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### Re: Hurstville Private Hospital - Aboriginal Heritage Preliminary Assessment

Dear Ms. Spira,

The following report documents the preliminary Aboriginal cultural heritage assessment process undertaken by Archaeological and Heritage Management Solutions Pty Ltd (AHMS) for the Hurstville Private Hospital property.

The information demonstrates that any proposed works at the site are unlikely to lead to harm to any Aboriginal objects - and therefore further investigation is not required. The report meets the requirements of the DGRs and could also be used for due diligence purposes in other planning frameworks.

If you have any queries, please do not hesitate to call Oliver Brown on 9555 4000.

Yours faithfully,

Lisa Newell

Associate Director, AHMS



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## 1 INTRODUCTION

### 1.1 Background

Redevelopment is proposed for the site of the Hurstville Private Hospital with consent sought through Part 3A of the *Environmental Planning and Assessment Act* (EP&A Act). The property is located at 37 Gloucester Road Hurstville with frontages extending to Millet Street and Pearl Street (**Figures 1 and 2**).



Figure 1: Site Location - Hurstville Private Hospital

The Director General's Requirements (DGRs) indicate that an Environmental Assessment "shall address Aboriginal Heritage in accordance with the *Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation 2005*". These guidelines outline the content and composition of any Aboriginal heritage study, which they typically divide into two stages: 1) a preliminary assessment, primarily a desktop or base-line study to identify the feasibility of Aboriginal heritage issues to occur; followed by 2) a more detailed impact assessment if (1) has demonstrated potential impacts to Aboriginal heritage.

This report documents a preliminary assessment addressing first of all whether there are indeed any Aboriginal cultural heritage values present. In the absence of any archaeological or other cultural values, the Guidelines allow that:





*“If following a preliminary assessment, it is determined that Aboriginal cultural heritage values are not likely to occur on the proposed development site, no further assessment is required. This conclusion, and the rationale for this finding, must be documented in the preliminary information and subsequent application submitted for determination”.*

This required Aboriginal cultural heritage assessment of the following scope according to Step 1 of the Guidelines:

- A description of the location and nature of the proposed development;
- A description of any social and cultural values including the spiritual, traditional, historical or contemporary associations and attachments which the place or area has for the present-day Aboriginal community; and
- An assessment of which of the Aboriginal cultural heritage values that are known or likely to occur are likely to be directly or indirectly affected by the proposal.

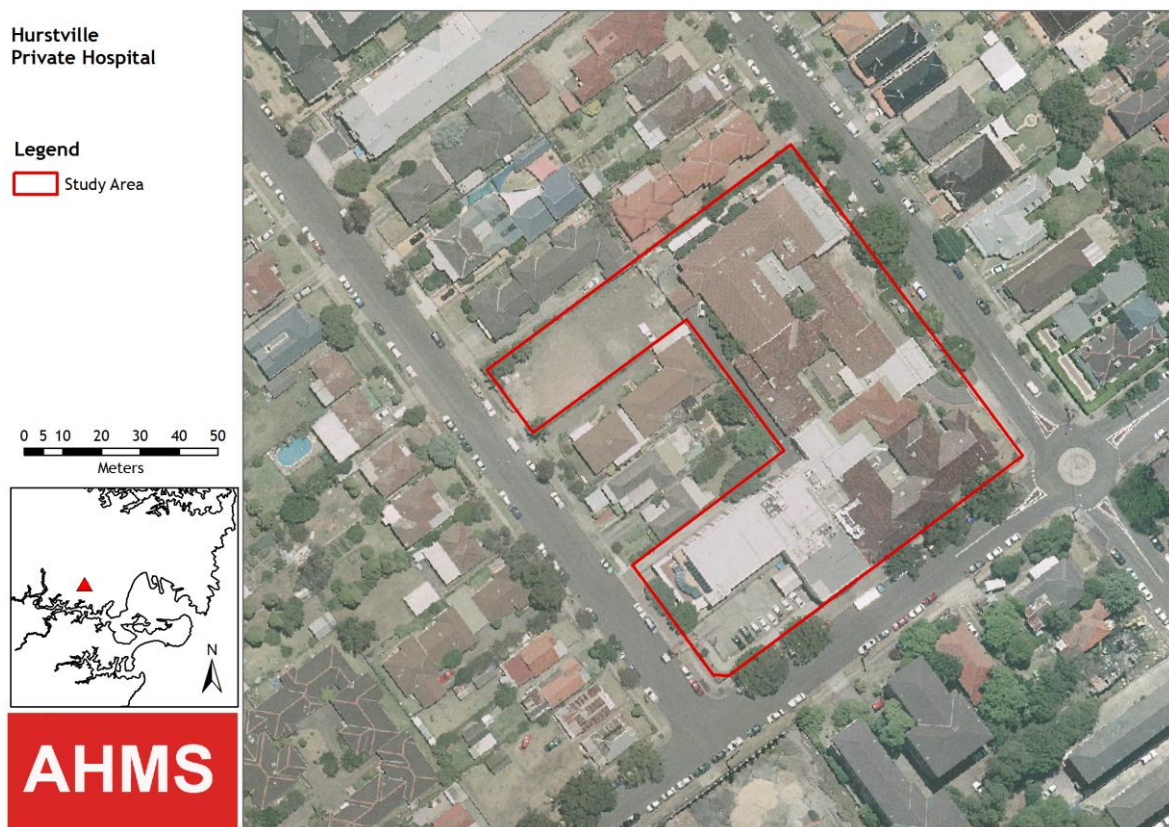


Figure 2: Aerial view of Hurstville Private Hospital grounds

In terms of the brief received from Inspira (on behalf of Healthe Care) as applied to the Guidelines, the needs of the current assessment were interpreted as:



