

Reference: 23020

9 June 2023

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RE: ABORIGINAL CULTURAL HERITAGE DUE DILIGENCE ADVICE FOR 260 EIGHTH AVENUE. AUSTRAL. NEW SOUTH WALES

Austral Archaeology Pty Ltd (Austral) has been engaged by Fabcot (Woolworths) to provide Aboriginal Cultural Heritage Due Diligence Assessment (ACHDDA) for the proposed project at 260 Eighth Ave, Austral, New South Wales (NSW) [the study area]. This advice is intended to assist the Client in determining their obligations with regard to the National Parks and Wildlife Act 1974 (NPW Act) and to determine whether the project will involve activities that may harm Aboriginal objects or places. The study area is shown on Figure 1 and Figure 2.

The study area is 1.8 hectares in area, and the proposed development consists of the construction of a Woolworths trading area with loading dock and car park as well as additional retail stores.

Section 87 of the NPW Act makes it a strict liability offence to knowingly or unknowingly harm Aboriginal objects or declared Aboriginal places without an Aboriginal Heritage Impact Permit (AHIP). Harm is defined under the NPW Act as "any act or omission that destroys, defaces or damages the object or place or in relation to an object, moves the object from the land on which it had been situated. The NPW Act allows for a person or organisation to exercise due diligence in determining whether their actions will or are likely to impact Aboriginal objects or places. Any person or organisation who can demonstrate that they have exercised due diligence has a defence against prosecution under the strict liability provisions of the NPW Act. Where an activity is likely to harm Aboriginal objects or places, consent in the form of an AHIP is required.

The National Parks and Wildlife Regulation 2009 (NPW Regulation) adopted the Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (DECCW 2010) (the Code). The Code sets out the reasonable and practicable steps that individuals and organisations need to take in order to:

- Identify whether Aboriginal objects are, or are likely to be, present within the study area.
- If Aboriginal objects are, or are likely to be present, determine whether their activities are likely to cause harm.
- Determine whether further assessment or an AHIP application is required for the activity to proceed.

This advice has been formulated to provide a robust assessment that will identify whether Aboriginal objects or places are present or are likely to be present within the study area. This has been achieved through the completion of a desktop review and archaeological survey of the study area. The Code provides a series of questions that clarify whether it is applicable to a proposed project. These questions are addressed in Table 1.



Table 1 Applicability of the Code to the proposed activity

Question	Response
Is the activity a declared project under Part 3A of the EP&A Act?	No
Is the activity an exempt activity listed in the NPW Act or other legislation?	No
Will the activity involve harm that is trivial or negligible?	No
Is the activity in an Aboriginal place or are you already aware of Aboriginal objects on the land?	No
Is the activity a low-impact activity for which there is a defence in the NPW Regulation?	No
Do you want to use an industry specific code of practice?	No
Do you wish to follow your own procedure?	No

As none of the questions outlined in Table 1 apply to the project, due diligence must be established by using the Code. The Code consists of a series of 5 steps outlined below.

STEP 1. WILL THE ACTIVITY DISTURB THE GROUND SURFACE OR ANY CULTURALLY MODIFIED TREES?

The proposed works entail the construction of a Woolworths trading area, loading dock, and a car park along with additional retail stores. This will involve the removal of existing vegetation and residential buildings within the study area. The disturbance caused by the demolition of existing buildings and the construction of the Woolworths store will directly impact surface artefacts.

The activity will disturb the ground surface; therefore consideration of steps 2a and 2b of the Code is required.

STEP 2A. SEARCH THE ABORIGINAL HERITAGE INFORMATION MANAGEMENT SYSTEM (AHIMS) DATABASE AND USE ANY OTHER SOURCES OF INFORMATION OF WHICH YOU ARE ALREADY AWARE

An extensive search of the Aboriginal Heritage Information Management System (AHIMS) database was conducted on 12 April 2023 (Client service ID: 771857) by Danielle Bainbridge (Graduate Archaeologist, Austral). The search identified 72 Aboriginal archaeological sites within a 5km radius search area centred on the proposed study area. None of these registered sites are located within the study area. The AHIMS search results are presented on Figure 3.

The AHIMS search identified a restricted site. Heritage NSW was consulted and confirmed that the site is not located within the study area. The site will be excluded from the results demonstrated in Table 2 and will not be further mentioned in this report.

Spatial information for this report is displayed using the GDA94 Datum. Where AHIMS site records were provided on a different datum, they were converted using standard functions in QGIS software.

Most of the AHIMS sites are located in proximity to Bringelly Road. This does not reflect where sites are likely to occur within land formations but is rather skewed to reflect recent developments and assessments undertaken within the area. A large portion of the sites also follow the waterways in the region. The highest site type occurrence in close proximity to the study area is artefact sites. Of the 71 sites within a 5-kilometre radius, 58 (81.69%) are recorded as artefact sites. Of the 12 sites within a 1-kilometre radius of the study area, 10 ten are recorded as artefact sites. The two remaining sites consist of an artefact, potential archaeological deposit (PAD) site, and a PAD site.



