

ARCHAEOLOGY – HERITAGE – MEDIATION – ARBITRATION

LIVERPOOL NEW PRIMARY SCHOOL

Aboriginal Cultural Heritage Assessment Report

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EXECUTIVE SUMMARY

The Department of Education, Schools Infrastructure NSW (SINSW), propose the construction of a new Liverpool Primary School to be located within the grounds of the existing Liverpool Boys and Girls High School in the Liverpool Central Business District (CBD), at 18 Forbes Street, Liverpool. The proposed new Liverpool Primary School is located in the eastern portion of the existing school grounds. The project will be assessed as a State Significant Development. The application seeks consent for the construction and operation of a new Liverpool Primary School. This will include construction of a new school building for core school facilities, teaching spaces, support units, preschools as well as associated landscaping and open space improvements. A detailed description of development is provided by Ethos Urban within the EIS.

Comber Consultants have been engaged to undertake Aboriginal consultation in respect of the project and to prepare this Aboriginal Cultural Heritage Assessment Report. The consultation and this report were prepared in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* and this report details that consultation. The following are Registered Aboriginal Parties:

- Goodradigbee Cultural Heritage
- Kamilaroi Yankuntjatjara Working Group
- Didge Ngunawal Clan
- A1 Indigenous Services
- Name withheld
- Dharug Ngurra Aboriginal Corporation
- Darug Aboriginal Cultural Heritage Assessments
- Darug Custodian Aboriginal Corporation
- Gandangara Local Aboriginal Land Council.
- Liverpool City Council Aboriginal Consultative Committee
- Cubbitch Barta
- Waawaar Awaa

The site contains known Aboriginal objects and is registered on the Aboriginal Heritage Information System and contains the potential to contain Aboriginal subsurface archaeological deposits. The aim of the testing is to determine the nature and extent of the Aboriginal objects and to minimise harm.

This report recommends the following:

1. Aboriginal archaeological test excavations should be undertaken to determine the nature and extent of any subsurface archaeological deposit. This should be undertaken in consultation with the Registered Aboriginal Parties prior to construction of the new Liverpool primary school. The testing should be undertaken in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*.
2. Aboriginal community consultation should continue throughout the archaeological testing and the life of the project.
3. As requested by the Registered Aboriginal Parties, any artefacts uncovered should remain on country and be catalogued and stored onsite and protected by SINSW. The artefacts could be used in an interpretive display. It will be necessary for a Care Agreement to be made between SINSW and the Registered Aboriginal Parties. To apply for a Care Agreement, an 'Application for the transfer of Aboriginal objects for safekeeping' must be signed by SINSW and the Registered Aboriginal Parties and submitted to the Department of Planning, Industry and Environment.
4. Interpretation of Aboriginal archaeology and history of the site should be undertaken in consultation with the Registered Aboriginal Parties. An interpretation strategy and plan should be developed in consultation with the Registered Aboriginal Parties to guide the interpretation.



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1.0 INTRODUCTION

1.1 Background

School Infrastructure NSW (SINSW) propose the construction of a new Liverpool Primary School (NLPS) to be located within the grounds of the existing Liverpool Boys and Girls High School in the Liverpool Central Business District (CBD), at 18 Forbes Street, Liverpool. The proposed new Liverpool Primary School is located in the eastern portion of the existing school grounds (refer to figure 1.) The site is legally described as Lot 1 in DP 1137425.

The project will be assessed as a State Significant Development. The application seeks consent for the construction and operation of a new Liverpool Primary School. This will include construction of a new school building for core school facilities, teaching spaces, support units, preschools as well as associated landscaping and open space improvements. A detailed description of development is provided by Ethos Urban within the EIS.



Figure 1: NLPS Site Plan

Comber Consultants have been engaged to undertake Aboriginal community consultation and to prepare this Aboriginal Cultural Heritage Report, which details that consultation. This report is written in accordance with the *Aboriginal Cultural Heritage Consultation Guidelines for Proponents 2010*.



1.3 Statutory Controls

The National Parks & Wildlife Act 1974 (NPW Act) provides protection to all Aboriginal sites within New South Wales. Heritage NSW is the State Government agencies responsible for the implementation and management of this Act.

Part 6 of the NPW Act provides for protection of all Aboriginal Places and Aboriginal objects.

Aboriginal Place

An Aboriginal Place means any place declared to be an Aboriginal Place under section 84. Section 84 states:

The Minister may, by order published in the Gazette, declare any place specified or described in the order, being a place that, in the opinion of the Minister, is or was of special significance with respect to Aboriginal culture, to be an Aboriginal place for the purposes of this Act.

Aboriginal Objects

An Aboriginal 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.

However, as this project is being undertaken as a State Significant Development in accordance with the Environmental Planning & Assessment Act 1979 as detailed below, it will not be necessary to apply for an AHIP for this project.

1.4 Environmental Planning & Assessment Act 1979

This project is being undertaken as a State Significant Development under Part 4, Division 4.1 of the *Environmental Planning & Assessment Act 1979* (EPA Act). Section 89J of the EPA Act (see below) does not require that a State significant development seek approval under the NPW Act as.

Section 89J of the EPA Act states the following:

89J Approvals etc legislation that does not apply

The following authorisations are not required for State significant development that is authorised by a development consent granted after the commencement of this Division (and accordingly the provisions of any Act that prohibit an activity without such as authority do not apply):

- (a) the concurrence under Part 3 of the *Coastal Protection Act 1979* of the Minister administering that Part of that Act,
 - (b) a permit under section 201, 205 or 219 of the *Fisheries Management Act 1994*
 - (c) an approval under Part 4, or an excavation permit under section 139, of the *Heritage Act 1977*
 - (d) an Aboriginal heritage impact permit under section 90 of the *National Parks and Wildlife Act 1974*
 - (e) an authorisation referred to in section 12 of the *Native Vegetation Act 2003* (or under any Act repealed by that Act) to clear native vegetation or State protected land,
 - (f) a bush fire safety authority under section 100B of the *Rural Fires Act 1997*,
 - (g) a water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91 of the *Water Management Act 2000*.
- (2) Division 8 of Part 6 of the *Heritage Act 1977* does not apply to prevent or interfere with the carrying out of State significant development that is authorised by a development consent granted after the commencement of this Division.
- (3) A reference in this section to State significant development that is authorised by a development consent granted after the commencement of this Division includes a reference to any investigative or other activities that are required to be carried out for the purpose of complying with any environmental assessment requirements under this Part in connection with a development application for any such development.

Consent for any impact on Aboriginal objects under Section 89J(d) of the EPA Act is required by the Department of Planning, Industry and Environment (DPIE).

The Secretary's Environmental Assessment Requirements (SEARS) (SSD 10391) were issued on 27 November 2019 and reissued on 9 January 2020, and require:



11. Aboriginal Heritage

- *Identify and describe the Aboriginal cultural heritage values that exist across the site and document these in an Aboriginal Cultural Heritage Assessment Report (ACHAR). This may include the need for surface survey and test excavation.*
- *Identify and address the Aboriginal cultural heritage values in accordance with the Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (Office of Environment and Heritage (OEH), 2011) and Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW (OEH, 2010).*
- *Undertake consultation with Aboriginal people and document in accordance with Aboriginal cultural heritage consultation requirements for proponents 2010 (Department of Environment, Climate Change and Water). The significance of cultural heritage values of Aboriginal people who have a cultural association with the land are to be documented in the ACHAR.*
- *Identify, assess and document all impacts on the Aboriginal cultural heritage values in the ACHAR.*
- *The EIS and the supporting ACHAR must demonstrate attempts to avoid any impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the ACHAR and EIS must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to the Environment, Energy and Science Group of the Department of Planning, Industry and Environment.*

1.5 Objectives of the Aboriginal cultural heritage assessment report (ACHAR)

This ACHAR details the results of the assessment and recommendations for actions to be taken before, during and after the proposed activities associated with the project in order to manage and protect Aboriginal objects identified by the investigation, assessment and testing of the study area.



2.0 ABORIGINAL HISTORY

In 1795, when Bass and Flinders first explored the Georges River before the colonisation of the Liverpool area, the Darug, Tharawal and Gandangara people lived in the area. These three language groups were divided into smaller clans or bands - extended family units consisting of up to sixty people. Each of these clans was named after the area of land where they normally resided, and to which the people had traditional links (Attenbrow 2010).

The suffix “gal” was added to the place name for men of the clan and “galleon” was added for women. The clan around Liverpool was the Cabro (gal) or (galleon), named after the cohbra grubs they harvested at the banks of the Georges River, especially near Cabramatta Creek. The main contact between clans was during ceremonial gatherings. There were linguistic and cultural differences, as well as economic ones. There was a complicated system of kinship and totems which prevented certain types of contact. It is difficult to pinpoint exact language boundaries, as information came from early colonists, explorers and ethnographers trying to interpret Aboriginal languages (Keating 1996:1-2).

It is thought that the Tharawal language was spoken from South of Botany Bay to the area east of the Georges River (Holsworthy area) to as far south as Jervis Bay and the Darug language on the Western side of the Georges River to Appin and Picton and as far west as the Blue Mountains. Gandangara is said to be the language of the 'mountain' people, from the Blue Mountains to the Nattai and Burratorang Valleys and as far south as Goulburn (Attenbrow 2010).

Current Local Land Council boundaries differ from these 'traditional' boundaries. The Cabro clan was recognised as one of the 'woods tribes' by Europeans, together with Aboriginal people living at South Creek, at Cowpastures near Camden, and at Mulgoa near Penrith (Attenbrow 2010; Keating 1996:3).

The Aboriginal economy was dependent on harvesting resources with only very little modification to the environment, with the Georges River playing a central part of that economy. People fished from the bank or in canoes and dug for yams and collected cohbra grubs on the banks of the river (Kohen 1993:4-7).

When Governor Macquarie first toured the district, he saw much of it in its natural state. The land near Liverpool was generally open forest, as was the country further west along Cabramatta Creek, with eucalyptus of medium height, which covered about 30 percent of the ground surface, with grasses beneath.

In contrast, Europeans quickly set about clearing the land and planting crops which prevented Aboriginal people from carrying out their traditional hunting of animals and gathering of plant foods. In 1803 Thomas Moore was commissioned to take timber from the Georges River for shipbuilding. The river provided water and for nearly two decades it was the primary means of transport back to Sydney.

3.0 ENVIRONMENTAL CONTEXT

3.1 Topography

The subject area lies within the Cumberland Plain and is typical of that region's gently undulating slopes with broad, rounded ridges and gently inclined slopes (Bannerman & Tillie 1:100,000 soil landscape map 1989). The Cumberland Plain is bordered by the Blue Mountains to the west, by the Hornsby Plateau to the north and the Georges River and headwaters of the Parramatta to the east. (Smith 1989:8).

The study area lies about 310m north of the closest point of the Georges River which flows through Lake Moore, which is about 850m southeast. The northern half of Lake Moore is artificial, whilst the southern section is natural. The Georges River flows through Chipping Norton Lake, an artificial lake and the adjacent wetlands, which are approximately 1.7km northeast. Brickmakers Creek is located approximately 2km to the west.

The site is located on gently sloping land 300 metres north of the Georges River and approximately 10 – 13 metres above the river (Figures 5 & 6). Prior to European occupation the area surrounding the natural part of Lake Moore would have been a resource rich wetland.

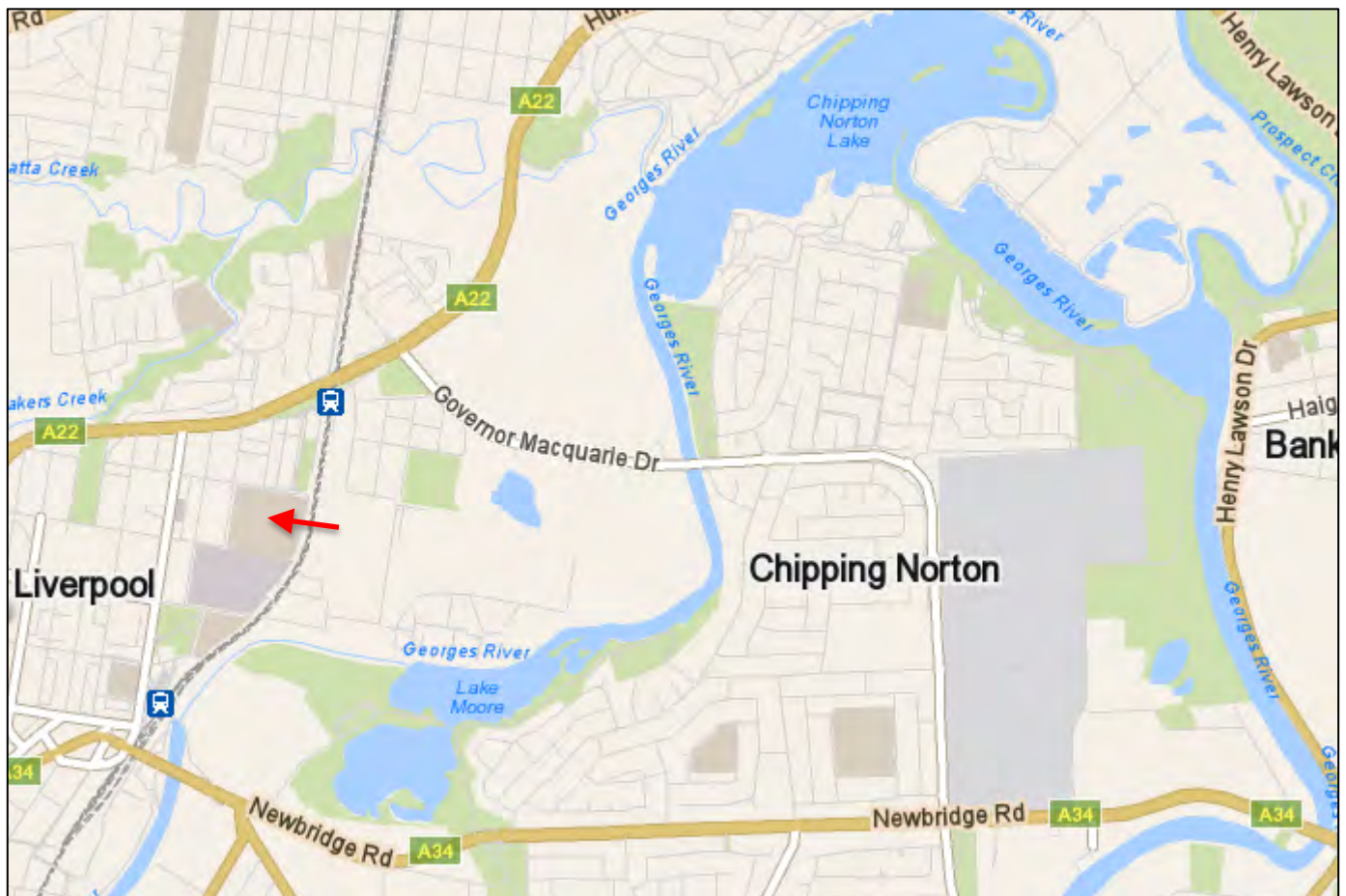


Figure 2: Showing location of school site (indicated by red arrow) in relation to the Georges River and Lake Moore

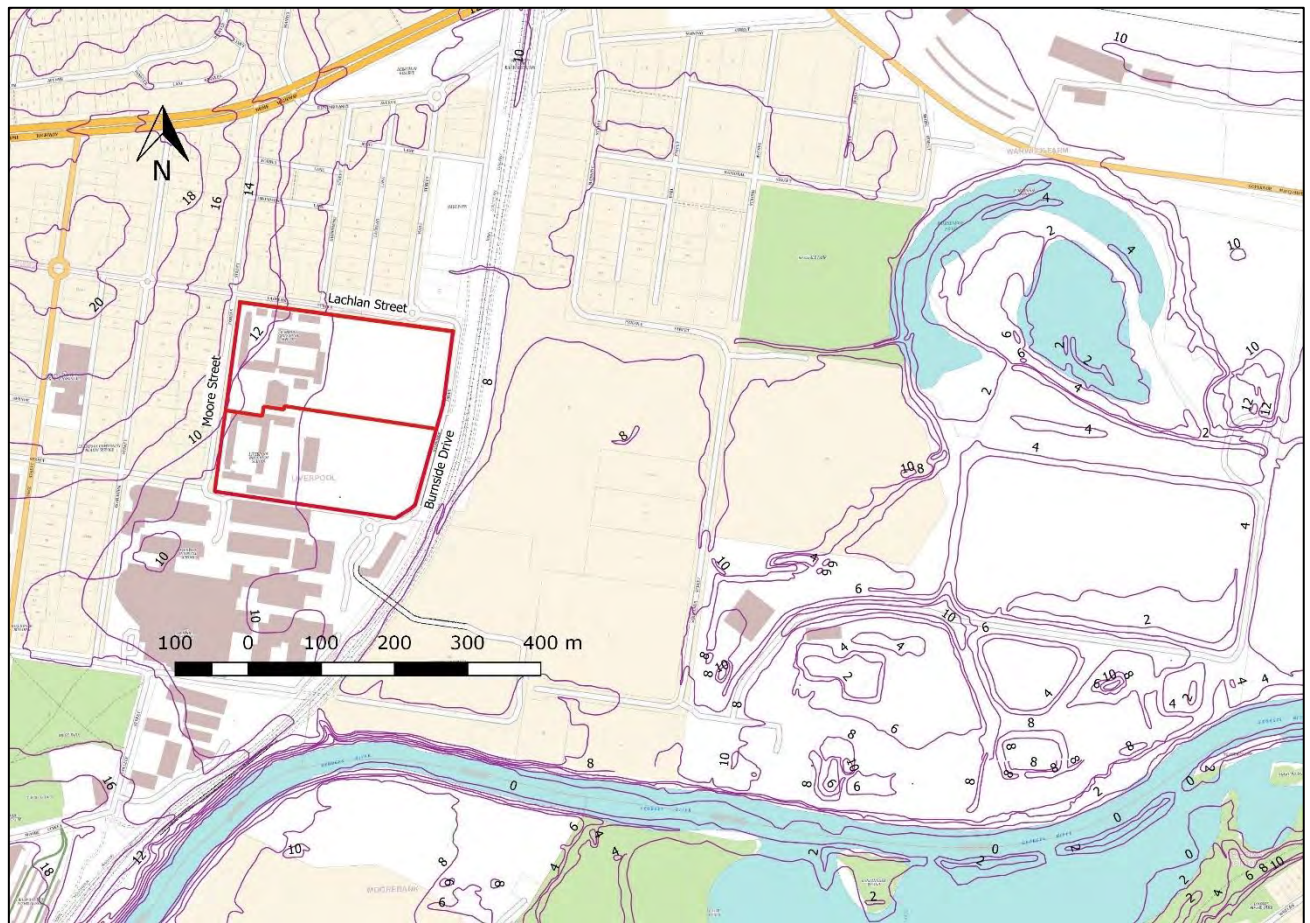


Figure 3: Showing the contours of the high school site and surrounds.
The area proposed for the NLPS is located to the east of the high school buildings
The study area slopes gently towards the east

3.2 Geology and Soils

The Cumberland Plain overlies the Wianamatta Group of Shales. Within the study area this group is divided into three formations, the basal Ashfield Shale, the Minchinbury Sandstone, and the uppermost Bringelly Shale. Bringelly Shale is formed from alluvial sediments (Jones & Clark 1987:17) and dominates the study area. Shales are brittle and not suitable for stone tool manufacture whilst the Minchinbury Sandstone does not weather to provide rockshelters or overhangs.

Several locations on the Cumberland Plain contain suitable material for stone tool manufacture, such as basalt and silcrete. Volcanic breccia, including basalt, is located at Wetherall Park, about 9km to the northwest of the study area. Pictite and dolorite are located at Prospect about 12km to the north. Ferricrete bands, including silcrete, are located about 3km to the south east at Moorebank. Silcrete outcrops are located at Luddenham (about 22km to the west) and Plumpton (about 22kms to the north-north west and St Clair about 20km to the north west) and Erskine Park approximately 18km to the north-west). Other material used in the manufacture of stone tools on the Cumberland Plain, includes chert, tuff, quartz and quartzite, which are located within the Rickabys Creek Formation, about 37kms north-north-west of the subject area (Clarke & Jones 1988, Smith 1989a:9-11 & 1989b:6-7).

The soils are described as shallow to moderately deep (>100<100cm), hard setting, mottled texture contrast soils, red and brown podzolic soils on crests, grading to yellow podzolic soils on lower slopes and drainage lines. The soils are typically of low fertility and have poor drainage (Bannerman & Tillie 1:100,000 soil landscape map 1989). The poor drainage would have made the area boggy and not always suitable for camping. Whilst undertaking the site inspection it was noted that the ground was very wet and Mary Monaghan advised that the area was often boggy with very poor drainage.



3.3 Vegetation

The vegetation of the Cumberland Plain was mapped by Benson (1981) and the NSW National Parks & Wildlife Service (2002). Historically, the undulating slopes of Western Sydney would have supported a tall open-forest of Cumberland Plain Woodland. The area was mapped by Benson (1981) as being woodland of *Eucalyptus moluccana* (Grey Box) in association with *Eucalyptus tereticornis* (Forest Red Gum). The understorey included *Acacia parramattensis*, *Acacia floribunda* and other acacia sp., *Casuarina cunninghamiana* (River Oak), *Bursaria spinosa* (Sweet Bursaria, Blackthorn) and *Hardenbergia violacea* (False Sarsparilla) with grasses of *Themeda australis* (Kangaroo Grass) and *Lomandra longifolia* (Basket grass).

Such a vegetation community would have provided a variety of edible plant species and plants suitable for artefact manufacture. For example, the tall Grey Box and Red Gum's would have provided bark to make coolamons, shields or canoes, whilst the long Lomandra leaves would have been used for basket weaving (Baker et al 1986:136). Acacia gum was a sweet nutritious food source and the acacia seeds were a valuable source of protein. The dried seeds were ground between stones and baked as a bread/damper and the green seeds eaten like peas (Low 1992:86). In addition, Cumberland Plain vegetation provided habitat for a variety of marsupials and birds whilst the Creek would have provided fish, yabbies and eels.

However, the nature and composition of the study area has been altered by past clearance and European land management activities, including urban development. The study area presently forms part of the urbanised suburb of Liverpool and does not contain remnant Cumberland Plain vegetation.

3.4 Stream Order Modelling

Stream order can be used to predict Aboriginal land use patterns. A first order stream is the smallest and is a small tributary that flows into and feeds larger streams but does not normally have any water flowing into it. The joining of two first order streams creates a second order stream and when two second order streams join they form a third order stream. In addition, first and second order streams generally form on steep slopes and flow quickly until they slow down and meet the next order waterway. First order streams are intermittent. (Horton 1945).

Modelling undertaken by McDonald and Mitchell (1994) on the Cumberland Plain indicates that stream order can be used to predict areas of archaeological potential. The model hypothesis is that in any particular climate and landscape, a threshold catchment area is necessary to allow permanent stream flow or the establishment of waterholes with extended longevity (i.e. months to years). The critical point where these conditions are met appears to be at the junction of two second or third order streams. Such a location is likely to contain more complex sites with a high density of artefacts, whilst second and third order streams are also likely to contain large sites within 100 metres of the watercourse.

The study area is located approximately 310m from the Georges River, a third order stream that would indicate that a study area has the potential to contain medium to high concentrations of Aboriginal occupation. It is also located close to the resource rich wetlands that once surrounded Lake Moore.

3.5 Current Land Use and Disturbance

A study of Parish Maps and other Land Title documents indicates that occupation within the area now containing the Boys' & Girls' High Schools, first commenced in 1827 with three small dwellings constructed on the western side of the site and the remainder of the site used for grazing. In 1884 the, the study area on the eastern portion of the High Schools was subdivided into small allotments with Hart Road extended across the study area linking Lachlan Street in the north and Campbell Street in the south. Whilst the allotments sold, only two dwellings appear to have been constructed on the eastern side of the site. Figure 4 is a 1943 aerial photograph showing the remaining buildings on the site, tracks, the evidence of Hart Road, dams or waterholes and a small creek or drainage line in the south.

The land was resumed by the Government in 1946 for the schools and construction began in 1948 and was completed in 1954. The western half of the study area is occupied by a range of school buildings, associated infrastructure and services used in the operation of the Liverpool Boys' & Girls' High Schools. The site the for NLPS on the eastern half of the school site is occupied by playing fields and includes a former running track.



Figure 4: 1943 aerial with the Boys's & Girls' High School boundaries edged in red. The study area is on the eastern side of the site between the eastern boundary and the former Hart Street.



4.0 ARCHAEOLOGICAL CONTEXT

4.1 The Cumberland Plain

The information summarised in this section will facilitate an understanding of Aboriginal site patterning in the region and thereby provide a context within which any sites located in the study area may be archaeologically assessed. It will also assist to determine whether sub-surface sites are likely to exist.

