identified as to have archaeological potential are to be impacted by the proposed development.

5. The creek line according to the proposed plan appears to not have any immediate impact of the development. However there should be plans put in place, as to avoid any secondary impacts from the proposed development. If any future plans to change the creek line in any way, or there be impacts then it would require a separate assessment, because of the rock shelter within the creek line.
6. The recommendations that have been made on page 20, I therefore basically agree with.

Yours faithfully,

G. Chalker.

Glenda Chalker

Hon. Chairperson

Phone/Fax 0246841129 0427218425 kgchalker@bigpond.com



Appendix 2

AHIMS Search Records

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref Number : Menangle Park

Client Service ID : 126817

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
52-2-1597	Menangle Park 1; Contact	AGD	56	292890	6222870	Open site	Valid	Artefact : - Permits	Open Camp Site	2038,2149
52-2-1607	Menangle Park 3; Contact	AGD	56	292490	6222870	Open site	Valid	Artefact : - Permits	Open Camp Site	2149
52-2-3193	Wandinong 6 Contact T Russell	AGD	56	289417	6219684	Open site	Valid	Artefact : 2 Permits		
52-2-3021	PAD1 Contact	AGD	56	291071	6221478	Open site	Valid	Potential Archaeological Deposit (PAD) : - Permits	1915,1992	
52-2-3022	PAD2 Mt Taurus Contact	AGD	56	290905	6221068	Open site	Valid	Potential Archaeological Deposit (PAD) : - Permits	1915,1992	
52-2-3023	IF1 Mt Taurus Contact	AGD	56	289814	6221256	Open site	Valid	Artefact : 1 Permits	1915	
52-2-3720	Bulli Site 40 Contact	AGD	56	292395	6220053	Closed site	Valid	Art (Pigment or Engraved) : 1 Permits		
52-2-3687	Bulli Site 7 Contact	AGD	56	290526	6219289	Open site	Valid	Artefact : 1 Permits		
52-2-3688	Bulli Site 8 Contact	AGD	56	290621	6219273	Open site	Valid	Artefact : 1 Permits		
52-2-3879	EMAI IF1 Contact	GDA	56	289500	6223650	Open site	Valid	Artefact : 1 Permits		
52-2-3910	MPRP 3 Menangle Park Rezoning Project 3 Contact	AGD	56	292004	6223189	Open site	Valid	Artefact : 5 Permits		
52-2-3911	MPRP 4 Menangle Park Rezoning Project 4 Contact	AGD	56	291915	6223016	Open site	Valid	Artefact : - Permits		
52-2-3912	MPRP 5 Menangle Park Rezoning Project 5 Contact	AGD	56	292506	6223397	Open site	Valid	Artefact : - Permits		
52-2-3913	MPRP 6 Menangle Park Rezoning Project 6 Contact	AGD	56	292279	6223248	Open site	Valid	Artefact : 3 Permits		
52-2-3916	MPRP 9 Menangle Park Rezoning Project 9 Contact	AGD	56	292951	6222494	Open site	Valid	Artefact : 6 Permits		
52-2-2239	NEPEAN RIVER NO.8	AGD	56	293106	6219660	Closed site	Valid	Artefact : -		

Report generated by AHIMS Web Service on 28/02/2014 for Tamika Goward for the following area at Datum :GDA, Zone : 56, Eastings : 289400 - 294400, Northings : 6219000 - 6224000 with a Buffer of 0 meters. Additional Info : Assessment. Number of Aboriginal sites and Aboriginal objects found is 30

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref Number : Menangle Park

Client Service ID : 126817

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Mrs.Caryll Sefton					Permits		
52-2-2273	RP2.	AGD	56	294260	6221910	Open site	Valid	Artefact : 30		
	Contact	Recorders	Doctor.Julie Dibden					Permits		
52-2-3190	WG1, Wandinong	AGD	56	289829	6219948	Open site	Valid	Artefact : 1		
	Contact T Russell	Recorders	Doctor.Julie Dibden					Permits		
52-2-3191	WG6, Wandinong	AGD	56	290275	6219303	Open site	Valid	Artefact : 1		
	Contact T Russell	Recorders	Doctor.Julie Dibden					Permits		
52-2-3192	WG5, Wandinong	AGD	56	289640	6219222	Open site	Valid	Artefact : 3		
	Contact T Russell	Recorders	Doctor.Julie Dibden					Permits		
52-2-3053	WG4 Wandingong (Unavailable)	AGD	56	289500	6219414	Open site	Valid	Artefact : -		
	Contact	Recorders	Doctor.Julie Dibden					Permits	2310	
52-2-3194	Wandinong 5	AGD	56	289558	6219548	Open site	Valid	Artefact : 1		
	Contact T Russell	Recorders	Doctor.Julie Dibden					Permits		
52-2-3195	EM13	AGD	56	291052	6222862	Open site	Valid	Artefact : 9		
	Contact T Russell	Recorders	Doctor.Julie Dibden					Permits		
52-2-3056	WG4	AGD	56	289500	6219414	Open site	Valid	Artefact : 3		
	Contact Searle	Recorders	Doctor.Julie Dibden					Permits		
52-2-3243	CP - OS - 11	AGD	56	290820	6223610	Open site	Valid	Artefact : -		
	Contact Searle	Recorders	Phil Hunt					Permits		
52-2-3244	CP - ST - 10	AGD	56	289390	6222800	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact Searle	Recorders	Phil Hunt					Permits		
52-2-3245	CP - ST - 09	AGD	56	290360	6223340	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact Searle	Recorders	Phil Hunt					Permits		
52-2-3235	CP - IF - 02	AGD	56	289710	6222400	Open site	Valid	Artefact : -		
	Contact T Russell	Recorders	Phil Hunt					Permits		
52-2-3236	CP - IF - 03	AGD	56	289500	6222010	Open site	Valid	Artefact : -		
	Contact T Russell	Recorders	Phil Hunt					Permits		
52-2-3764	MPP-01-10	GDA	56	291756	6223225	Open site	Valid	Artefact : 1		
	Contact	Recorders	AECOM Australia Pty Ltd (previously HLA-Envirosciences),Artefact Heritage Servic					Permits	3226,3645	

Report generated by AHIMS Web Service on 28/02/2014 for Tamika Goward for the following area at Datum :GDA, Zone : 56, Eastings : 289400 - 294400, Northings : 6219000 - 6224000 with a Buffer of 0 meters. Additional Info : Assessment. Number of Aboriginal sites and Aboriginal objects found is 30

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