Table 2 AHIMS sites identified within 5 kilometres of the study area

Site type	Occurrence	Frequency
Artefact, Aboriginal Resource and Gathering	1	1.41%
Artefact, PAD	5	7.04%
PAD	7	9.86%
Artefact	58	81.69%
Grand Total	71	100.00%

The most commonly occurring site type within AHIMS search is artefact, accounting for 81.69% (n=58) of sites, followed by PAD (9.86%) (n=7), and artefact/PAD (7.04%) (n=5). One site contains artefacts and is classified as an Aboriginal resource and gathering site. These data suggest artefact sites are the most likely to occur within the study area.

A review of the reports held on the AHIMS database identified several archaeological studies which have been undertaken in the locality of the study area. These are summarised in Table 3. Austral has also undertaken a review of information to identify whether the activity is located within landscape features likely to contain Aboriginal objects. This includes an assessment of ethnographic information, soils, geology, landform, disturbance, and resource information pertinent to the study area. The outcome of this review is outlined in Table 4.

Table 3 Archaeological studies undertaken in the vicinity of the study area

Author	Year	Details
Biosis Pty Ltd	2015	The assessment area is located approximately 4 km east of the current study area. Archaeological test excavations were conducted at the proposed Carnes Hill sporting complex within a study area of approximately 12 hectares containing an alluvial flat and hill slope directed towards a drainage channel flowing east to southwest. Prior to surveying, the assessment area contained a single site, Hoxton Park PAD 2.
		An initial archaeological survey was focused on the alluvial flat and identified no new Aboriginal sites, but Hoxton Park PAD 2 was expanded (Biosis Pty Ltd 2015, p.37).
		Eighty-eight test pits measuring 0.25 square metre were excavated within the newly established boundaries of Hoxton Park PAD 2. A total of 54 artefacts were recovered from 22 test pits. The average artefact density was 2.45 artefacts per square metre, with the highest-density pit containing 10 artefacts. The most common artefact types to occur within the assemblage were complete flake (n=18) and distal flake (n=15). The dominant raw material was silcrete (n=42), followed by chert (n=5), quartz (n=4), and quartzite (n=3) (Biosis Pty Ltd 2015, pp.46–49). The assemblage characteristics were determined to be consistent with others throughout the Liverpool LGA that represent low-intensity usage rather than focused occupation (Biosis Pty Ltd 2015, p.57).
Comber Consultants	2016	The assessment area is located within 1.1 km north of the study area. Due diligence assessments of 170 Eleventh Avenue, 160 Eleventh Avenue, 150 Eleventh Avenue, 140 Eleventh Avenue, 135 Tenth Avenue, 145 Tenth Avenue, 155 Tenth Avenue, and 165 Tenth Avenue in Austral were conducted in order to construct classroom buildings for a primary school. The study area was located approximately 200 m from an unnamed tributary of Kemps Creek. A foot survey was completed; however, only a portion of the study area could be accessed. No sites were identified during the survey. Despite this, and due to the study area's proximity to a tributary of Kemps Creek and registered Aboriginal sites within the locality, it was assessed that there was a high potential for sub-surface artefacts to be present within the study area.