- A description of the proposed development focusing on the potential to impact any intact soil deposits based on site visit and overlaying plans using GIS software;
- A search of the Office of Environment and Heritage (OEH) Aboriginal Heritage Information Management Service (AHIMS) site register;
- Background research based on the above records, other documentary sources and the accrued knowledge of AHMS' specialist Aboriginal project archaeologists on the physical and Aboriginal cultural landscape setting of the study area;
- A predictive analysis of the likelihood of Aboriginal cultural heritage material occurring using GIS and based on well-established patterns of site distribution in relation to landscape features;
- Consultation with the Metropolitan Local Aboriginal Land Council (MLALC) and coordinating involvement in a property inspection;
- An archaeological survey of the property to ground-truth the predictive assessment, search for archaeological evidence on the ground surface, assess the nature of past disturbance, consult in the field with the MLALC Sites Officer and collect any spatial or photographic data needed to support the interpretations and recommendations of the report; and
- Preparation of the preliminary archaeological assessment documentation inclusive of clear management recommendations.

The assessment was designed to create two possible scenarios for inclusion in an EA with clear implications for any requisite Management Plan or Statement of Commitments:

1. That no known or likely Aboriginal cultural heritage material was identified for the property, in which case the assessment documentation could be submitted to satisfy the DGRs and demonstrate no further need for assessment; or
2. That potential impact to Aboriginal cultural heritage was identified, in which case the preliminary study would form the basis for progressing to further steps outlined in the Guidelines.

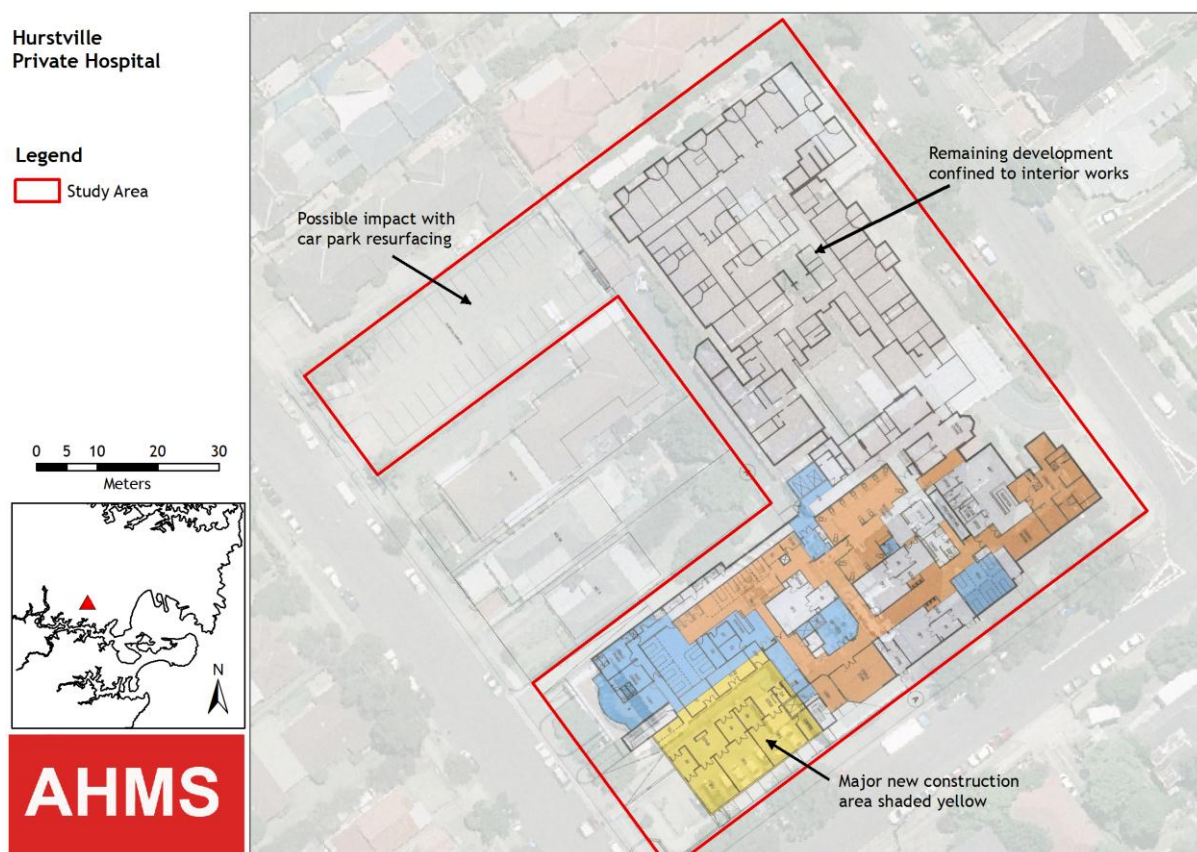
## **1.2 Authorship**

This advice was prepared by Oliver Brown (Senior Archaeologist, AHMS) with input from Alan Williams (Senior Archaeologist, AHMS) and reviewed by Lisa Newell (Associate Director, AHMS). All photographs were taken by Oliver Brown for AHMS.



