



ABORIGINAL DUE DILIGENCE ASSESSMENT REPORT

WENTWORTH HOSPITAL

WENTWORTH NSW

JANUARY 2023

Report prepared by
OzArk Environment & Heritage
for NSW Health Infrastructure

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Enquiries should be addressed to OzArk Environment & Heritage.		

Acknowledgement

OzArk acknowledge the traditional custodians of the area on which this assessment took place and pay respect to their beliefs, cultural heritage, and continuing connection with the land. We also acknowledge and pay respect to the post-contact experiences of Aboriginal people with attachment to the area and to the Elders, past and present, as the next generation of role models and vessels for memories, traditions, culture and hopes of local Aboriginal people.

EXECUTIVE SUMMARY

OzArk Environment & Heritage (OzArk) has been engaged by NSW Health Infrastructure to complete an Aboriginal heritage due diligence heritage assessment for the proposed Wentworth Health Service Redevelopment. The proposal is in the Wentworth Local Government Area (LGA).

The Wentworth Health Service redevelopment proposal covers 3.8 hectares (ha) of land adjacent to the Darling and Murray Rivers.

The visual inspection of the study area was undertaken by OzArk Archaeologists, Brendan Fisher and Barry Kerton, on 28 February 2022 with the assistance of Mr James Toomey representing the Dareton Local Aboriginal Land Council (LALC). This visual inspection was conducted as part of the OzArk (2022) options assessment for the Wentworth Hospital redevelopment and it is the results of this inspection that is being used as basis for the current assessment.

No Aboriginal sites or areas with potential subsurface deposits were recorded during the visual inspection.

The undertaking of the due diligence process resulted in the conclusion that if proposed works proceed, they will have an impact on the ground surface, however, no Aboriginal objects or intact archaeological deposits will be harmed by the proposal. This moves the proposal to the following outcome:

AHIP (Aboriginal Heritage Impact Permit) application not necessary. Proceed with caution. If any Aboriginal objects are found, stop work, and notify Heritage NSW (02) 9873 8500 (heritagemailbox@environment.nsw.gov.au). If human remains are found, stop work, secure the site, and notify NSW Police and Heritage NSW.

To ensure the greatest possible protection to the area's Aboriginal cultural heritage values, the following recommendations are made:

- 1) The proposed work may proceed within the study areas without further archaeological investigation under the following conditions:
 - a) All land and ground disturbance activities must be confined to within the study area, as this will eliminate the risk of harm to Aboriginal objects in adjacent landforms. Should the parameters of the proposal extend beyond the assessed areas, then further archaeological assessment may be required.
 - b) All staff and contractors involved in the proposed work should be made aware of the legislative protection requirements for all Aboriginal sites and objects.
- 2) This assessment has concluded that there is a low likelihood that the proposed work will adversely harm Aboriginal cultural heritage items or sites. If during works, however,

Aboriginal artefacts or skeletal material are noted, all work should cease and the procedures in the *Unanticipated Finds Protocol* (**Appendix 2**) should be followed.

- 3) Inductions for work crews should include a cultural heritage awareness procedure to ensure they recognise Aboriginal artefacts (see **Appendix 3**) and are aware of the legislative protection of Aboriginal objects under the *National Parks and Wildlife Act 1974* (NPW Act) and the contents of the *Unanticipated Finds Protocol*.
- 4) The information presented here meets the requirements of the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*. It should be retained as shelf documentation for five years as it may be used to support a defence against prosecution in the event of unanticipated harm to Aboriginal objects.