Author	Year	Details
Comber Consultants Pty Ltd	2017	The assessment area is located within 3 km north of the current study area. Due diligence assessment of 145 Gurner Avenue, Austral, covered 2.6 hectares of land intended for development as a residential subdivision. The assessment area is predominantly occupied by a flat with a small ephemeral creek cutting northeast-to-southwest in the northern half. Eight archaeological sites within a 1-km radius of the assessment area were identified in an AHIMS search. The sites consisted of two PAD sites, two artefact scatters, and four isolated finds. All sites were located in proximity to streams associated with Kemps Creek (Comber Consultants Pty Ltd 2017, pp.15–16). Site inspections did not identify any further Aboriginal sites, with Comber Consultants Pty Ltd (2017, p.20) concluding any sites that once existed at the surface may have been destroyed or removed by significant ground disturbance and erosion.
Biosis Pty Ltd	2017	The assessment area is located approximately 1 km south of the current study area. An ACHA of 230-260 Fifth Avenue, Austral, was conducted for the proposed subdivision of the land. The study area is predominantly located on a crest and associated slope in close proximity to a number of ephemeral creeks. A survey of the assessment area was conducted, and the registered Aboriginal parties considered the study area to have a high level of cultural significance due to the proximity of complex sites to the study area. During the excavation of the study area, a single artefact was identified between 100 and 200 mm. The artefact was identified as a mudstone proximal flake (AHIMS #45-5-4912). It was assessed that the site had low significance and that the project's earthworks would cause a total degree of harm. It was recommended that the client applies for an AHIP.
Kelleher Nightingale Consulting Pty Ltd	2019	The assessment area is located approximately 500 m east of the study area. Aboriginal archaeological salvage of ELWW1 (AHIMS #45-5-4376), ELWW2 (AHIMS #45-5-4421), Ingleburn Road AFT 1 (AHIMS #45-5-4918), PAD 2056-6 (AHIMS #45-5-4051), and Rickard Road AFT 1 (AHIMS #45-5-4919). From an excavated area of 155 square metres, a total of 1,663 artefacts were recovered. The artefacts consisted primarily of silcrete, a common material within the Cumberland Plain. The artefacts were predominantly knapping debris and were found in low-medium density assemblages. From the study, it was concluded that archaeological deposits at the margins of flood zones may survive flooding events.
Extent Heritage Advisors	2019	The assessment area is located approximately 2 km east of the study area. Aboriginal community collection and excavation of the Upper Canal corridor was undertaken to mitigate impacts to sites within the area of proposed works for the Upper Canal. The project included the mitigation of 15 archaeological sites previously identified and five sites newly identified. The mitigation included the collection of artefacts observed on the surface at each site and a subsurface excavation of 62 square metres. It was noted that the majority of the corridor had been disturbed and that there were only small pockets of the natural soil profile. The project identified 409 artefacts that predominantly consisted of isolated Aboriginal objects and low-density scatters. The assemblage predominantly consisted of silcrete and indurated mudstone/tuff/chert. Amongst the assemblage, it was noted that there was a high rate of core reduction and discard indicating that there may have been a scarcity of raw materials. It was concluded that the artefacts identified did not reflect a typical Cumberland Plain assemblage.
Austral Archaeology	2022	The assessment area is located approximately 3 km north of the current study area. Due diligence assessment of 50 Gurner Avenue, Austral, covered 3.9 hectares of land intended for residential subdivision. The assessment area is located within 500 m of several 1st order streams and approximately 2 kilometres east of Kemps Creek. During an AHIMS search 101 archeological sites were identified within 3 km of the assessment area. It was noted that artefacts occur at the highest rate throughout Austral and its surrounding area (82.2%) with a large proportion located within 100 m of the higher order streams associated with the George's River. A survery of the assessment area was conducted; however, no evidence of cultural material or practises was identified, and it was concluded that the area was of low potential.



Table 4 Assessment of landscape features

Information	Details
Ethnographic	The earliest dates for Aboriginal occupation in Australia reach back to at least 65,000 years (Clarkson et al. 2017). Within the Cumberland Plain, in which the study area is situated, the earliest known occupational site is located north of Pitt Town, on the southern bank of the Hawkesbury River, where cultural deposits were dated by optically stimulated luminescence to 36,000+/-3000 BP (Williams et al. 2012).
	The study area is likely to have been an intersecting point of occupation for the Dharawal, Darug, and Gundungurra language groups. The Dharawal group generally occupied coastal environments with their territory spanning from the Shoalhaven River to Botany Bay and as far inland as Camden. The Gundungurra were noted to have occupied regions to the west and southwest of the Dharawal. The Darug group were located throughout much of the Cumberland Plain and was divided into coastal and hinterland dialects (Attenbrow 2010, p.34).
	Early ethnographic accounts note that local Aboriginal people throughout the Sydney region were grouped as clans or bands consisting of between 25 and 50 people (Attenbrow 2010, p.29). The George's River and its associated landscapes were utilised by the local peoples with evidence of their occupation remaining in the form of campsites, middens and artworks (Goodall & Cadzow 2014). Estuaries such as the George's River were particularly important for fishing and shellfish gathering. Ethnographic accounts recorded local Aboriginal people gathering resources from the estuary shallows within canoes and using tools such as pronged spears with tips of bone and fish traps consisting of plant materials. Generally, a higher frequency of middens would be located in proximity to the banks of the George's River and its tributaries, however many were destroyed by early Europeans due to their yield of lime fit for use in construction and agriculture (Attenbrow 2010, p.5). Aboriginal people were noted to employ the use of rocky overhangs as shelters within the extents of the Hawkesbury Sandstone. In the absence of rock shelters, such as in the study area, semi-permanent huts were constructed of the bark of stringy bark trees supported by a frame of branches. These huts were observed to accommodate 3 to 4 people, though larger coneshaped dwellings could hold up to 8 people (Turbert 1989, pp.16–17).
	With the arrival of British colonies within the wider Sydney area and in the locality of the study area came the destabilisation of local Aboriginal groups as the land was claimed and transformed for settlement and agricultural purposes. Resources and landscapes once readily available to local groups such as timber, plainlands, and water sources were also exploited and depleted by the colony. Interactions between the local Aboriginal groups and European settlers became increasingly hostile, with Aboriginal people eventually being largely driven out of their homelands. Aboriginal populations were later restricted to living within Camden Park and along George's River near Liverpool (Liston 1988).
Soils	The study area sits within the Blacktown soils (Figure 4). The Blacktown (bt) soil landscape is characterised by gently undulating rises on Wianamatta Group shales with local relief of 30m. The Blacktown (bt) soil profile is made up of: • bt1 – friable greyish brown loam • bt2 – hard-setting brown clay loam
	 bt3 – strongly pedal, mottled brown, light clay bt4 – light grey plastic mottled clay It is noted that Blacktown (bt) soils are moderately erodible, with topsoils (bt1 and bt2) being generally hard setting with significant fine sand and silt contents, offset by moderate amounts of organic matter (NSW Department of Environment and Climate Change. 2008). Areas within the Blacktown (bt) soil landscape are considered to have potential for subsurface artefacts to be identified, as the soil profile is suitable for the retention of deposited objects.