## 2 NATURE OF THE PROPOSED DEVELOPMENT

The proposed work largely relates to interior work on existing buildings with some additional construction in the southernmost corner of the property (**Figure 3**). This is entirely in an area that has previously been excavated below any natural soil levels (see images in **Appendix 1**). Rather than limiting assessment of potential impact to Aboriginal cultural heritage in just these areas however, a hypothetical position of proposed impact to the entire property has been taken for the benefit of managing any potential design changes, ancillary and unanticipated impacts, and future stages of redevelopment.



Figures 3: Private Hospital proposed ground floor plan

## 3 ABORIGINAL COMMUNITY CONSULTATION

Aboriginal community consultation is a fundamental aspect of Aboriginal cultural heritage in NSW. The NSW Government recognises that Aboriginal people are the principal determinants of the significance of their heritage. The requirements for consultation with the Aboriginal community as set out in the Guidelines include that an assessment: ‘must demonstrate that input by affected Aboriginal communities has been considered, when determining and assessing impacts, developing options, and finalising the application’.





For the current assessment process, consultation has been conducted through the Metropolitan Local Aboriginal Land Council (MLALC). On their behalf, Jason Pitt attended the site inspection on 8/5/2012 and they were invited to provide comment on the draft report. No written comment has been submitted by MLALC, although it is noted that Jason Pitt indicated agreement with these findings following the property inspection and that subsequent correspondence with MLALC on the matter of invoicing for survey did not indicate any objections to the proposed work or the findings of this assessment.

## **4 DESKTOP ASSESSMENT**

### **4.1 Requirements**

The requirement for preliminary assessment is preconditioned in the first instance simply by the intention to disturb the ground surface or otherwise propose an activity that may impact Aboriginal cultural heritage. It then follows that a defensible assessment must be made as to whether any Aboriginal cultural heritage items are present or if there is any reason to suspect that they may be present undetected as subsurface deposits which may be harmed. The Guidelines specify that:

*‘The preliminary assessment is primarily a desktop exercise that involves examination and collation of the information required for understanding the cultural landscape. This information will include information detailing the physical setting (landscape); the history of the peoples living on that land (documentation from archival and oral sources, as well archaeological information); the material evidence (archaeological and contemporary) that has been created by and is manifested by the occupation of people/s in that land, and the cultural and social values attached to the land and the material evidence. Assessment will include lands, waterways, landscape features and native plants and animals and the various types of cultural sites that have been created by Aboriginal people throughout the last 50,000 + years’*

### **4.2 Aboriginal Ethnohistory**

The study area is located in an uncertain area with regard to traditional ownership. Three key pieces of research have been undertaken since the 1970s to map pre-1788 cultural boundaries in the Sydney Basin. In 1970, Capell mapped what he considered to be the boundaries of distinct language areas on the coast of Sydney, with ‘Guringai’ extending up to the Central Coast and an *Eora* language area existing on the ‘Sydney peninsula’, between the Georges River / Botany Bay and Parramatta River / Sydney Harbour (Capell 1970). In the 1980s, Kohen mapped what he considered to be the extent of the *Darug*-speaking people across most of the Sydney Basin (Kohen 1986, 1993). For Kohen, the *Darug* included both some saltwater and hinterland people. Attenbrow (2002) takes a similar



approach in describing most of the Sydney Basin as *Darug* but accepts separation of the language group into ‘inland *Darug*’ and ‘coastal *Darug*’ dialects corresponding to Capell’s ‘*Darug*’ and ‘*Guringai*’ respectively. The coast / hinterland distinction was very well argued in the late 1980s by Annie Ross, who referred to early ethnohistoric material in doing so (Ross 1988). As it is based on actual accounts from Aboriginal people describing their pre-invasion society rather than word lists, the ethnohistoric material appears compelling. Ross also disputed the existence of the separate *Eora* language area described by Capell, pointing out the existence of a number of references to people speaking the same language on either side of Sydney Harbour even if they belonged to different clans.