One of the oldest dated occupations for the Sydney region is 15,000 years BP from the Shaws Creek K2 rockshelter on the Nepean River (Kohen 1984; Nanson et al. 1987). The dates obtained by Kohen (1984) and Attenbrow (2003) must be considered in association with environmental data related to sea level rises. The Sydney region that we know today was vastly different to the landscape of 15,000 years ago.

The period of maximum glaciation was 15,000 – 18,000 years BP. Therefore the date of the K2 rockshelter and Attenbrow's Darling Mills site indicate that Aboriginal people lived throughout a period of extreme environmental change. During this period, sea levels were up to 130m below current sea levels (Nutley 2006: 1). About 10,000 years ago, as temperatures began rising at the end of the last ice age, the polar ice started melting and sea levels rose. The rising sea levels forced people to abandon coastal sites and move inland, with the result that the oldest coastal sites were inundated.

By about 6,000 years ago, rising water levels had flooded the coastal plain forming the Sydney landscape that we know today. The vast majority of sites in the Sydney region date to around 5,000 years BP, after sea levels had stabilised. Whilst research into submerged indigenous sites is now being undertaken (Nutley 2006), there are few sites in the Sydney area that are known to date beyond 10,000 years BP. Therefore, research undertaken to date has focused on subsistence patterns and cultural change, e.g. Attenbrow (2003).

Many archaeological surveys have been conducted on the Cumberland Plain in relation to Environmental Impact Statements. As a result of these studies, which were occasioned by the burgeoning urban expansion extending onto the Cumberland Plain, the NPWS recognised the need for a coherent study of the area to fully assess the impact of urbanisation on the natural and cultural heritage of the Cumberland Plain. Smith (1989b) was commissioned by the NPWS to undertake an Aboriginal Site Planning Study to be utilised in the management of Aboriginal sites on the Cumberland Plain.

Prior to her study, 307 sites had been recorded on the Cumberland Plain, mainly open artefact scatters (297) with four scarred trees, one carved tree and four axe-grinding grooves and a Mission site (the Blacktown Institute). Smith (1989b:2) added 79 open sites and 29 isolated finds from field surveys related to her study.

Smith's (1989b:3) analysis indicated that site location and site densities were influenced by the availability of water and raw materials. She concluded that other factors such as topography, natural vegetation and soil types did not influence site location.

Since Smith's study there has been a dramatic increase in development in Western Sydney resulting in a great deal more archaeological survey and excavation (McDonald 1997). This further work has indicated the complexity in the archaeological record of the area that was not previously recognised. In particular it has been recognised that surface artefact scatters do not represent the full nature and extent of such sites. The potential for sub-surface deposits to remain, despite agricultural disturbance is high whilst sites on permanent water are more complex than sites on ephemeral drainage lines with major confluences being prime site locations.

In 2005 McDonald published the results of excavations in the Rouse Hill Development area, which is south of the present study area. This study refined the model of occupation for the Cumberland Plain. Her study examined site location, stone tool manufacture, mobility, change over time and occupation in relation to stream order. Second and Third Order streams are less likely to contain major sites unless they are at the confluence with another creek or river, which is not the case within the present study area.

McDonald's 2005a report demonstrates the dynamic nature of stone tool technologies on the Cumberland Plain. She reviewed previous work within a theoretical framework to identify intra and inter-regional variation. She not only identified change over time in the stone tool technology, but the manner in which "stone technologies were organised in relation to landscape" (McDonald 2005a: np). Her report provides a framework to tentatively date sites through technological analyses and to identify cultural changes.



Her study also indicated that the surface representation of a site on the Cumberland Plain does not necessarily reflect the actuality of that site. Of the excavations conducted by her, sub-surface deposits were present even when there was no surface indication of a site. According to McDonald (2005a:5), “despite artefacts being rare or completely absent on the surface at each of the sites investigated, all six sites were found to contain intact archaeological deposit. Almost 500 square metres were excavated during this Project and almost 35,000 artefacts retrieved.” McDonald (2005) also considers that Aboriginal occupation was focussed on the major river systems and characterised by mobility between a small number of sites. As a result of her various studies and applying stream order modelling she (2005) further predicts that the density and complexity of archaeological sites will vary according to stream order, as follows:

- Fourth-Fifth order creeks (or rivers): Archaeological evidence will be more complex and possibly stratified, reflecting more permanent and repeated occupation on major creeks.
- Third order creeks: Evidence of more frequent occupation such as knapping floors or higher artefact densities will be found in the lower reaches of tributary creeks.
- Second order creeks: Sparse archaeological evidence will be found which indicates occasional use and/or occupation.
- First order creeks: Due to the intermittent nature of water flow only very sparse evidence would be found in the headwaters of upper tributaries such as background artefact scatter.

Kohen’s studies at Penrith confirmed the importance of fifth order creeks and rivers. He recorded over 50 sites in the Penrith area which included open artefact scatters, axe grinding grooves and rock shelters. Kohen (1997:7) indicates that sites occurring throughout the Penrith area “are particularly likely to occur adjacent to the rivers and creeks. The distribution of raw materials associated with the manufacture of stone tools suggests that chert and basalt were carried or traded east from the river gravels and that silcrete was traded or carried from sources near South Creek and Eastern Creek, west towards the Nepean flood plain”.

Comber (2006 & 2008) also recorded open artefact scatters and scarred trees within the Cumberland Plain. She undertook excavation at two sites at Penrith Lakes known PL9 (2010a) as Camenzulis (2010b) and at PL9 she retrieved more than 1,500 artefacts, including backed blades and an edge ground axe. Her work confirms McDonald’s (2005) and Kohen’s predictive model that sites are more likely to occur adjacent to the rivers and high order creeks. These excavations (Comber 2010a&b) at Penrith Lakes further indicates the possibility that sub-surface archaeological deposits will remain despite disturbance by non-Aboriginal activities and the complexity of such sites. Surveys (2006 & 2008) undertaken prior to the excavations recorded the areas as being disturbed by agricultural activities. They had been grazed, ploughed, planted with crops and a dam constructed. Only a small number of artefacts were recorded on the surface but over 1,500 artefacts retrieved during excavation.

A survey undertaken by Comber (2008) and subsequent excavations undertaken by Stening (2011) at Doonside demonstrated that although no surface artefacts were recorded (Comber 2008) substantial subsurface deposits did exist on the site with over 1,000 artefacts being recovered from a highly disturbed context (Stening 2011). This site was located beside Eastern Creek an important 4th or 5th order creek. It is an important watershed with extensive evidence of Aboriginal occupation

Archaeological investigations within the Sydney Basin have established reliable Carbon 14 dating evidence of Aboriginal occupation dating from the Pleistocene but (14,700BP at Cranebrook Terrace). The majority of sites however have been dated to less than 5,000 years. The absence of earlier dates is due to the effect of sea level rises c6,000 years ago. The influx of seawater over former coastal plains is presumed to have forced people into the new confines of the Sydney Basin (Nutley 2006). This ‘intensification’, or increased population, was then associated with an increase in the physical evidence of post 5,000BP occupation now being recorded through archaeological investigation.

The model of occupation developed for the Cumberland Plain indicates that reliable water is a prime factor in the choosing of site locations by Aboriginal people. More complex higher density sites will be located at the confluence of several water bodies whilst evidence of frequent occupation will be located in the lower reaches of tributaries. However, evidence will still be located in areas with seasonal creek lines, but it will sparse and less complex. Ground disturbance will impact on surface evidence, but subsurface evidence may still be located in areas of high disturbance.



4.2 Liverpool and Georges River Catchment

Five sites and one Aboriginal Place are located within a 2.5km radius of the study area. None of these sites are within the study area. They are:

| Site No. | Site Type | Approximate Distance from Liverpool Boys' & Girls' High Schools |
|-----------|--|---|
| 45-5-2912 | Artefact Deposit | 926m NW |
| 45-5-2540 | Open Camp Site | 966m SW |
| 45-5-3629 | Potential Archaeological Deposit (PAD) | 2.1km SW |
| 45-5-0257 | Scarred Tree | 1.5km E |
| 45-5-2538 | Possible Scarred tree | 2.5km SW |
| 45-5-3629 | Aboriginal Place – Collingwood House | 1km S |

Table 1: Sites within 5km of the study area

In 1988, the Gandangara Eel Dreaming Project conducted a site survey along Orphan School Creek, about 4km. The site recorded 6 sites which included 3 open campsites, two scarred trees and a site containing both a scarred tree and an open campsite.

In 2012 Comber (2012) undertook a Due Diligence report for the Sackville Street Creek bank Stabilisation just over 5km north of the present subject area. That report located the position of a scarred tree (AHIMS 45-5-073) recorded for the Gandangara Eel Dreaming Project. No other sites were recorded.

Comber (2005) conducted 2.5km inspection of transmission cable routes in Hoxton Park, including a crossing of Cabramatta Creek. This investigation located a scarred tree in association with ochre.

Archaeological salvage and monitoring was conducted about 2.5km to the northwest of the current study area at Maxwells Creek, Prestons in June 2000 by Australian Museum Business Services (AMBS). As with Brickmakers Creek, Maxwells Creek is within the Georges River catchment. Maxwells Creek is 3km long and starts in Prestons. It flows north through the Prestons Industrial Estate, under Hoxton Park Road, through Elouera Nature Reserve and into Cabramatta Creek. 151 artefacts were recovered from the excavations with raw materials including silcrete, chert, indurated mudstone, tuff, petrified wood and quartz. While the most common artefacts were flaked pieces, other artefacts included backed blades, whole and broken flakes, a ground stone axe head and heat shatter. This study concluded that the range and density of artefacts indicated long-term usage and that the area had been occupied for a least the last 3000 years. (AMBS 2000:i)

In 1989 Liverpool Council commissioned an archaeological site and planning study that included areas to the north and west of the current study area (Smith 1989). Of 21 sites recorded, 19 were artefact scatters (open sites) and 2 were scarred trees (Smith 1989:2). This study found that the majority of sites located were close to permanent creeks and around swamp margins. Topographical features of archaeological potential were creek flats and banks. The study also found that isolated finds were more common on hill tops than other types of site but that this may be due to greater land disturbance and site destruction rather than the distance from water. In addition, the study found that the artefact scatters were dominated by debitage rather than cores or actual tools and that the artefacts tended to be smaller than in the northern Cumberland Plain – suggesting that the source material was not local and possibly more than 5km distant (Smith 1989:53-54). The raw material of the artefacts was consistent with that found elsewhere on the Cumberland Plain and was dominated by silcrete, followed in order by quartz, indurated mudstone and chert (Smith 1989:54).

The combined results of the above conforms to the predictive modelling for the Cumberland Plain and Liverpool as detailed by Smith (1989:2), that sites will be located close to permanent creeks and around swamp margins. Stream order also needs to be considered. More complex sites and sites with a higher density of artefacts will be located at the junction of two second or third order streams. Second and third order streams are also likely to contain large sites within 100 metres of the watercourse.



Figure 5: Study Area showing the location of AHIMS sites with the location of nearest sites within a 2.5km radius of the site.

4.3 Study Area

The site of the Boys' & Girls' High School contains two Aboriginal objects. One of these objects is within the area proposed for the NLPS. The site of the Boys' & Girls' High Schools is registered as an Aboriginal site on the Aboriginal Heritage Information Management System.



5.0 RESULTS, IMPACTS AND MITIGATION

5.1 Results

Site visits were conducted by Jillian Comber and David Nutley, archaeologists, Comber Consultants on 31 October 2019. An additional site inspection was undertaken by Glenn Suey, Rivers McEwan, Kadibullah Khan and Chris Jones, Comber Consultants on 1 November 2019. On 4th February 2020 during Aboriginal consultation the site was again inspected by Jillian Comber and Veronica Norman of Comber Consultants and Nathan Holloway, School Infrastructure NSW. RAPs that attended the consultation meeting were invited to attend but Darren Duncan of the Gandangara Local Aboriginal Land Council was the only person able to attend but on arriving at the site he received a telephone call and had to leave immediately without conducting a thorough inspection. The study area was inspected on foot and photographs were taken of the study area's main features.

During the site inspections on 31 October and 1st November, two silcrete artefacts were recorded within the study area. One was located at Grid Reference 308795 E/6244978.077 N and the other at 308910 E/6245026 N (Figure 6).

The portion of the school site which is the proposed location for the new primary school is not sealed by asphalt or concrete and was vegetated with lawn grass with some bare patches, so that visibility varied from 0%-40%. The ground was poorly drained and boggy. Evidence of the former running track could still be seen.

The study area is within a low lying area close to the river and former wetlands and within an area predicted to contain medium to high density sites. A creek or drainage line was once located on the southern portion of the study area. It is an area that would have provided good resources and may have been suitable for camping during dry periods. After rain, due to the poorly drained nature of the soil it would not have been suitable for camping. As it is possible that seasonal camping occurred within the study area, it is possible that further surface and subsurface evidence of such occupation remains within the study area.

The disturbance to the study area since settlement has been minimal. Four small residential cottages with outbuildings were constructed and various walking tracks created. The cottages would have most likely been timber on shallow foundations. The disturbance from the cottages and the walking tracks would not have removed evidence of Aboriginal occupation.



Figure 6: Locations of silcrete artefacts observed during site inspections.
Approximate boundaries of the site for the NLPS edged in the solid red line.

5.2 Impacts

The proposed development will involve impacts to the north east portion of the greater school grounds for the construction of the school buildings. The remainder of the site will contain landscaping and playing fields. The proposed works will involve ground disturbance including, but not limited to:

- Clearing and land modification
- Landscaping
- Construction of buildings
- Construction of service infrastructure

As the area is known to contain surface Aboriginal objects has been assessed as having the potential to contain subsurface Aboriginal archaeological deposits, further measures will be required in order to mitigate potential impacts to Aboriginal heritage values.

5.3 Mitigation avoiding and minimising harm

As the site for the NLPS contains a known Aboriginal object and Aboriginal subsurface archaeological potential, in accordance with SSDA requirements, Aboriginal archaeological testing excavation must be undertaken prior to construction of the new primary school. The testing can be undertaken prior to SSDA approvals in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*. The aim of the testing is to determine the nature and extent of subsurface deposits to enable the impact to Aboriginal objects to be minimised.



The information gained from the archaeological excavation would contribute to our knowledge and understanding of Aboriginal occupation of the region. This knowledge can then be passed down to future generations through educational programs and interpretation. Such strategies will contribute to maintaining social cohesion within the Aboriginal community and to building social cohesion within the broader community, and protecting cultural values for future generations. Archaeological sites are valued by the Aboriginal community for more than their archaeological/scientific values. Such sites reflect both the physical and spiritual presence of ancestors on country. It is therefore important that as much information as possible is obtained to ensure recognition of Aboriginal heritage and to pass this information on to future generations.



6.0 CONSULTATION

Table 1 summarises the consultation undertaken in accordance with *Aboriginal cultural heritage consultation requirements for proponents 2010*. The letters and emails are attached at Appendix A.

Note: As consultation is still being undertaken, this section will be completed following completion of Aboriginal community consultation and with input from the RAPs.

Table 1: Consultation undertaken in accordance with *Aboriginal cultural heritage consultation requirements for proponents 2010*.

| Step | Task Requirement | Action | Date of action | Outcome |
|-------|---|---|----------------|---|
| 4.1.1 | Identify if native title exists in relation to the project area. | We wrote to National Native Title Tribunal to request a search of Tribunal Registers. | 19/10/2019 | There are no Land Claims or Indigenous Land Use Agreements. |
| 4.1.2 | Ascertain, from reasonable sources of information, the names of Aboriginal people who may hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places. Compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining the cultural significance of Aboriginal objects and/or places | We wrote to the following organisations seeking the names of any Aboriginal people or organisations who may hold cultural knowledge: <ul style="list-style-type: none">Greater Sydney Local Land Services (GSLLS)Department of Planning, Industry and Environment (DPIE)Office of Registrar, Aboriginal Land Rights Act 1983NTS CorporationGandangara Local Land CouncilLiverpool City Council | 19/10/2019 | <ul style="list-style-type: none">DPIE responded with list of people/organisations who have an interest in the area.GSLLS advised they are not the primary source to provide contact lists and advised that contact should be made with DPC.Office of Registrar, Aboriginal Land Rights Act advises thatLiverpool City Council responded with a list of people/organisations who have an interest in the area. |
| 4.1.3 | Written notification and advertisement: Write to the Aboriginal people whose names were obtained in step 4.1.2 and the relevant LALC(s) to notify them of the proposed project. Place a notice in the local newspaper circulating in the general location of the proposed project, explaining the project and its exact location. Notification by letter and newspaper must include: (a) the name and contact details of the proponent (b) a brief overview of the proposed project that may be the subject of an application for an AHIP, including the location of the proposed project (c) a statement that the purpose of community | We wrote to the following organisations/people identified in 4.1.2 <ul style="list-style-type: none">Gandangara Local Aboriginal Land CouncilDarug Custodian Aboriginal CorporationDharug Ngurra Aboriginal Corporation (formerly Darug Tribal Aboriginal Corporation)Darug Aboriginal Cultural Heritage AssessmentsDarug Land ObservationsDarug Aboriginal Land CareA1 Indigenous ServicesCubbitch BartaKamilaroi Yankuntjajara Working GroupWurrumay ConsultancyWarragil Cultural ServicesKawul Cultural ServicesTocomwallAmanda Hickey Cultural ServicesGunyuWalbunjaBadu | 2/11/2019 | Responses were received from the following organisations who are now Registered Aboriginal Stakeholders: <ul style="list-style-type: none">Caine Carroll – Goodradigbee Cultural HeritagePhilip Khan – Kamilaroi Yankuntjajara Working GroupLilly Carroll – Didge Ngunawal ClanCarolyn Hickey – A1 Indigenous ServicesName withheldCorina – Dharug Ngurra Aboriginal Corporation (formerly DNAC)Celestine Everingham - Darug Aboriginal Cultural Heritage AssessmentsJustine Coplin – Darug Custodian Aboriginal CorporationMelissa Williams- Gandangara Local Aboriginal Land CouncilNorma Burrows – Liverpool City Council Aboriginal Consultative CommitteeGlenda Chalker – Cubbitch BartaRodney Gunther – Waawara Awa |



| Step | Task Requirement | Action | Date of action | Outcome |
|-------|---|---|----------------|---------|
| | <p>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</p> <p>(d) 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</p> <p>(e) a closing date for the registration of interests</p> | <ul style="list-style-type: none"> Goobah Developments Wullung Yerramurra Nundagurri Murumbul Jerringong Pemulwuy CHTS Bilinga Munyunga Wingkara Minnamunnung Walgala Thauaira Dharug Gulaga Biamanga Callendulla Murramarang Butucarbin Aboriginal Corporaton Didge Ngunawal Clan Ginninderra Aboriginal Corporation Garrara Aboriginal Corporation Wailwan Aboriginal Group Guntawang Aboriginal Resources Incorporated Barking Owl Aboriginal Corporation Yulay Cultural Services Thoorga Nura Barraby Cultural Services Yurrandali Cultural Services Darug Boorooberongal Elders Aboriginal Corporation B. H. Heritage Consultants Ngambaa Cultural Connections Goodradigbee Cultural & Heritage Aboriginal Corporation Mura Indigenous Corporation Aragung Aboriginal Cultural Heritage Site Assessments Waawaar Awaa Darug Local Aboriginal Land Council <p>We place an advertisement in the Liverpool Leader.</p> | 23/10/2019 | |
| 4.1.4 | A minimum of 14 days from the date the letter was sent or notice published in the newspaper to register an interest. | Closing date for registration of interest included in the notification letters and notice in the newspaper was at least 14 days from the date the letters were sent and notices appeared in the newspapers. | | |



| Step | Task Requirement | Action | Date of action | Outcome |
|-------|---|---|------------------------------|---|
| 4.1.5 | Must advise Aboriginal people who are registering an interest that their details will be forwarded to DPC and the LALC unless they specify that they do not want their details released. | This advice was included in the advertisement and letters | | |
| 4.1.6 | Make a record of the names of each Aboriginal person who registered an interest. Provide a copy of that record and copy of the notification from step 4.1.3 to the relevant DPC and LALC within 28 days of closing date for registration of interest. | List of RAP's compiled and sent to DPIE. List of RAP's compiled and sent to Gandangara Local Aboriginal Land Council | 14/12/2019 21/12/2019 | |
| 4.1.7 | LALCs holding cultural knowledge relevant to determining the significance of Aboriginal objects and places in the proposed project area who wish to register an interest to be involved in consultation must register their interest as an Aboriginal organisation rather than individuals. | Gandangara LALC is a registered party to be involved in consultation (refer to 4.1.6) | | Gandangara LALC is a registered organisation. Representative: Melissa Williams Contact number: 9602 5280 |
| 4.1.8 | Where an Aboriginal organisation representing Aboriginal people, who hold cultural knowledge has registered an interest, a contact person for that organisation must be nominated. Aboriginal cultural knowledge holders who have registered an interest may indicate they have appointed a representative to act on their behalf. Where this occurs, the registered Aboriginal party must provide written confirmation and contact details of those individuals to act on their behalf. | | | A contact person was nominated for all RAPs. Please see 4.1.3 above |
| 4.2 | Presentation of information about the proposed project. | Meeting held to explain project, ascertain significance, artefact management and any other issues of concern. | 4/2/2020 | Minutes of meeting attached including methodology which was presented at meeting. The following organisations were in attendance at that meeting and as detailed in the minutes agreed with the methodology: <ul style="list-style-type: none"> Darren Duncan, Gandangara Local Aboriginal Land Council |



| Step | Task Requirement | Action | Date of action | Outcome |
|-------------|--|---|--|---|
| | | | | <ul style="list-style-type: none"> Dave Whitton & Kyle Whitton, Goodradigbee Marbuk Khan, Kamilaroi-Yankuntjatjara Working Group Norma Burrows, Liverpool City Council's Aboriginal Consultative Committee Nathan Holloway, School Infrastructure NSW Jillian Comber, Comber Consultants Rivers McEwan, Comber Consultants Veronica Norman, Comber Consultants |
| 4.3.1-4.3.2 | Notification of proposed assessment methodology | <p>Methodology forwarded to RAPs with invitation on 30/01/2020 with 28 days to respond ie., 27/02/2020. Also advised it would be discussed at meeting.</p> <p>Methodology presented and discussed at meeting.</p> | <p>30/01/2020</p> <p>4/02/2020</p> | <p>All RAPs attending the meeting agreed with the methodology.</p> <p>Rodney Gunther, who was not able to attend the meeting, provided an email in support of the methodology.</p> |
| 4.3.3 | Gathering information about cultural significance | All RAPs were invited to provide cultural information by written invitation and at the consultation meeting. | | RAP's who attended the meeting on the 4/2/2020 provided culturally significant information regarding the study area (see minutes of meeting in Appendix A and significance assessment 7.3). |
| 4.4 | Review of draft cultural heritage assessment report | Draft ACHAR sent to all RAPs on 01/04/2020 with a response date of 29/04/2020 | 01/04/2020 | <p>The following RAPs responded advising that they agreed with the recommendations in the report and supported the ACHAR:</p> <ul style="list-style-type: none"> Caine Carroll, Goodradigbee CH Justine Coplin, DCAC |
| | The proposal for the Liverpool new public school was amended. Previously the Liverpool Boys & Girls High School was included in the scheme. The previous plan included the redevelopment of the Liverpool Boys & Girls High School and included development of the new primary school. The plans now only include the construction of the new primary school on the same site as included in the previous plan. The only alteration to the plans is the removal of the redevelopment of the Boys & | Although the proposal for the new primary school has not altered, and that the only change was the removal of the redevelopment of the high school the ACHAR was sent to all RAPs for their comment. | The report was sent on 19th March with a response date of 16 th April | <p>Responses were received from the following RAPs who agreed with the proposal:</p> <ul style="list-style-type: none"> Phil Khan, Kamilaroi-Yankuntjatjara Working Group Carolyn Hickey, A1 Indigenous Services Pty Ltd Justine Coplin, Darug Custodian Aboriginal Corporation Paul Boyd & Lilly Carroll, Didge Nunawall Clan |



| Step | Task Requirement | Action | Date of action | Outcome |
|------|---|--------|----------------|---------|
| | Girls High School. The proposal for the new primary school is the same. | | | |

As a result of the above consultation the following organisations are Registered Aboriginal Parties:

- Caine Carroll – Goodradigbee Cultural Heritage
- Philip Khan – Kamilaroi Yankuntjatjara Working Group
- Lilly Carroll – Didge Ngunawal Clan
- Carolyn Hickey – A1 Indigenous Services
- Name withheld
- Corina – Darug Ngurra Aboriginal Corporation (formerly DNAC)
- Celestine Everingham - Darug Aboriginal Cultural Heritage Assessments
- Justine Coplin – Darug Custodian Aboriginal Corporation
- Melissa Williams- Gandangara Local Aboriginal Land Council
- Norma Burrows – Liverpool City Council Aboriginal Consultative Committee
- Glenda Chalker – Cubbitch Barta
- Rodney Gunther – Waawaar Awa



7.0 CULTURAL HERITAGE VALUES AND STATEMENT OF SIGNIFICANCE

7.1 Preamble

Significance assessment is the process whereby sites or landscapes are assessed to determine their value or importance to the community.

