Unearthed

Archaeology & Heritage

Bankstown North Public School

322 Hume Highway, Bankstown

Aboriginal Archaeological Assessment

Prepared by:	Tory Stening
Report to:	JDH Architects on behalf of the Department of Education
LGA:	Canterbury-Bankstown Council
Date:	March 2019
Version:	C.2019.1015

Unearthed
Archaeology & Heritage

Version:	Project Number: UA/1015.JDH	
A.2018	Author(s):	Tory Stening
	Date:	13th December 2018
	Status:	Draft
B.2019	Author(s):	Tory Stening
	Date:	27th March 2019
	Status:	Final
C.2019	Author(s):	Tory Stening
	Date:	29th March 2019
	Status:	Final

Unearthed
Archaeology & Heritage

Executive Summary

JDH Architects has been engaged by the NSW Department of Education to design new contemporary learning environments for Bankstown North Public School. The project has been determined as State Significant Development. JDH Architects have received preliminary planning advice that it is likely that there will be a requirement to identify, describe and document the Aboriginal Cultural Heritage values that exist across the whole area that will be affected by the development.

As such, Unearthed Archaeology & Heritage were commissioned by JDH Architects on behalf of the Department of Education to undertake this Aboriginal archaeological assessment. This Aboriginal archaeological assessment has been undertaken in accordance with the Office of Environment & Heritage's (OEH) *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* and *Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW*.

Bankstown North Public School is located on the Wianamatta Shales on and on the slope below the ridgeline within a hinterland/freshwater environment, an area which Attenbrow's (2002) research demonstrates was not as heavily populated as on the coast. The predictive model indicates that sites are more likely to occur on the valley bottoms and shorelines on Hawkesbury Sandstone, rather than in locations as at Bankstown North Public School which is located on and just below the ridgeline on Wianamatta Shales.

Given that Bankstown North Public School is situated on Wianamatta Shales and is located approximately 900m from the Cooks River, it would be expected that if any evidence of Aboriginal occupation did exist within the study area, that only very low density open camp sites or isolated finds that are the result of tool manufacture or discard would be expected.

The area proposed for demolition of existing buildings and the construction of new buildings and structures was inspected carefully to understand the potential impacts of the proposed works. The area of proposed works has undergone significant disturbance with the construction of buildings, levelling and cutting of areas for playground and car parking surfaces, the installation of underground services and general landscaping. The ongoing development of the school would have removed the upper layers of soil and therefore removed any evidence of Aboriginal occupation within the grounds of Bankstown North Public School.

Therefore, it is recommended that:

1. There is no objection to the proposed development on Aboriginal archaeological grounds;

2. No Aboriginal objects were recorded during the site inspection. The study area does not possess any significance in respect of Aboriginal archaeology and cultural heritage, and it is considered highly unlikely that any archaeological deposits remain within the study area or will be impacted upon by the present development;

3. No further investigation in respect of Aboriginal archaeology or cultural heritage is required;

4. It is not necessary to undertake consultation with the Aboriginal community in accordance with OEH's *Aboriginal cultural heritage consultation requirements for proponents 2010* or preparation of an Aboriginal Cultural Heritage Assessment Report (ACHAR);

5. If, during the proposed works, any Aboriginal objects or evidence of Aboriginal occupation are uncovered, all work must cease in the vicinity of the suspected Aboriginal objects or evidence of occupation, and further advice should be sought from a qualified archaeologist.

Unearthed

Archaeology & Heritage

1.0 Background Information

1.1 Introduction

JDH Architects has been engaged by the NSW Department of Education to design new contemporary learning environments for Bankstown North Public School. The project has been determined as State Significant Development.

JDH Architects have received preliminary planning advice that it is likely that there will be a requirement to identify, describe and document the Aboriginal Cultural Heritage values that exist across the whole area that will be affected by the development. JDH Architects anticipate that the Secretary's Environmental Assessment Requirements (SEARs) may include the following requirements:

- Identify, describe and document the Aboriginal Cultural Heritage values that exist across the whole area that will be affected by the development, which may include the need for surface survey and test excavation. The identified of Aboriginal Cultural Heritage values should be guided by the *Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW* (DECC, 2011).
- Where Aboriginal Cultural Heritage values are identified, consultation with Aboriginal people must be undertaken and documented in accordance with *the Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW). The significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be documented in the EIS.
- The EIS must demonstrate attempts to avoid impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the EIS must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented in the EIS.

As such, Unearthed Archaeology & Heritage were commissioned by JDH Architects on behalf of the Department of Education to undertake this Aboriginal archaeological assessment. This Aboriginal archaeological assessment has been undertaken in accordance with the Office of Environment & Heritage's (OEH) *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* and *Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW*.

1.2 Study area location

Bankstown North Public School is located at 322 Hume Highway, Bankstown, approximately 16kn to the north west of the Sydney Central Business District (CBD). It is located within the Canterbury-Bankstown Council Local Government Area (LGA). It comprises Lot 14 DP 1000689.

Bankstown North Public School is bound by Stacey Street to the north, Beresford Avenue to the east, the Hume Highway to the south and the residential properties fronting the eastern side of Rookwood Road to the west.

Figure 1 below shows the location of Bankstown. Figure 2 below shows the location of Bankstown North Public School on the topographic map. Figure 3 below shows Bankstown North Public School on the aerial photograph.