Information	Details
Hydrology	The study area is located in proximity to two 1st order tributaries of Kemps Creek (Figure 5). One of these tributaries is located approximately 425 m northeast from the study area, and the other is located approximately 500 m northwest of the study area. Kemps Creek also traverses north to south approximately 1 km west of the study area. As a perennial watercourse, Kemps Creek would have provided traditional Aboriginal communities with water and a large range of exploitable resources for food and tool making.
Geology	The study area is located within the Bringelly Shale unit described by Herbert (1983) as containing "shale, carbonaceous claystone, laminate, fine to medium-grained lithic sandstone [and] rare coal." Evidence of stone artefacts associated with this geological unit may be detected should outcroppings be present within the study area.
	The underlying geology of the study area and surrounding region would have provided a range of stone material types suitable for the production of flaked stone artefacts. Silcrete is the most common raw material type associated with stone tool manufacture based on assemblages recovered from archaeological sites across the Cumberland Plain and the Cumberland Lowlands. Known silcrete sources in the wider region include the St Marys Formation, Rickabys Creek gravels, and terraces along the Nepean River. No known stone sources are located within the study area (Figure 5).
Landform	The study area is largely characterised as alluvial floodplain located between Kemps Creek and other drainages. The study area and near vicinity exhibit gently rolling plain, and both the study area and surrounds have been moderately disturbed by agricultural activities and residential development. Regardless, artefacts may still be present within undisturbed contexts.
Past Fauna and Flora	Both estuarine and terrestrial resources were exploited by Aboriginal hunter-gathers in the Cumberland Plain. Land mammals that were hunted for food included kangaroos, possums, sugar gliders, wombats, and echidnas as well as native rats and mice (Attenbrow 2003, p.70). Birds, such as the mutton bird and brush turkey, were also eaten, and it is recorded that eggs were a favourite food (Attenbrow 2003, pp.75–76). Evidence of yam harvesting has also been recorded on the Hawkesbury River, and fish traps are known to have been used in the Nepean River (Kohen 1985). Kohen also notes that in 1810, the diet of the Gundungurra people was described as consisting of a variety of foods including "possums, eels, snakes, bluetongued lizards, freshwater mussels and a variety of birds" (Kohen 1985).
	Attenbrow has noted that "Sydney vegetation communities include over 200 species that have edible parts, such as seeds, fruits, tubers/roots/rhizomes, leaves, flowers and nectar" (Attenbrow 2003, p.76).
Disturbance	Historic aerials indicate the study area was mainly used for residential occupation once most of the region had been cleared. A 1960s aerial demonstrates that a significant portion of the study area had been cleared and that a residential building and two small structures had been erected within the cleared area (Figure 6). At this point, a moderate amount of forestry was still located in proximity to the study area. By 1975 more of the study area had been cleared of vegetation, however, some forestry still remained. Additionally, three small structures had been added to the study area and one structure shown in the 1960s had been removed. Properties adjacent to the study area had been cleared for agricultural and pastoral use (Figure 7). Imagery from 1985 indicates all forested areas have been removed, and two large outbuildings have been constructed south of the residence (Figure 8). The northern portion of the study area was utilised for residential occupation. Through visible plough lines, it is evident that the southern end of the study area had been used for agricultural purposes. The use of the study area for residential occupation and agriculture is also demonstrated in contemporary aerials such as that shown in Figure 9.



Based upon the results of these background studies Austral has been able to develop a series of predictive statements relating to the type and character of Aboriginal cultural heritage sites that are likely to exist in the study area and where they are more likely to be located. These predictive statements indicate that:

- While intact deposits of cultural material are present within the broader area, historical aerial imagery indicates historical disturbance of the study area.
- Given the extensive disturbance that has occurred throughout the study area, it is unlikely
 any potential artefacts deposited in the study area remain. If they are present, they may
 be identified out of context due to disturbances such as agricultural ploughing and
 residential development.
- Should cultural materials be identified in the study are, they are likely to be isolated artefacts manufactured from silcrete.

STEP 2B. ACTIVITIES IN AREAS WHERE LANDSCAPE FEATURES INDICATE THE PRESENCE OF ABORIGINAL OBJECTS

Table 5 Applicability landscape features from the Code likely to have Aboriginal objects to the study area.

Question	Response
Is the activity within 200m of 'waters'?	No
Is the activity within a sand dune system?	No
Is the activity located on a ridge top, ridge line or headland?	No
Is the activity located within 200m below or above a cliff face?	No
Is the activity within 20m of or in a cave, rock shelter or cave mouth?	No
Is the activity (or any part of it) on land that is disturbed?	Yes
Do the predictive statements of 2A indicate Aboriginal Objects or places are likely to occur on any of the topographic elements of the activity area?	No

While there are some elements present within the study area that are often associated with Aboriginal sites, the extensive development of the site and the predominant landform indicate that the identification of new sites is unlikely.