A range of criteria have been developed for assessing the significance which embody the values contained in the Burra Charter. The Burra Charter provides principles and guidelines for the conservation and management of cultural heritage places within Australia.

Following are the criteria which will be used to assess the significance of the study area.

7.2 Criteria

Social value (sometimes termed 'Aboriginal' value) which refers to the spiritual, traditional, historical or contemporary associations or attachments which the place or area has for the present day Aboriginal community.

Historic value refers to the associations of a place with a person, event, phase or activity of importance to the history of an Aboriginal community.

Scientific value refers to the importance of a landscape, area, place, or objects because of its potential to provide information which is of value in scientific analysis and the ability to answer scientific or technical research questions.

Aesthetic value refers to the sensory, scenic and creative aspects of the place.

Representativeness refers to whether the site demonstrates the principle characteristics of that site and is a good representative example of that site type.

Rarity refers to the degree to which such a site is known elsewhere and whether the site is uncommon, rare or endangered.

7.3 Assessment

Social value

Consultation with the Registered Aboriginal Parties indicates that the study area is important to the local and broader Aboriginal community. The artefacts predicted to be located on the site will provide evidence of Aboriginal occupation representing their past providing a direct link to their ancestors.

Historic value

The study area has the potential to contain evidence of Aboriginal occupation which contributes to an understanding of the pre and post contact history of the Darug and Tharawal communities.

Scientific value

The study area has the potential to yield further information through detailed scientific and archaeological research into the nature of Aboriginal occupation and techniques utilised in subsistence activities. It has the potential to contain sub-surface archaeological deposits. The RAPs advised of excavations nearby which yielded many artefacts.

Aesthetic value

The current site does not contain Aboriginal aesthetic values, however, after excavation the objects uncovered might meet this criterion.

Representativeness

Until the excavation has been completed it is not known if the site contains representative value.

Rarity

Until the excavation has been completed it is not known if the site contains representative value.



7.4 Statement of significance

Consultation with representatives of the Aboriginal community indicates that the study area is important to the local and broader Aboriginal community. The artefacts predicted to be located on the site will provide evidence of Aboriginal occupation representing their past, providing a direct link to their ancestors. The study area has the potential to contain evidence of Aboriginal occupation which contributes to an understanding of the history of the pre and post contact history of the Darug community. The study area has the potential to yield further information through detailed scientific and archaeological research into the nature of Aboriginal occupation and techniques utilised in subsistence activities. It has the potential to contain sub-surface archaeological deposits. The current site does not contain aesthetic value, however, after excavation, the object uncovered might meet this criteria. Until the excavation has been completed it is not known if the site contains representative or rarity values.



8.0 RECOMMENDATIONS

The following recommendations are made on the basis of:

- SEARS requirements
- Research into the archaeological record for the Cumberland Plain and the study area in particular.
- Results of the assessment as outlined in this report.

IT IS THEREFORE RECOMMENDED THAT:

1. Aboriginal archaeological test excavations should be undertaken to determine the nature and extent of any subsurface archaeological deposit. This should be undertaken in consultation with the Registered Aboriginal Parties prior to construction of the new Liverpool Primary School. The testing should be undertaken in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*.
2. Aboriginal community consultation should continue throughout the archaeological testing and the life of the project.
3. Any artefacts uncovered should remain on country and be catalogued and stored onsite and protected by SINSW. The artefacts could be used in an interpretive display. It will be necessary for a Care Agreement to be made between SINSW and the Registered Aboriginal Parties. To apply for a Care Agreement, an 'Application for the transfer of Aboriginal objects for safekeeping' must be signed by SINSW and the Registered Aboriginal Parties and submitted to the Department of Planning, Industry and Environment.
4. Interpretation of Aboriginal archaeology and history of the site should be undertaken in consultation with the Registered Aboriginal Parties. An interpretation strategy and plan should be developed in consultation with the Registered Aboriginal Parties to guide the interpretation.



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GLOSSARY

Adze: an axe like bifacial tool with a bevelled bit or blade edge usually used to work wood, or sometimes to dig for root crops.

Alluvium: material which is transported by a river and deposited at points along the flood plain of the river.

Artefact: any object made by human agency. All lithic tools and lithic debitage are considered artefacts.

Artefact scatter: also known as a surface scatter or open site, where prehistoric material such as artefacts and waste debris are lying exposed on the surface of the ground.

Assemblage: a collection of artefacts from an archaeological site.

Australian small tool tradition: a mid Holocene tool industry that appeared about 5,000 years ago when a new ensemble of small, flaked stone tools began to come into use. The types consisted of backed blades and flakes, Unifacial and bifacial points, and small adze flakes. There are some regional distributions of tools, including Bondi points, geometric microliths, Pirri points and Tula adzes.

Axe: a stone artefact that has been ground on one or more sides to produce a sharp edge.

Backed blade: a blade flake that has been abruptly retouched along one or more margins opposite an acute (sharp) edge. Backed pieces include backed blades and geometric microliths. They are thought to have been hafted onto wooden handles to produce composite cutting tools or spears. Backed blades are a feature of the “Australian small tool tradition”, dating from between 5,000 and 1,000 years ago in south eastern Australia (Mulvaney 1975).

Bifacial flaking or retouch: when flakes have been removed from two opposing faces.

Biomantle: the upper part of soil produced by biodynamical agents and processes of which bioturbation is normally hierarchically dominant. By definition, it contains at least 50% biofabric, a condition met in essentially all topsoils.

Bioturbation: the alteration of a site by non-human agency, eg. burrowing animals, tree and grass roots, insects

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

Bondi point: a small, asymmetric backed point, named after Bondi Beach where it was first found, which is a component of the Australian small tool tradition. It is usually less than 5cm long and is sometimes described as a backed blade.

Broad platform flake: a flake which has a platform which is as wide as, or wider than, the body of the flake.

Bulb of percussion: a rounded bulge where the force from the hammerstone has radiated through the stone and split it from the core.

Burin: a flake tool that was produced by the removal of two flakes at right angles to one another to produce a very fine sharp and durable edge.

Carved trees: trees which have had designs carved into the bark or heartwood and in some areas may have been used to mark burial or initiation sites.

Chert: a very fine crystalline aggregate of silica.

Context: the time and space setting of an artefact, feature or culture. The context of a find is its position on a site, its relationship through association with other artefacts, and its chronological position as revealed through stratigraphy. An artefact’s context usually consists of its immediate matrix (the material surrounding it, eg. clay, gravel or sand), its provenience (horizontal and vertical position within the matrix), and its association with other artefacts (occurrence together with other archaeological remains, usually in the same matrix). The assessment of context includes study of what has happened to the find since it was deposited.

Core: a piece of stone bearing one or more negative (concave) flake scars. A stone which has obviously had flakes and flaked pieces struck from it.

Cortex: refers to the original weathered outer surface of the rock used to manufacture an artefact.

Debitage (debris): detached pieces that are discarded during the reduction process.

Distal end: the end opposite to the platform or the point end of a blade.

Dorsal surface: the ‘back’ of the artefact or the side that was once part of the outside of the core or shows evidence of previous flake removals.



Edge-ground artefact: an artefact (generally an axe or adze) whose cutting edges have been ground, rather than flaked, to form a sharp edge.

Erailure scar: the small flake scar on the dorsal side of a flake next to the platform. It is the result of rebounding force during percussion flaking.

Erosion: the wearing away or loosening and transportation of soil or rock by water, wind and ice.

Fabricator: a stone or bone artefact used in the manufacture of other tools. Often rod shaped and worn heavily on one end, it is used to chip flakes from a core, or to retouch a flake.

Flake: any piece of stone removed from a larger mass (core) by application of force (percussion), and having a striking platform and bulb of percussion.

Flaked piece: any stone struck from a larger mass by percussion but not containing all or any of the characteristics of a flake.

Focal platform flake: a flake which has a platform narrower than the body of the flake.

Grinding groove: a depression resulting from the sharpening of stone tools such as axes and adzes, usually located on surfaces of fine homogenous sandstone and near water.

Grinding stone: a thick stone used as a mortar for grinding seeds, roots, tubers, or ochre.

Hammerstone: the stone that is used to remove flakes from the core.

Holocene: that portion of geologic time that postdates the latest episode of continental glaciation. The Holocene Epoch is synonymous with the recent or postglacial interval of Earth's geologic history and extends from 10,000 years ago to the present day. It was preceded by the Pleistocene Epoch and is part of the Quaternary Period, a time characterised by dramatic climatic oscillations from warm (interglacial) to cold (glacial) conditions that began about 1.6 million years ago. The term Holocene is also applied to the sediments, processes, events, and environments of the epoch.

Horizon (or soil horizon): the layers of the upper crust of the earth. The top, or O, horizon is the layer of undecomposed litter; the A horizon is topsoil, where most roots grow; B is the subsoil; and C is the parent rock material, broken into chunks. Although some roots can penetrate into the C horizon, few microorganisms live there.

Isolated find: a single stone artefact found on the surface of the land not in association with any other artefact.

Knapping: the process of hitting one stone (core) with another (hammerstone) to produce a flaked artefact.

Lamellate flaked piece: thin and wedge shaped, similar to a flake, but without the diagnostic features of a flake. A lamellate may be the distal end of a flake which has had its platform broken off.

Lithic: anything made of stone. Derived from the Greek word meaning stone or anything pertaining to stone.

Manuport: piece of stone intended to be, or used as, a core that has been carried to the area from somewhere else.

Microlith: a small (1 – 3cm long) flake with evidence of retouch. Bondi points, scrapers and backed blades are all types of microliths.

Midden: a prehistoric refuse site chiefly composed of shell fragments.

Multidirectional core: a lithic mass (core) with evidence of flaking originating from more than one direction and with more than a single striking platform.

Negative flake scar: the scar left by the removal of a flake. The scar may also show a rounded depression which is the negative of the bulb of percussion.

Open site: also known as a surface or artefact scatter, where prehistoric material such as artefacts and waste debris are lying exposed on the surface of the ground.

Pirri point: a symmetrical leaf-shaped point, up to 7cm long, unifacially flaked all over its dorsal surface. The striking platform and bulb of percussion are sometimes removed to produce a rounded, thinned butt. Pirri points are a component of the Australian small tool tradition, found generally in inland Australia. The term pirri is an Aboriginal word for 'wood engraving tool'.

Platform: the flat surface which receives percussion or pressure in the removal of a flake or flaked piece.

Pleistocene: a geochronological division of geological time, an epoch of the Quaternary period following the Pliocene. During the Pleistocene, large areas of the northern hemisphere were covered with ice and there were successive glacial advances and retreats. The lower Pleistocene began about 1.8 million years ago; the Middle Pleistocene about 730,000 years ago; and the Upper Pleistocene about 127,000 years ago; it ended about 10,000 years ago. The Pleistocene was succeeded by the Holocene.



Potential archaeological deposit (PAD): any location considered to have a moderate to high potential for subsurface archaeological material

Potlid: small circular piece of stone that has literally “popped off” the surface of the artefact due to exposure to extreme heat.

Proximal end: the ‘top’ of the artefact, or the part that the knapper hit to remove it from the core, where the platform is expected to be.

Quarry: a location from which stone has been extracted in order to make stone artefacts.

Retouch: refers to the secondary working of an artefact after it has been struck from the core. Retouch is used to sharpen the edges. It is the intentional modification of a stone tool edge by either pressure or percussion flaking techniques.

Scarred trees: trees from which bark has been removed for the manufacture of everyday items such as containers, canoes or shields.

Scraper: a generalised term used to describe a flake tool that has a retouched edge angle of approximately 60 to 90 degrees.

Silcrete: silica-rich duricrust identified by the presence of complete granules or even pebbles within the matrix.

Stratigraphy: the study and interpretation of the stratification of rocks, sediments, soils, or cultural debris, based on the principle that the lowest layer is the oldest and the uppermost layer is the youngest. The sequence of deposition can be assessed by a study of the relationships of different layers.

Taphonomy: Literally, ‘the laws of burial’. In archaeology, it is the study of the processes by which archaeological remains are transformed by human and natural processes during their incorporation into archaeological deposits, their subsequent long-term preservation within those deposits, and their recovery by archaeologists. The aim is to understand the processes resulting in the archaeological record.

Thumbnail scraper: a small flake with a convex scraper edge, shaped like a thumbnail and located opposite the flake’s platform. They exhibit unifacial retouch (usually on the ventral surface) and are usually less than 30mm in length.

Transect: an arbitrary sample unit which is a linear corridor of uniform specified width. A straight line or narrow sections through an archaeological site, along which a series of observations or measurements is made.

Tuff: a rock formed of volcanic fragments (generally ash).

Typology: a scheme to order multiple types in a relational manner. A common typology orders types in a hierarchical manner.

Unidirectional core: a core with only one striking platform surface and with flake scars extending in only one direction.

Unifacial flaking or retouch: where flakes have been removed from one face only.

APPENDIX A: CONSULTATION

Written Notification (Step 4.1.2) DATE sent to the following:

- National Native Title Tribunal
- Department of Planning, Industry & Environment (DPIE) formerly Office of Environment & Heritage
- Gandangara LALC
- Registrar, Aboriginal Land Rights Act 1983
- Liverpool City Council
- Greater Sydney Local Land Services
- NTS Corp

To:

Department of Planning, Industry and Environment
Gandangarra Local Aboriginal Land Council
Office of Registrar, Aboriginal Land Rights Act 1983
National Native Title Tribunal
Native Title Services Corporation Limited
Greater Sydney Local Land Services
Liverpool City Council

Liverpool Boy's & Girls' High Schools
Forbes Street, Liverpool
Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010

The Department of Education, Schools Infrastructure NSW (SINSW), is investigating the development potential of Liverpool Boys' & Girls' High Schools which are located at Forbes Street, Liverpool, within the Liverpool City Council Local Government Area. The proposal will be determined as a State Significant Development (SSD).

Comber Consultants have been engaged by the Department of Education to undertake Aboriginal community consultation in accordance with Department of Planning, Industry and Environment's (formerly OEH) *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*. Therefore, I am writing to you to ascertain if you are aware of Aboriginal people or organisations who may hold cultural knowledge relevant to determining the significance of Aboriginal objects and or/places within the study area. If so, I would be pleased if you could forward their contact details to me.

I would be pleased if you could forward your response by (14 days from date of letter) to:

Jillian Comber
76 Edwin Street North
Croydon, NSW, 2132
jillian.comber@comber.net.au
Ph: (02) 9799 6000
Fax: (02) 9799 6011
Thank you for your assistance.

Yours Sincerely

Jillian Comber
Director /Archaeologist
Comber Consultants

Responses (Step 4.1.2)

NATIONAL NATIVE TITLE TRIBUNAL – 21/10/2019

To identify if native title exists we wrote to National Native Title Tribunal on the 19 October 2019. A response was received by email on 21 October 2019. There are no active Native Title Claims and no Indigenous land Use Agreements.

An up to date search of the National Native Title Register was undertaken on 7 December 2019. There are no current claims and no ILUAs

From: Geospatial Search Requests <GeospatialSearch@NNTT.gov.au>

Sent: Monday, 21 October 2019 6:05 PM

To: achar <achar@comber.net.au>

Subject: RE: SR19/130 - Liverpool Boys and Girls High School - Request for Search of Tribunal Registers - SR19/130

UNCLASSIFIED

Native title search – NSW Parcel – Lot 1 on DP1137425

Your ref: *Liverpool Boys and Girls High School* - **Our ref:** SR19/130

Dear Jillian Comber,

Thank you for your search request received on 21 October 2019 in relation to the above area. Based on the records held by the National Native Title Tribunal as at 21 October 2019 it would appear that there are no Native Title Determination Applications, Determinations of Native Title, or Indigenous Land Use Agreements over the identified area.

Search Results

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

- Schedule of Native Title Determination Applications
- Register of Native Title Claims
- National Native Title Register
- Register of Indigenous Land Use Agreements
- Notified Indigenous Land Use Agreements

At the time this search was carried out, there were **no relevant entries** in the above databases.

| Parcel ID | Feature Area SqKm | NNTT file number | Name | Category | Percent Selected Feature |
|-------------|-------------------|----------------------------|------|----------|--------------------------|
| 1//D1137425 | 0.0750 | No overlap | | | 0.00% |

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

The Tribunal accepts no liability for reliance placed on enclosed information

The enclosed information has been provided in good faith. Use of this information is at your sole risk. The National Native Title Tribunal makes no representation, either express or implied, as to the accuracy or suitability of the information enclosed for any particular purpose and accepts no liability for use of the information or reliance placed on it.

Cultural Heritage Searches in NSW

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

Interested parties are invited to use Native Title Vision (NTV) the Tribunal's online mapping system to discover native title matters in their area of interest. Access to NTV is available at

<http://www.nntt.gov.au/assistance/Geospatial/Pages/NTV.aspx>

Training and self-help documents are available on the NTV web page under "Training and help documents". For additional assistance or general advice on NTV please contact GeospatialSearch@NNTT.gov.au

Additional information can be extracted from the Registers available at

<http://www.nntt.gov.au/searchRegApps/Pages/default.aspx>

If you have any further queries, please do not hesitate to contact us on the free call number 1800 640 501.

Regards,

Geospatial Searches

National Native Title Tribunal | Perth

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

Search National Native Title Register

The National Native Title Register (NNTR) is a register established under s. 192 of the *Native Title Act 1993* (Cth).

The NNTR contains determinations of native title made by:

- the High Court of Australia
- the Federal Court of Australia
- or a recognised body such as South Australia's Supreme Court and Environment Resources and Development Court.

Further [information about the NNTR](#) is available.

| | |
|--|---|
| Tribunal file no. | <input type="text"/> |
| Federal Court file no. | <input type="text"/> |
| Short name | <input type="text"/> |
| Case name | <input type="text"/> |
| State or Territory | New South Wales ▼ |
| Registered Native Title Body Corporate | <input type="text"/> |
| Representative ATSIL body area | <input type="text"/> |
| Local government area | Liverpool City Council |
| Determination type | ALL ▼ |
| Legal process | ALL ▼ |
| Determination outcome | ALL ▼ |
| Determination date between | <input type="text"/> and <input type="text"/> |
| Sort by | Determination date ▼ |
| <input type="button" value="Search >"/> | |

No results for current search criteria



Search Register of Indigenous Land Use Agreements

The Register of Indigenous Land Use Agreements contains information about Indigenous land use agreements (ILUAs) that have accepted for registration.

Under the *Native Title Act*, the Registrar is responsible for maintaining the Register of Indigenous Land Use Agreements and must provide the following details:

- a description of the area covered by the agreement
- the name of each party to the agreement and the address at which the party can be contacted
- if the agreement specifies the period during which it will operate — that period
- if the agreement includes any statements regarding extinguishment, the validation or doing of future acts, contracting out or to negotiate provisions of the *Native Title Act*, or changing the effect of intermediate period acts on native title — a reference to the fact, setting out any such statements.

Further [information on the ILUA Register](#) is available.

| | |
|--|---|
| Tribunal file no. | <input type="text"/> |
| ILUA name | <input type="text"/> |
| ILUA type | <input type="text" value="ALL"/> |
| State or Territory | <input type="text" value="New South Wales"/> |
| Representative A/TSI body area | <input type="text" value="Liverpool"/> |
| Subject Matter | <input type="text"/> |
| Date registered between | <input type="text"/>  and <input type="text"/>  |
| Sort by | <input type="text" value="Date registered"/> |
| <input type="button" value="Search >"/> | |

No results for current search criteria

DPIE – 23/10/2019

From: Barry Gunther <Barry.Gunther@environment.nsw.gov.au>

Sent: Wednesday, 23 October 2019 3:56 PM

To: Jillian Comber <jillian.comber@comber.net.au>

Subject: OEH Aboriginal stakeholder list for the proposed development at Liverpool Boys and Girls High School, Forbes Street Liverpool

Hi Jillian,

Please find attached your request for the OEH Aboriginal stakeholder list for the proposed development at Liverpool Boys and Girls High School, Forbes Street Liverpool.

If you wish to discuss this email please contact me on the details below.

regards

Barry Gunther
Aboriginal Heritage Planning Officer
Greater Sydney

Climate Change & Sustainability | Department of Planning, Industry and Environment

T 02 88376394 | **E** barry.gunther@environment.nsw.gov.au

Level 2, 10 Valentine Avenue, Parramatta NSW 2150



11 November 2019

By email: Jillian.Comber@Comber.net.au

Jillian Comber
Comber Consultants
76 Edwin Street North
CROYDON NSW 2132

Dear Ms Comber,

Request - Search for Registered Aboriginal Owners

We refer to your email dated 19 October 2019 regarding an Aboriginal Cultural Heritage Assessment for the proposed development at Liverpool Boys and Girls High School, Forbes Street, Liverpool NSW.

Under Section 170 of the *Aboriginal Land Rights Act 1983* the Office of the Registrar is required to maintain the Register of Aboriginal Owners (RAO). A search of the RAO has shown that there are not currently any Registered Aboriginal Owners in the project area.

We suggest you contact Gandangara Local Aboriginal Land Council on 02 9602 5280 as they may be able to assist you in identifying Aboriginal stakeholders who wish to participate.

Yours sincerely

Elizabeth Loane
Project Officer, Aboriginal Owners
Office of the Registrar, ALRA

Address: Level 3, 2 – 10 Wentworth Street, PARRAMATTA NSW 2150
Post: P.O Box 5068, PARRAMATTA NSW 2124
Phone: 02 8633 1266

LIVERPOOL CITY COUNCIL – 25/10/2019

From: Norma Burrows <BurrowsN@liverpool.nsw.gov.au>
Sent: Friday, 25 October 2019 11:02 AM
To: achar <achar@comber.net.au>; LCC <LCC@liverpool.nsw.gov.au>
Subject: RE: Liverpool Boy's & Girl's High School

Good morning Comber Team,

Thank you for your email, please find below the list potential stakeholders that hold cultural knowledge in relation to city of Liverpool and surrounding areas.

I have included Liverpool City Council's Aboriginal Consultative Committee as the development falls within the Liverpool Local Government Area (LGA) As the convene of this committee we welcome receiving general updates in relation to this development.
Council ACC request is to review, comment and recommend relevant actions on methodology plan and final report.

Aboriginal Stakeholders List as of this date;
(in no particular order)

| | | |
|---|---|---|
| Leanne Watson | Darug Custodial Aboriginal Corporation PO Box 81 Windsor NSW 2756 | Murgokiwi@bigpond.com Ph: 02 4577 51 81 or Mobile: 0415 770 163 |
| Kevin Cavanagh (CEO) | Darug Local Aboriginal Land Council | CEO@deerubbin.org.au |
| Gordon Morton | Darug Land Observations PO Box 571 Plumpton NSW 2761 | Ph: 02 4567 7421 |
| Gandangara Cultural Officer Mr Darren Duncan | Gandangara Local Aboriginal Land Council | DDuncan (DDuncan@glalc.org.au) |
| Brad Maybery | Guntawang Aboriginal Resources Inc | Wendy Morgan < wenlissa01@hotmail.com > |
| Norma Burrows (Committee Convenor) | C/o Liverpool City Council Aboriginal Consultative Committee (ACC) | burrowsn@Liverpool.city.council.nsw.gov.au |

If you have any question in relation to this email please do not hesitate to call me during business working hours on the number below.

Cheers

Norma Burrows

Community Development Worker (ATSI)

02 8711 7477 | | BurrowsN@liverpool.nsw.gov.au

Customer Service: 1300 36 2170 | 52 Scott Street Liverpool, NSW 2170, Australia



www.liverpool.nsw.gov.au

GREATER SYDNEY LAND SERVICES OFFICER -

From: Margaret Bottrell <margaret.bottrell@lls.nsw.gov.au>

Sent: Tuesday, 22 October 2019 7:48 AM

To: Jillian Comber <jillian.comber@comber.net.au>

Subject: Liverpool Boys & Girls High School site - Forbes Street, Liverpool Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010

To Jillian Comber,

RE: Liverpool Boys & Girls High School site - Forbes Street, Liverpool Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010

Thank you for your letter dated 19 October 2019, requesting assistance with identifying Aboriginal stakeholder groups or persons who may have an interest in your project area.

Greater Sydney Local Land Services (GS LLS) acknowledges that Local Land Services have been listed in *Section 4.1.2 (g) of the Aboriginal cultural heritage consultation requirements for proponents 2010*, under *Part 6, National Parks and Wildlife Act 1974* as a source of information to obtain the “names of Aboriginal people who may hold cultural knowledge relevant to determining the significance of Aboriginal *objects* and/or *places*”.