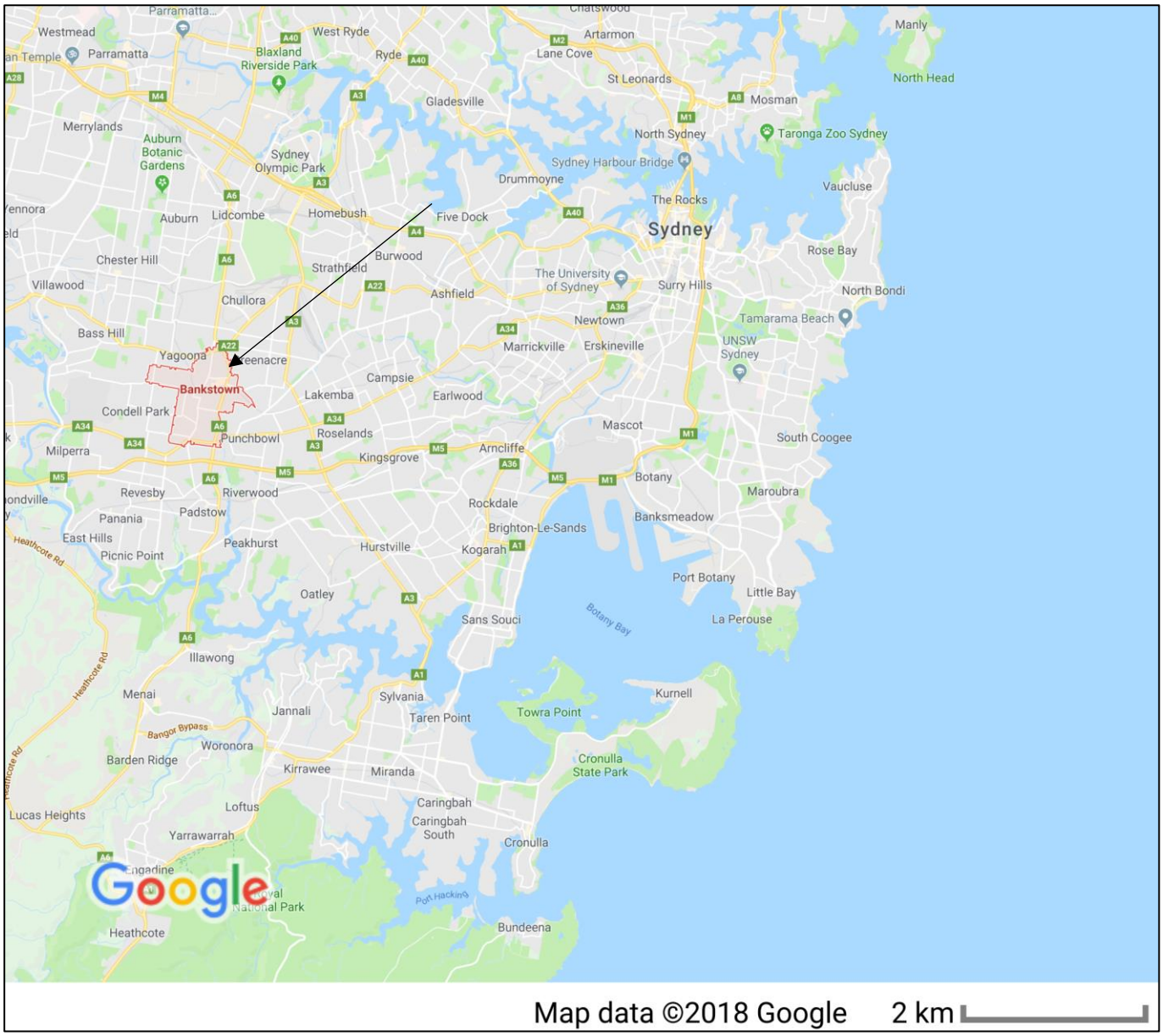


Figure 1: Showing the location of Bankstown indicated by the arrow (map courtesy of Google Maps).

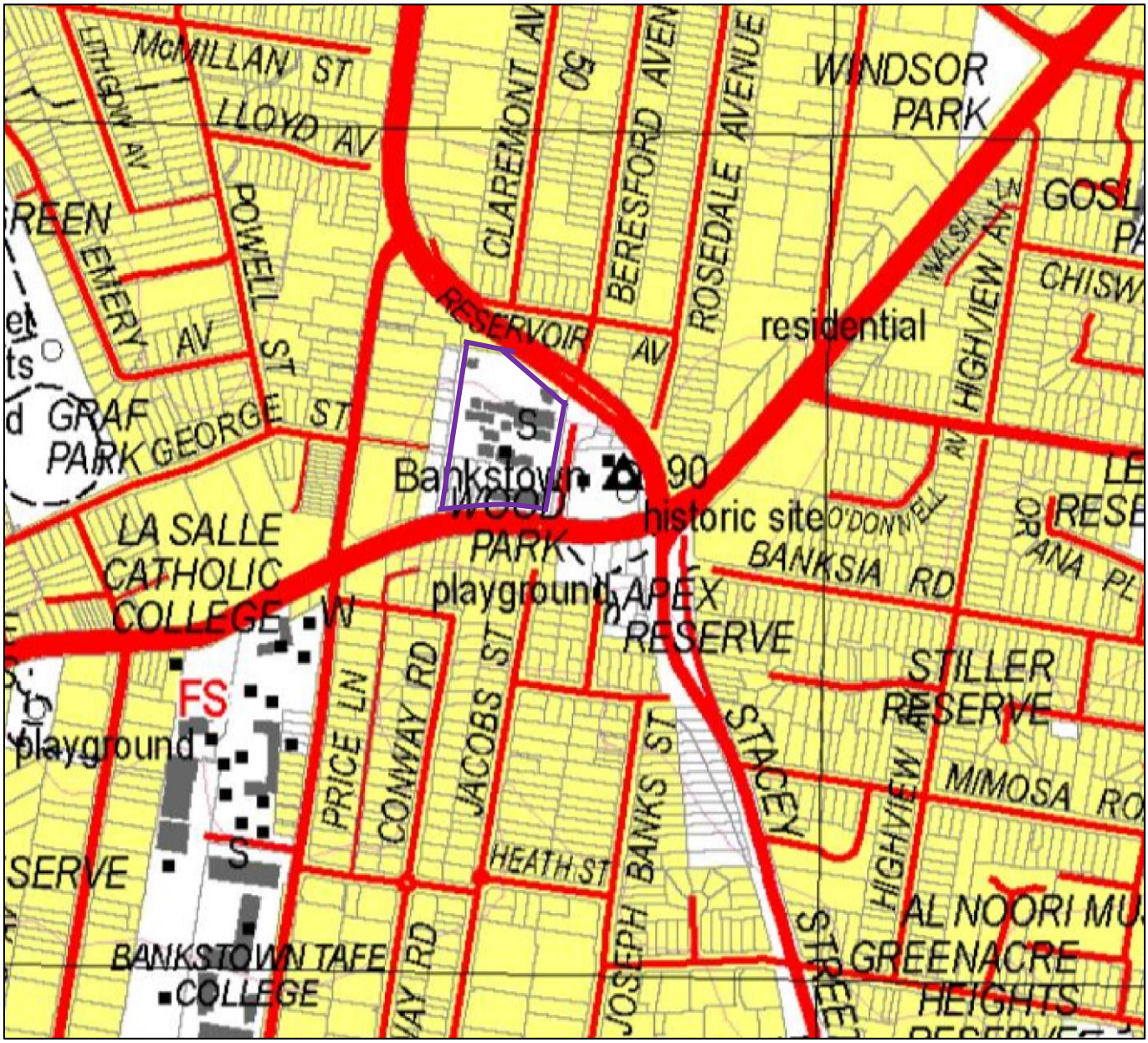


Figure 2: Showing Bankstown North Public School outlined in purple (topographic map courtesy of www.maps.six.gov.nsw,au)

Figure 3: Showing the boundaries of Bankstown North Public School on the 2018 aerial photograph outlined in purple (map courtesy of www.maps.six.gov.au) .

2.0 Proposed works

The proposal is for the redevelopment of BNPS for a total of 36 new teaching spaces by 2022:

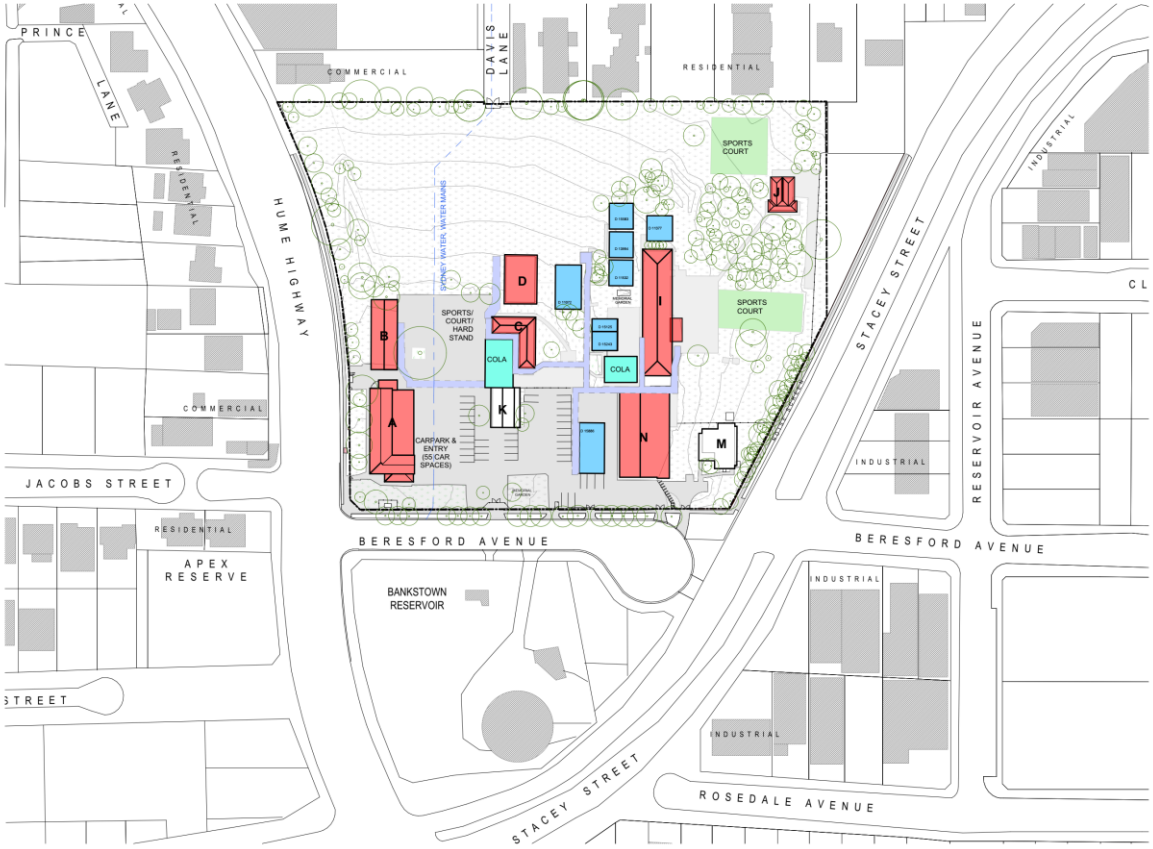
- Construction of 30 new teaching spaces, including four teaching spaces for special education
- Construction of new core facilities to Core 35 guidelines, including Staff and Administration, Library and Special Programs, Canteen and Covered Outdoor Learning Area
- Construction of student amenities to Core 28 guidelines
- Retention and extension of the existing hall (Building N)

The planning approval pathway for BNPS redevelopment is State Significant Development (SSD). However, the following works will be undertaken as part of a separate planning approval pathway to enable the SSD works to take place (these do not form part of the SSD application):

- Construction of a new carpark
- Demolition of Blocks A, C, D, K and the existing demountable buildings
- Demountable classroom installation
- Off-site infrastructure upgrades
- Retention and refurbishment of 6 existing teaching spaces (Building B and Building I)"

Figure 4 below shows the existing site plan for Bankstown North Public School. Figure 5.shows the proposed works plan.

CD06 EXISTING SITE PLAN



ENROLMENTS:

CURRENT ENROLMENTS : 367

FUTURE STUDENT ENROLMENT (2022): 725

NET NEW TEACHING SPACES: 30

OUTDOOR PLAY SPACE (10sqm per student):

REQUIRED OPEN SPACE:	8250m^2
PROPOSED OPEN SPACE:	11,495m^2
TOTAL SITE AREA:	**27,683m^2**

LEGEND

- GENERAL SCHOOL BUILDINGS
- OTHER BUILDINGS (EXTERNAL USE)
- DEMOUNTABLES
- COLA (COVERED OUTDOOR LEARNING AREA)
- COVERED WALKWAYS
- EXISTING LANDSCAPING
- SPORTS FIELD
- GENERAL LANDSCAPE
- CONCRETE HARDSCAPE/CARPARK
- BOUNDARY
- FENCE

JDH architects 44 Little Oxford Street Darlinghurst, NSW 2010 Telephone: 02 9281 8697 www.jdharchitects.com.au

NSW GOVERNMENT Education School Infrastructure

BANKSTOWN NORTH PUBLIC SCHOOL
322 HUME HWY BANKSTOWN NSW 2200

BANKSTOWN NORTH PUBLIC SCHOOL
Rev. A
CONCEPT DESIGN
19/03/28
PRELIMINARY SCALE: @A3

Figure 4: Showing the existing site plan of Bankstown North Public School (plan courtesy of JDH Architects).

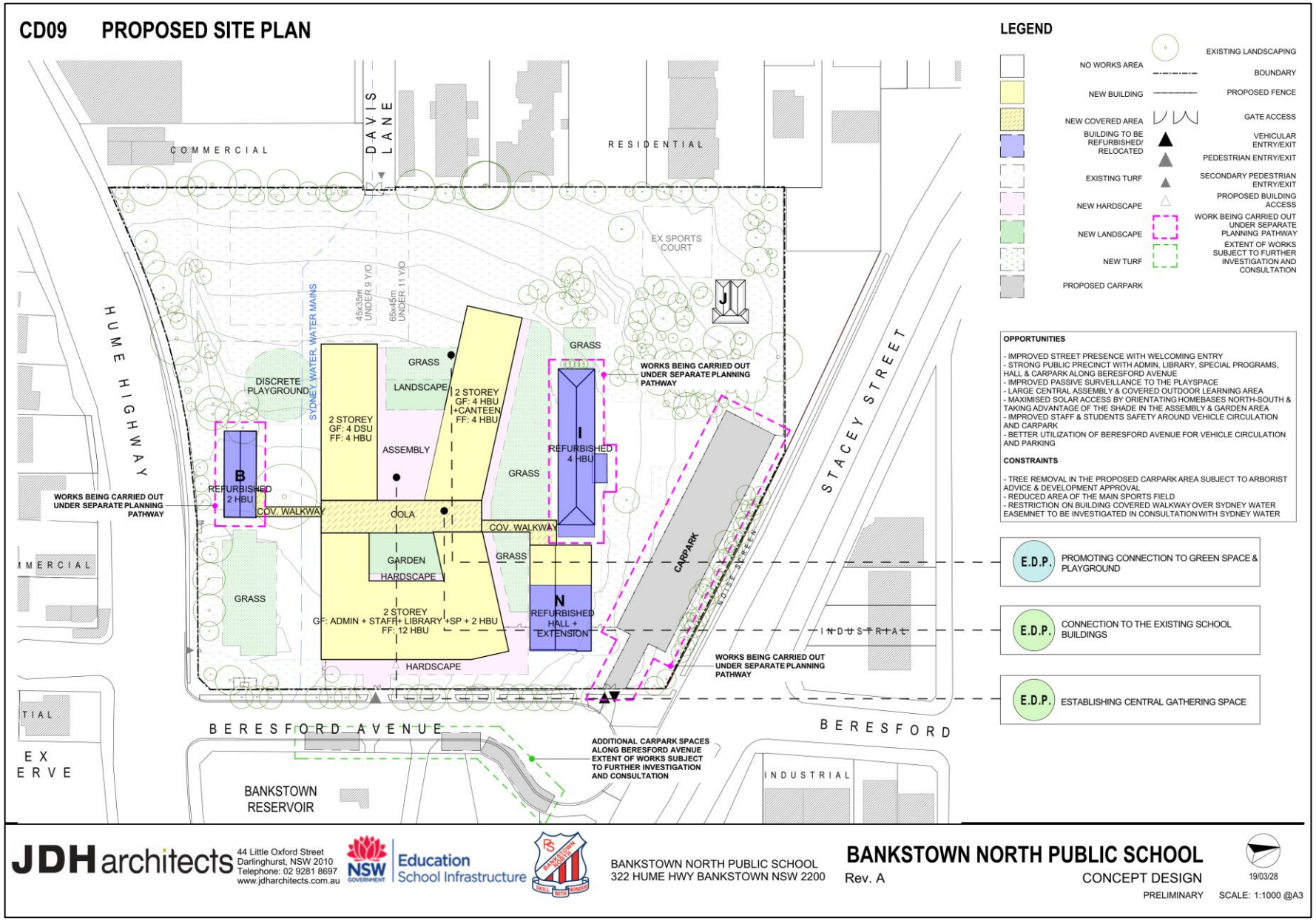


Figure 5: Showing the proposed works plan for Bankstown North Public School (plan courtesy of JDH Architects).