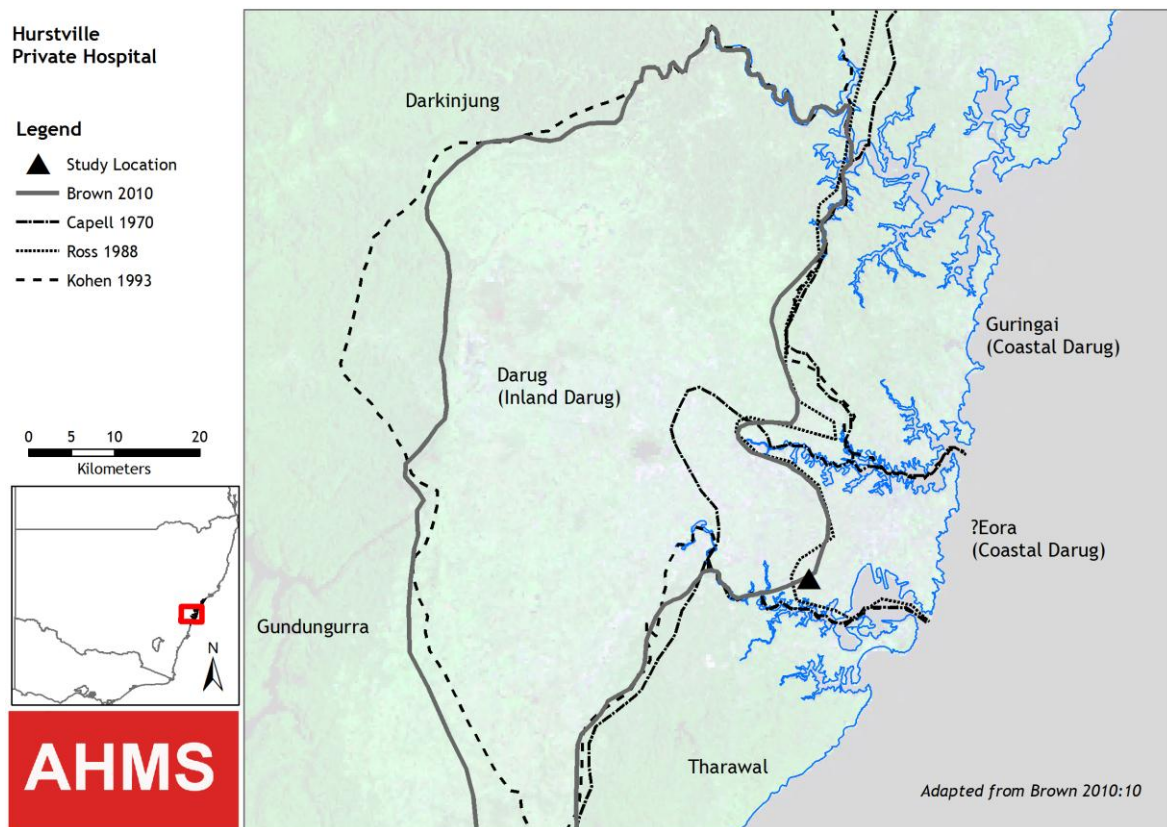


Figure 4: Pre-1788 cultural boundary mapping

Within a summary of this mapping (adapted from Brown 2010a:10 in **Figure 4**), the study area falls within what Capell would have called *Eora*, Kohen would have called *Darug*, Attenbrow would call Coastal *Darug* and Ross would have called *Guringai*. Further, the study area lies very close to the boundary of the *Tharawal* people, who on the catchment basis for cultural group separation described by Flood (1982) might assert an additional viewpoint for the Georges River as within rather than a boundary to their traditional country.

Within this context it must then be allowed that many Aboriginal people may adopt a traditional ownership or custodial role for the study area. Within a legally formalised context of Aboriginal custodianship, the area is within the boundaries of the Metropolitan Local Aboriginal Council (MLALC). Under S52 (4) of the *Aboriginal Land Rights Act* 1983,





MLALC are required: “a) to take action to protect the culture and heritage of Aboriginal persons in the Council’s area, subject to any other law, and; b) to promote awareness in the community of the culture and heritage of Aboriginal persons in the Council’s area”.