STEP 3. CAN YOU AVOID HARM TO THE OBJECT OR DISTURBANCE OF THE LANDSCAPE FEATURE?

The proposed works will involve the construction of a carpark and shopping centre within the study area, which will necessitate excavation and other earthworks. Thus, the scope of these works are unable to avoid harm to the landscape features. As no cultural sites or objects have been located within the study area, no further protection is recommended.

STEP 4. DESKTOP ASSESSMENT AND VISUAL INSPECTION

To ground truth the desktop assessment, a visual inspection of the study area was undertaken on 26 April 2023 by Peta Rice (Archaeologist). The visual inspection consisted of a systematic survey of the study area to identify and record any Aboriginal archaeological sites visible on the surface or areas of Aboriginal archaeological potential and cultural sensitivity. The archaeological survey was conducted on foot. The methods used during the visual inspection conformed to requirements 5 to 8 of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010b). Photos of the study area taken during the visual inspection are included below (see Figure 10 through Figure 13).

In order to ground truth the desktop assessment, a visual inspection of the study area was undertaken on 26 April 2023 by Peta Rice (Archaeologist, Austral). The visual inspection consisted of a systematic survey of the study area to identify and record any Aboriginal archaeological sites visible on the surface or areas of Aboriginal archaeological potential and cultural sensitivity. The



archaeological survey was conducted on foot. The methods used during the visul inspection conformed to requirements 5 to 8 of the *Code of Practice for Archaeological Investivagion of Aboriginal Objects in NSW* (DECCW 2011).

The study area exists within a sloped landform with areas of disturbance throughout. The study area is neighboured by residential housing developments and represents one of the last allotments in the area maintaining most of the natural landform. The study area has low visibility and exposure of the natural soil profile due to thick grass coverage throughout. Visibility was limited to areas of imported fill and vechicle tracks and, where soil was visible, there was no evidence of the natural soil profile or Aboriginal archaeological remains. Areas of disturbance throughout the study area include a small levee bank running north-south throughout the centre, evidence of trenching on the western border, and the existing dwellings and market gardening within the study area. The results of the visual inspection are outlined in Figure 14.

STEP 5. FURTHER INVESTIGATIONS AND IMPACT ASSESSMENT

Based upon the outcome of Steps 1 to 4 of the code, further assessment is not warranted based on the AHIMS search and the visual inspection. As such the project may proceed with caution. The following recommendations apply:

- 1. All Aboriginal objects and Places are protected under the NPW Act. It is an offence to knowingly disturb an Aboriginal site without a consent permit issued by Heritage NSW. Should any Aboriginal objects be encountered during works associated with this proposal, works must cease in the vicinity and the find should not be moved until assessed by a qualified archaeologist. If the find is determined to be an Aboriginal object the archaeologist will provide further recommendations. These may include notifying Heritage NSW and Aboriginal stakeholders.
- Aboriginal ancestral remains may be found in a variety of landscapes in NSW, including middens and sandy or soft sedimentary soils. If any suspected human remains are discovered during any activity, you must:
 - immediately cease all work at that location and not further move or disturb the remains
 - notify the NSW Police and Heritage NSW's Environmental Line on 131 555 as soon as practicable and provide details of the remains and their location
 - not recommence work at that location unless authorised in writing by OEH.

If you have any questions regarding the advice within this letter, please do not hesitate to contact me on the details below.

Yours sincerely,

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1. REFERENCES

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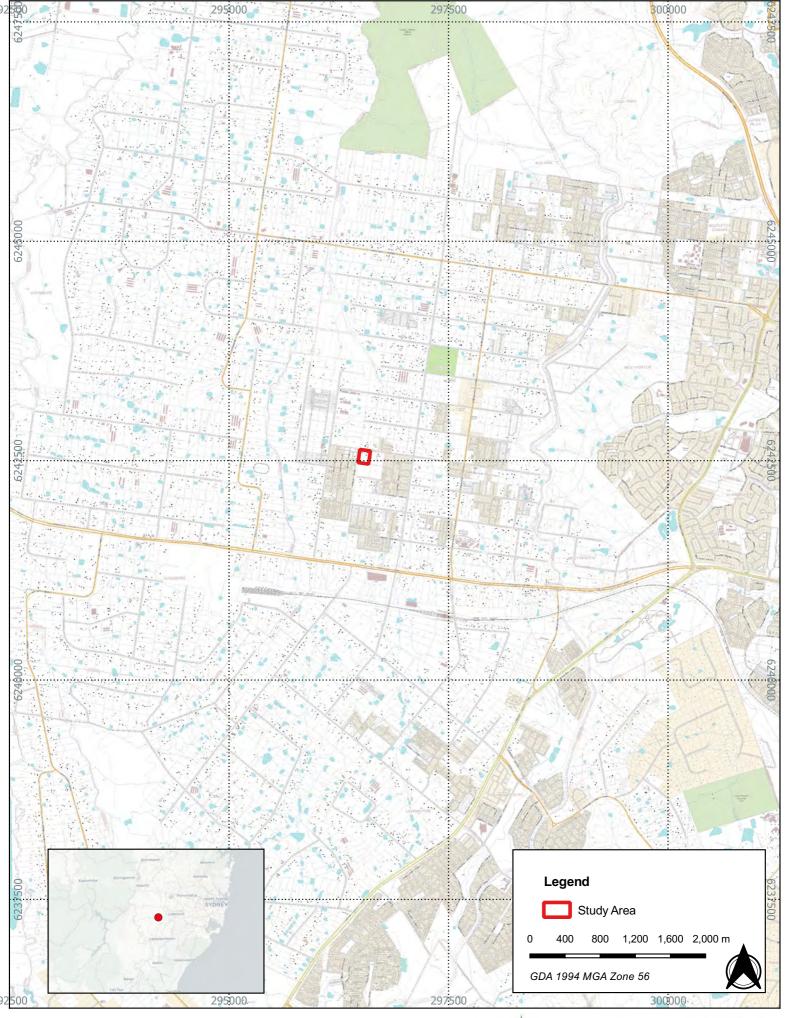