3.0 Landscape and Environmental Context

3.1 Topography

Bankstown North Public School is located within the central portion of the Sydney Basin. The Sydney Basin is a geological basin of the Permian-Triassic era that covers an area of 64,000km^2 on the central eastern coast of Australia (http://www.environment.nsw.gov.au/bioregions/SydneyBasin-Landform.htm 12/10/2017). The Sydney Basin is comprised of sandstone and shales which has been subjected to erosion, creating a landscape of steep sandstone cliffs and escarpments, plateaus over areas of shale and coastal sand dune and wetland systems (Stening 2018a:4).

Bankstown is located in the south western portion of the Cumberland Plain, the low lying, gently undulating plain which covers approximately 30% of the Sydney Basin. The Cumberland Plain covers an area of approximately 2750m^2 and extends from Windsor in the north west to Picton in the south, the Nepean-Hawkesbury River in the west, to the headwaters of the Georges and Parramatta Rivers in the east and to the Hornsby Plateau in the north (Stening 2018b:6).

Bankstown North Public School is located approximately 900m to the south of the Cooks River, approximately 2km to the east of Duck River and approximately 1.4km to the west of an unnamed creek line. It is located approximately 1.4km to the south east of the confluence of the Cooks and Duck Rivers. The Hume Highway follows the ridgeline and the grounds of Bankstown North Public School gradually slope up toward the Hume Highway ridgeline.

3.2 Stream Order Modelling

Stream order can be used to facilitate a predictive model of Aboriginal land use patterns. A creek or small tributary that generally does not have any water flowing into it, but feeds into a larger stream is classified as a first order stream. A first order stream can have intermittent flow. When two first order streams join, it creates a second order stream, and the joining of two second order streams creates a third order stream and so forth (Strahler 1957).

McDonald and Mitchell (1994) developed a predictive model within the Cumberland Plain which demonstrates that stream order can be used to predict areas of archaeological potential. Their hypothesis is that in order to allow permanent stream flow or to allow the formation of waterholes with extended longevity over months and years, it is necessary to have a threshold catchment area. The critical point at where the necessary conditions are met is at the junction of two second or third order streams. Locations such as these areas likely to contain larger, more complex sites with higher densities of artefacts, whilst locations within 100 metres of second and third order streams are likely to contain large sites (Stening 2018b:7).

The study area is located approximately 900m to the south of the Cooks River, a third order stream. The study area is located approximately 900m to the west of an unnamed creek line, a first order stream. The proximity of a third order stream indicates that archaeological potential could be expected within the study area.

3.3 Geology and soils

The geology of the Sydney CBD is characterised by Hawkesbury Sandstone with areas of overlying Wianamatta Shales (Stening 2018b:6). Bankstown North Public School is located on the Bringelly Shales of the Wianamatta Shales Group. The Wianamatta Shales do not provide a significant variety of lithic materials suitable for small tool manufacture, however small outcrops of tuff can be found in the upper layer (Herbert 1980: 22; Sydney Geological Map 1:100,000). However, the surrounding Hawkesbury Sandstone weathers into overhangs and shelters suitable for habitation and protection from the elements and provides surfaces suitable for the manufacture of ground edge implements and for the engraving and painting of art. Outcrops of materials suitable for small tool manufacture, such as chert, silcrete, tuff and quartz, weather from the Hawkesbury Sandstone (Stening 2018b:6).

The NSW Soil and Land Information System provides two soil profiles in the vicinity of the study area. A soil profile sampled to the north west of Bankstown North Public Schools indicated an A1 soil profile of a brown silty loam to a depth of approximately 30cm overlying an A2 horizon of pinkish grey light clay to a depth of 60cm (Soil Essentials Report: Bano Hall Res. Birrong). A second soil profile recorded to the south of Bankstown North Public School is comprised of Yellow Podzolic Soils. This soil profile is characterised by a dark brown coarse sandy loam to a depth of approximately 25cm, overlying a pale brown sandy clay loam to a depth of 40cm, with a yellowish brown medium clay to a depth of approximately 60cm (Soil Essentials Report: Bankstown). Aboriginal archaeological deposits including camp sites would be anticipated to be located within the silty and sandy loams in the upper 30-40cm of the natural soil profile.

3.4 Vegetation

Historically the study area would have been comprised of the Shale/Gravel Transition Forest vegetation community which is characterised by Red Ironbark (*Eucalyptus fibrosa*), Woollybutt (*Eucalyptus longifolia*) and Grey Box (*Eucalyptus moluccana*). A sparse shrub layer is usually present which includes Blackthorn (*Bursaria spinosa)*, *Daviesia ulicifolia* and Peach Heath *Lissanthe strigose* (http://www.shanespark.com/UBBS/UBBS%20Flora%20App1%20-%20Bankstown.pdf)

Flowers of the many eucalypt and banksia species provide a rich nectar that was eaten by Aboriginal people and the wide variety of vegetation provided a food source for animal species, such as small marsupials and birds, which are associated with the Aboriginal diet. The large trees provided bark and wood for coolamons (a shallow carrying vessel for food or water), shields, spears and canoes (Stening 2018a:6).

3.5 Land use history and current land use

The present day Bankstown North Public School was known as Bankstown Public School from its opening in 1868 until the name was changed in 1914. The school began in a weatherboard church hall and the first public school building was opened in 1880. The two storey brick building which still sits at the corner of the Hume Highway and Beresford Avenue was opened in 1924 and was extended in 1944. In 1953 a four room Infants' Department was constructed and another building in 1959. In the 1980s, demountable classrooms were introduced to the school. In 2011 a new hall and canteen were constructed, and the library refurbished in the old hall (http://bankstownnorthps.com.au/our-school/history).

Figure 6 below shows a photograph of Bankstown North Public School in 1914. Figure 7 shows the school in 1924 and Figure 8 shows the 1943 aerial photograph of the school site.

Figure 6: Bankstown North Public School in1914 (photo courtesy of http://bankstownnorthps.com.au/our-school/history/dsc02070)

Figure 7: Bankstown North Public School in 1924 (photo courtesy of http://bankstownnorthps.com.au/our-school/history/dsc02073).

Figure 8: Showing the 1943 aerial with the present day footprint of Bankstown North Public School outlined in red (map courtesy of www.maps.six.gov.nsw.au).

4.0 Archaeological Context

4.1 Sydney Basin

Research into the regional and local archaeological context of the study area can be used to develop an understanding of the patterning of Aboriginal land use and enable the preparation of a predictive model to determine the likelihood of particular site types being located within the study area.

The Last Glacial Maximum (LGM), the last period when Earth's ice sheets were at their maximum glaciation, occurred between 15,000 – 18,000 years ago. Sea levels were up to 130m below current sea levels during this period (Nutley 2006:1). As temperatures started to rise at the end of the LGM, the polar ice caps started to melt and sea levels began to rise, and in doing so helped to form the present day Sydney landscape.