### 4.3 AHIMS search

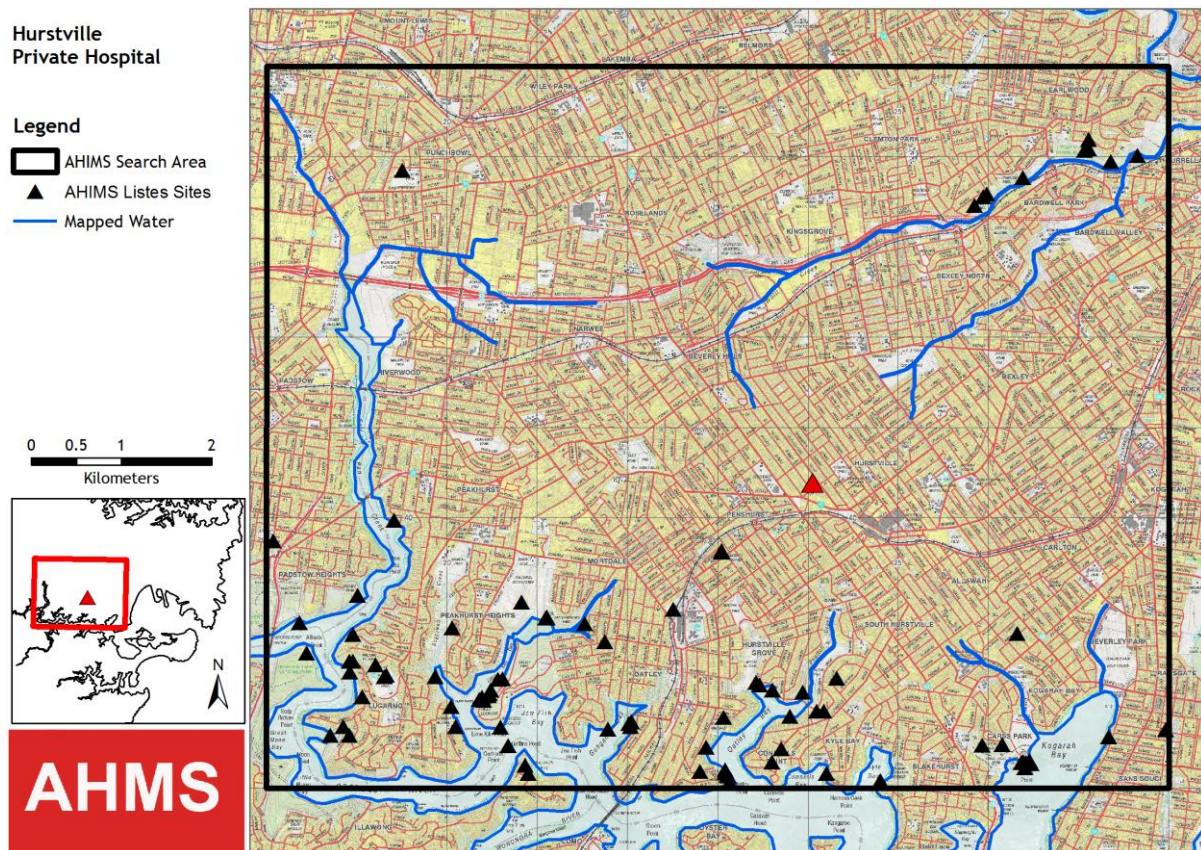


Figure 5: AHIMS listed sites

The Aboriginal Heritage Information Management System (AHIMS) database includes information about Aboriginal objects and places that have been reported to the NSW Government and associated archaeological reports. As such it is a partial record of the distribution of Aboriginal sites, heavily biased towards areas that have been subject to archaeological survey for development impact assessment, public land management and academic research. Private land for which there has been no previous requirement for Aboriginal cultural heritage assessment is generally unlikely to have listed sites unless they are very obvious or significant. At a larger scale, and even allowing for coverage biases, the AHIMS database still however provides the most approachable starting point for considering site distribution patterns as they may apply to a new study area.

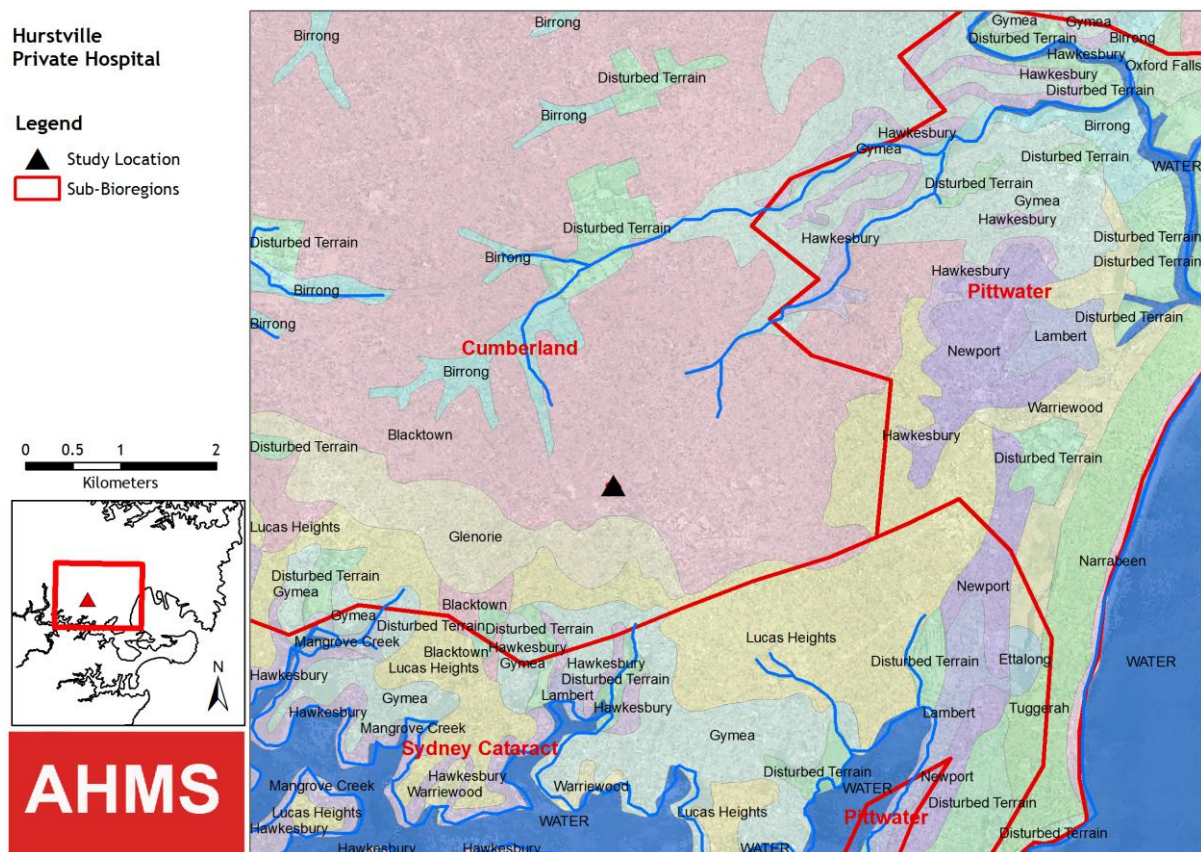




There nearest listed site is more than 1.2 km away and there are no listed sites for the entire suburb of Hurstville. Sites listed in a 10 x 8 km area around the site (**Figure 5**) are almost entirely confined to the Georges River estuary to the south with another cluster of sites in public reserve areas along Wolli Creek to the northeast. This is consistent with site distribution in metropolitan Sydney where the vast majority of sites are within 200 m of water and rare preserved in heavily developed areas (see **Section 4.6** below).