Figure 1 - Location of the study area



A U S T R A L



Figure 2 - Detailed aerial imagery of the study area



A U S T R A L

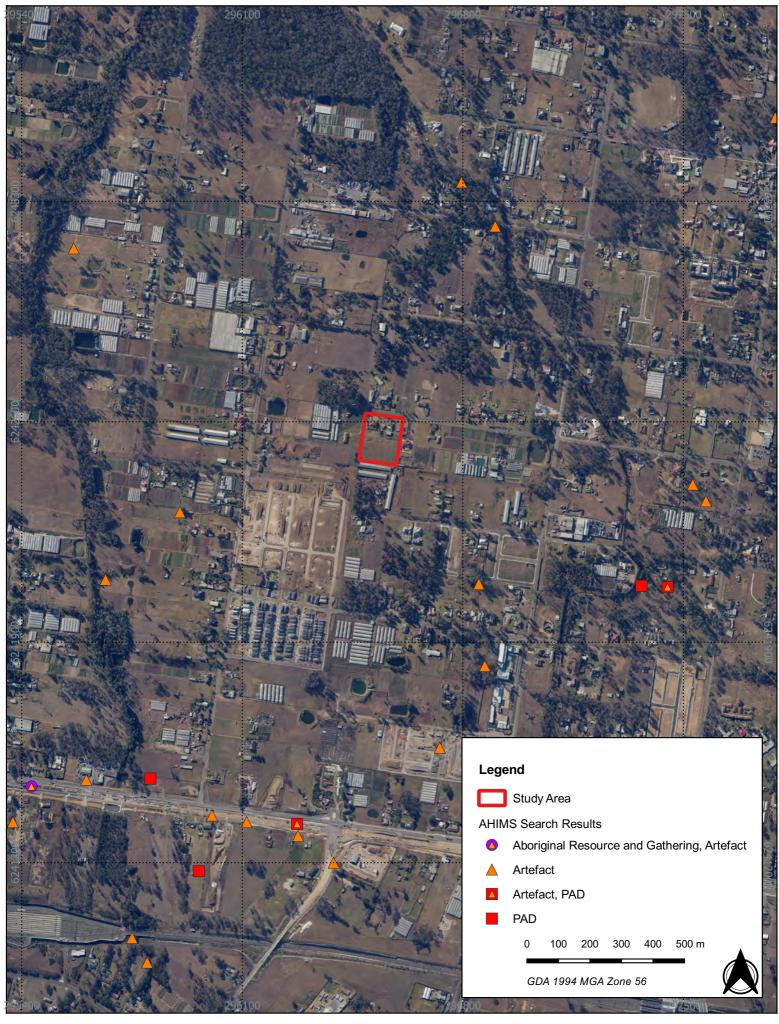


Figure 3 - AHIMS search results in relation to the study area



AUSTRAL

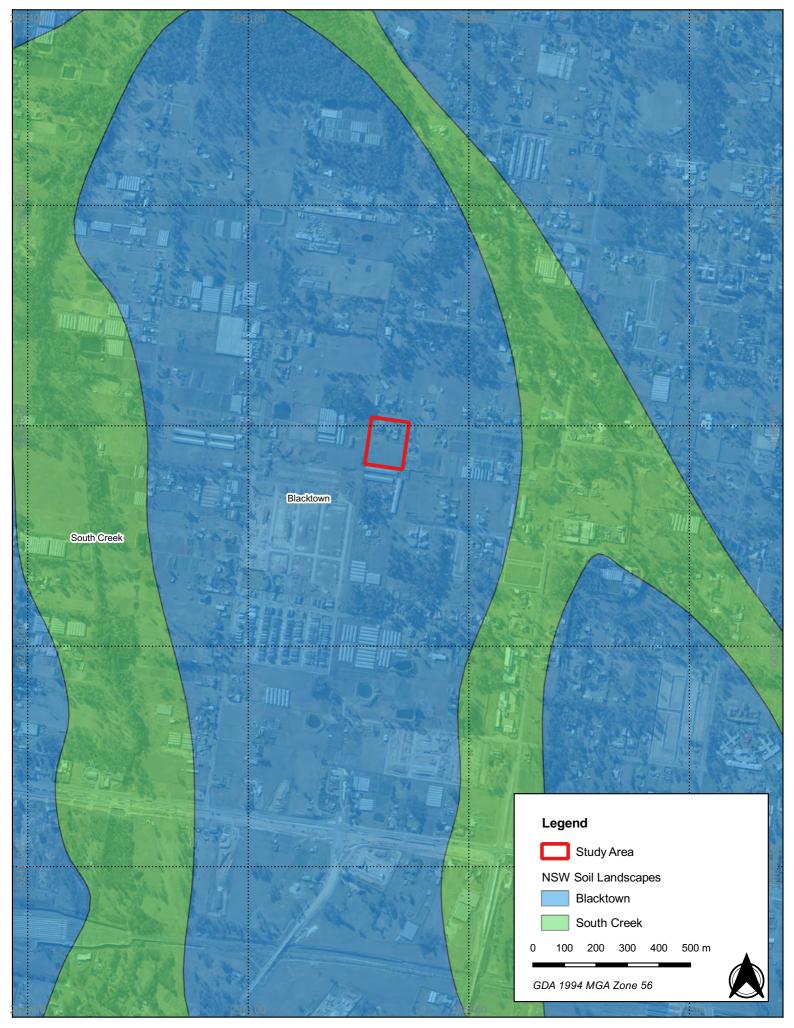


Figure 4 - NSW soils landscape of the study area



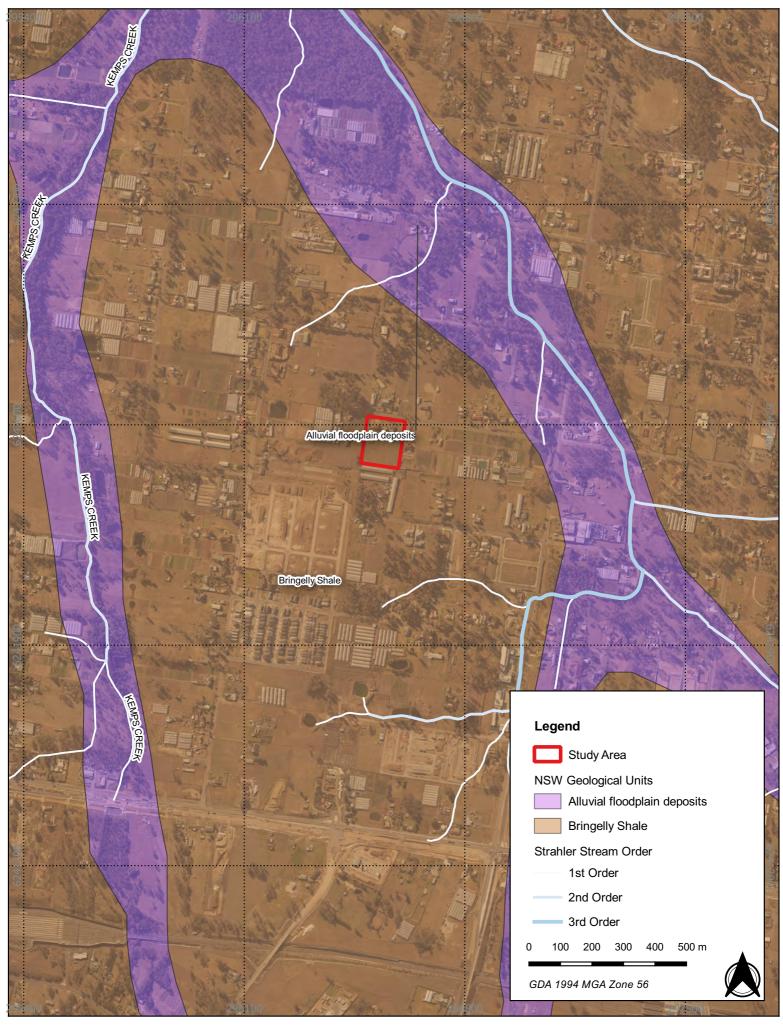