As sea levels rose, people were forced to move inland, abandoning formerly coastal sites which were now being inundated by the sea (Nutley 2006). Sea levels began to stabilise about 6,000 years ago and the majority of sites around the Sydney region date to the last 5,000 years after sea levels had stabilised. Research into submerged Aboriginal sites has demonstrated that several submerged sites in the Sydney region date to more than 10,000 years BP.

Research into the regional and local archaeological context of the study area can be used to develop an understanding of the patterning of Aboriginal land use and enable the preparation of a predictive model to determine the likelihood of particular site types being located within the study area.

The Last Glacial Maximum (LGM), the last period when Earth's ice sheets were at their maximum glaciation, occurred between 15,000 – 18,000 years ago. Sea levels were up to 130m below current sea levels during this period (Nutley 2006:1). As temperatures started to rise at the end of the LGM, the polar ice caps started to melt and sea levels began to rise, and in doing so helped to form the present day Sydney landscape.

As sea levels rose, people were forced to move inland, abandoning formerly coastal sites which were now being inundated by the sea (Nutley 2006). Sea levels began to stabilise about 6,000 years ago and the majority of sites around the Sydney region date to the last 5,000 years after sea levels had stabilised. Research into submerged Aboriginal sites has demonstrated that several submerged sites in the Sydney region date to more than 10,000 years BP.

In 1989 the National Parks and Wildlife Service (NPWS) engaged Smith to undertake an Aboriginal Site Planning Study to assist in the management of Aboriginal sites on the Cumberland Plain (Smith 1989), as the number of archaeological investigations being undertaken in the region was increasing due to increasing development.

Smith's study indicated that site location and site densities were heavily influenced by the availability of water and of raw materials to manufacture tools, however other environmental factors including topography, soil type and vegetation had significantly less influence on site location and densities (1989:3). She states that sites "will most likely occur along permanent creeks and within and around swamp margins" (1989: 2). When discussing the Liverpool Local Government Area where the present study area is located, Smith notes that in this area, factors such as soils, topography and vegetation do not influence site location but rather that the vast majority of artefacts within the area are located within 100m of water and that artefacts scatters were most likely to be found in association with permanent water sources (Smith 1989).

The burgeoning expansion of development into southern, northern and western Sydney has increased since Smith's (1989) study, resulting in a significant increase in the archaeological investigation of the Cumberland Plain. The results of these archaeological assessments and excavations has demonstrated the complexity of the archaeological record across the region. In particular, ongoing research and investigation has indicated that the presence of surface artefact scatters does not indicate the full nature and extent of the archaeological deposit. Archaeological deposits can be located despite historical disturbance and in locations with a lack of surface artefacts. The research has indicated that more complex sites with higher artefact densities are generally located on permanent water sources and areas with major confluences present are prime site locations (Stening 2016:11).

In 1997, Kohen's (1997) studies around Penrith determined that sites such as surface artefact scatters, rock shelters and grinding grooves "are particularly likely to occur adjacent to the rivers and creeks", such as the Nepean River, a fifth order stream.

The results of McDonald's excavations in the Rouse Hill Development Area (2005) refined the model of occupation for the Cumberland Plain. She examined site location, mobility and change over time, in relation to stream order. Her study determined that confluences of second and third order streams with other watercourses are more likely to contain major, complex sites.

She examined the dynamic nature of lithic, or stone tool, technologies across the Cumberland Plain. She analysed the manner in which "stone technologies were organised in relation to landscape" and the way in which technologies and the model of occupation across the Cumberland Plain changed over time in response to environmental factors (McDonald 2005:np). As sea levels rose and population levels increased in the region, sites become more intensively occupied and some groups live permanently in the Cumberland Plain. As such, emphasis is placed on locally sourced raw materials for the manufacture of stone tools and lithic technology changes accordingly (McDonald 2005: np).

McDonald's excavation methodology demonstrated that a lack of artefacts on the surface does not reflect the actual archaeological potential of a site. She states that "despite artefacts being rare or completely absent on the surface of each of the sites investigated, all six sites were found to contain intact archaeological deposit" (McDonald 2005:np). Sites were selected for investigation based on their assessed archaeological potential.

McDonald's extensive studies across the Cumberland Plain have resulted in a predictive model for the region. She determined that sites located on fourth or fifth order streams are likely to be more complex and possibly stratified indicating ongoing, repeated, lengthy occupation at these locations. Sites with evidence of frequent occupation are likely to be located within third order stream catchment areas. Second order streams have the potential to contain sites which reflect occasional occupation.

Comber's excavations at Penrith Lakes (2010) confirmed the model of occupation presented by Kohen (1997) and McDonald (2005). Excavations were undertaken in two locations, adjacent to the Nepean River, a fifth order stream. Her excavations revealed that despite only a low density artefact scatter being present on the surface at each location, more than 1,000 artefacts were collected from a highly stratified, intensively occupied site.

Excavations undertaken at a highly disturbed location adjacent to Eastern Creek, a third order stream, at Doonside (Stening 2011). These excavations demonstrated that despite no surface artefacts being recorded, more than 1,000 artefacts were uncovered. Analysis showed that the site had been occupied by a larger, more complex group over more extensive periods of time.

In 1984 Haglund located one open artefact scatter and one isolated find between King Georges Road, Beverly Hills and Heathcote Road, Moorebank along the banks of the Georges River. In that report she summarised work undertaken to date in South Sydney and determined that the "known sites are mostly, by, or close to, the Georges River in sandstone cliffs or outcrops" (1984: 3).

Extensive survey work was undertaken by Koettig (1980; 1982) and Koettig and Hughes (1983) along the route of the proposed rail link between East Hills and Glenfield within the Wianamatta Shale landscape. No Aboringal sites were recorded during this extensive fieldwork program.

Smith (1989), Kohen (1997) and McDonald's (2005) model of occupation for the Cumberland Plain indicates that larger, more complex sites are more likely to be located at the confluence of several watercourses, especially higher order streams. Evidence of frequent occupation is likely to be located within third order stream catchment areas, despite a lack or a low density of surface artefacts. First and second order creeks are likely to contain evidence of less complex and lower density sites. Therefore, given that the study area is located approximately 1.4km to the south east of the confluence of the Cooks and Duck Rivers two third order streams, evidence of frequent occupation could be expected within the study area.

A study of Aboriginal subsistence patterns and cultural change across the Sydney region was undertaken by Attenbrow in 2002. She determined that the Sydney region was not intensively occupied until sea levels rose about 5,000 years ago. She concluded that middens and open campsites comprised over half of the over 4000 Aboriginal sites registered on the AHIMS database at the time and that the main focus of Aboriginal occupation was "on the valley bottoms and shorelines" (2002: 47). Her analysis also determined that Aboriginal people were more likely to occupy the coastal and estuarine landscapes on Hawkesbury sandstone, rather than the hinterland and freshwater environments on the Wianamatta shales.

The present study area is located on the Wianamatta Shales on and on the slope below the ridgeline within a hinterland/freshwater environment, an area which Attenbrow's (2002) research demonstrates was not as heavily populated as on the coast. The predictive model indicates that sites are more likely to occur on the valley bottoms and shorelines on Hawkesbury Sandstone, rather than in locations as at Bankstown North Public School which is located on and just below the ridgeline on Wianamatta Shales.

4.2 Bankstown and Surrounding Suburbs

A search of the Aboriginal Heritage Information Management System (AHIMS) on 23rd November 2018 indicates that there are five registered Aboriginal sites within a 5km radius of the study area. Table 1 below shows the details of those five registered Aboriginal sites within the vicinity of the study area. Figure 9 below shows the location of these five sites.