GS LLS is a partner with many Aboriginal communities in the region on many natural resource management (NRM) projects. However, GS LLS is not the primary source for contacting or managing contact lists for Aboriginal communities or persons that may inform or provide comment on planning issues. GS LLS considers cultural heritage issues that relate to land-use planning in general and only considers culture and heritage issues in the context of NRM.

We strongly recommend that you make contact with the Office of Environment and Heritage (OEH), Cultural Heritage Division, for all-inclusive contact lists of persons and organisations that may assist with your investigation.

Note: Hawkesbury Nepean Catchment Management Authority (HNCMA) no longer exists. All work previously carried out by HNCMA is now delivered by Greater Sydney Local Land Services (GS LLS).

Regards,

--

Margaret Bottrell Senior Strategic Land Services Officer
(Aboriginal Communities)

Greater Sydney Local Land Service

Level 4, 2-6 Station Street Penrith

PO Box 4515 Penrith Westfields NSW 2750

T: 02 47242111

E: margaret.bottrell@lls.nsw.gov.au

W: <http://www.lls.nsw.gov.au>

Newspaper Notification (Step 4.1.3)

The newspaper notification in the Liverpool Leader dated 23 October 2019 requested responses to be received by COB 8 November 2019.

Aboriginal Cultural Heritage Liverpool Boys & Girls High School site Forbes Street, Liverpool

Notification and Registration of Aboriginal Interests

The Department of Education is currently undertaking planning for the proposed redevelopment of the Liverpool Boys and Girls High School site on Forbes Street, Liverpool (located within the Liverpool Local Government Area). Please see map. It may be necessary to undertake Aboriginal archaeological excavation prior to the redevelopment.

The proposed development will be assessed as a State Significant Development (SSD) under Part 4 Division 4.7 of the *Environmental Planning and Assessment Act 1979*. This requires Aboriginal community consultation to be undertaken in accordance with the Department of Planning, Industry and Environment's (DPIE) *Aboriginal cultural heritage consultation requirements for proponents 2010*.

Registrations of interest are sought from Aboriginal people who hold cultural knowledge relevant to determining the significance of any potential Aboriginal objects at this location. This will assist in the assessment of the proposal by DPIE.

Please note that the details of Aboriginal people or organisations who register an interest will be forwarded to DPIE and the Gandangara Local Aboriginal Land Council (GLALC). If you do not want your details forwarded to the GLALC, please specify in your letter when registering an interest that you do not want your details forwarded to the GLALC.

Comber Consultants Pty Ltd has been appointed to undertake Aboriginal consultation and the archaeological assessment.

You can register, indicating the nature of your interest, by phone or in writing to:
Jillian Comber
Comber Consultants Pty Ltd
76 Edwin Street North
Croydon NSW 2132
Tel: (02) 9799 6000
Fax: (02) 9799 6011
jillian.comber@comber.net.au

**REGISTRATIONS MUST BE RECEIVED BY
COB FRIDAY 8TH NOVEMBER 2019**



06 LIVERPOOL LEADER Wednesday, October 23, 2019

Copy of written notification to Aboriginal people and/or organisations from step 4.1.2 (Step 4.1.3)

achar

From: achar
Sent: Saturday, 2 November 2019 3:23 PM
To: 'mwilliams@glalc.org.au'; 'justinecoplin@optusnet.com.au'; Darug Tribal Aboriginal Corporation - Darug Tribal Aboriginal Corporation (darug_tribal@live.com.au); Jamie Workman (daruglandobservations@gmail.com); Des Dyer - Darug Aboriginal Landcare (desmond4552@hotmail.com); Carolyn Hickey (cazadirect@live.com); Phil Khan - Kamilaroi-Yankuntjatjara Working Group (philipkhan.acn@live.com.au); Kerrie Slater - Wurrumay Consultancy (wurrumay@hotmail.com); Aaron Slater - Warragil Cultural Services (warragil_c.s@hotmail.com); Vicki Slater - Kawul Cultural Services (vicki.slater@hotmail.com); Danny Franks - Tocomwall Pty Ltd (danny@tocomwall.com.au); Amanda Hickey (amandahickey@live.com.au); Kylie Ann Bell (gunyuuchts@gmail.com); Hika Tekowhai (walbunja@gmail.com); Kara Bond - Badu (baduchts@gmail.com); Basil Smith (goobahchts@gmail.com); Robert Parson - Yerramurra (yerramurra@gmail.com); Newton Carriage (nundagurri@gmail.com); Mark Henry (murrumbul@gmail.com); Joanne Anne Stewart - Jerringong (jerringong@gmail.com); Pemulwuy Johnson - Pemulwuy CHTS (pemulwuyd@gmail.com); Simalene Carriage - Bilinga (bilingachts@gmail.com); Kaya Dawn Bell (munyungachts@gmail.com); Hayley Bell - Wingikara (wingikarachts@gmail.com); Ronald Stewart - Walgalu (walgaluchts@gmail.com); Shane Carriage (thauairachts@gmail.com); Andrew Bond - Dharug Murrin (dharugchts@gmail.com); Wendy Smith - Gulaga CHTS (gulagachts@gmail.com); Seli Storer - Biamanga (biamangachts@gmail.com); Corey Smith - Cullendulla CHTS (cullendullachts@gmail.com); Roxanne Smith - Murramarang CHTS (murramarangchts@gmail.com); 'Butucarbin Heritage'; lilly carroll (didgengunawalclan@yahoo.com.au); Steven Johnson and Krystie Carroll - Ginninderra Aboriginal Corporation (ginninderra.corp@gmail.com); 'psilva@gujaga.org.au'; Phil Boney (waarlan12@outlook.com); 'Wenlissa01@hotmail.com'; Judy Kulakowski - Barking Owl Aboriginal Corporation (barkingowlcorp@gmail.com); 'yulayculturalservices@gmail.com'; John Carriage - Thoorga Nura (thoorganura@gmail.com); 'lee field'; 'Bo Field'; 'paulhand1967@gmail.com'; 'hamptonralph46@gmail.com'; 'kinghampton@77gmail.com'; Kaarina Slater (ngambaaculturalconnections@hotmail.com); Caine Carroll (goodradigbee1@outlook.com); 'James.eastwood@y7mail.com'; 'Waawaar.awaa@gmail.com'
Subject: Liverpool Boys and Girls High School
Attachments: Map.docx

Liverpool Boys and Girls High School, Liverpool
Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010

Comber Consultants have been engaged by the Department of Education, Schools Infrastructure NSW (SINSW) to undertake Aboriginal community consultation in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*.

The Department of Education is currently undertaking planning for the proposed redevelopment of the Liverpool Boys and Girls High School site on Forbes Street, Liverpool (located within the Liverpool Local Government Area). The proposed development will be assessed as a State Significant Development (SSD). Attached is a map showing the location of the study area.

The Department of Planning, Industry and Environment (DPIE) has advised that you are a stakeholder who may have an interest in the project. Therefore, you are invited to register an interest, particularly if you hold cultural knowledge relevant to determining the significance of Aboriginal objects and or/places within the study area. You are also invited to provide the names and contact details of any other Aboriginal person or organisations who may hold cultural knowledge relevant to the study area.

Please note that this invitation is for Aboriginal community consultation, which should not be confused with employment. As stated in section 3.4 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*. "Consultation does not include the employment of Aboriginal people to assist in field assessment and/or site monitoring." Therefore, responding to this invitation will not be a guarantee of work.

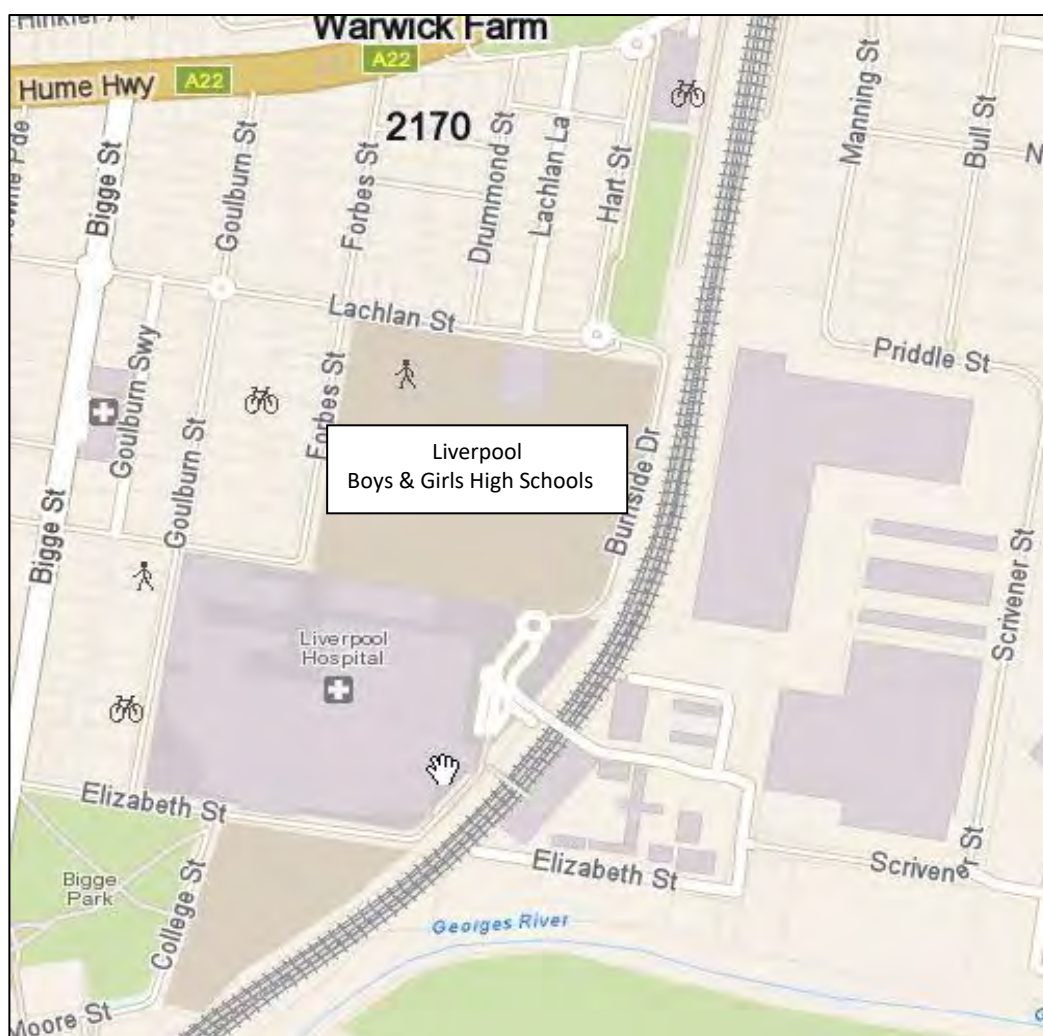
Please note that a log of responses will be prepared and forwarded to DPIE and the Gandangara Local Aboriginal Land Council (GLALC). If you do not want your name forwarded to GLALC, please let Comber Consultants know.

Please forward your response to:

Comber Consultants
76 Edwin Street North
Croydon NSW 2132
ACHAR@comber.net.au
PH: (02) 9799 6000
Fax: (02) 9799 6011

Please send your response by Saturday 16th November 2019

COMBER CONSULTANTS
76 Edwin Street North, Croydon, NSW, 2193
Ph: (02) 9799 6000
ACHAR@comber.net.au



From: achar
Sent: Saturday, 2 November 2019 3:24 PM
To: burrowsn@liverpool.nsw.gov.au
Subject: FW: Liverpool Boys and Girls High School

Dear Norma

Liverpool Boys and Girls High School, Liverpool
Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010

Comber Consultants have been engaged by the Department of Education, Schools Infrastructure NSW (SINSW) to undertake Aboriginal community consultation in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*.

The Department of Education is currently undertaking planning for the proposed redevelopment of the Liverpool Boys and Girls High School site on Forbes Street, Liverpool (located within the Liverpool Local Government Area). The proposed development will be assessed as a State Significant Development (SSD). Attached is a map showing the location of the study area.

The Department of Planning, Industry and Environment (DPIE) has advised that you are a stakeholder who may have an interest in the project. Therefore, you are invited to register an interest, particularly if you hold cultural knowledge relevant to determining the significance of Aboriginal objects and or/places within the study area . You are also invited to provide the names and contact details of any other Aboriginal person or organisations who may hold cultural knowledge relevant to the study area.

Please note that this invitation is for Aboriginal community consultation, which should not be confused with employment. As stated in section 3.4 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*. "Consultation does not include the employment of Aboriginal people to assist in field assessment and/or site monitoring." Therefore, responding to this invitation will not be a guarantee of work.

Please note that a log of responses will be prepared and forwarded to DPIE and the Gandangara Local Aboriginal Land Council (GLALC). If you do not want your name forwarded to GLALC, please let Comber Consultants know.

Please forward your response to:

Comber Consultants
76 Edwin Street North
Croydon NSW 2132
ACHAR@comber.net.au
PH: (02) 9799 6000
Fax: (02) 9799 6011

Please send your response by Saturday 16th November 2019

COMBER CONSULTANTS
76 Edwin Street North, Croydon, NSW, 2193
Ph: (02) 9799 6000
ACHAR@comber.net.au

From: achar
Sent: Saturday, 2 November 2019 4:19 PM
To: Steve Randall (srandall@deerubbin.org.au) <srandall@deerubbin.org.au>
Subject: Liverpool Boys and Girls High Schools and Liverpool West Public School

Liverpool Boys and Girls High Schools & Liverpool West Public School, Liverpool
Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010

Hi Steve,

Liverpool City Council requested that I forward you an invitation to register your interest in the following:

The Department of Education is currently undertaking planning for the proposed redevelopment of the Liverpool Boys and Girls High School site on Forbes Street, Liverpool and Liverpool West Public School located on Hoxton Park Road, Liverpool (as well as potentially Mainbridge School which adjoins Liverpool West). The proposed developments will be assessed as a State Significant Development (SSD). Attached are maps showing the location of the study areas.

Comber Consultants have been engaged by the Department of Education, Schools Infrastructure NSW (SINSW) to undertake Aboriginal community consultation in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*.

If you would like to register an interest in these projects please forward your response to:

Comber Consultants
76 Edwin Street North
Croydon NSW 2132
ACHAR@comber.net.au
PH: (02) 9799 6000
Fax: (02) 9799 6011

Please send your response by Saturday 16th November 2019

Regards,

Jillian.

COMBER CONSULTANTS
76 Edwin Street North, Croydon, NSW, 2193
Ph: (02) 9799 6000
ACHAR@comber.net.au

LETTER SENT ON 2/11/2019 TO:

Mr Lee-Roy James Boota
Mr Aaron Broad
Mr Phillip Carroll
Ms Celestine Everingham
Ms Glenda Chalker
Ms Rebecca Chalker

ABORIGINAL CULTURAL HERITAGE CONSULTATION REQUIREMENTS FOR PROPONENTS 2010
Liverpool Boys and Girls High School, Liverpool

Comber Consultants have been engaged by the Department of Education, Schools Infrastructure NSW (SINSW) to undertake Aboriginal community consultation in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*.

The Department of Education is currently undertaking planning for the proposed redevelopment of the Liverpool Boys and Girls High School site on Forbes Street, Liverpool (located within the Liverpool Local Government Area). The proposed development will be assessed as a State Significant Development (SSD). Attached is a map showing the location of the study area.

The Department of Planning, Industry and Environment (DPIE) has advised that you are a stakeholder who may have an interest in the project. Therefore, you are invited to register an interest, particularly if you hold cultural knowledge relevant to determining the significance of Aboriginal objects and or/places within the study area. You are also invited to provide the names and contact details of any other Aboriginal person or organisations who may hold cultural knowledge relevant to the study area.

Please note that this invitation is for Aboriginal community consultation, which should not be confused with employment. As stated in section 3.4 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*. "Consultation does not include the employment of Aboriginal people to assist in field assessment and/or site monitoring." Therefore, responding to this invitation will not be a guarantee of work.

Please note that a log of responses will be prepared and forwarded to DPIE and the Gandangara Local Aboriginal Land Council (GLALC). If you do not want your name forwarded to GLALC, please let Comber Consultants know.

Please forward your response to:

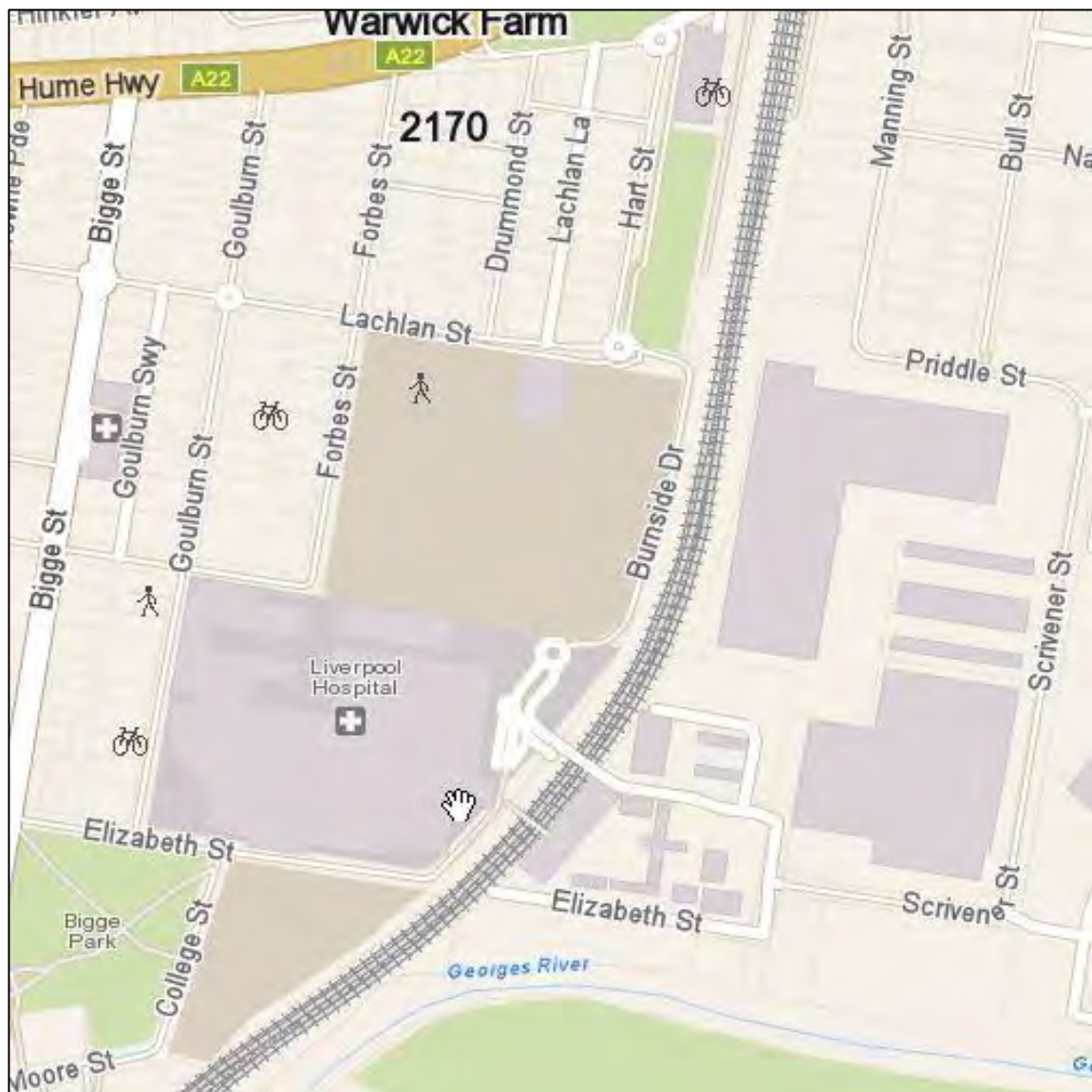
Jillian Comber
Comber Consultants
76 Edwin Street North
Croydon NSW 2132
ACHAR@comber.net.au
PH: (02) 9799 6000 Fax: (02) 9799 6011

Please send your response by Saturday 16 November 2019 and it would be appreciated if you could provide an email address on which you can be contacted.

Yours faithfully



Jillian Comber
Director/Archaeologist



Written Notification (Step 4.1.3)

Notification of the proposed project was sent to the people/organisations provided by DPIE, as shown below

| Aboriginal Organisation | Contact |
|--|----------------------------------|
| Gandangara Local Aboriginal Land Council | Melissa Williams |
| Darug Custodian Aboriginal Corporation | Justine Coplin |
| Dharug Ngurra Aboriginal Corporation (formerly Darug Custodian Aboriginal Corporation) | Corina |
| Darug Aboriginal Cultural Heritage Assessments | Celestine Everingham |
| Darug Land Observations | Jamie Workman |
| Darug Aboriginal Land Care | Des Dyer |
| A1 Indigenous Services | Carolyn Hickey |
| Cubbitch Barta | Glenda and Rebecca Chalker |
| Kamilaroi Yankuntjatjara Working Group | Phil Khan |
| Wurrumay Consultancy | Kerrie Slater |
| Warragil Cultural Services | Aaron Slater |
| Kawul Cultural Services | Vicky Slater |
| Tocomwall | Danny Franks |
| Amanda Hickey Cultural Services | Amanda Hickey |
| Gunyu | Kylie Ann Bell |
| Walbunja | Hika Te Kowhai |
| Badu | Karia Lea Bond |
| Goobah Developments | Basil Smith |
| Wullung | Lee-Roy James Boota |
| Yerramurra | Robert Parson |
| Nundagurri | Newton Carriage |
| Murrumbul | Mark Henry |
| Jerringong | Joanne Anne Stewart |
| Pemulwuy CHTS | Pemulwuy Johnson |
| Bilinga | Simalene Carriage |
| Munyunga | Kaya Dawn Bell |
| Wingikara | Hayley Bell |
| Minnamunnung | Aaron Broad |
| Walgala | Ronald Stewart |
| Thauaira | Shane Carriage |
| Dharug | Andrew Bond |
| Gulaga | Wendy Smith |
| Biamanga | Seli Storer |
| Callendulla | Corey Smith |
| Murramarang | Roxanne Smith |
| Butucarbin Aboriginal Corporation | Jennifer Beale |
| Didge Ngunawal Clan | Lilly Carroll |
| Ginninderra Aboriginal Corporation | Steven Johnson & Krystie Carroll |
| Garrara Aboriginal Corporation | Raymond Ingrey |
| Wailwan Aboriginal Group | Phillip Boney |
| Guntawang Aboriginal Resources Incorporated | Wendy Morgan |
| Barking Owl Aboriginal Corporation | Jody Kulakowski |
| Yulay Cultural Services | Arika Jalomaki |
| Thoorga Nurra | John Carriage |
| Barraby Cultural Services | Lee Field |
| Yurrandaali Cultural | Bo Field |
| Darug Boorooberongal Elders Aboriginal Corporation | Paul Hand |
| B. H. Heritage Consultants | Ralph Hampton and Nola Hampton |
| Ngambaa Cultural Connections | Karina Slater |

| | |
|--|-----------------|
| Goodradigbee Cultural & Heritage Aboriginal Operation. | Caine Carroll |
| Mura Indigenous Corporation | Phillip Carroll |
| Aragung Aboriginal Cultural Heritage Site Assessments | Jamie Eastwood |
| Waawarr Awards | Rodney Gunter |
| Darug Local Aboriginal Land Council | Steve Randall |

4.1.6 List of Registered Aboriginal Parties

Registration of interest was received from the following people and organisations:

| Nbr | Date | Aboriginal Organisation | Name | Method of Registration |
|-----|------------|--|----------------------|------------------------|
| 1 | 2/11/21019 | Goodradigbee Cultural Heritage | Caine Carroll | Email |
| 2 | 2/11/2019 | Kamilaroi Yankuntjatjara Working Group | Philip Khan | Email |
| 3 | 3/11/2019 | Didge Ngunawal Clan | Lilly Carroll | Email |
| 4 | 3/11/2019 | A1 Indigenous Services | Carolyn Hickey | Email |
| 5 | 8/11/2019 | Dharug Ngurra Aboriginal Corporation (formerly DNAC) | Corina | Email |
| 6 | 4/11/2019 | Name withheld | | Email |
| 7 | 7/11/2019 | Darug Aboriginal Cultural Heritage Assessments | Celestine Everingham | Telephone |
| 8 | 6/11/2019 | Darug Custodian Aboriginal Corporation | Justine Coplin | Email |
| 9 | | Gandangara Local Aboriginal Land Council | Melissa Williams | |
| 10 | 25/10/2019 | Liverpool City Council Aboriginal Consultative Committee | Norma Burrows | Email |
| 11 | 11/11/2019 | Cubbitch Barta | Glenda Chalker | Email |
| 12 | 11/11/2019 | Rodney Gunther | Waawaar Awaa | Email |

Registration of interest correspondence

From: Caine Carroll <Goodradigbee1@outlook.com>

Sent: Saturday, 2 November 2019 4:21 PM

To: achar <achar@comber.net.au>

Subject: Re: Liverpool Boys and Girls High School

Afternoon,

GCACHAC would like to register as a interested party on this project

Director- Caine Carroll
Goodradigbee Cultural & Heritage
Aboriginal Corporation
0410974236

From: Caza X <cazadirect@live.com>

Sent: Sunday, 3 November 2019 5:40 PM

To: achar <achar@comber.net.au>

Subject: Re: Liverpool West Public School and Mainbridge School

A1

Indigenous Services

Contact: Carolyn

M: 0411650057

E: Cazadirect@live.com

A: 10 Marie Pitt Place, Glenmore Park, NSW 2745

ABN: 20 616 970 327

Hi,

I would like to register for consultation and field work, I hold cultural knowledge relevant to determining the cultural significance of any Aboriginal objects and values that exist within the project area.