#### 4.4 Landform

The Guidelines require that landscape assessment ‘should describe and map landscape and landform units being used for the study (at the different levels of landscape, landscape unit, landform, topographic unit). It should also identify and map landscape features, places and natural resources of interest to the Aboriginal community’.



*Figure 6: Soil landscape and bioregion mapping*

The entire property constitutes a single unit, being level land of consistent underlying soil and geology and without drainage line, exposed rock or significant topographic variation. At a bioregional level, the study area is in the easternmost extent of the Cumberland sub-bioregion (**Figure 6**). This is the gently undulating shale-based landscape that is



characteristic of western Sydney that naturally supports grey box, forest red gum, narrow-leaved ironbark woodland with some spotted gum on the shale hills (NPWS 2003). The underlying Blacktown Soil Landscape, whilst of only low-moderate fertility, is nonetheless relatively more fertile than most surrounding sandstone country soils.

The property is more than 1 km from mapped water (see **Figure 5**) in any direction; the Hurstville area being the divide between a number of creek catchments feeding into the Cooks and Georges River. Wolli Creek is mapped just over 1 km to the NNW; Bardwell Creek 1.3 km to the NE; and Poulton Creek 1.4 km to the south. The Georges River estuary is at its nearest some 2.3 km to the south.

#### 4.5 Predictive Analysis

Predictive modelling of the likelihood of Aboriginal archaeological sites occurring is relatively well developed for the Cumberland sub-bioregion and its associated soil types (of which the Blacktown Soil Landscape has the greatest extent) due largely to the extent of development in western Sydney over recent decades. The overwhelmingly dominant type of archaeological evidence in this landscape is stone artefacts. These may be found as isolated occurrences ('isolated finds'), in concentrations marking the locality of heavily used 'activity areas' (previously referred to as 'open camp sites'), or may be predicted to occur as undetected subsurface deposits ('potential archaeological deposits' (PADs)).

Where drainage lines have incised down to underlying sandstone geology, associated site types such as rockshelters, grinding grooves and rock art may occur in the Cumberland sub-bioregion, however this is not applicable for the current study area. Where remnant old growth vegetation remains, culturally modified trees may also occur, but again, this is not applicable. Burial sites typically do not occur in the region outside of sandy or rockshelter contexts; midden (or other faunal) deposits do not occur on Blacktown Soils away from water; stone arrangements have not been recorded in Sydney shale country.

Based on landscape assessment and known site distribution patterns, the requirement for assessing potential *archaeological* Aboriginal cultural heritage for the Hurstville Private Hospital site can therefore be limited to the consideration of flaked stone artefact evidence. Non-archaeological Aboriginal cultural values may occur in the absence of archaeological evidence, however this is addressed separately in **Section 5**.

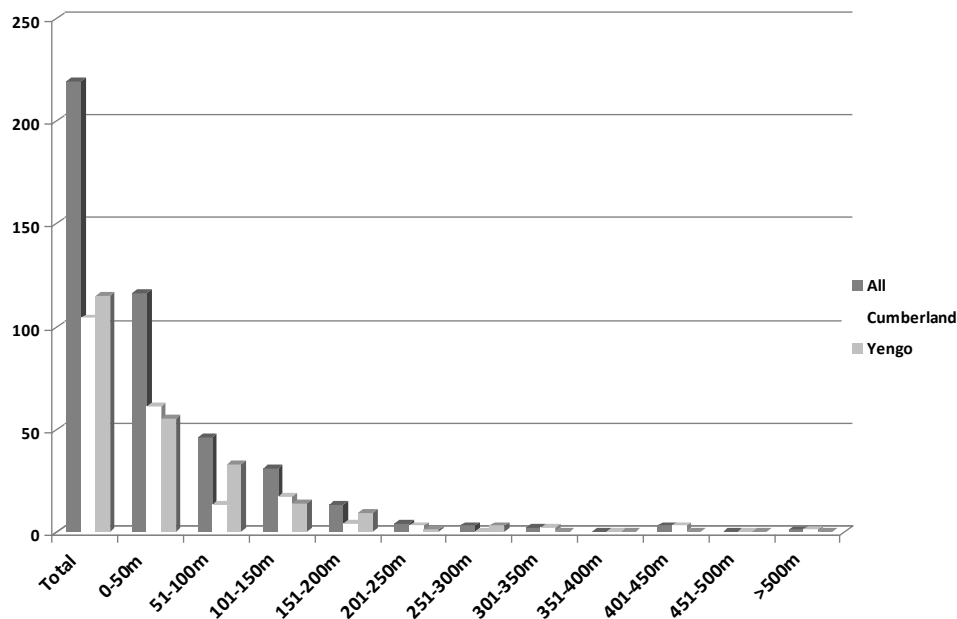
Starting in the 1980s, Haglund (1980), Kohen (1986, 1993) and Smith (1989) analysed strong correlations between the location of artefact sites and proximity to water in western Sydney - i.e. the Cumberland sub-bioregion (and applicable to Hurstville as within its easternmost extent - see **Figure 6**). These patterns have been further investigated and formalised into predictive 'models' such as McDonald's 'stream order model' (e.g. JMcDCHM 2005, White & McDonald 2011) and Baker's 'activity zones model' (Baker 1998, AMBS 2000). While more recent GIS-based models do provide for some statistical determination of site likelihood (e.g. AHMS 2011, Ridges 2010), predictive modelling more





frequently involves the consideration of a number of principles - the most significant being proximity to water.