AHIMS No.	Site Location	Site type
45-6-2546	This site is located within the northwest corner of Punchbowl Park, approximately 3.1km to the south of the present study area within an area of Hawkesbury Sandstone.	Open camp site with stone artefacts and midden material.
45-6-2470	The site is recorded as on the "track to pipeline through public reserve" just above the mangroves. The site is located approximately	Rock shelter with deposit.

	6.3km to the south of the present study area within an area of Hawkesbury Sandstone. .	
45-6-2471	The site is recorded as on the "track to pipeline through public reserve" just above the mangroves. The site is located approximately 6.3km to the south of the present study area within an area of Hawkesbury Sandstone..	Rock shelter with deposit.
45-6-1783	This site is located behind Clarke Street South, Peakhurst and approximately 100m from Salt Pan Creek. The site is located approximately 6.9km to the south of the study area within an area of Hawkesbury Sandstone.	Rock shelter with deposit
45-6-3358	Riverwood PAD01 is located at within preserved parkland and within 200m of Salt Pan Creek at Kentucky Road Riverwood. The site is located approximately 4.5km to the south of the present study area within an area of Hawkesbury Sandstone.	Potential Archaeological Deposit

Table 1: Showing the details of registered AHIMS sites within 1km of the study area.

The Canterbury-Bankstown City Council website states that among the most important Aboringal sites in the LGA is "the surviving Aboriginal artwork sites in Canterbury Bankstown is a rock shelter located at Undercliff, in the environs of Cooks River". The website also mentions a "site of Aboriginal resistance to settlers" at Punchbowl. Council indicates on their website that evidence of Aboriginal occupation can be found "along the Georges River, Cooks River and other areas, including rock and overhand paintings, stone scrapers, middens and axe grinding grooves" (https://www.cbcity.nsw.gov.au/community/cultural-services/aboriginal-torres-strait-islanders/aboriginal-history-places-of-significance).

The results of the AHIMS search indicate that no Aboriginal sites have been registered within the Bankstown area. However, the above sites within a 5km radius of the study area indicate that rock shelters and open camp sites could be expected, and that evidence of Aboriginal occupation is more likely located in the vicinity of fresh water in areas of Hawkesbury Sandstone and in areas undisturbed by urban and commercial development.

Given that Bankstown North Public School is situated on Wianamatta Shales and is located approximately 900m from the Cooks River, it would be expected that if any evidence of Aboriginal occupation did exist within the study area, that only very low density open camp sites or isolated finds that are the result of tool manufacture or discard would be expected.

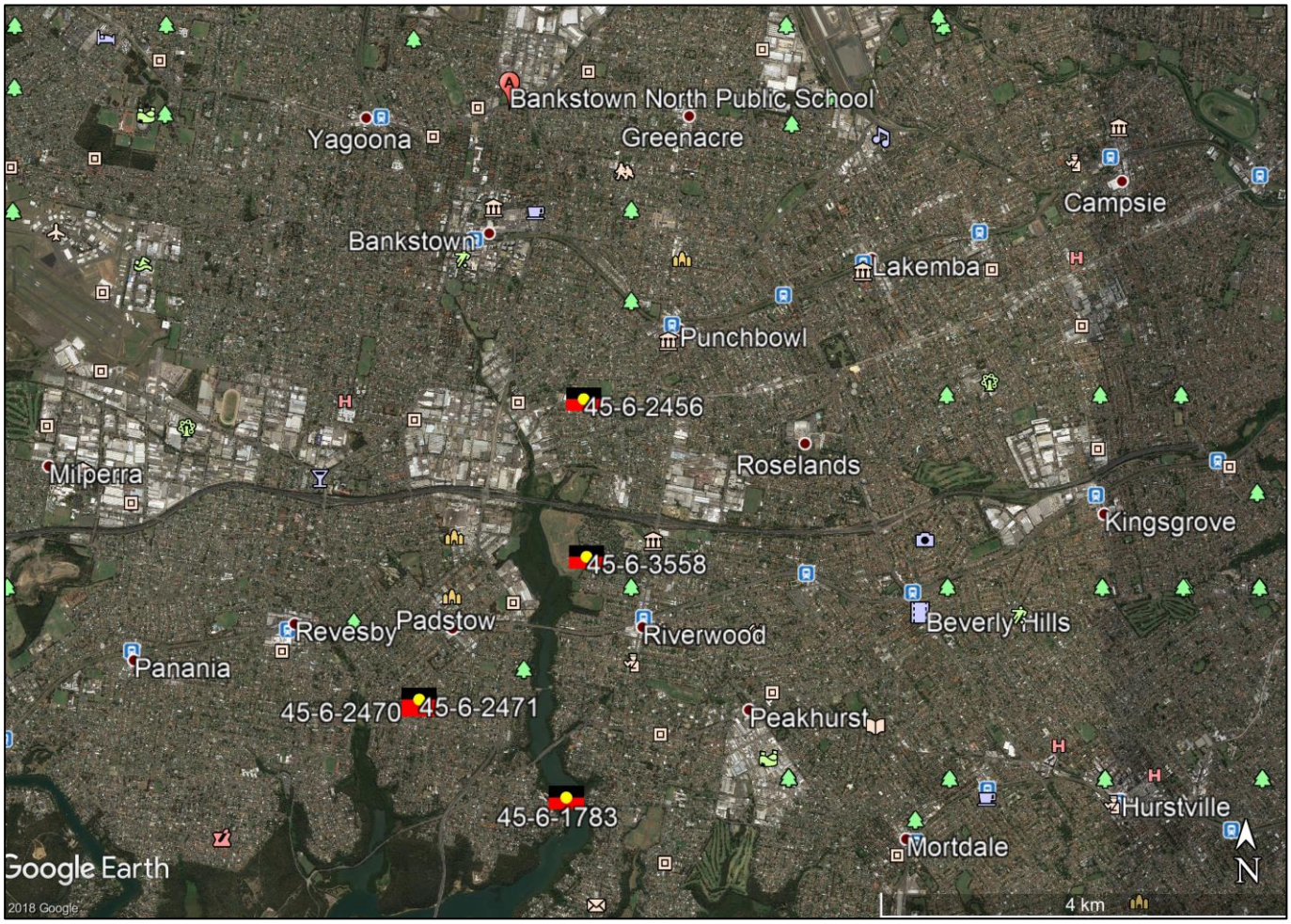


Figure 9: Showing the location of the five registered AHIMS sites within a 5km radius of Bankstown North Public School.

4.3 The Study Area

A search of the AHIMS database dated 23rd November 2018 indicates that there are no registered Aboriginal sites within the study area.

4.4 Predictive Model

The above environmental and archaeological research across the Sydney region indicates that it is more likely that evidence of Aboriginal occupation will be found on the coastal and estuarine landscapes on Hawkesbury sandstone rather than the hinterland and freshwater environments on the Wianamatta shales, such as the present study area. Evidence of Aboringal occupation within the Bankstown area is likely to be focused around the Cooks and Georges Rivers.

The results of the AHIMS search indicates that rock shelters and open camp sites are the most commonly occurring site type in the area, however rock shelters are not expected within the study area as there is no outcropping sandstone suitable for shelters. As the study area has previously been cleared of all original vegetation, scarred or carved trees are not expected.

Bankstown North Public School is located on the Wianamatta Shales on and on the slope below the ridgeline within a hinterland/freshwater environment, an area which Attenbrow's (2002) research demonstrates was not as heavily populated as on the coast. The predictive model indicates that sites are more likely to occur on the valley bottoms and shorelines on Hawkesbury Sandstone, rather than in locations as at Bankstown North Public School which is located on and just below the ridgeline on Wianamatta Shales.