Thank you

Carolyn Hickey

From: justinecoplin@optusnet.com.au <justinecoplin@optusnet.com.au>
Sent: Wednesday, 6 November 2019 12:06 PM
To: Jillian Comber <jillian.comber@comber.net.au>
Subject: reg of interest Liverpool Boys and Girls High School, Liverpool

From: Dharug Ngurra Aboriginal Corporation ICN 2734 <darug_tribal@live.com.au>
Sent: Friday, 8 November 2019 12:49 PM
To: Jillian Comber <jillian.comber@comber.net.au>
Subject: Re: DNAC Contact details

Hi Jillian,
My contact details are 0402534773 and is the best contact for Dharug Ngurra Aboriginal Corporation.

Warmest Regards,
Corina

Response withheld

From: Glenda Chalker <kgchalker@bigpond.com>
Sent: Monday, 11 November 2019 9:10 AM
To: achar <achar@comber.net.au>
Subject: Liverpool High School

Dear Jillian,
I wish to register an interest in the above project on behalf of Cubbitch Barta

Thanking You

Glenda Chalker
0427218425

From: Rodney Gunther <waawaar.awaa@gmail.com>
Sent: Monday, 11 November 2019 9:59 PM
To: achar <achar@comber.net.au>
Subject: Re: Liverpool West Public School and Mainbridge School

Dear Jillian,

Waawaar Awaa would like to register for consultation for the proposed development at Liverpool West Public School and Mainbridge School, Liverpool.

regards

Rodney Gunther

From: lilly carroll <didgengunawalclan@yahoo.com.au>
Sent: Saturday, 2 November 2019 3:26 PM
To: achar <achar@comber.net.au>; **Subject:** Re: Liverpool Boys and Girls High School
Hi Jillian,

DNC would like to register an interest into Liverpool boys and girls High School

Kind regards
Paul Boyd & Lilly Carroll
Directors DNC

DARUG CUSTODIAN

ABORIGINAL CORPORATION



DARUG CUSTODIAN
ABORIGINAL
CORPORATION

PO BOX 81 WINDSOR 2756
PHONE: 0245775181 FAX: 0245775098
MOBILE: 0414962766 Justine Coplin
EMAIL: justinecoplin@optusnet.com.au

Attention: Comber Consultants

Date: 01/11/19

Subject: Liverpool Boys and Girls High School, Liverpool

Dear Jillian

Our group is a non- profit organisation that has been active for over forty years in Western Sydney, we are a Darug community group with over three hundred members. The main aim in our constitution is the care of Darug sites, places, wildlife and to promote our culture and provide education on the Darug history.

The Liverpool area is an area that our group has a vast knowledge of, we have worked and lived in for many years, this area is significant to the Darug people due to the connection of sites and the continued occupation. Our group has been involved in all previous assessments and works in this area as a traditional owner Darug group for the past 40 plus years.

Therefore we would like to register our interest for full consultation and involvement in the above project area. Please contact us with all further enquiries on the above contacts.

Regards

Justine Coplin

We acknowledge and pay respect to the Darug people, the traditional Aboriginal custodians of this land.

From: philip khan <philipkhan.acn@live.com.au>
Sent: Saturday, 2 November 2019 2:29 PM
To: achar <achar@comber.net.au>
Subject: RE: Liverpool West Public School and Mainbridge School

Hi Jillian,

Thank you for informing us that **Comber Consultants** will be involved in an Aboriginal Cultural Heritage Assessment regarding the **Liverpool West Public School and Mainbridge School, Liverpool** &, that you are inviting Aboriginal organisations to register, if they wish too be involved in the community consultation process.

As a senior Aboriginal person for the past 40yrs, I actively participate in the protection of the Aboriginal Cultural Heritage throughout the Sydney Basin, & particularly throughout Western Sydney, on behalf of Kamilaroi Yankuntjatjara Working Group I wish to provide to you my organisation's registration of interest.

I wish to be involved & participate in all levels of consultation/project involvement. I wish to attend all meetings, participate in available field work & receive a copy of the report.

I have attached a copy of Kamilaroi Yankuntjatjara Working group's GIO Public Liability Insurance & GIO Workers Compensation certificate.

Should you wish me to provide further information, please do not hesitate to contact me on 0434545982 or Stefeanie on 0451068480.

Thanks
Phil

4.1.6 Make a record of the names of each Aboriginal person who registered an interest.

Provide a copy of that record and copy of the notification from step 4.1.3 to the relevant DPC and LALC within 28 days of closing date for registration of interest.

From: achar

Sent: Saturday, 21 December 2019 12:05 PM

To: mwilliams@glalc.org.au

Subject: Record of notification and Registered Aboriginal Parties - Liverpool Boys' & Girls' High Schools and Liverpool West Public School

Dear Ms Williams

Please find attached a record of notification and Registered Aboriginal Parties for Liverpool Boys' and Girls' High Schools.

Regards,

Jillian

COMBER CONSULTANTS

76 Edwin Street North, Croydon, NSW, 2193

Ph: (02) 9799 6000

ACHAR@comber.net.au

From: achar

Sent: Saturday, 14 December 2019 3:36 PM

To: gs.ach@environment.nsw.gov.au

Subject: Record of notification and Registered Aboriginal Parties - Liverpool Boys' & Girls' High Schools and Liverpool West Public School

Please find attached a record of notification and Registered Aboriginal Parties for Liverpool Boys' and Girls' High Schools.

Regards,

Jillian

COMBER CONSULTANTS

76 Edwin Street North, Croydon, NSW, 2193

Ph: (02) 9799 6000

ACHAR@comber.net.au

Notification of Registered Aboriginal Parties for Liverpool West Public School in accordance with *Aboriginal Cultural Heritage Consultation Requirements 2010*.

List of Registered Aboriginal Parties for Liverpool West Public School

Registration of interest was received from the following people and organisations:

| Nbr | Date | Aboriginal Organisation | Name | Method of Registration |
|-----|------------|--|----------------------|------------------------|
| 1 | 2/11/2019 | Goodradigbee Cultural Heritage | Caine Carroll | Email |
| 2 | 2/11/2019 | Kamilaroi Yankuntjatjara Working Group | Philip Khan | Email |
| 3 | 3/11/2019 | Didge Ngunawal Clan | Lilly Carroll | Email |
| 4 | 3/11/2019 | A1 Indigenous Services | Carolyn Hickey | Email |
| 5 | 8/11/2019 | Dharug Ngurra Aboriginal Corporation (formerly DNAC) | Corina | Email |
| 6 | 4/11/2019 | Name withheld | | Email |
| 7 | 7/11/2019 | Darug Aboriginal Cultural Heritage Assessments | Celestine Everingham | Telephone |
| 8 | 6/11/2019 | Darug Custodian Aboriginal Corporation | Justine Coplin | Email |
| 9 | | Gandangara Local Aboriginal Land Council | Melissa Williams | |
| 10 | 25/10/2019 | Liverpool City Council Aboriginal Consultative Committee | Norma Burrows | Email |
| 11 | 11/11/2019 | Cubbitch Barta | Glenda Chalker | Email |
| 12 | 11/11/2019 | Waawaar Awaa | Rodney Gunter | Email |

Notification of Registered Aboriginal Parties for Liverpool Boys' and Girls' High Schools in accordance with *Aboriginal Cultural Heritage Consultation Requirements 2010*.

List of Registered Aboriginal Parties for the Liverpool Boys' and Girls' High Schools

Registration of interest was received from the following people and organisations:

| Nbr | Date | Aboriginal Organisation | Name | Method of Registration |
|-----|------------|--|----------------------|------------------------|
| 1 | 2/11/21019 | Goodradigbee Cultural Heritage | Caine Carroll | Email |
| 2 | 2/11/2019 | Kamilaroi Yankuntjatjara Working Group | Philip Khan | Email |
| 3 | 3/11/2019 | Didge Ngunawal Clan | Lilly Carroll | Email |
| 4 | 3/11/2019 | A1 Indigenous Services | Carolyn Hickey | Email |
| 5 | 8/11/2019 | Dharug Ngurra Aboriginal Corporation (formerly DNAC) | Corina | Email |
| 6 | 4/11/2019 | Name withheld | | Email |
| 7 | 7/11/2019 | Darug Aboriginal Cultural Heritage Assessments | Celestine Everingham | Telephone |
| 8 | 6/11/2019 | Darug Custodian Aboriginal Corporation | Justine Coplin | Email |
| 9 | | Gandangara Local Aboriginal Land Council | Melissa Williams | |
| 10 | 25/10/2019 | Liverpool City Council Aboriginal Consultative Committee | Norma Burrows | Email |
| 11 | 11/11/2019 | Cubbitch Barta | Glenda Chalker | Email |
| 12 | 11/11/2019 | Rodney Gunther | Waawaar Awaa | Email |

4.2 Presentation of Information

Invitation to meeting and agenda sent by email and mail to all RAPs on 21/12/2019

From: achar

Sent: Saturday, 21 December 2019 10:29 AM

To: Caine Carroll (goodradigbee1@outlook.com) <goodradigbee1@outlook.com>; Phil Khan - Kamilaroi-Yankuntjatjara Working Group (philipkhan.acn@live.com.au) <philipkhan.acn@live.com.au>; lilly carroll (didgengunawalclan@yahoo.com.au) <didgengunawalclan@yahoo.com.au>; Carolyn Hickey (cazadirect@live.com) <cazadirect@live.com>; justinecoplin@optusnet.com.au; mwilliams@glalc.org.au; Glenda Chalker <kgchalker@bigpond.com>; Waawaar.awaa@gmail.com; Norma Burrows <BurrowsN@liverpool.nsw.gov.au>; darug_tribal@live.com.au

Cc: Nathan.Holloway7@det.nsw.edu.au; jester.magpayo@pwc.com

Subject: Invitation to attend consultation meeting for Liverpool Boys' & Girls' High Schools and Liverpool West Public School

Dear All,

Please find attached an invitation to attend an Aboriginal community consultation meeting for Liverpool Boys' and Girls' High Schools and Liverpool West Public School. I will contact you in the new year to advise the venue for the meeting.

Regards,

Jillian

COMBER CONSULTANTS

76 Edwin Street North, Croydon, NSW, 2193

Ph: (02) 9799 6000

ACHAR@comber.net.au

21/12/2019

Ms Celestine Everingham
Darug Aboriginal Cultural Heritage Assessments
9/6 Chapman Avenue
CHATSWOOD NSW 2067

Dear Celestine

**ABORIGINAL CULTURAL HERITAGE CONSULTATION REQUIREMENTS FOR PROPONENTS 2010
Liverpool Boys' and Girls' High Schools and Liverpool West Public School**

Comber Consultants have been engaged by the Department of Education, Schools Infrastructure NSW (SINSW) to undertake Aboriginal community consultation in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*.

Please find attached an invitation to attend an Aboriginal community consultation meeting for Liverpool Boys' and Girls' High Schools and Liverpool West Public School on 4th February 2020. I will contact you in the new year to advise the venue for the meeting.

Please RSVP by 20th January 2020 to:

Jillian Comber
Comber Consultants
76 Edwin Street North
Croydon NSW 2132
ACHAR@comber.net.au
PH: (02) 9799 6000 Fax: (02) 9799 6011

Yours faithfully



Jillian Comber
Director/Archaeologist

INVITATION

ABORIGINAL CULTURAL HERITAGE CONSULTATION

PRESENTATION OF INFORMATION TO REGISTERED ABORIGINAL PARTIES

LIVERPOOL BOYS' AND GIRLS' HIGH SCHOOLS
FORBES STREET, LIVERPOOL
AND
LIVERPOOL WEST PUBLIC SCHOOL
HOXTON PARK ROAD, LIVERPOOL

As a Registered Aboriginal Party (RAP) for the above project you are invited to attend an Aboriginal community consultation meeting. The purpose of the meeting is to present details of the project, discuss the archaeological methodology and to gather cultural information in accordance with the Department of Planning, Industry and Environment's *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*. An agenda for the meeting follows.

Date: Tuesday 4th February 2020

Time: 10.00am

Venue: To be advised

As this is a community consultation meeting there will be no payment for attendance at this meeting. Such payment would be a conflict of interest.

Please forward your RSVP by Monday 20th January 2020 to:

Comber Consultants
76 Edwin Street North
Croydon. NSW 2132
ACHAR@comber.net.au
Ph: (02) 9799 6000
Fax: (02) 9799 6011

Yours sincerely



Jillian Comber
Director
Comber Consultants

AGENDA

ABORIGINAL CULTURAL HERITAGE CONSULTATION

PRESENTATION OF INFORMATION TO REGISTERED ABORIGINAL PARTIES

LIVERPOOL BOYS' AND GIRLS' HIGH SCHOOLS
FORBES STREET, LIVERPOOL
AND
LIVERPOOL WEST PUBLIC SCHOOL
HOXTON PARK ROAD, LIVERPOOL

Purpose: Aboriginal community consultation in accordance with the Department of Planning, Industry and Environment's *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*. A record of this meeting, including agreed outcomes, will be provided to all registered Aboriginal parties.

Date: Tuesday 4th February 2020

Time: 10:00am

Venue: To be advised

Please note: As this is a community consultation meeting there will be no payment for attendance at this meeting. Such payment would be a conflict of interest.

| AGENDA |
|---|
| <ol style="list-style-type: none">1. Welcome to Country or Acknowledgement of Country2. Introduction3. Outline of purpose of meeting4. Outline of project5. Presentation of Methodology6. Open forum to discuss proposed archaeological methodology7. Discussion of Aboriginal significance of the area, including contemporary significance.8. Artefact management9. Open forum to discuss any issues of concern10. Any other business/issues11. Close |

Further invitation was sent on 30/1/2020 advising the venue and including the methodology.

From: Jillian Comber

Sent: Thursday, 30 January 2020 10:57 AM

To: Phil Khan (philipkhan.acn@live.com.au) <philipkhan.acn@live.com.au>; didgengunawalclan@yahoo.com.au; Carolyn Hickey (cazadirect@live.com) <cazadirect@live.com>; Dharug Ngurra Aboriginal Corporation (darug_tribal@live.com.au) <darug_tribal@live.com.au>; Justine Coplin (justinecoplin@optusnet.com.au) <justinecoplin@optusnet.com.au>; Chalker Glenda (kgchalker@bigpond.com) <kgchalker@bigpond.com>; Rodney Gunther (waawaar.awaa@gmail.com) <waawaar.awaa@gmail.com>

Cc: Nathan Holloway <Nathan.Holloway7@det.nsw.edu.au>

Subject: Consultation meeting for Liverpool Boys' and Girls' High Schools and Liverpool West Public School

Hi Everyone

This is to confirm the meeting in respect of Liverpool Boys' and Girls' High Schools and Liverpool West Public School next Tuesday 4th February. The invitation is attached. The meeting will be held at the Liverpool West Public School. Meet in the parking lot off Flowerdale Road, Liverpool at 10.am.

I also attach the methodology to be discussed at the meeting.

Cheers

Jillian

**MINUTES OF MEETING HELD ON 4th FEBRUARY 2020
AT LIVERPOOL WEST PUBLIC SCHOOL, 79-81 HOXTON PARK RD, LIVERPOOL
PRESENTATION OF INFORMATION TO REGISTERED ABORIGINAL PARTIES
REGARDING:
LIVERPOOL BOYS' AND GIRLS' HIGH SCHOOLS
FORBES STREET, LIVERPOOL

AND
LIVERPOOL WEST PUBLIC SCHOOL
HOXTON PARK ROAD, LIVERPOOL**

PRESENT:

Darren Duncan, Gandangara Local Aboriginal Land Council
Dave Whitton & Kyle Whitton, Goodradigbee
Marbuk Khan, Kamilaroi-Yankuntjatjara Working Group
Norma Burrows, Liverpool City Council's Aboriginal Consultative Committee
Nathan Holloway, School Infrastructure NSW
Jillian Comber, Comber Consultants
Rivers McEwan, Comber Consultants
Veronica Norman, Comber Consultants

APOLOGIES:

Paul Boyd, Didge Ngunawal Clan
Rodney Gunther, Waawaar Awaa
Ruth Sheridan, Gandangara Local Aboriginal Land Council
Wendy Morgan, Guntawang

Meeting opened at 10.00am

BUSINESS:

1. Welcome/Acknowledgement of Country

Darren Duncan provided an acknowledgement of country

2. Introduction

Everyone introduced themselves including the name of their organisation and their role.

3. Outline of Purpose of Meeting

Jillian Comber advised that the purpose of the meeting was to discuss the project, the proposed testing methodology, significance and artefact management. The meeting was not to discuss work opportunities

4. Outline of project

Nathan Holloway outlined both projects, as follows:

Liverpool Boys' & Girls' High Schools

The Department of Education, Schools Infrastructure NSW (SINSW), is investigating the development potential of Liverpool Boys' & Girls' High Schools. SINSW are undertaking appropriate planning and delivery of a new Liverpool Education Precinct which will include a new primary school to be built on the grounds of the Liverpool Boys' & Girls' High Schools.

The proposal has undergone master planning; however, the high schools are not experiencing the same level of growth that has necessitated the construction of a new primary school and the high school proposal will be revisited later this year. The purpose of the master plan was to determine whether the proposed primary school could go ahead. It is proposed to site it in the south western corner of the High School playgrounds. At present there are many options that are being considered for the high schools.

The works proposed for the primary school would be undertaken in stages. The proposed primary school would cater for up to 1200 students, with Stage 1 catering for 400 students and establishing core facilities. The timeframe would be approximately concurrent with the Liverpool West Public School project, i.e., Stage 1 completion expected by 2023.

This project will be undertaken as a State Significant Development (SSD) and that it would not be necessary to apply for an Aboriginal Heritage Impact Permit.

It was agreed that the consultation presently being undertaken was in respect of both Stages 1 and 2. It was agreed that it was not necessary to undertake new consultation for Stage 2. All the Registered Aboriginal Parties for Stage 1 would be the RAPs for Stage 2.

Liverpool West Public School

The Department of Education, Schools Infrastructure NSW (SINSW) is planning to reconfigure and redevelop Liverpool West Public School. The concept design includes space for 1200 students (current capacity is 700-800), two new preschools to replace the existing preschool, new class rooms, library and administration space.

Stage 1 is expected to be completed by 2023. As part of Stage 1, the current library, canteen and a small toilet block would be demolished and replaced with a three-storey building and new teaching spaces. It is anticipated that Stage 2 would follow after the completion of Stage 1, however Stage 2 may not proceed. It is assumed that demolition works would be undertaken during school holidays and the construction of a temporary library, toilet block and canteen would be required during the works.

This project will be undertaken as a State Significant Development (SSD) and that it would not be necessary to apply for an Aboriginal Heritage Impact Permit.

Again, it was agreed that the current consultation was in respect of Stages 1 and 2.

5. Presentation of Methodology

Jillian advised that due to the Aboriginal archaeological potential of each site that archaeological testing and salvage would be undertaken. As it was an SSDA it would be possible to undertake testing and salvage together and that an AHIP would not be required.

The methodology that had been sent to everyone with the meeting invitation on 30th January was further explained. Testing would commence in 1m x 1m trenches and expanded if evidence of Aboriginal occupation was uncovered. Excavation would be undertaken by hand in 5cm spits and wet sieved. Only areas where ground disturbance was to occur as a result of the redevelopment would be excavated.

6. Open forum to discuss proposed archaeological methodology

The methodology was discussed and everyone agreed on the proposed methodology. Everyone was advised that they had 28 days from 30th January to provide any further comment, if so desired. Comments should be received by 27th February.

7. Discussions of Aboriginal significance of the area, including contemporary significance

The significance of both sites was discussed and it was agreed that both sites were important, as follows:

Liverpool Boys' & Girls' High Schools

During a site inspection by Comber Consultants three artefacts had been found. The high school overlooks the Georges River and is close to the resource rich wetlands that once surrounded Lake Moore. Such an area would have provided a wide variety of fresh and saltwater seafood and vegetation and resources for making wooden and stone artefacts. The artefacts located on the site provide tangible links to their past and the lifestyles of their ancestors. The site is a cultural landscape which is important to Aboriginal people today as representing a significant aspect of their history.

Liverpool West Public School

Liverpool West once formed part of a land grant to Maria Locke, daughter of Yarramundi, who married the convict Robert Locke. She was a very significant figure in Colonial times and many Aboriginal people in Western Sydney are descendants of Maria. It appears that she used the land for grazing cattle, but did not build any structures on the site. In addition, two surface artefacts were found within the grounds of the school, on a small area of open ground near the Aboriginal bush tucker garden. The site is exceptionally significant because of its association with Maria Locke and because of its archaeological potential.

Norma Burrows: Trees on the school grounds are important as they are providing homes for multiple bird species, including Major Mitchell and black cockatoos, as well as rainbow lorikeets and others.

Nathan said that the current design retains as many mature trees as possible, however he did not have a definite number of trees that would be removed.

8. Artefact management

Darren Duncan, Site Officer, Gandangara Local Aboriginal Land Council, suggested that any artefacts recovered during the project should be retained on the site of each school for display. At Liverpool West Public School this display could possibly be within the new administration building or library. He suggested that the interpretative display at Carnes Hill Library was a good example of an interpretative display and that the schools could consider developing a similar display. Everyone at the meeting agreed this was a good option for artefact management. Jillian advised that all RAPs, SINSW and DPIE would need to sign a Care Agreement. Norma stated that all RAPs must be consulted but that Gandangara Local Aboriginal Land Council should be the lead agency and handle the logistics. Everyone agreed with this.

Darren Duncan stated that the GLALC were developing a Keeping Place and that if it was not possible for the schools to display the artefacts, then the GLALC would like to store and manage the artefacts. This was agreed by everyone.

9. Open forum to discuss any issues of concern

Darren Duncan queried how many Land Council workers would be required on the project if both Liverpool Boys' and Girls' High Schools and the Liverpool West Public School projects were to run concurrently. Jillian confirmed that the meeting was not to discuss work, and further outlined that it was not known when the excavations would occur and how many people would be required.

10. Any other business/issues

Norma Burrows asked a range of questions concerning the operation of the Liverpool West Public School which were answered by Nathan Holloway

- Norma asked about disruption to students during the redevelopment of the schools. Nathan explained that it was aimed to undertake as much work as possible during the school holidays and that during term time, buildings would be maintained so that classes could be continued.
- She raised concerns about the increase in traffic in the area. Nathan said that the number of kiss and rides for the school would be increased to 12/13 as part of Stage 1.
- Norma asked whether neighbouring Mainsbridge School would be part of the new school, Nathan said that it is not included in the development.

- Questions about the carpark were asked: whether the car park would be extended, Nathan said that the current 72 space car park would be extended behind the hall to 90 spaces. Norma suggested that inclusion of the Mainsbridge School campus would provide additional entry/exit points, however Nathan confirmed inclusion of the campus is not in the current scope.
- Where would the children would play in the new plan. Nathan clarified that the proposal meets the 10 m² of open space per child requirement.
- Norma suggested an indoor gym be included in the proposal and Nathan said this idea would be taken on board.
- Norma queried whether neighbouring schools would be providing support during the redevelopment. Nathan said that Warwick Farm and Mainsbridge have some capacity to take on students however the preference was to keep all children on site during the works.

11. Close

Meeting closed at 11.20am.

12. Site Inspections

Everyone walked over the site of the Liverpool West Public School prior to the meeting and inspected the artefacts found previously.

Everyone was given the opportunity to inspect Liverpool Boys' & Girls' High Schools at the end of the meeting. Everyone declined and the Comber Consultants' staff and Nathan Holloway, SINSW visited the site following the end of the meeting to relocate artefacts.

Response to Research Design

All present at the meeting agreed with the Research Design. Those people were:

- Darren Duncan, Gandangara Local Aboriginal Land Council
- Dave Whitton & Kyle Whitton, Goodradigbee
- Marbuk Khan, Kamilaroi-Yankuntjatjara Working Group
- Norma Burrows, Liverpool City Council's Aboriginal Consultative Committee

The following person replied in writing in support of the Research Design:

- Rodney Gunther, Waawaar Awaa

From: Rodney Gunther <waawaar.awaa@gmail.com>

Sent: Sunday, 2 February 2020 4:23 PM

To: Jillian Comber <jillian.comber@comber.net.au>

Subject: Re: Consultation meeting for Liverpool Boys' and Girls' High Schools and Liverpool West Public School

Dear Jillian.