The location of most archaeological sites is usually given as 200 metres or less within the Cumberland sub-bioregion - and this has become statutorily embodied through Office of Environment and Heritage (OEH) guidelines. In a recent large scale study of the Hills Shire (biogeographically similar to Hurstville LGA in having a mix of shale and sandstone country and some estuarine waterways), of a total of 219 sites with verifiable locations, 94 % were within 200 m of water and those that weren't were mostly isolated finds (Brown 2010b). Only one site was located more than 500 m from mapped water (see **Figure 7**).



*Figure 7: Site proximity to water in the comparable landform of the Hills Shire (Brown 2010b)*

While it is obviously not impossible for an archaeological site to be located away from water, the predictive models developed for the Cumberland sub-bioregion clearly demonstrates that major activity areas, where stone tools were either manufactured or maintained, did essentially have nearby freshwater as a precondition for use. While Aboriginal people certainly used the entirety of the landscape and in doing so would inevitably have left some artefactual evidence across it, this is considered to be a part of the 'background scatter' of artefacts that is theoretically present across almost all landscapes in Australia.

Predictive modelling as outlined above is done based on an initial assumption of a landscape undisturbed by development. Where development has essentially destroyed pre-European soil profiles, the statutory framework for heritage management tends to maintain that the Aboriginal objects in it are also destroyed. In the case of the Hurstville Private Hospital property, virtually no original soil profiles remain intact.



The sum of the information above indicates that there is a very low potential for any Aboriginal archaeological heritage to be present at the Hurstville Private Hospital site. For the majority of the property where previous development has destroyed previous soil profiles (and indeed largely removed them entirely), there is little to no potential at all. For the remaining areas with some remnant but almost entirely disturbed soil profiles there is low potential based on landform-based predictive models.

## **5 SITE INSPECTION (Due Diligence Step 4)**

### **5.1 Methods**

The property was inspected on Tuesday the 8<sup>th</sup> of May 2012 by Oliver Brown (Senior Archaeologist, AHMS) and Jason Pitt (MLALC Sites Officer). The survey was targeted at searching any and all remnant soil areas. Full survey coverage of any areas with soil or other potential archaeological contexts on the property was possible.

### **5.2 Results**

No Aboriginal objects were located during the survey and it is considered that none are likely to exist undiscovered. The property has been completely developed and has only a few remnant areas of soil, the rest being buildings and hardstand areas (see images in **Appendix 1**). The very few areas of soil are heavily disturbed and most likely to have imported to the site for landscaping purposes.

## **6 SOCIAL AND CULTURAL VALUES**

In the absence of not only any potential Aboriginal archaeological contexts but of any pre-1788 environmental values, it is not appropriate to consider Aboriginal cultural values outside of those that may be considered shared values of the entire community. No issues of cultural values were raised by the Metropolitan Local Aboriginal Land Council.

## **7 RECOMMENDATIONS**

It is considered that the proposed activity is unlikely to harm any Aboriginal objects and that there is no need for further assessment based on the process outlined in the Part 3A guidelines. The property inspection included a discussion at the end between Oliver Brown (AHMS) and Jason Pitt (MLALC) wherein both parties agreed on the outcome reported above.

The absence of any Aboriginal archaeological potential precludes the need for any stop work measures for any proposed works on the property.





## 8 REFERENCES

- AMBS Consulting. 2000. Mungerie Town Centre: Archaeological salvage excavations near Kellyville Cumberland Plain, NSW. Report to Department of Urban Affairs and Planning.
- Attenbrow, V. 2002. Sydney's Aboriginal past: investigating the archaeological and historical records. Sydney: UNSW Press.
- AHMS (Archaeological and Heritage Management Solutions P/L). 2011. Aboriginal Heritage Impact Assessment for Water Related Services for the North West Growth Centre - Second Release Precincts. Report to Sydney Water.
- Baker, N. 1998. Mungerie Park Town Centre: Archaeology Survey for Aboriginal Sites. Report by Australian Museum Business Services to the Department of Urban Affairs and Planning, Sydney.
- Brown, O.J.F. 2010a. Aboriginal cultural heritage and mapping: Aspects of cultural boundaries, sub-bioregions and site distribution in the Sydney Basin. *Archaeological Heritage* 2:9-16.
- Brown, O (OBICA). 2010b. Aboriginal Cultural Heritage in the Hills Shire: Review of Council Processes and Procedures. Prepared for the Hills Shire Council
- Capell, A. 1970. Aboriginal languages in the south central coast, New South Wales: Fresh discoveries. *Oceania* 41:20-7.
- Flood, J. 1982. Katungal, Paiendra and Bemeringal. In S. Bowdler (ed), *Coastal Archaeology in Eastern Australia: Proceedings of the 1980 Valla Conference on Australian Prehistory*, pp 29-31. Canberra: ANU.
- Haglund, L. 1980. Report on Archaeological Survey in the City of Blacktown. Report to NPWS.
- Kohen, J. 1986. *Prehistoric Settlement in the Western Cumberland Plain: Resources, Environment and Technology*. Unpublished PhD thesis, Macquarie University.
- Kohen, J. 1993. *The Darug and Their Neighbours: The Traditional Owners of the Sydney Region*. Sydney: Darug Link in association with Blacktown & District Historical Society.
- JMcDCHM. 2001. Salvage excavation of six sites along Caddies Creek, Second Ponds, Smalls and Cattai Creeks in the Rouse Hill Development Area
- NSW National Parks and Wildlife Service. 2003. The Bioregions of New South Wales: their biodiversity, conservation and history. Hurstville: NSW National Parks and Wildlife Service.