Given that Bankstown North Public School is situated on Wianamatta Shales and is located approximately 900m from the Cooks River, it would be expected that if any evidence of Aboriginal occupation did exist within the study area, that only very low density open camp sites or isolated finds that are the result of tool manufacture or discard would be expected.

5.0 Methodology

5.1 Background research

A search of the OEH's AHIMS database was undertaken on 23rd November 2018. Research was undertaken into the environmental background of the study area, outlining the topographic, geological and vegetation context of the study area. An analysis of the archaeological background of the Sydney Basin and Bondi Beach was undertaken. This background research facilitated an understanding of Aboriginal land use patterns within the region and the preparation of a predictive model of occupation.

A review of plans for the proposed development of the study area enabled an understanding of the impact of the proposed works on the potential archaeological deposit.

5.2 Site inspection

A site inspection was undertaken on 23rd November 2018 by Tory Stening.

The entire study area was inspected on foot to develop an understanding of the environmental and potential archaeological context and to record any evidence of Aboriginal occupation.

The surrounding landscape was also examined to facilitate an understanding of the environmental context of the study area and to attempt to locate previously recorded Aboriginal sites within the vicinity of the study area.

5.3 Effective survey coverage

The study area is comprised of landscaped gardens, buildings and the grassed oval and associated banks. Ground visibility during the site inspection was nil due to the presence of grass and concrete surfaces.

5.4 Consultation

Consultation has not been undertaken with any representatives of the Local Aboriginal Land Council or any other representatives of the Aboriginal community.

5.5 Report

This Aboriginal Archaeological Assessment Report was prepared in accordance with OEH's *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in New South Wales* and *Code of Practice for the Investigation of Aboriginal Objects in NSW*.

6.0 Results and Mitigation

6.1 Results

The site inspection was undertaken on 23rd November 2018 and was conducted on foot. All accessible outdoor areas were carefully inspected with particular attention being paid to the historic topography and the disturbance from European development. Bankstown North Public School has undergone 150 years of development as a school. School buildings have been constructed across the study area, underground services have been installed and the grounds have been landscaped. The school grounds have previously been cleared with no original vegetation remaining.

No Aboriginal objects or sites were recorded during the site inspection. An AHIMS search dated 23rd November 2018 indicates that no Aboriginal sites had previously been recorded within the study area. Furthermore, the AHIMS search indicated that only five registered Aboriginal sites are located within a 5km radius of Bankstown North Public School, with all five being at least 3km from the study area.

The study area is located approximately 900m to the south of the Cooks River, a third order stream. The study area is located approximately 900m to the west of an unnamed creek line, a first order stream. The proximity of a third order stream indicates that archaeological potential could be expected within the study area, as the environmental and archaeological research presented in this report indicates that evidence of Aboriginal occupation in the Bankstown area is likely to be focused around the Cooks and Georges Rivers. The archaeological evidence indicates that rock shelters and open camp sites are the most likely site types. No suitable sandstone outcrops for shelters were observed or expected across the study area as it is situated on the Wianamatta shales.

However, the predictive model presented by Attenbrow (2002) indicates that it more likely that evidence of Aboriginal occupation will be found on the coastal and estuarine landscapes on Hawkesbury Sandstone rather than the hinterland and freshwater environments on the Wianamatta shales, such as the present study area.

Bankstown North Public School is located on the Wianamatta Shales on and on the slope below the ridgeline within a hinterland/freshwater environment, an area which Attenbrow's (2002) research demonstrates was not as heavily populated as on the coast. The predictive model indicates that sites are less likely to occur in locations as at Bankstown North Public School which is located on and just below the ridgeline on Wianamatta Shales.

Given that Bankstown North Public School is situated on Wianamatta Shales and is located approximately 900m from the Cooks River, it would be expected that if any evidence of Aboriginal occupation did exist within the study area, that only very low density open camp sites or isolated finds that are the result of tool manufacture or discard would be expected.

The 1943 aerial photograph (Figure 8) shows that the school grounds had already been subjected to levelling to create a flat play area and zigzag trenches have been excavated within the area now occupied by the oval/playing field.

The construction and ongoing maintenance of the Hume Highway would have had an impact on the southern portion of the school grounds. It is also highly likely that the construction of Rockwood Road to the north of the school would have impacted upon any natural ground surfaces in the northern portion of the school grounds.

The area proposed for demolition of existing buildings and the construction of new buildings and structures was inspected carefully to understand the potential impacts of the proposed works. The areas of proposed works has undergone significant disturbance with the construction of buildings, levelling and cutting of areas for playground and car parking surfaces, the installation of underground services and general landscaping. The ongoing development of the school would have removed the upper layers of soil and therefore removed any evidence of Aboriginal occupation within the grounds of Bankstown North Public School.

6.2 Impact and Mitigation

The proposed works are located in an area that has undergone significant disturbance over its 150 year history as a school, which would have heavily disturbed or removed any subsurface archaeological deposits. It is therefore considered highly unlikely that the proposed works as outlined in this assessment report will impact on any Aboriginal archaeological deposits or Aboriginal objects.

As it is not predicted that the proposed works will impact on any evidence of Aboriginal occupation or Aboriginal objects, no further archaeological investigation will be required in relation to these works.

Further, as this assessment has determined that the study area was not heavily populated or intensively utilised by the Aboriginal people of the Bankstown area, it is unlikely that the study area has any cultural heritage value to the Aboriginal community of the area. The study area does not possess any significance in respect of Aboriginal archaeology and cultural heritage and it is considered highly unlikely that any archaeological deposits remain within the study area or will be impacted upon by the present development. Therefore, consultation with the Aboriginal community in accordance with OEH's *Aboriginal cultural heritage consultation requirements for proponents 2010* and preparation of an Aboriginal Cultural Heritage Assessment Report (ACHAR) is not required.

7.0 Legislation

7.1 The National Parks & Wildlife Act 1974 (as amended)

The *National Parks & Wildlife Act 1974* (NPW Act) provides statutory protection to all Aboriginal objects and Aboriginal places within New South Wales. The Office of Environment & Heritage (OEH) is the State Government agency responsible for the implementation and management of this Act.

Part 6 of the *National Parks & Wildlife Act* provides provision for the 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". In particular, 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 assessment undertaken in accordance with OEH's *Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW* and *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW*. This assessment has concluded that due to the disturbed nature of the Bankstown North Public School grounds, it is highly unlikely that any evidence of Aboriginal occupation or any Aboriginal objects will be harmed by the proposed works. Therefore, an Aboringal Heritage Impact Permit (AHIP) will not be required for the proposed works as detailed in this report.

7.2 Environmental Planning and Assessment Act 1979 (as amended)

The proposed works at Bankstown North Public School are being undertaken as a State Significant Development under Part 4, Division 4.1 of the Environmental Planning and Assessment Act 1979 (EPA Act). Section 5.23 of the EPA Act does not require that a State significant development seek approval under the NPW Act.