Thank you the invitation to the meeting regarding the Liverpool Boys', Liverpool Girls' High Schools and Liverpool West Public School project on Tuesday 4th February. Unfortunately I will not be able to attend.

However, I have reviewed the methodology you have provided and support it.

Hope the meeting goes well, regards Rodney.

4.4 Stage 4 – Review of draft cultural heritage assessment report

Draft Aboriginal Cultural Heritage Assessment Report sent to all RAPs on 1/04/2020 with 28 days to respond, ie. Response required by 29th April 2020. The following organisations responded. They all supported the ACHAR

- Caine Carroll, Goodradigbee C&HAC
- Justine Coplin, Darug Custodian Aboriginal Corporation

From: Caine Carroll <Goodradigbee1@outlook.com>
Sent: Wednesday, 1 April 2020 3:41 PM
To: Jillian Comber <jillian.comber@comber.net.au>
Subject: Re: Liverpool Boys' & Girls' School ACHAR

Hi Jillian,

Trust you are well in this current climate.

Thanks for the email and update on the project.

I've reviewed the document and all looks good at this stage.

Keep me posted on any further works once things come back to normal.

Speak soon and take care.

Kind Regards,

Caine Carroll
0410 974 236
Director
Goodradigbee Cultural & Heritage Aboriginal Corporation (GCAHAC)

DARUG CUSTODIAN

ABORIGINAL CORPORATION



DARUG CUSTODIAN
ABORIGINAL
CORPORATION

PO BOX 81 WINDSOR 2756
PHONE: 0245775181 FAX: 0245775098
MOBILE: 0414962766 Justine Coplin
EMAIL: justinecoplin@optusnet.com.au

Attention Comber Consultants

Date: 04042020

Subject: Liverpool Boys' & Girls' School ACHAR

Dear Jillian

Our group is a non- profit organisation that has been active for over forty years in Western Sydney, we are a Darug community group with over three hundred members. The main aim in our constitution is the care of Darug sites, places, wildlife and to promote our culture and provide education on the Darug history.

Our group promotes Darug Culture and works on numerous projects that are culturally based as a proud and diverse group. It has been discussed by our group and with many consultants and researches that our history is generic and is usually from an early colonists perspective or solely based on archaeology and sites. These histories are adequate but they lack the people's stories and parts of important events and connections of the Darug people and also other Aboriginal people that now call this area home and have done so for numerous generations.

This area is significant to the Darug people due to the evidence of continued occupation, within close proximity to this project site there is a complex of significant sites.

Landscapes and landforms are significant to us for the information that they hold and the connection to Darug people. Aboriginal people (Darug) had a complex lifestyle that was based on respect and belonging to the land, all aspects of life and survival did not impact on the land but helped to care for and conserve land and the sustenance that the land

provided. As Darug people moved through the land there were no impacts left, although there was evidence of movement and lifestyle, the people moved through areas with knowledge of their areas

and followed signs that were left in the landscape. Darug people knew which areas were not to be entered and respected the areas that were sacred.

Knowledge of culture, lifestyle and lore have been part of Darug people's lives for thousands of years, this was passed down to the next generations and this started with birth and continued for a lifetime. Darug people spent a lifetime learning and as people grew older they passed through stages of knowledge, elders became elders with the learning of stages of knowledge not by their age, being an elder is part of the kinship system this was a very complicated system based on respect.

Darug sites are all connected, our country has a complex of sites that hold our heritage and past history, evidence of the Darug lifestyle and occupation are all across our country, due to the rapid development of Sydney many of our sites have been destroyed, our sites are thousands of years old and within the short period of time that Australia has been developed pre contact our sites have disappeared.

The Aboriginal cultural heritage consultation requirements for proponents Section 4.1.8 refers to "Aboriginal organisations representing Aboriginal people who hold cultural knowledge". Recent consultation meetings have revealed that many of these Aboriginal organisations and individuals do not hold cultural knowledge of the Western Sydney area. The increasing involvement of such parties in cultural heritage management means that genuine local Aboriginal organisations are unable to properly care for our cultural heritage.

Many Aboriginal organisations listed in the OEH response letter do not contribute to the Aboriginal community of Western Sydney. Individuals listed in the OEH response letter do not represent the community and while they may be consulted with, should not be employed for their own personal financial benefit.

Our organisation is committed to providing benefits back to our local Aboriginal community through such measures as funding the local Aboriginal juniors' touch football team, painting classes for the local children and donating money to various charities. Employment in cultural heritage activities is source of income that organisations such as ours can use to contribute to beneficial activities and support within the community.

Darug custodian Aboriginal Corporation's site officers have knowledge of Darug land, Darug Culture, Oral histories, landforms, sites, Darug history, wildlife, flora and legislative requirements. We have worked with consultants and developers for many years in Western

Sydney (Darug Land) for conservation, site works, developments and interpretation/education strategie.

We support the recommendations set out in this report.

Please contact us with all further enquiries on the above contacts.

Regards



Justine Coplin

We acknowledge and pay respect to the Darug people, the traditional Aboriginal custodians of this land.

From: Jillian Comber
Sent: Monday, 19 April 2021 9:32 AM
To: Rodney Gunther <waawaar.awaa@gmail.com>
Subject: RE: New Liverpool Public School

Hi Rodney

Thanks for your response. At this stage I don't know the exact locations for the testing. We will target the areas where the artefacts were found and the areas that will be disturbed by the construction of the new school.

I will let you know when the testing is to be undertaken and look forward to working with you.

Kind regards

Jillian

From: Rodney Gunther <waawaar.awaa@gmail.com>
Sent: Sunday, 21 March 2021 10:16 AM
To: Jillian Comber <jillian.comber@comber.net.au>
Subject: Re: New Liverpool Public School

Hi Jillian,

Thank you for the draft ACHAR for Liverpool Boys PS.

Consultation Response:

Waawaar Awaa Aboriginal Corporation supports the draft ACHAR and proposed Testing Excavations for Liverpool Boys PS for the following reasons:

- The proposed location is near the Georges River.
- Aboriginal occupation of the Cabrogal Clan has been historically documented for the Liverpool area.
- Two artefacts were found during the survey of the proposed study area.

Question: Have any proposed locations of transects or test pit locations been indicatively identified?

Testing Excavation Response:

Waawaar Awaa Aboriginal Corporation requests involvement in the proposed Test Excavations for the following reasons:

- Waawaar Awaa Aboriginal Corporation is a **local** (7 kms from study area) Aboriginal organisation.
- Waawaar Awaa members are also members of **Gandangara Land Council**.
- Waawaar Awaa members are **Aboriginal** by descent.
- Waawaar Awaa members are **fit and healthy** to undertake field work.
- Waawaar Awaa members have the knowledge to provide **cultural knowledge** regarding Aboriginal objects and legislative processes.

Please find attached Waawaar Awaa Aboriginal Corporation Public Liability and Workers Compensation Insurances.

Looking forward to working with you.

regards

Rodney Gunther

Barry Gunther

From: Jillian Comber <jillian.comber@comber.net.au>
Sent: Friday, 19 March 2021 7:06 AM
To: Darren Duncan <DDuncan@glalc.org.au>; Phil Khan (philipkhan.acn@live.com.au) <philipkhan.acn@live.com.au>; Norma Burrows (N.Burrows@liverpool.nsw.gov.au) <n.burrows@liverpool.nsw.gov.au>; Caine Carroll (Goodradigbee1@outlook.com) <goodradigbee1@outlook.com>; lilly carroll <didgengunawalclan@yahoo.com.au>; Carolyn Hickey (cazadirect@live.com) <cazadirect@live.com>; Dharug Ngurra Aboriginal Corporation (darug_tribal@live.com.au) <darug_tribal@live.com.au>; Justine Coplin (justinecoplin@optusnet.com.au) <justinecoplin@optusnet.com.au>; Melissa Williams (MWilliams@glalc.org.au) <mwilliams@glalc.org.au>; Chalker Glenda (kgchalker@bigpond.com) <kgchalker@bigpond.com>; Rodney Gunther <waawaar.awaa@gmail.com>
Cc: Nicholas Lawler (nicholas.lawler@cbre.com) <Nicholas.Lawler@cbre.com>
Subject: New Liverpool Public School

Hi Everyone

In 2019/2020 consultation was undertaken in respect of the redevelopment of the Liverpool Boys' and Girls' High Schools and a meeting held last year to discuss the development. At that stage the redevelopment included the demolition of the high school buildings, construction of a new high school and construction of a new primary school. The demolition and redevelopment of the high schools is now not proceeding. The construction of the new primary school will still proceed. It will still be in the same location, on the eastern side of the high school buildings within the playing fields. I have amended the ACHAR to refer only to the construction of the new primary school. I have attached the amended ACHAR which includes the plans for the new primary school, for your information. The ACHAR still recommends testing prior to construction of the new primary school.

Please let me know if you have any comments or queries. Could you please provide your comments by Friday 16th April.

Kind regards

Jillian

DR JILLIAN COMBER

ARCHAEOLOGIST
HERITAGE CONSULTANT

76 EDWIN STREET NORTH, CROYDON, NSW, 2132
T (02) 9799 6000 F (02) 9799 6011 M 0418 788 802
E jillian.comber@comber.net.au



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Comber Consultants acknowledges the traditional custodians of the land on which we work and pay our respects to Elders past and present.

From: lilly carroll <didgengunawalclan@yahoo.com.au>
Sent: Friday, 19 March 2021 5:23 PM
To: Jillian Comber <jillian.comber@comber.net.au>
Subject: Re: New Liverpool Public School

Hi Jillian,

DNC agrees to the testing prior to the new primary school@ Liverpool. Hope to be a part of your test excavations

Kind regards
Paul Boyd & Lilly Carroll
Directors DNC
0426823944

From: philip khan <philipkhan.acn@live.com.au>
Sent: Tuesday, 23 March 2021 11:12 AM
To: Jillian Comber <jillian.comber@comber.net.au>
Subject: RE: New Liverpool Public School

Hi Jillian,

Thank you for your ACHA, we agree and support your report regarding New Liverpool Public School. Regarding Aboriginal Cultural Interpretation plan there are many ways to incorporate Aboriginal Culture such as native garden beds, art work or educational displays of our culture. Please do not hesitate to consult with us through the Interpretation process.

Kind Regards
Phil Khan





INDIGENOUS SERVICES PTY LTD

Contact: Carolyn Hickey

M: 0411650057

E: Cazadirect@live.com

A: 10 Marie Pitt Place, Glenmore Park, NSW 2745

ACN: 639 868 876

ABN: 31 639 868 876

Hi Jillian,

thank you for your email I have reviewed the document and support the amended ACHAR.
A1 would like to be involved in any future field work.

Kind regards

Carolyn Hickey

DARUG CUSTODIAN

ABORIGINAL CORPORATION



DARUG CUSTODIAN
ABORIGINAL
CORPORATION

PO BOX 81 WINDSOR 2756
PHONE: 0245775181 FAX: 0245775098
MOBILE: 0415770163 Leanne Watson
0414962766 Justine Coplin
EMAIL: mulgokiwi@bigpond.com / justinecoplin@optusnet.com.au

Attention: Comber Consultants

Date: 16/04/21

Subject: Liverpool Boys' and Girls' High Schools

Dear Jillian

Our group is a non- profit organisation that has been active for over forty years in Western Sydney, we are a Darug community group with over three hundred members. The main aim in our constitution is the care of Darug sites, places, wildlife and to promote our culture and provide education on the Darug history.

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Darug custodian Aboriginal Corporation's site officers have knowledge of Darug land, Darug Culture, Oral histories, landforms, sites, Darug history, wildlife, flora and legislative requirements. We have worked with consultants and developers for many years in Western

Sydney (Darug Land) for conservation, site works, developments and interpretation/education strategie.

Darug Custodian Aboriginal Corporation have received and reviewed the report for Liverpool Boys' and Girls' High Schools

We support the recommendations set out in this report.

Please contact us with all further enquiries on the above contacts.

Regards



Justine Coplin

We acknowledge and pay respect to the Darug people, the traditional Aboriginal custodians of this land.

APPENDIX B: TECHNICAL REPORT

ARCHAEOLOGY – HERITAGE – MEDIATION – ARBITRATION

NEW LIVERPOOL PRIMARY SCHOOL

Aboriginal Archaeological Assessment

PREPARED BY

REPORT TO

LGA:

VERSION NO

DATE

JILLIAN COMBER AND DAVID NUTLEY

DEPARTMENT OF EDUCATION, SCHOOL INFRASTRUCTURE NSW

LIVERPOOL

D.2021

MARCH 2021

DOCUMENT CONTROL

PROJECT NO. DE346

STATUS: FINAL

| REV | DATE | PREPARED | EDITED | APPROVED |
|-----|------------|-------------------------------|--------------|----------------|
| A | 03/12/2018 | Jillian Comber & David Nutley | David Nutley | Jillian Comber |
| B | 15/01/2019 | Jillian Comber & David Nutley | David Nutley | Jillian Comber |
| C | 14/11/2019 | Jillian Comber & David Nutley | David Nutley | Jillian Comber |
| D | 18/03/2021 | Jillian Comber & David Nutley | David Nutley | Jillian Comber |

Comber Consultants has a certified integrated management system to the requirements of ISO 9001 (quality), ISO 14001 (environmental), OHSAS 18001 (health and safety) and AS/NZS 4801 (health and safety). This is your assurance that Comber Consultants is committed to excellence, quality and best practice and that we are regularly subjected to rigorous, independent assessments to ensure that we comply with stringent Management System Standards.



EXECUTIVE SUMMARY

School Infrastructure NSW (SINSW) propose the construction of a new Liverpool Primary School (NLPS) to be located within the grounds of the existing Liverpool Boys and Girls High School in the Liverpool Central Business District (CBD), at 18 Forbes Street, Liverpool. The proposed new Liverpool Primary School is located in the eastern portion of the existing school grounds.

The project will be assessed as a State Significant Development. The application seeks consent for the construction and operation of a new Liverpool Primary School. This will include construction of a new school building for core school facilities, teaching spaces, support units, preschools as well as associated landscaping and open space improvements. A detailed description of development is provided by Ethos Urban within the EIS.

A site inspection recorded two Aboriginal objects. The assessment and this report have been undertaken in accordance with the Department of Planning, Industry and Environment's (DPIE) *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* and makes the following recommendations:

1. Aboriginal consultation must be undertaken in accordance with OEH's *Aboriginal cultural heritage consultation for proponents 2010*.
2. Aboriginal archaeological testing and possibly salvage must be undertaken within the site proposed for the new Liverpool primary school to determine the nature and extent of Aboriginal objects within the study area. Once the testing has been completed further management recommendations will be provided.



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1.0 INTRODUCTION

School Infrastructure NSW (SINSW) propose the construction of a new Liverpool Primary School (NLPS) to be located within the grounds of the existing Liverpool Boys and Girls High School in the Liverpool Central Business District (CBD), at 18 Forbes Street, Liverpool. The proposed new Liverpool Primary School is located in the eastern portion of the existing school grounds. The site is legally described as Lot 1 in DP 1137425. Figure 1 shows the location of Liverpool, Figure 2 the Boys' and Girls' High School and Figure 3 the plan for the proposed new school.

The project will be assessed as a State Significant Development. The application seeks consent for the construction and operation of a new Liverpool Primary School. This will include construction of a new school building for core school facilities, teaching spaces, support units, preschools as well as associated landscaping and open space improvements. A detailed description of development is provided by Ethos Urban within the EIS.

This Aboriginal Archaeological Assessment has been written in accordance with the Department of Planning, Industry and Environment's (DPIE) *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW*.

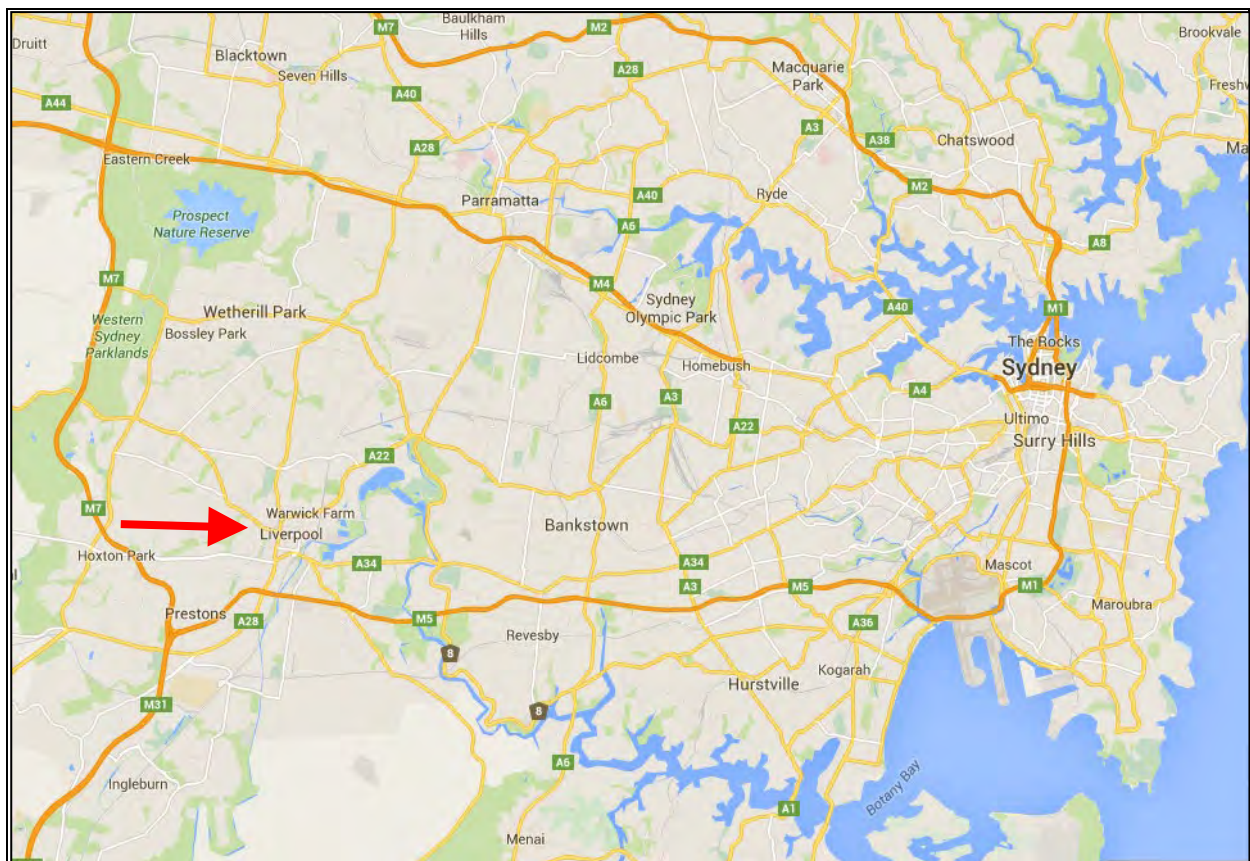


Figure 1: Liverpool indicated by red arrow
(Google maps)

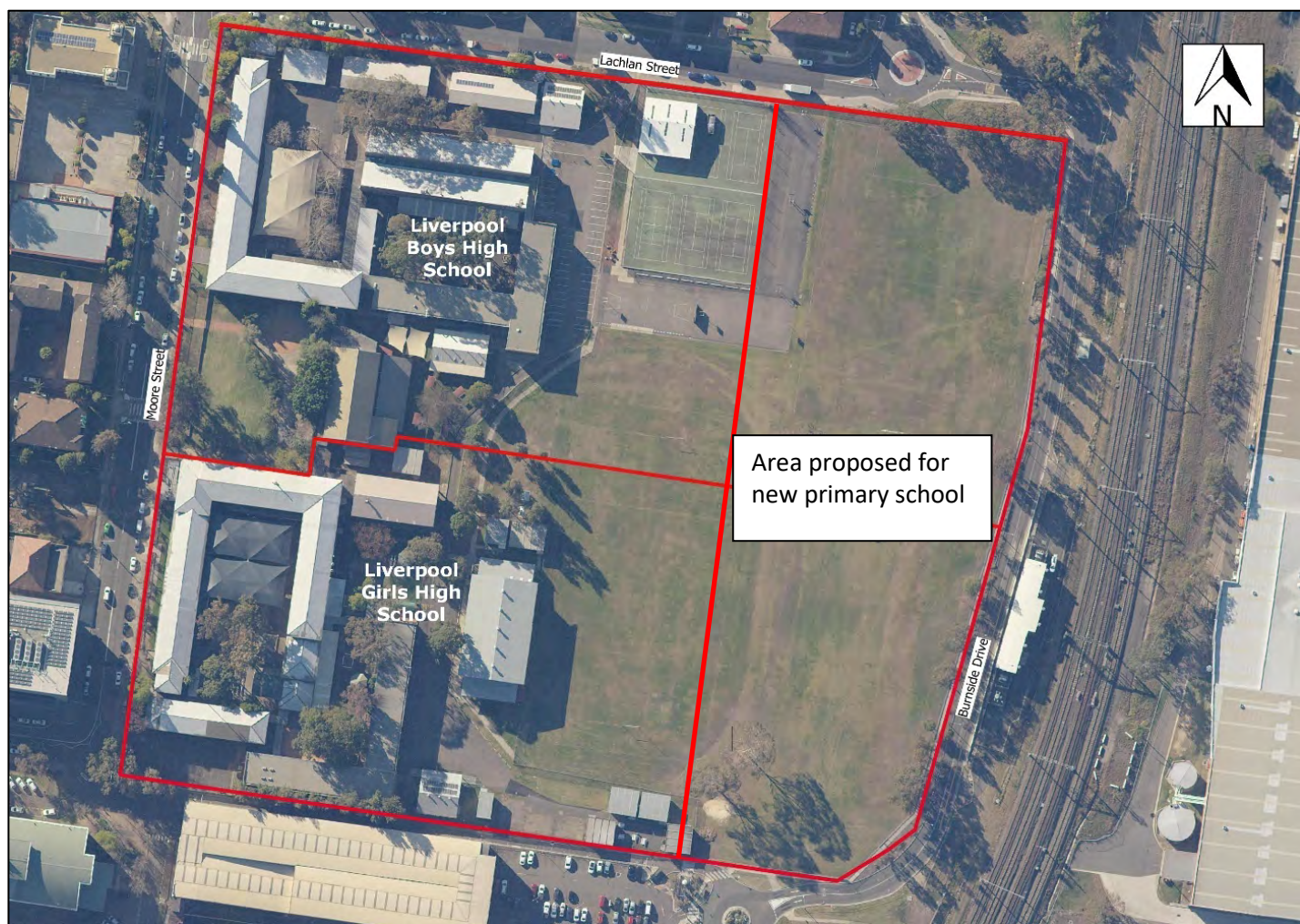


Figure 3: Liverpool Boys and Girls Schools. Area proposed for the new primary school is to the left of the school buildings



Figure 3: NLPS site plan

2.0 METHODOLOGY

This project was conducted in three stages, being background research, field survey and report preparation, as detailed below.

Stage 1: Background Research

Prior to the field component of this project, the Aboriginal Heritage Information Management System (AHIMS) was searched on 11 October 2018 and again on 20 November 2019. A copy is attached at Appendix A. Site data, associated documents and archaeological survey reports held by AHIMS were reviewed. Environmental information relating to Aboriginal land use was also researched. Such research facilitated an understanding of the potential nature of sites and site patterning in the region, which enabled a predictive statement to be made. It also provided an archaeological and environmental context within which a significance assessment could be made, if any Aboriginal sites were located during the field survey.

Stage 2: Site Inspection

Two site inspections were undertaken as follows:

The first site inspection was undertaken on Wednesday 24th October 2018 by the people listed below. The inspection at both schools was undertaken on foot and the whole of the study area was inspected.

Boys High School

- Jillian Comber, Archaeologist, Comber Consultants
- David Nutley, Archaeologist, Comber Consultants
- Mary Monaghan, Business Manager, Liverpool Boys School accompanied Jillian and David for the whole of the inspection.

Girls High School

- Jillian Comber, Archaeologist, Comber Consultants
- David Nutley, Archaeologist, Comber Consultants
- Les Redding, General Assistant, Liverpool Girls High School accompanied Jillian and David for part of the inspection.

Another site inspection was undertaken from 30/09/2019 to 1/10/2019. This site inspection was to further inspect the site proposed for the new Liverpool primary school. It was undertaken by the following:

- Glenn Suey, Archaeologist, Comber Consultants
- Rivers McEwen, Archaeological Assistant, Comber Consultants
- Kadibullah Khan, Archaeological Assistant Comber Consultants
- Christopher Jones, Archaeological Assistant Comber Consultants

Stage 3: Report Preparation

Further archaeological research was conducted, where necessary, to clarify the results of the survey. This report was then compiled and provided to the Department of Education, School Infrastructure NSW.