Ridges, M. 2010 Aboriginal Sites Decision Support Tool (ASDST): State-Wide Product Outline and Technical Summary. Sydney: Department of Environment, Climate Change and Water.

Ross, A. 1988. Tribal and Linguistic Boundaries: A Reassessment of the Evidence In Aplin, G (ed.) *Sydney Before Macquarie: A Difficult Infant*. Sydney: NSW University Press.

Smith, L. 1989. Aboriginal Sites Planning Study in the Sydney Basin Stage 1: The Cumberland Plain. Archaeological Site Survey and Analyses of Sites on the Northern Cumberland Plain. Report to NSW NPWS.

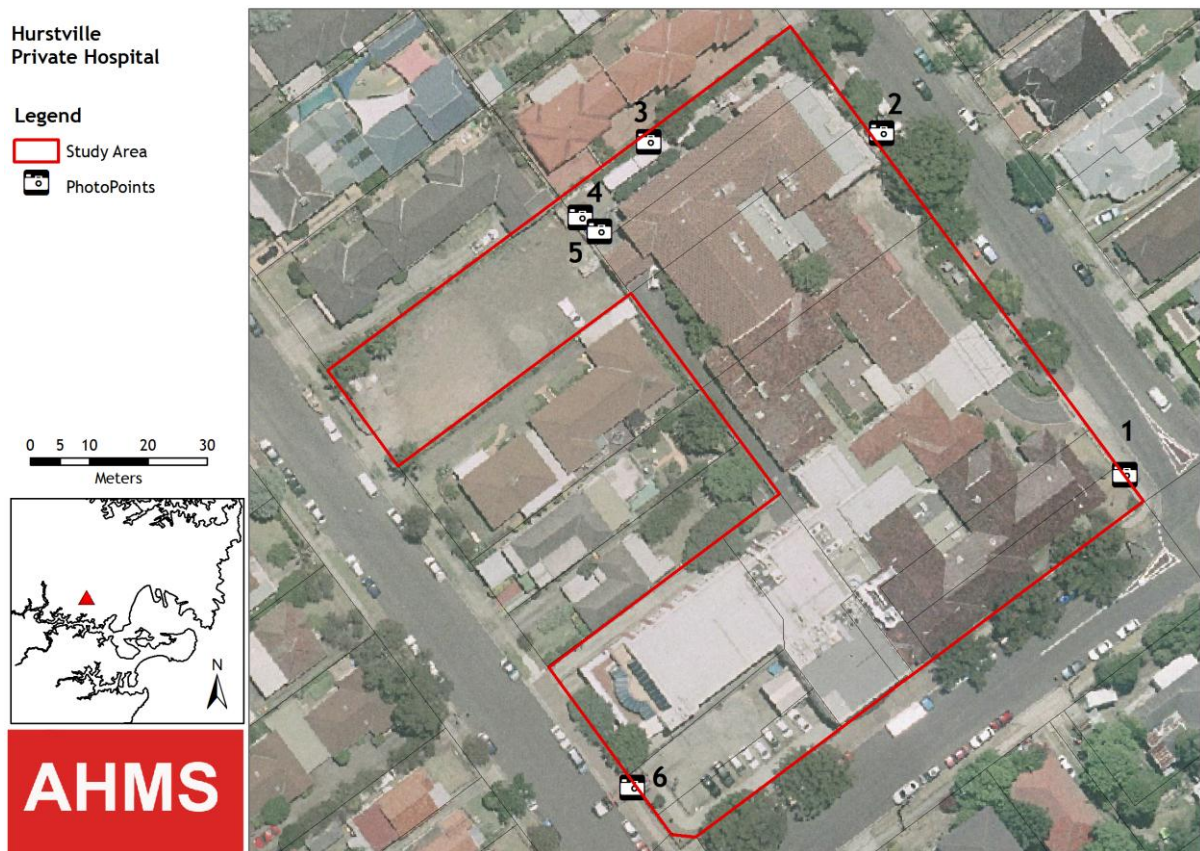
White, B. and J. McDonald. 2010 Lithic artefact distribution in the Rouse Hill Development Area, Cumberland Plain, NSW. *Australian Archaeology* 70:29-38





**APPENDIX 1**

**IMAGES**



*Figure 8: Map showing locations for the following Plates*



**Plate 1:** View of the eastern corner of the property looking west towards the entrance showing largest area of soil - which is built up behind a wall, very heavily disturbed and probably imported.



**Plate 2:** The northern corner of the property looking northwest showing very minimal soil that is heavily disturbed and probably imported.







**Plate 3:** View down the northwestern boundary showing what is effectively complete disturbance.



**Plate 4:** View to southwest of the car park at the western corner of the property showing complete disturbance.



**Plate 5:** The southern entry to the hospital



**Plate 6:** The loading bay where new construction is proposed showing deep excavation into underlying rock.