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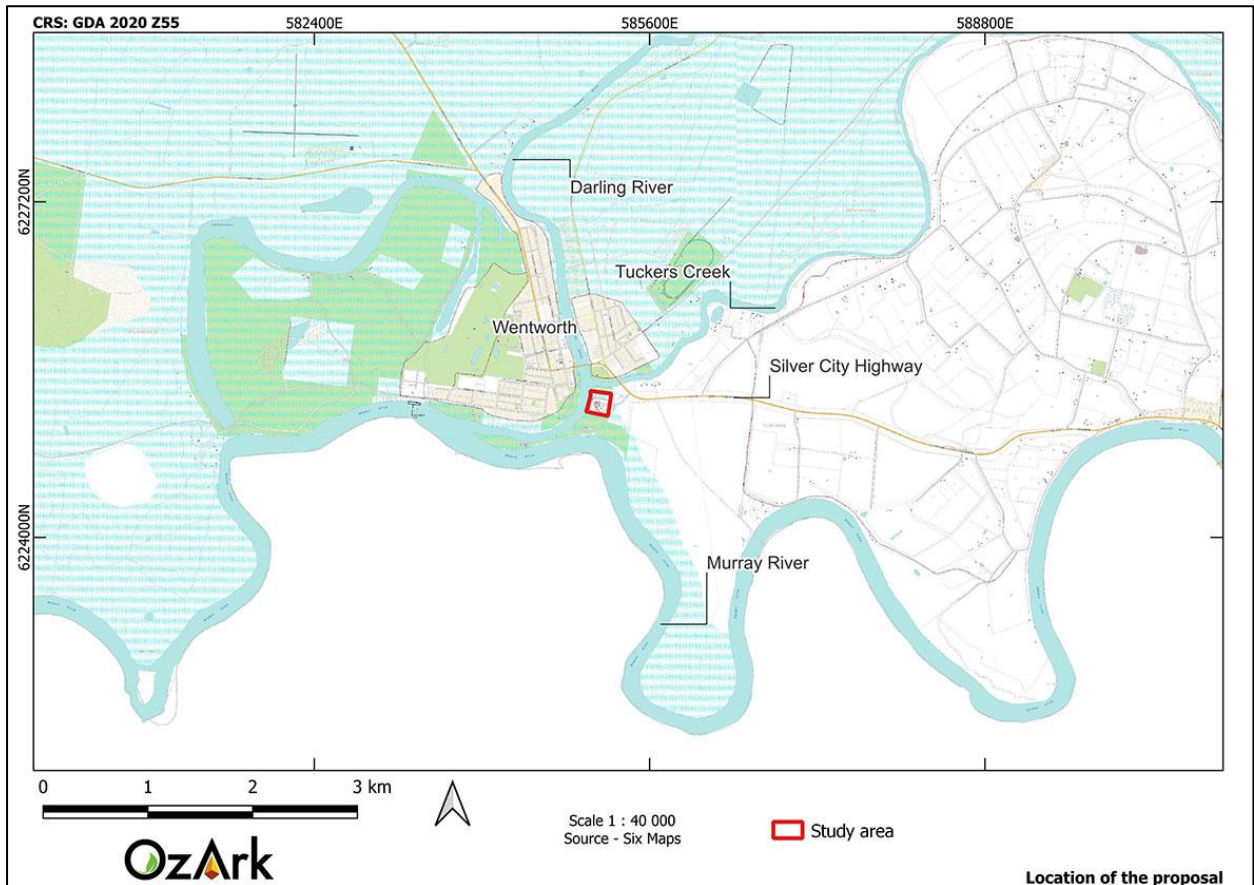
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1 INTRODUCTION

1.1 BRIEF DESCRIPTION OF THE PROPOSAL

OzArk Environment & Heritage (OzArk) has been engaged by NSW Health Infrastructure (the proponent) to complete an Aboriginal due diligence heritage assessment for the Wentworth Health Service Redevelopment (WHSR, the proposal). The proposal is in the Wentworth Local Government Area (LGA) (**Figure 1-1**).

Figure 1-1. Map showing the location of the proposal.



1.2 BACKGROUND

In early 2022, OzArk completed a due diligence options assessment for the proposed WHSR (OzArk 2022). This assessment focused on three proposed locations for the Wentworth Hospital redevelopment, and assessed for potential Aboriginal heritage at each of these locations. Following the assessment, and based on review of all specialist studies in relation to the location of the new complex, NSW Health Infrastructure determined Option 1 as the preferred location for the hospital redevelopment, which is the study area covered by this due diligence. As the OzArk 2022 due diligence options assessment included a comprehensive visual inspection of the study area, those results will be used as the visual inspection component for this due diligence assessment.

1.3 STUDY AREA

The study area is comprised of approximately 3.8 hectares (ha) of land at the junction of the Murray and Darling Rivers, as well as Tuckers Creek in Wentworth NSW. The study area is situated on an elevated terrace associated with these three waterways, and has been utilised as a health facility since the late 1800s.

The study area is shown on **Figure 1-2**.

1.4 PROPOSAL INFORMATION

The proposal will not only involve the construction of a new health service complex, but also the excavation of the deposit below the current buildings. Once the existing buildings have been removed, the deposit below needs to be removed due to asbestos contamination.

1.5 ASSESSMENT APPROACH

The assessment of the study area follows the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (due diligence; DECCW 2010).

Figure 1-2: Aerial showing the study area.



2 ABORIGINAL DUE DILIGENCE ASSESSMENT

2.1 INTRODUCTION

Section 57 of the National Parks and Wildlife Regulation 2019 (NPW Regulation) made under the *National Parks and Wildlife Act 1974* (NPW Act) advocates a due diligence process to determining likely impacts on Aboriginal objects. Carrying out due diligence provides a defence to the offence of harming Aboriginal objects and is an important step in satisfying Aboriginal heritage obligations in NSW.