3.0 ABORIGINAL HISTORY

In 1795, when Bass and Flinders first explored the Georges River before the colonisation of the Liverpool area, the Darug, Tharawal and Gandangara people lived in the area. These three language groups were divided into smaller clans or bands - extended family units consisting of up to sixty people. Each of these clans was named after the area of land where they normally resided, and to which the people had traditional links (Attenbrow 2010).

The suffix “gal” was added to the place name for men of the clan and “galleon” was added for women. The clan around Liverpool was the Cabro (gal) or (galleon), named after the cohbra grubs they harvested at the banks of the Georges River, especially near Cabramatta Creek. The main contact between clans was during ceremonial gatherings. There were linguistic and cultural differences, as well as economic ones. There was a complicated system of kinship and totems which prevented certain types of contact. It is difficult to pinpoint exact language boundaries, as information came from early colonists, explorers and ethnographers trying to interpret Aboriginal languages (Keating 1996:1-2).

It is thought that the Tharawal language was spoken from South of Botany Bay to the area east of the Georges River (Holsworthy area) to as far south as Jervis Bay and the Darug language on the Western side of the Georges River to Appin and Picton and as far west as the Blue Mountains. Gandangara is said to be the language of the 'mountain' people, from the Blue Mountains to the Nattai and Burragarang Valleys and as far south as Goulburn (Attenbrow 2010).

Current Local Land Council boundaries differ from these 'traditional' boundaries. The Cabro clan was recognised as one of the 'woods tribes' by Europeans, together with Aboriginal people living at South Creek, at Cowpastures near Camden, and at Mulgoa near Penrith (Attenbrow 2010; Keating 1996:3).

The Aboriginal economy was dependent on harvesting resources with only very little modification to the environment, with the Georges River playing a central part of that economy. People fished from the bank or in canoes and dug for yams and collected cohbra grubs on the banks of the river (Kohen 1993:4-7).

When Governor Macquarie first toured the district, he saw much of it in its natural state. The land near Liverpool was generally open forest, as was the country further west along Cabramatta Creek, with eucalyptus of medium height, which covered about 30 percent of the ground surface, with grasses beneath.

In contrast, Europeans quickly set about clearing the land and planting crops which prevented Aboriginal people from carrying out their traditional hunting of animals and gathering of plant foods. In 1803 Thomas Moore was commissioned to take timber from the Georges River for shipbuilding. The river provided water and for nearly two decades it was the primary means of transport back to Sydney.

4.0 ENVIRONMENTAL CONTEXT

4.1 Topography

The subject area lies within the Cumberland Plain and is typical of that region's gently undulating slopes with broad, rounded ridges and gently inclined slopes (Bannerman & Tillie 1:100,000 soil landscape map 1989). The Cumberland Plain is bordered by the Blue Mountains to the west, by the Hornsby Plateau to the north and the Georges River and headwaters of the Parramatta to the east. (Smith 1989:8).

The study area lies about 310m north of the closest point of the Georges River which flows through Lake Moore, which is about 850m southeast. The northern half of Lake Moore is artificial, whilst the southern section is natural. The Georges River flows through Chipping Norton Lake, an artificial lake and the adjacent wetlands, which are approximately 1.7km northeast. Brickmakers Creek is located approximately 2km to the west.

The schools are located on gently sloping land 300m north of the Georges River and approximately 10-13m above the river (Figures 4 & 5). Prior to European occupation the area surrounding the natural part of Lake Moore would have been a resource rich wetland.

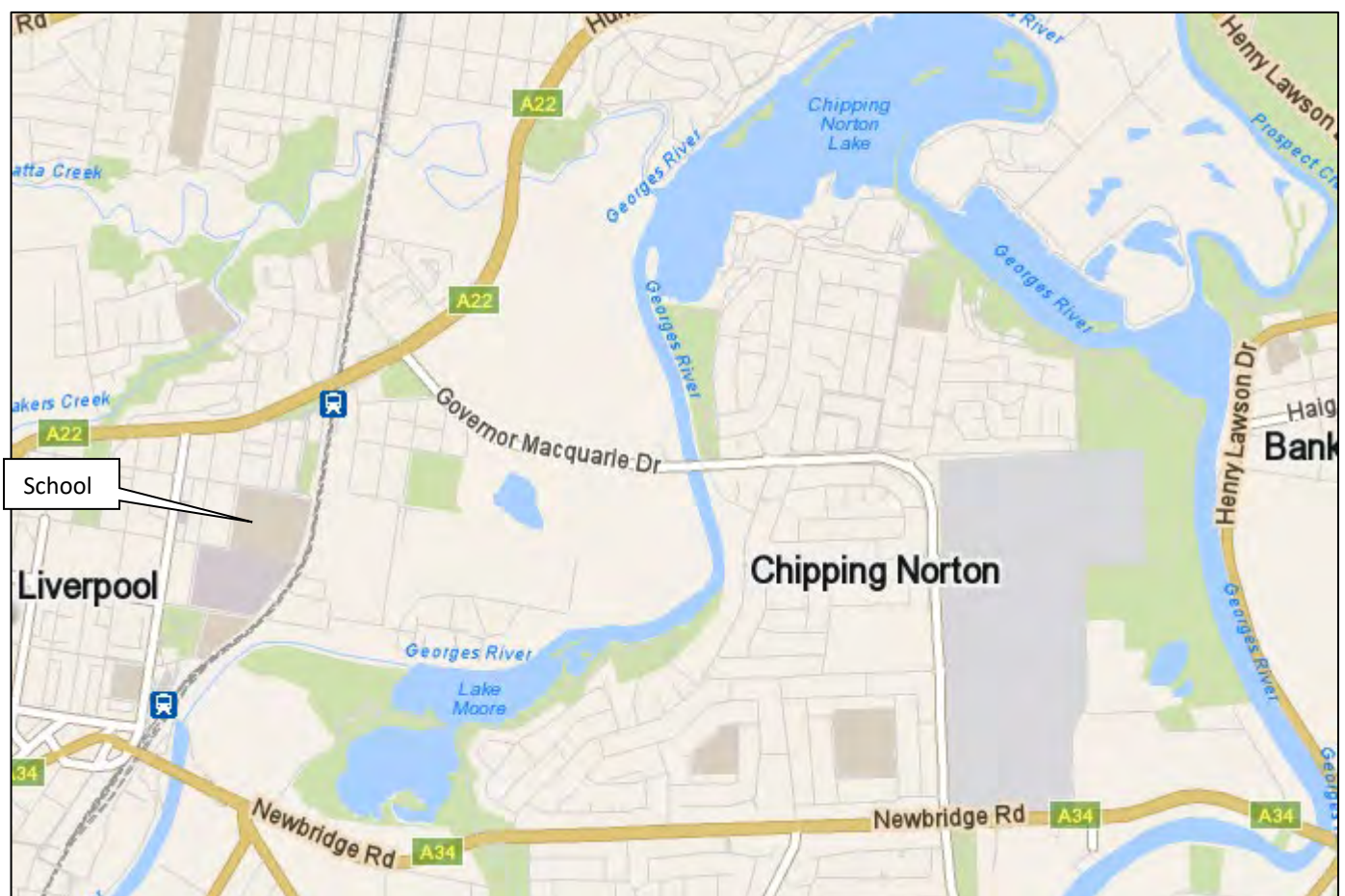


Figure 4: Showing location of school in relation to the Georges River and Lake Moore

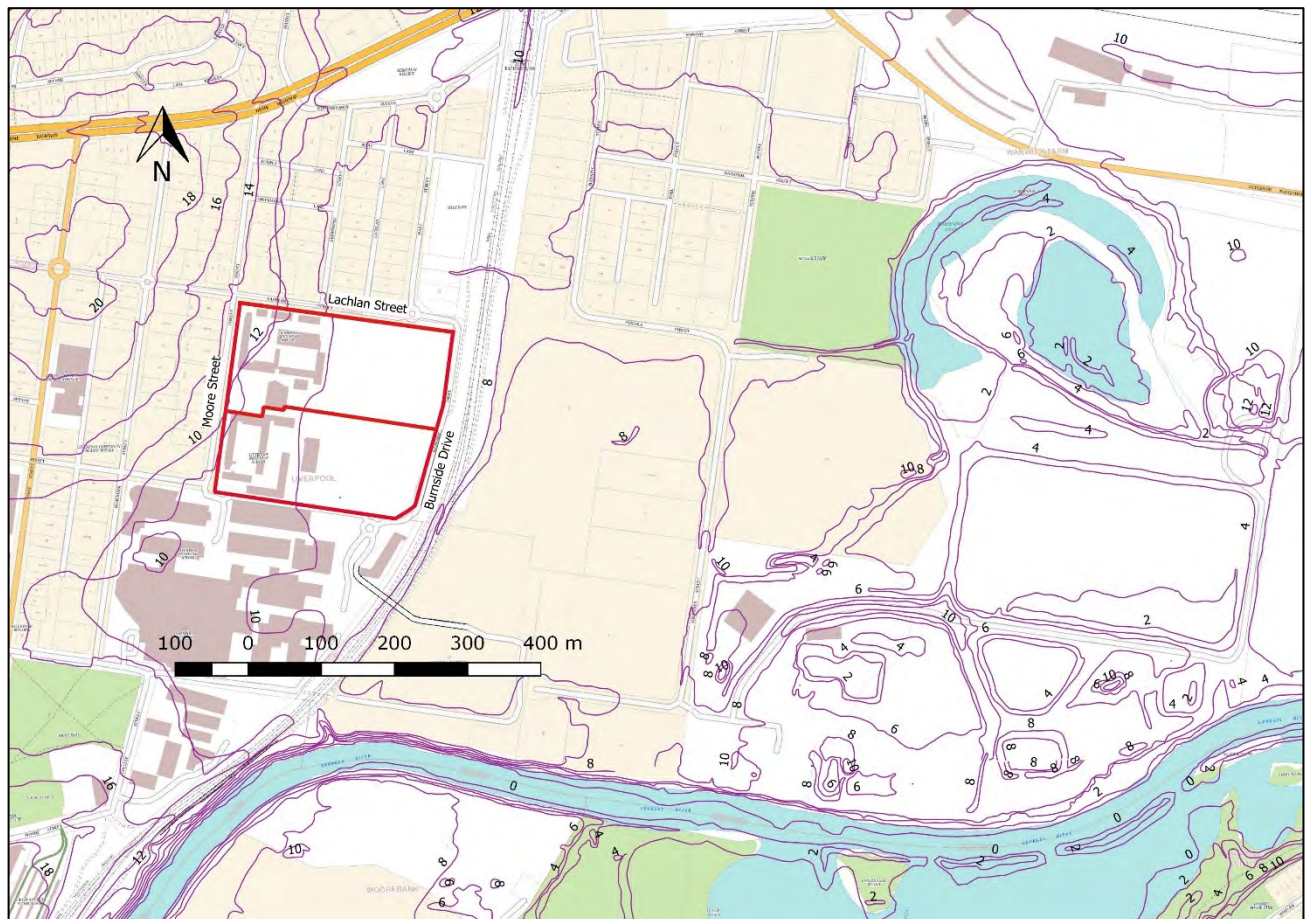


Figure 5: Showing the contours of the high school site and surrounds.
 The area proposed for the NLPS is to the east of the school buildings
 The study area slopes gently towards the east

4.2 Geology and Soils

The Cumberland Plain overlies the Wianamatta Group of Shales. Within the study area this group is divided into three formations, the basal Ashfield Shale, the Minchinbury Sandstone, and the uppermost Bringelly Shale. Bringelly Shale is formed from alluvial sediments (Jones & Clark 1987:17) and dominates the study area. Shales are brittle and not suitable for stone tool manufacture whilst the Minchinbury Sandstone does not weather to provide rockshelters or overhangs. These qualities are reflected in the lithology of the study area. The western two thirds includes shale, carbonaceous claystone, laminate, fine to medium-grained lithic sandstone, rare coal and tuff. The eastern third of the study area is in a zone of clayey, quartose sand and clay.

Several locations on the Cumberland Plain contain suitable material for stone tool manufacture, such as basalt and silcrete. Volcanic breccia, including basalt, is located at Wetherall Park, about 9km to the northwest of the study area. Pictite and dolorite are located at Prospect about 12km to the north. Ferricrete bands, including silcrete, are located about 3km to the south east at Moorebank. Silcrete outcrops are located at Luddenham (about 22km to the west) and Plumpton (about 22kms to the north-north west and St Clair about 20km to the north west) and Erskine Park approximately 18km to the north-west). Other material used in the manufacture of stone tools on the Cumberland Plain, includes chert, tuff, quartz and quartzite, which are located within the Rickabys Creek Formation, about 37kms north-north-west of the subject area (Clarke & Jones 1988, Smith 1989a:9-11 & 1989b:6-7).

The soils are described as shallow to moderately deep (>100<100cm), hard setting, mottled texture contrast soils, red and brown podzolic soils on crests, grading to yellow podzolic soils on lower slopes and drainage lines. The soils are typically of low fertility and have poor drainage (Bannerman & Tillie 1:100,000 soil landscape map 1989). The poor drainage would have made the area boggy and not always suitable for camping. Whilst undertaking the site inspection it was noted that the ground was very wet and Mary Monaghan advised that the area was often boggy with very poor drainage.

4.3 Stream Order Modelling

Stream order can be used to predict Aboriginal land use patterns. A first order stream is the smallest and is a small tributary that flows into and feeds larger streams but does not normally have any water flowing into it. The joining of two first order streams creates a second order stream and when two second order streams join they form a third order stream. In addition, first and second order streams generally form on steep slopes and flow quickly until they slow down and meet the next order waterway. First order streams are intermittent. (Horton 1945).

Modelling undertaken by McDonald and Mitchell (1994) on the Cumberland Plain indicates that stream order can be used to predict areas of archaeological potential. The model hypothesis is that in any particular climate and landscape, a threshold catchment area is necessary to allow permanent stream flow or the establishment of waterholes with extended longevity (i.e. months to years). The critical point where these conditions are met appears to be at the junction of two second or third order streams. Such a location is likely to contain more complex sites with a high density of artefacts, whilst second and third order streams are also likely to contain large sites within 100 metres of the watercourse.

The study area is located approximately 300m from the Georges River, a third order stream that would indicate that a study area has the potential to contain medium to high concentrations of Aboriginal occupation. It is also located close to the resource rich wetlands that once surrounded Lake Moore.

4.4 Vegetation

The vegetation of the Cumberland Plain was mapped by Benson (1981) and the NSW National Parks & Wildlife Service (2002). Historically, the undulating slopes of Western Sydney would have supported a tall open-forest of Cumberland Plain Woodland. The area was mapped by Benson (1981) as being woodland of *Eucalyptus moluccana* (Grey Box) in association with *Eucalyptus tereticornis* (Forest Red Gum). The understorey included *Acacia parramattensis*, *Acacia floribunda* and other acacia sp., *Casuarina cunninghamiana* (River Oak), *Bursaria spinosa* (Sweet Bursaria, Blackthorn) and *Hardenbergia violacea* (False Sarsparilla) with grasses of *Themeda australis* (Kangaroo Grass) and *Lomandra longifolia*.

Such a vegetation community would have provided a variety of edible plant species and plants suitable for artefact manufacture. For example, the tall Grey Box and Red Gum's would have provided bark to make coolamons, shields or canoes, whilst the long Lomandra leaves would have been used for basket weaving (Baker et al 1986:136). Acacia gum was a sweet nutritious food source and the acacia seeds were a valuable source of protein. The dried seeds were ground between stones and baked as a bread/damper and the green seeds eaten like peas (Low 1992:86). In addition, Cumberland Plain vegetation provided habitat for a variety of marsupials and birds whilst the Creek would have provided fish, yabbies and eels.

However, the nature and composition of the study area has been altered by past clearance and European land management activities, including urban development. The study area presently forms part of the urbanised suburb of Liverpool and does not contain remnant Cumberland Plain vegetation.

4.5 Current land use and disturbance

Occupation within the study area first commenced in 1827 with three small dwellings constructed on the western side of the site and the remainder of the site used for grazing. In 1884 the eastern portion of the study area was subdivided into small allotments with Hart Road extended across the study area linking Lachlan Street in the north and Campbell Street in the south. Whilst the allotments sold, only two dwellings appear to have been constructed on the eastern side of the site. Figure 6 is a 1943 aerial photograph showing the remaining buildings on the site, tracks, the evidence of Hart Road, dams or waterholes and a small creek or drainage line in the south.

The land was resumed by the Government in 1946 for the school and construction began in 1948 and was completed in 1954. The western half of the study area is occupied by a range of school buildings, associated infrastructure and services used in the operation of the Liverpool Boys' & Girls' High Schools. The eastern half of the study area is occupied by playing fields and includes a former running track.



Figure 6: 1943 aerial with high school land edged in red.
Area proposed for the NLPS is on the eastern side.

5.0 ARCHAEOLOGICAL CONTEXT

5.1 Cumberland Plain

The information summarised in this section will facilitate an understanding of Aboriginal site patterning in the region and thereby provide a context within which any sites located in the study area may be archaeologically assessed. It will also assist to determine whether sub-surface sites are likely to exist.

One of the oldest dated occupations for the Sydney region is 15,000 years BP from the Shaws Creek K2 rockshelter on the Nepean River (Kohen 1984; Nanson et al. 1987). The dates obtained by Kohen (1984) and Attenbrow (2003) must be considered in association with environmental data related to sea level rises. The Sydney region that we know today was vastly different to the landscape of 15,000 years ago.

The period of maximum glaciation was 15,000 – 18,000 years BP. Therefore the date of the K2 rockshelter and Attenbrow's Darling Mills site indicate that Aboriginal people lived throughout a period of extreme environmental change. During this period, sea levels were up to 130m below current sea levels (Nutley 2006: 1). About 10,000 years ago, as temperatures began rising at the end of the last ice age, the polar ice started melting and sea levels rose. The rising sea levels forced people to abandon coastal sites and move inland, with the result that the oldest coastal sites were inundated.

By about 6,000 years ago, rising water levels had flooded the coastal plain forming the Sydney landscape that we know today. The vast majority of sites in the Sydney region date to around 5,000 years BP, after sea levels had stabilised. Whilst research into submerged indigenous sites is now being undertaken (Nutley 2006), there are few sites in the Sydney area that are known to date beyond 10,000 years BP. Therefore, research undertaken to date has focused on subsistence patterns and cultural change, e.g. Attenbrow (2003).

Many archaeological surveys have been conducted on the Cumberland Plain in relation to Environmental Impact Statements. As a result of these studies, which were occasioned by the burgeoning urban expansion extending onto the Cumberland Plain, the NPWS recognised the need for a coherent study of the area to fully assess the impact of urbanisation on the natural and cultural heritage of the Cumberland Plain. Smith (1989b) was commissioned by the NPWS to undertake an Aboriginal Site Planning Study to be utilised in the management of Aboriginal sites on the Cumberland Plain.

Prior to her study, 307 sites had been recorded on the Cumberland Plain, mainly open artefact scatters (297) with four scarred trees, one carved tree and four axe-grinding grooves and a Mission site (the Blacktown Institute). Smith (1989b:2) added 79 open sites and 29 isolated finds from field surveys related to her study.

Smith's (1989b:3) analysis indicated that site location and site densities were influenced by the availability of water and raw materials. She concluded that other factors such as topography, natural vegetation and soil types did not influence site location.

Since Smith's study there has been a dramatic increase in development in Western Sydney resulting in a great deal more archaeological survey and excavation (McDonald 1997). This further work has indicated the complexity in the archaeological record of the area that was not previously recognised. In particular it has been recognised that surface artefact scatters do not represent the full nature and extent of such sites. The potential for sub-surface deposits to remain, despite agricultural disturbance is high whilst sites on permanent water are more complex than sites on ephemeral drainage lines with major confluences being prime site locations.

In 2005 McDonald published the results of excavations in the Rouse Hill Development area, which is south of the present study area. This study refined the model of occupation for the Cumberland Plain. Her study examined site location, stone tool manufacture, mobility, change over time and occupation in relation to stream order. Second and Third Order streams are less likely to contain major sites unless they are at the confluence with another creek or river, which is not the case within the present study area.

McDonald's 2005a report demonstrates the dynamic nature of stone tool technologies on the Cumberland Plain. She reviewed previous work within a theoretical framework to identify intra and inter-regional variation. She not only identified change over time in the stone tool technology, but the manner in which "stone technologies were organised in relation to landscape" (McDonald 2005a: np). Her report provides a framework to tentatively date sites through technological analyses and to identify cultural changes.

Her study also indicated that the surface representation of a site on the Cumberland Plain does not necessarily reflect the actuality of that site. Of the excavations conducted by her, sub-surface deposits were present even when there was no surface indication of a site. According to McDonald (2005a:5), “despite artefacts being rare or completely absent on the surface at each of the sites investigated, all six sites were found to contain intact archaeological deposit. Almost 500 square metres were excavated during this Project and almost 35,000 artefacts retrieved.” McDonald (2005) also considers that Aboriginal occupation was focussed on the major river systems and characterised by mobility between a small number of sites. As a result of her various studies and applying stream order modelling she (2005) further predicts that the density and complexity of archaeological sites will vary according to stream order, as follows:

- Fourth-Fifth order creeks (or rivers): Archaeological evidence will be more complex and possibly stratified, reflecting more permanent and repeated occupation on major creeks.
- Third order creeks: Evidence of more frequent occupation such as knapping floors or higher artefact densities will be found in the lower reaches of tributary creeks.
- Second order creeks: Sparse archaeological evidence will be found which indicates occasional use and/or occupation.
- First order creeks: Due to the intermittent nature of water flow only very sparse evidence would be found in the headwaters of upper tributaries such as background artefact scatter.

Kohen’s studies at Penrith confirmed the importance of fifth order creeks and rivers. He recorded over 50 sites in the Penrith area which included open artefact scatters, axe grinding grooves and rock shelters. Kohen (1997:7) indicates that sites occurring throughout the Penrith area “are particularly likely to occur adjacent to the rivers and creeks. The distribution of raw materials associated with the manufacture of stone tools suggests that chert and basalt were carried or traded east from the river gravels and that silcrete was traded or carried from sources near South Creek and Eastern Creek, west towards the Nepean flood plain”.

Comber (2006 & 2008) also recorded open artefact scatters and scarred trees within the Cumberland Plain. She undertook excavation at two sites at Penrith Lakes known PL9 (2010a) as Camenzulis (2010b) and at PL9 she retrieved more than 1,500 artefacts, including backed blades and an edge ground axe. Her work confirms McDonald’s (2005) and Kohen’s predictive model that sites are more likely to occur adjacent to the rivers and high order creeks. These excavations (Comber 2010a&b) at Penrith Lakes further indicates the possibility that sub-surface archaeological deposits will remain despite disturbance by non-Aboriginal activities and the complexity of such sites. Surveys (2006 & 2008) undertaken prior to the excavations recorded the areas as being disturbed by agricultural activities. They had been grazed, ploughed, planted with crops and a dam constructed. Only a small number of artefacts were recorded on the surface but over 1,500 artefacts retrieved during excavation.

A survey undertaken by Comber (2008) and subsequent excavations undertaken by Stening (2011) at Doonside demonstrated that although no surface artefacts were recorded (Comber 2008) substantial subsurface deposits did exist on the site with over 1,000 artefacts being recovered from a highly disturbed context (Stening 2011). This site was located beside Eastern Creek an important 4th or 5th order creek. It is an important watershed with extensive evidence of Aboriginal occupation

Archaeological investigations within the Sydney Basin have established reliable Carbon 14 dating evidence of Aboriginal occupation dating from the Pleistocene but (14,700BP at Cranebrook Terrace). The majority of sites however have been dated to less than 5,000 years. The absence of earlier dates is due to the effect of sea level rises c6,000 years ago. The influx of seawater over former coastal plains is presumed to have forced people into the new confines of the Sydney Basin (Nutley 2006). This ‘intensification’, or increased population, was then associated with an increase in the physical evidence of post 5,000BP occupation now being recorded through archaeological investigation.

The model of occupation developed for the Cumberland Plain indicates that reliable water is a prime factor in the choosing of site locations by Aboriginal people. More complex higher density sites will be located at the confluence of several water bodies whilst evidence of frequent occupation will be located in the lower reaches of tributaries. However, evidence will still be located in areas with seasonal creek lines, but it will sparse and less complex. Ground disturbance will impact on surface evidence, but subsurface evidence may still be located in areas of high disturbance.

5.2 Liverpool & Georges River Catchment

Five sites and one Aboriginal Place have been identified within a 2.5km radius of the study area. None of these sites are within the study area. They are:

| Site No. | Site Type | Approximate Distance from Liverpool Boys' & Girls' High Schools |
|-----------|--|---|
| 45-5-2912 | Artefact Deposit | 926m NW |
| 45-5-2540 | Open Camp Site – red silcrete & mudstone | 966m SW |
| 45-5-0257 | Scarred Tree | 1.5km E |
| 45-5-2538 | Possible Scarred tree | 2.5km SW |
| 45-5-3629 | Aboriginal Place – Collingwood House – ground edge axe | 1km S |

In 1988, the Gandangara Eel Dreaming Project conducted a site survey along Orphan School Creek, about 4km. The site recorded 6 sites which included 3 open campsites, two scarred trees and a site containing both a scarred tree and an open campsite.