Section 5.23 of the EPA Act state the following:

> **5.23 Approvals etc. legislation that does not apply**
>
> (1) The following authorisations are not required for approved State significant infrastructure (and accordingly the provisions of any Act that prohibit an activity without such an authority do not apply):
>
> a) A permit under 201, 205 or 219 of the *Fisheries Management Act 1994*;
> b) An approval under Part 4, or an excavation permit under section 139, of the *Heritage Act 1977*;
> **c) An Aboriginal heritage impact permit under section 90 of the *National Parks and Wildlife Act 1974*;**
> d) A bush fire safety authority under section 100B of the *Rural Fires Act 1997*;
> e) 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 infrastructure;

(3) The following directions, orders or notices cannot be made or given so as to prevent or interfere with the carrying out of approved critical State significant infrastructure:

a) An interim protection order (within the meaning of the *National Parks and Wildlife Act 1974*);
b) An order under Division 1 (Stop work orders) of Part 6A of the *National Parks and Wildlife Act 1974* or Division 7 (Stop works orders) of Part 7A of the *Fisheries Management Act 1994*;
c) A remediation direction under Division 3 (Remediation directions) of Part 6A of the *National Parks and Wildlife Act 1974*;
d) An order or direction under Part 11 (regulatory compliance mechanisms) of the *Biodiversity Conservation Act 2016*;
e) An environment protection notice under Chapter 4 of the *Protection of the Environment Operation Act 1997*;
f) An order under section 124 of the *Local Government Act 1993*.

(4) A reference in this section to approved State significant infrastructure 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 Division in connection with an application for approval to be carried out for the purpose of complying with any environmental assessment requirements under this Division in connection with an application for approval to carry out the State significant infrastructure.

The *EPA Act* is administered by the Department of Planning and Environment who will determine the consent for this project and for any impact on Aboriginal "objects". Section 5.23 of the *EPA Act* does not require the consent of the Office of Environment and Heritage.

8.0 Recommendations

The following recommendations are made in accordance with:

- The legal requirements of the *National Parks & Wildlife Act 1974* (as amended) which states that it is an offence to harm or desecrate an Aboriginal object without gaining prior consent of the Director General of OEH and the *Environmental Planning and Assessment Act 1974* which states that the Department of Planning and Environment will provide consent and an AHIP is not required;

- Research into the environmental and archaeological record of the study area;

- The results of this Aboriginal archaeological assessment which concludes that it is highly unlikely that subsurface archaeological deposits remain within the study area.

Therefore, it is recommended that:

1. There is no objection to the proposed development on Aboriginal archaeological grounds;

2. No Aboriginal objects were recorded during the site inspection. The study area does not possess any significance in respect of Aboriginal archaeology and cultural heritage, and it is considered highly unlikely that any archaeological deposits remain within the study area or will be impacted upon by the present development;

3. No further investigation in respect of Aboriginal archaeology or cultural heritage is required;

4. It is not necessary to undertake consultation with the Aboriginal community in accordance with OEH's *Aboriginal cultural heritage consultation requirements for proponents 2010* or preparation of an Aboriginal Cultural Heritage Assessment Report (ACHAR);

5. If, during the proposed works, any Aboriginal objects or evidence of Aboriginal occupation are uncovered, all work must cease in the vicinity of the suspected Aboriginal objects or evidence of occupation, and further advice should be sought from a qualified archaeologist.

References

Attenbrow, Val. 2002. *Sydney's Aboriginal Past: Investigating the Archaeological and Historical Records.* Sydney: UNSW Press.

Comber, Jillian. 2010. *Excavation Report (S90 Consent 2430): Camenzulis Site 1 (AHIMS 45-5-3071). Unpublished Report to Penrith Lakes Development Corporation.*

Kohen, James. 1997. *The DA4 Area, Penrith Lakes Scheme: Archaeological Investigations. Unpublished Report to Penrith Lakes Development Corporation*.

McDonald, Josephine. 2005. *Salvage Excavation of Six Sites along Caddies, Second Ponds, Smalls and Cattai Creeks in the Rouse Hill Development Area NSW*. St Lucia, Qld.: Australian Association of Consulting Archaeologists.

McDonald, Josephine J. and Peter Mitchell. 1994. *An Assessment of The Archaeological Context, Landuse History and Management Requirements for Aboriginal Archaeology in the Australian Defence Industries Site, St Marys NSW. Unpublished Report to ADI Ltd, NSW Property Group. (AHIMS #3345)*.

Nutley, David. 2006. 'The Last Global Warming: Archaeological Survival in Australian Waters'. Flinders University.

Smith, Laurajane. 1989. *Archaeological Site Survey and Analyses on the Northern Cumberland Plain. Unpublished Report to the NSW National Parks and Wildlife Service.*

Stening, Tory. 2011. *Archaeological Excavations Consent No. 1114096: Doonside Zone Substation and Underground 132kV Feeders*.

Stening, Tory. 2016. *56 Cudgegong Road, Rouse Hill: Research Design AHIMS Site 45-5-4765. Unpublished Report to Blacktown City Council.*

Stening, Tory. 2018a. *Bondi Beach Post Office - 20-24 Hall Street, Bondi Beach: Aboriginal Archaeological Assessment. Unpublished Report to Casey & Lowe on Behalf of Taylor.*

Stening, Tory. 2018b. *Lot 72 DP 661069, 1 Sirius Road, Voyager Point: Aboriginal Archaeological Assessment. Unpublished Report to Pronto Properties Pty Ltd. (AHIMS #103915).*

Strahler, Arthur N. 1957. 'Quantitative Analysis of Watershed Geomorphology'. *Transactions, American Geophysical Union* 38(6):913.

Photographs

Photograph 1: Looking across the area of proposed development.

Photograph 2: Facing west and looking across the back of the main school building which fronts the Hume Highway**.**

Photograph 3: Facing east and looking across the area for proposed development.

Photograph 4: Facing south east and looking across the area of the proposed development. Services can be seen marked in spray-paint on the asphalt surface.

Photograph 5: Facing south and looking toward the Hume Highway. Many services can be seen marked in spray paint on the asphalt surface. .

Photograph 7: Looking across the area proposed for developmetn and showing the buildings and manufactured topography to provide a level playing surface.

Photograph 8: Looking between the demountables which will be removed as part of the proposed works. The landscape in this area has been manufactured and any upper layers of soil have been removed.

Photograph 9: Facing north and looking across the area of proposed development.

Appendix A: AHIMS Extensive Search Results

Office of Environment & Heritage
NSW GOVERNMENT

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : BNPS
Client Service ID : 384767

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-6-2546	Punchbowl Park_1;PbP 1;	AGD	56	319400	6243660	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Michael Guider					**Permits**		
45-6-2470	None Specified	AGD	56	317850	6240650	Closed site	Valid	Artefact : -, Art (Pigment or Engraved) : -, Grinding Groove : -	Axe Grinding Groove,Shelter with Art,Shelter with Deposit	
	Contact	**Recorders**	Gary Dunnett					**Permits**		
45-6-2471	None Specified	AGD	56	317850	6240700	Closed site	Valid	Artefact : -, Art (Pigment or Engraved) : -, Grinding Groove : -	Axe Grinding Groove,Shelter with Art,Shelter with Deposit	
	Contact	**Recorders**	Gary Dunnett					**Permits**		
45-6-1783	Salt Pan Creek;	AGD	56	319309	6239781	Open site	Valid	Art (Pigment or Engraved) : -	Axe Grinding Groove,Rock Engraving	
	Contact	**Recorders**	Warren Bluff,Jarvis					**Permits**		
45-6-3358	Riverwood PAD01	GDA	56	319489	6242118	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Artefact - Cultural Heritage Management ,Mr.Michael Lever					**Permits**		

Report generated by AHIMS Web Service on 23/11/2018 for Tory Stening for the following area at Datum :GDA, Zone : 56, Eastings : 317000 - 320000, Northings : 6240000 - 6250000 with a Buffer of 50 meters. Additional Info : Archaeological assessment. Number of Aboriginal sites and Aboriginal objects found is 5