Figure 5 - Geology and hydrology of the study area



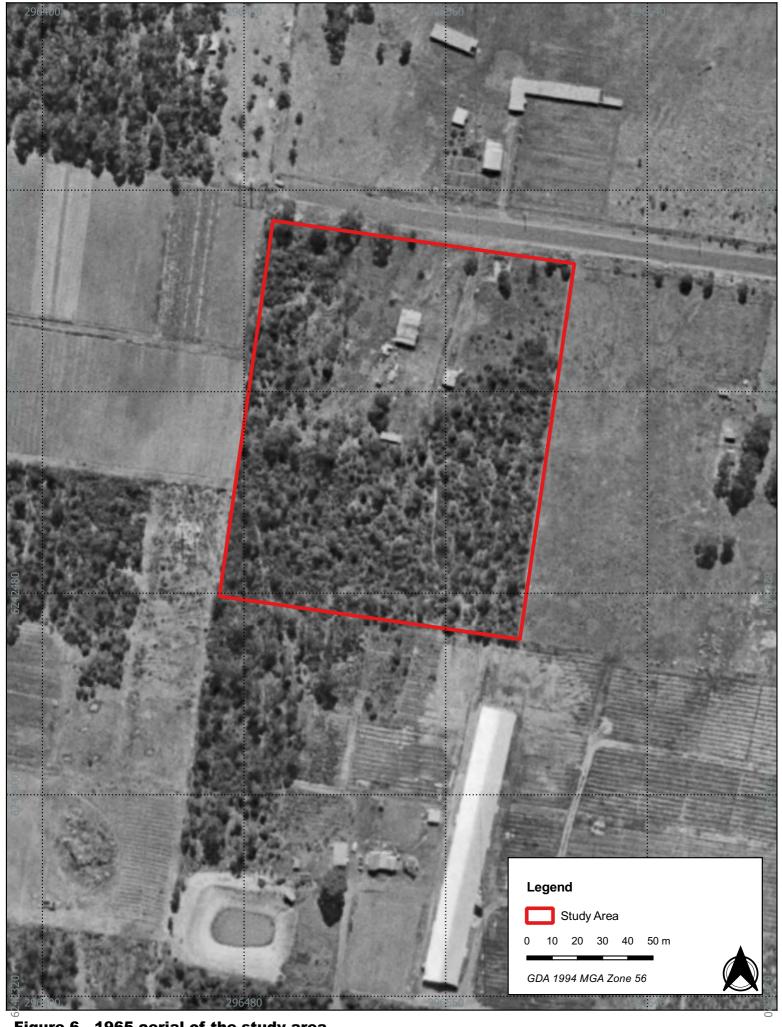


Figure 6 - 1965 aerial of the study area



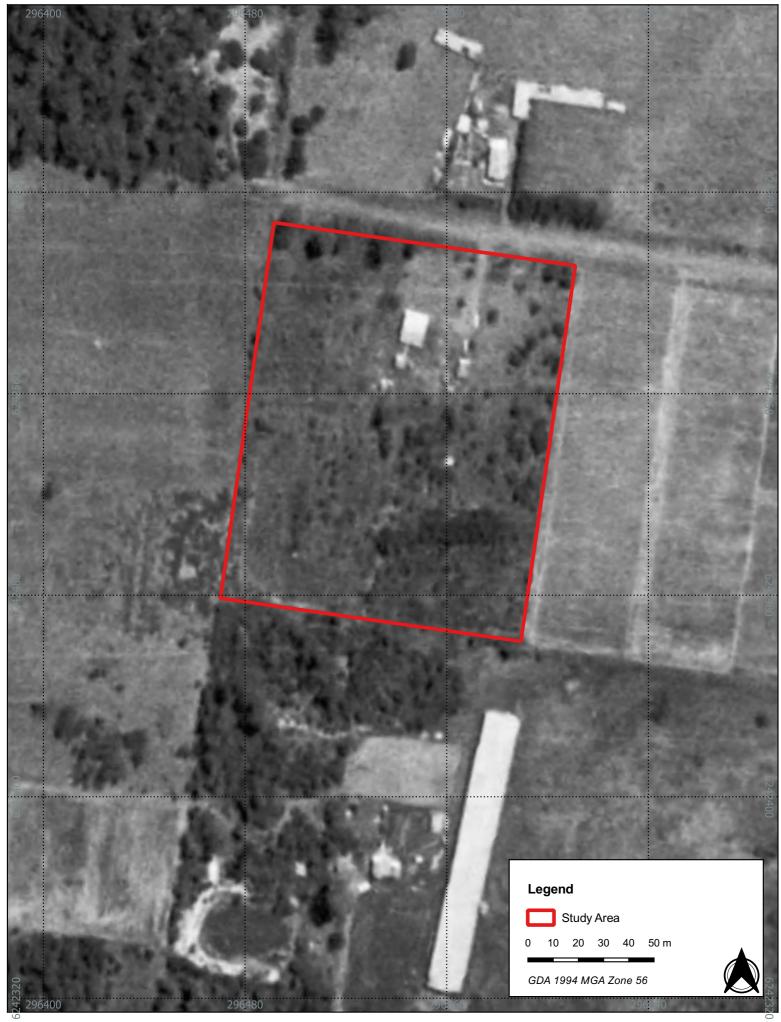


Figure 7 - 1975 aerial of the study area





Figure 8 - 1985 aerial of the study area





Figure 9 - 2004 aerial of the study area







Figure 10 View south from northeast corner of study area showing structures and ground cover.



Figure 11 View east from southeast quadrant of study area showing residential surrounds and overgrown vegetative ground cover.





Figure 12 View south of outbuildings and agricultural operations.



Figure 13 View east across open field toward levee showing vegetation, ground surface visibility, and areas of exposure.



Figure 14 - Visual inspection results