In 2012 Comber (2012) undertook a Due Diligence report for the Sackville Street Creek bank Stabilisation just over 5km north of the present subject area. That report located the position of a scarred tree (AHIMS 45-5-073) recorded for the Gandangara Eel Dreaming Project. No other sites were recorded.

Comber (2005) conducted 2.5km inspection of transmission cable routes in Hoxton Park, including a crossing of Cabramatta Creek. This investigation located a scarred tree in association with ochre.

Archaeological salvage and monitoring was conducted about 2.5km to the northwest of the current study area at Maxwells Creek, Prestons in June 2000 by Australian Museum Business Services (AMBS). As with Brickmakers Creek, Maxwells Creek is within the Georges River catchment. Maxwells Creek is 3km long and starts in Prestons. It flows north through the Prestons Industrial Estate, under Hoxton Park Road, through Elouera Nature Reserve and into Cabramatta Creek. 151 artefacts were recovered from the excavations with raw materials including silcrete, chert, indurated mudstone, tuff, petrified wood and quartz. While the most common artefacts were flaked pieces, other artefacts included backed blades, whole and broken flakes, a ground stone axe head and heat shatter. This study concluded that the range and density of artefacts indicated long-term usage and that the area had been occupied for a least the last 3000 years. (AMBS 2000:i)

In 1989 Liverpool Council commissioned an archaeological site and planning study that included areas to the north and west of the current study area (Smith 1989). Of 21 sites recorded, 19 were artefact scatters (open sites) and 2 were scarred trees (Smith 1989:2). This study found that the majority of sites located were close to permanent creeks and around swamp margins. Topographical features of archaeological potential were creek flats and banks. The study also found that isolated finds were more common on hill tops than other types of site but that this may be due to greater land disturbance and site destruction rather than the distance from water. In addition, the study found that the artefact scatters were dominated by debitage rather than cores or actual tools and that the artefacts tended to be smaller than in the northern Cumberland Plain – suggesting that the source material was not local and possibly more than 5km distant (Smith 1989:53-54). The raw material of the artefacts was consistent with that found elsewhere on the Cumberland Plain and was dominated by silcrete, followed in order by quartz, indurated mudstone and chert (Smith 1989:54).

The combined results of the above conforms to the predictive modelling for the Cumberland Plain and Liverpool as detailed by Smith (1989:2), that sites will be located close to permanent creeks and around swamp margins. Stream order also needs to be considered. More complex sites and sites with a higher density of artefacts will be located at the junction of two second or third order streams. Second and third order streams are also likely to contain large sites within 100 metres of the watercourse.



Figure 7: Study Area showing the location of AHIMS sites with the location of nearest sites within a 2.5km radius of the site.

5.3 Study Area

During the site inspections on 31 October and 1st November, two silcrete artefacts were recorded within the high school grounds. One was located at Grid Reference 308795 E/6244978.077 N and the other at 308910 E/6245026 N. The whole of the school grounds including the site of the NLPS is registered on the Aboriginal Heritage Information System. One of these objects is within the area proposed for the NLPS.

5.4 Site prediction

The following predictive model is based on the background research into the geology, vegetation and archaeology of the study area and the Cumberland Plain generally.

The study area lies about 310m north of the closest point of the Georges River which feeds into Lake Moore with adjacent wetlands. The area is surrounded with several 1st and 2nd order creeks located between 1-3km away. The Georges River would have been an important source of aquatic resources, whilst the creeks would have provided freshwater and freshwater resources.

Nearby resources would have included quantities of fresh water, aquatic life and plant foods as well as bark for manufacturing containers, shields and canoes and plants for manufacturing twine. The manufacturing process would have necessitated the use of stone tools which may also have needed to be modified. The predictive modelling indicates that campsites would have been located close to the water source or on ridgelines overlooking a water source. The study area is on a low area close to the river and former wetlands.

The site types that could be expected to have existed in this area prior to disturbance would include open artefact scatters, scarred trees and isolated finds.

However, as detailed in section 3.5 of this report, the study area has cleared and modified for the construction of the school and associated facilities, therefore scarred trees are not expected, although artefact scatters and isolated finds could exist within the study area.

6.0 RESULTS & MITIGATION

6.1 Results

The area proposed for the NLPS is within a low lying area close to the river and former wetlands and within an area predicted to contain medium to high density sites. The ground was poorly drained and boggy. A creek or drainage line was once located on the southern portion of the study area. It is an area that would have provided good resource and may have been suitable for camping during dry periods. After rain, due to the poorly drained nature of the soil it would not have been suitable for camping. As it is possible that seasonal camping occurred within the study area, it is possible that subsurface evidence of such occupation remains within the study area.

The disturbance to the study area since settlement has been minimal. Four small residential cottages with outbuildings were constructed and various walking tracks created. The cottages would have most likely been timber on shallow foundations. The disturbance from the cottages and the walking tracks would not have removed evidence of Aboriginal occupation. Evidence of the former running track could still be seen.

During the site inspections on 31 October and 1st November, two silcrete artefacts were located within the study area. One was located at Grid Reference 308795 E/6244978.077 N and the other at 308910 E/6245026 N (Figure 9).

The site of the Liverpool Boys & Girls High Schools, including the area proposed for the NLPS, has now been registered on the Aboriginal Heritage Information System.



Figure 9: Locations of silcrete artefacts observed during site inspections. Area proposed for NLPS within solid red line.

6.2 Mitigation

As the school contains Aboriginal objects and has Aboriginal subsurface archaeological potential and in accordance with SSDA requirements, Aboriginal archaeological testing and possibly salvage must be undertaken prior to redevelopment of the high school. The testing should be undertaken to determine the nature and extent of Aboriginal objects and be undertaken in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*.

7.0 LEGISLATION

7.1 National Parks and Wildlife Act 1974

The *National Parks & Wildlife Act 1974* (NPW Act) provides statutory protection for all Aboriginal objects within New South Wales. The Department of Planning, Industry and Environment is the State Government agency responsible for the implementation and management of this Act.

Part 6 of the NPW Act provides for protection of all “Aboriginal objects” which are 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.

Part 6 of the Act states that it is an offence to harm or desecrate an Aboriginal object or Aboriginal place, without an Aboriginal Heritage Impact Permit (AHIP).

This Aboriginal archaeological assessment has determined that the site contains Aboriginal subsurface archaeological potential. Two artefacts were recorded during the assessment of the high school and the school has been registered on the Aboriginal Heritage Information Management System (AHIMS) maintained by the Department of Planning, Industry and Environment.

Consultation must be undertaken in accordance with OEH’s *Aboriginal cultural heritage consultation for proponents 2010* and Aboriginal archaeological testing must be undertaken within the site of the high school to determine the nature and extent of Aboriginal objects within the study area. The testing should be undertaken in accordance with *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*.

7.2 Environmental Planning & Assessment Act 1979

This project is being undertaken as a State Significant Development under Part 4, Division 4.1 of the *Environmental Planning & Assessment Act 1979* (EPA Act). Section 89J of the EPA Act (see below) does not require that a State significant development seek approval under the NPW Act as.

Section 89J of the EPA Act states the following:

89J Approvals etc legislation that does not apply

The following authorisations are not required for State significant development that is authorised by a development consent granted after the commencement of this Division (and accordingly the provisions of any Act that prohibit an activity without such as authority do not apply):

- (a) the concurrence under Part 3 of the *Coastal Protection Act 1979* of the Minister administering that Part of that Act,
- (b) a permit under section 201, 205 or 219 of the *Fisheries Management Act 1994*
- (c) an approval under Part 4, or an excavation permit under section 139, of the *Heritage Act 1977*
- (d) an Aboriginal heritage impact permit under section 90 of the *National Parks and Wildlife Act 1974*
- (e) an authorisation referred to in section 12 of the *Native Vegetation Act 2003* (or under any Act repealed by that Act) to clear native vegetation or State protected land,
- (f) a bush fire safety authority under section 100B of the *Rural Fires Act 1997*,
- (g) a water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91 of the *Water Management Act 2000*.
- (2) Division 8 of Part 6 of the *Heritage Act 1977* does not apply to prevent or interfere with the carrying out of State significant development that is authorised by a development consent granted after the commencement of this Division.
- (3) A reference in this section to State significant development that is authorised by a development consent granted after the commencement of this Division includes a reference to any investigative or other activities that are required to be carried out for the purpose of complying with any environmental assessment requirements under this Part in connection with a development application for any such development.

The EPA Act is administered by the Department of Planning and Environment who will provide the consent for this project and for any impact on relics Aboriginal objects. Section 89J(d) does not require the consent of Heritage NSW or the Aboriginal Cultural Heritage Regulation Planning Team, Department of Planning, Industry & Environment.

8.0 RECOMMENDATIONS

The following recommendations are made on the basis of:

- Legal requirements under the terms of the *National Parks & Wildlife Act 1974* (as amended), which states that it is an offence to harm or desecrate an Aboriginal place or object without first gaining a permit under Part 6 of the *National Parks & Wildlife Act 1974*.
- Research into the archaeological record for the Cumberland Plain and the study area in particular.
- Results of the assessment as outlined in this report.

IT IS THEREFORE RECOMMENDED THAT:

1. Aboriginal consultation must be undertaken in accordance with OEH's *Aboriginal cultural heritage consultation for proponents 2010*.
2. Aboriginal archaeological testing and possibly salvage must be undertaken within the site proposed for the new Liverpool primary school to determine the nature and extent of Aboriginal objects within the study area. Once the testing has been completed further management recommendations will be provided. The testing should be undertaken in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*.

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PHOTOGRAPHS

Liverpool Girls' High School



Photograph 1: View of Liverpool Girls' High School along Forbes Street frontage showing terraced open area between the Girls' High School and Liverpool Boy's High School. View to SE.



Photograph 2: Sewer pump house (RHS) and Block O on southern border of high school. Thick vegetation and no ground visibility. View to ESE.



Photograph 3: Open area with mulch heap and weeds west of Block O (RHS of image) and on northern side of sewer pump house. No ground visibility



Photograph 4: Exposed ground with thick matting of leaf litter and weeds along southern border. View to WNW.



Photograph 5: View of paved parking and driveway to SW of Block N. No ground visibility. View to NE.



Photograph 6: Paved quadrangle bordered by Blocks M and FH. View to S.



Photograph 7: Paved quadrangle area with Shade screens SS7 and SS1. View to NNE.



Photograph 8: Liverpool Girls' High School playing fields. Limited ground visibility. Large areas of saturated soil. View from former housing sites along Burnside Drive. View to SW.

Liverpool Boys' High School



Photograph 9: View to north of paved area under shade screen on eastern side of Block A. The gradient slopes to the east. No ground visibility.



Photograph 10: View to NE from Block A showing changes to natural slop to provide levelling for quadrangle and for foundations of Block D (left of image) Ground visibility limited to base of tree.



Photograph 11: Asphalted quadrangle between Blocks B, D and C with concrete strips and raised garden beds. No ground visibility. View to WSW.



Photograph 12: View across asphalt carpark to playing fields along eastern boundary. Block M, on left of image, is on northern boundary adjacent to Lachlan Street



Photograph 13: View to SW across asphalted car park to Block C (RHS) and Block B (LHS)



Photograph 14: View to north along Burnside Drive showing areas of former house sites, now converted to playing fields. Limited ground visibility.



Photograph 15: Heavily grassed areas near shelter SS4 and SS5. Minimal ground visibility. View to south.



Photograph 16: Levelled area between Block I CW4 and Block A is within the original slop rising to Forbes Street. View WNW.



Photograph 17: view to west along approximate border between Liverpool Girls' school to the left and Liverpool Boys' High School to the right. Very limited ground visibility on playing field.



Photograph 18: Aboriginal object located within the site proposed for the NLPS

APPENDIX A: AHIMS SEARCH

Office of
Environment
& HeritageAHIMS Web Services (AWS)
Extensive search - Site list reportYour Ref/PO Number : Liverpool schools
Client Service ID : 375915

| SiteID | SiteName | Datum | Zone | Easting | Northing | Context | Site Status | SiteFeatures | SiteTypes | Reports |
|-----------|---------------------------|-------|------|-----------------|----------|-----------|-------------|---|----------------|---------------------|
| 45-5-2912 | Brickmakers Creek | AGD | 56 | 307950 | 6245250 | Open site | Destroyed | Artefact : 8 | | 102196 |
| | Contact | | | | | | | Permits | | |
| 45-5-2540 | Liverpool Weir ocs1 | AGD | 56 | 308420 | 6244040 | Open site | Valid | Artefact :- | Open Camp Site | 98443,102340 |
| | Contact | | | | | | | Permits | | |
| 45-5-3629 | Collingwood Park (CW 1) | GDA | 56 | 307600 | 6243160 | Open site | Valid | Artefact :- Potential Archaeological Deposit (PAD) :- | | 101316 |
| | Contact | | | | | | | Permits | 3184,3992 | |
| 45-5-0257 | Liverpool Chipping Norton | AGD | 56 | 310540 | 6245081 | Open site | Valid | Modified Tree (Carved or Scarred) :- | Scarred Tree | 260,1018,1021 96 |
| | Contact | | | | | | | Permits | | |
| | | | | | | | | | | |
| | Recorders | | | Mr.Oliver Brown | | | | | | |
| | Recorders | | | David Bell | | | | | | |

Report generated by AHIMS Web Service on 11/10/2018 for David Nutley for the following area at Datum :GDA, Zone : 56, Eastings : 307380 - 310820, Northings : 6242804 - 6246222 with a Buffer of 50 meters. Additional Info : Archaeological Assessment. Number of Aboriginal sites and Aboriginal objects found is 4
This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

APPENDIX B: GLOSSARY

A Horizon: used in soil sciences to describe the upper layer of a soil profile, not including surface organic matter. It can be subdivided into the A1 horizon, which is darker due to accumulated humic matter, and the A2 horizon, which is lighter and leached of clay, iron, humic material, and other colouring agents.

Aboriginal object means *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 (National Parks & Wildlife Act 1974).*

Aboriginal Place means *any place declared to be an Aboriginal place under section 84 of the National Parks & Wildlife Act 1974.*

Adze: an axe like bifacial tool with a bevelled bit or blade edge usually used to work wood, or sometimes to dig for root crops.

Alluvium: material which is transported by a river and deposited at points along the flood plain of the river.

Artefact: any object made by human agency. All lithic tools and lithic debitage are considered artefacts.

Artefact scatter: also known as a surface scatter or open site, where prehistoric material such as artefacts and waste debris are lying exposed on the surface of the ground.

Assemblage: a collection of artefacts from an archaeological site.

Australian small tool tradition: a mid Holocene tool industry of the Australian Aborigines that appeared about 5,000 years ago when a new ensemble of small, flaked stone tools began to come into use. The types consisted of backed blades and flakes, Unifacial and bifacial points, and small adze flakes. There are some regional distributions of tools, including Bondi points, geometric microliths, Pirri points and Tula adzes.

Axe: a stone artefact that has been ground on one or more sides to produce a sharp edge.

B horizon: used in soil sciences to describe lower layers of a soil profile. This is the zone in which colouring agents such as clay, iron, humic material, and other colouring agents accumulate. It can be subdivided into the B1 horizon, which is the upper transitional zone, and the lower B2.

Backed blade: a blade flake that has been abruptly retouched along one or more margins opposite an acute (sharp) edge. Backed pieces include backed blades and geometric microliths. They are thought to have been hafted onto wooden handles to produce composite cutting tools or spears. Backed blades are a feature of the “Australian small tool tradition”, dating from between 5,000 and 1,000 years ago in south eastern Australia (Mulvaney 1975).

Bifacial flaking or retouch: when flakes have been removed from two opposing faces.

Biomantle: the upper part of soil produced by biodynamical agents and processes of which bioturbation is normally hierarchically dominant. By definition, it contains at least 50% biofabric, a condition met in essentially all topsoils.

Bioturbation: the alteration of a site by non-human agency, eg. burrowing animals, tree and grass roots, insects

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

Bondaian: Refers to the period in Australian stone tool production which saw a proliferation of the use of backed artefacts between 5,000 and 1,000 years ago in south eastern Australia (see ‘Backed blade’). Pre-bondaian refers to earlier periods. Late-bondaian refers to the period from 1,500- 1000 years ago.

Bondi point: a small, asymmetric backed point, named after Bondi Beach where it was first found, which is a component of the Australian small tool tradition. It is usually less than 5cm long and is sometimes described as a backed blade.

BP: an abbreviation of “before present”. A time scale used in archaeology to express old dates. The ‘present’ refers to January 1st 1950, being around the time when radiocarbon dating methods became available.

Broad platform flake: a flake which has a platform which is as wide as, or wider than, the body of the flake.

Bulb of percussion: a rounded bulge where the force from the hammerstone has radiated through the stone and split it from the core.

Burin: a flake tool that was produced by the removal of two flakes at right angles to one another to produce a very fine sharp and durable edge.

Carved trees: trees which have had designs carved into the bark or heartwood and in some areas may have been used to mark burial or initiation sites.

Chert: a sedimentary rock composed of microcrystallite quartz. It is a fine grained highly siliceous and hard rock that Aboriginal people used to make small tools. It can be flaked to form very sharp edges.

Contact: The early historic period of contact between Aboriginal people and the early settlers.

Contact Archaeology: Archaeological evidence indicating Aboriginal occupation of an area at the same time as the early settlers such as artefacts made from glass or electricity conductors etc.

Context: the time and space setting of an artefact, feature or culture. The context of a find is its position on a site, its relationship through association with other artefacts, and its chronological position as revealed through stratigraphy. An artefact's context usually consists of its immediate matrix (the material surrounding it, eg. clay, gravel or sand), its provenience (horizontal and vertical position within the matrix), and its association with other artefacts (occurrence together with other archaeological remains, usually in the same matrix). The assessment of context includes study of what has happened to the find since it was deposited.

Core: a piece of stone bearing one or more negative (concave) flake scars. A stone which has obviously had flakes and flaked pieces struck from it.

Cortex: refers to the original weathered outer surface of the rock used to manufacture an artefact.

Debitage (debris): detached pieces that are discarded during the reduction process.

Distal end: the end opposite to the platform or the point end of a blade.

Dorsal surface: the 'back' of the artefact or the side that was once part of the outside of the core or shows evidence of previous flake removals.

Edge-ground artefact: an artefact (generally an axe or adze) whose cutting edges have been ground, rather than flaked, to form a sharp edge.

Eraillure scar: the small flake scar on the dorsal side of a flake next to the platform. It is the result of rebounding force during percussion flaking.

Erosion: the wearing away or loosening and transportation of soil or rock by water, wind and ice.

Fabricator: a stone or bone artefact used in the manufacture of other tools. Often rod shaped and worn heavily on one end, it is used to chip flakes from a core, or to retouch a flake.

Flake: any piece of stone removed from a larger mass (core) by application of force (percussion), and having a striking platform and bulb of percussion.

Flaked piece: any stone struck from a larger mass by percussion but not containing all or any of the characteristics of a flake.

Focal platform flake: a flake which has a platform narrower than the body of the flake.

Grinding groove: a depression resulting from the sharpening of stone tools such as axes and adzes, usually located on surfaces of fine homogenous sandstone and near water.

Grinding stone: a thick stone used as a mortar for grinding seeds, roots, tubers, or ochre.

Hammerstone: the stone that is used to remove flakes from the core.

Holocene: that portion of geologic time that postdates the latest episode of continental glaciation. The Holocene Epoch is synonymous with the recent or postglacial interval of Earth's geologic history and extends from 10,000 years ago to the present day. It was preceded by the Pleistocene Epoch and is part of the Quaternary Period, a time characterised by dramatic climatic oscillations from warm (interglacial) to cold (glacial) conditions that began about 1.6 million years ago. The term Holocene is also applied to the sediments, processes, events, and environments of the epoch.

Horizon (or soil horizon): the layers of the upper crust of the earth. The top, or O, horizon is the layer of undecomposed litter; the A horizon is topsoil, where most roots grow; B is the subsoil; and C is the parent rock material, broken into chunks. Although some roots can penetrate into the C horizon, few microorganisms live there.

IMST: a rock type often referred to by archaeologists as indurated mudstone or silicified tuff.

Isolated find: a single stone artefact found on the surface of the land not in association with any other artefact.

Knapping: the process of hitting one stone (core) with another (hammerstone) to produce a flaked artefact.

Lamellate flaked piece: thin and wedge shaped, similar to a flake, but without the diagnostic features of a flake. A lamellate may be the distal end of a flake which has had its platform broken off.

Lithic: anything made of stone. Derived from the Greek word meaning stone or anything pertaining to stone.

Manuport: piece of stone intended to be, or used as, a core that has been carried to the area from somewhere else.

Microlith: a small (1 – 3cm long) flake with evidence of retouch. Bondi points, scrapers and backed blades are all types of microliths.

Midden: a prehistoric refuse site chiefly composed of shell fragments.

Multidirectional core: a lithic mass (core) with evidence of flaking originating from more than one direction and with more than a single striking platform.

Negative flake scar: the scar left by the removal of a flake. The scar may also show a rounded depression which is the negative of the bulb of percussion.

Object: See "Aboriginal Object"

Ochre: a crumbly to hard rock coloured by iron oxide used for as a material for painting. It is found in a variety of colours from pale yellow to dark reddish-brown.

Open site: also known as a surface or artefact scatter, where prehistoric material such as artefacts and waste debris are lying exposed on the surface of the ground.

Palynology: the study of pollen grains and other spores in the archaeological record.

Pirri point: a symmetrical leaf-shaped point, up to 7cm long, unifacially flaked all over its dorsal surface. The striking platform and bulb of percussion are sometimes removed to produce a rounded, thinned butt. Pirri points are a component of the Australian small tool tradition, found generally in inland Australia. The term pirri is an Aboriginal word for 'wood engraving tool'.

Platform: the flat surface which receives percussion or pressure in the removal of a flake or flaked piece.

Pleistocene: a geochronological division of geological time, an epoch of the Quaternary period following the Pliocene. During the Pleistocene, large areas of the northern hemisphere were covered with ice and there were successive glacial advances and retreats. The lower Pleistocene began about 1.8 million years ago; the Middle Pleistocene about 730,000 years ago; and the Upper Pleistocene about 127,000 years ago; it ended about 10,000 years ago. The Pleistocene was succeeded by the Holocene.

Potential archaeological deposit (PAD): any location considered to have a moderate to high potential for subsurface archaeological material

Potlid: small circular piece of stone that has literally "popped off" the surface of the artefact due to exposure to extreme heat.

Proximal end: the 'top' of the artefact, or the part that the knapper hit to remove it from the core, where the platform is expected to be.

Quarry: a location from which stone has been extracted in order to make stone artefacts.

Redoximorphic features: features indicating the chemical reduction and oxidation of iron and manganese compounds resulting from saturation through drainage of surface water or interaction with the water table.

Regolith: the layers of the Earth's surface overlying bedrock.

Retouch: refers to the secondary working of an artefact after it has been struck from the core. Retouch is used to sharpen the edges. It is the intentional modification of a stone tool edge by either pressure or percussion flaking techniques.

Scarred trees: trees from which bark has been removed for the manufacture of everyday items such as containers, canoes or shields.

Scraper: a generalised term used to describe a flake tool that has a retouched edge angle of approximately 60 to 90 degrees.

Silcrete: silica-rich duricrust identified by the presence of complete granules or even pebbles within the matrix.

Stratigraphy: the study and interpretation of the stratification of rocks, sediments, soils, or cultural debris, based on the principle that the lowest layer is the oldest and the uppermost layer is the youngest. The sequence of deposition can be assessed by a study of the relationships of different layers.

Taphonomy: Literally, 'the laws of burial'. In archaeology, it is the study of the processes by which archaeological remains are transformed by human and natural processes during their incorporation into archaeological deposits, their subsequent long-term preservation within those deposits, and their recovery by archaeologists. The aim is to understand the processes resulting in the archaeological record.

Thumbnail scraper: a small flake with a convex scraper edge, shaped like a thumbnail and located opposite the flake's platform. They exhibit unifacial retouch (usually on the ventral surface) and are usually less than 30mm in length.

Transect: an arbitrary sample unit which is a linear corridor of uniform specified width. A straight line or narrow sections through an archaeological site, along which a series of observations or measurements is made.

Tuff: a rock formed of volcanic fragments (generally ash).

Typology: a scheme to order multiple types in a relational manner. A common typology orders types in a hierarchical manner.

Unidirectional core: a core with only one striking platform surface and with flake scars extending in only one direction.

Unifacial flaking or retouch: where flakes have been removed from one face only.