2.2 DEFENCES UNDER THE NPW REGULATION 2019

2.2.1 Low impact activities

The first step before application of the due diligence process itself is to determine whether the proposed activity is a “low impact activity” for which there is a defence in the NPW Regulation. The exemptions are listed in Section 58 of the NPW Regulation (DECCW 2010: 6).

The activities of NSW Health Infrastructure are not considered a ‘low impact activity’ and the due diligence process must be applied.

2.2.2 Disturbed lands

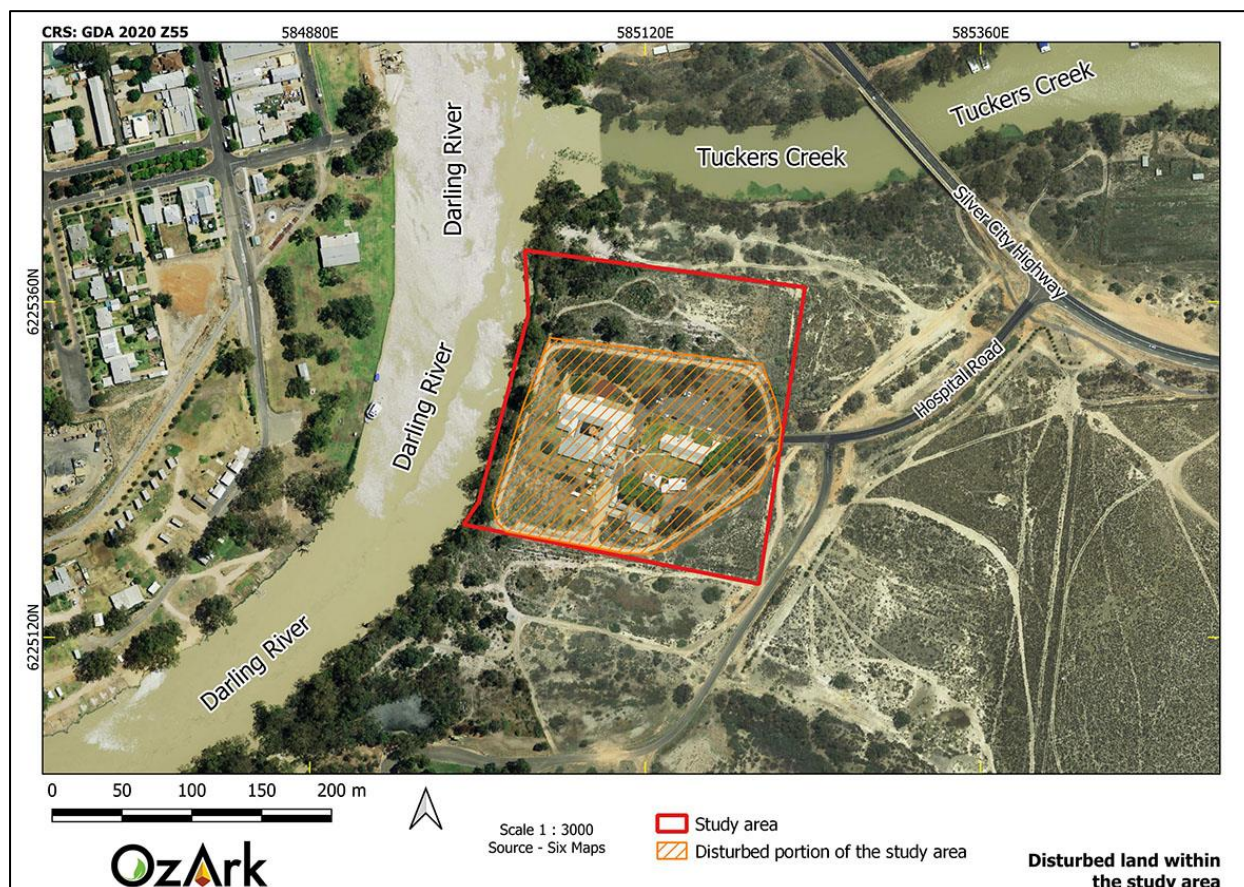
Relevant to this process is the assessed levels of previous land-use disturbance.

The NPW Regulation Section 58 (DECCW 2010: 18) define disturbed land as follows:

Land is disturbed if it has been the subject of a human activity that has changed the land’s surface, being changes that remain clear and observable.

Examples include ploughing, construction of rural infrastructure (such as dams and fences), construction of roads, trails and tracks (including fire trails and tracks and walking tracks), clearing vegetation, construction of buildings and the erection of other structures, construction or installation of utilities and other similar services (such as above or below ground electrical infrastructure, water or sewerage pipelines, stormwater drainage and other similar infrastructure) and construction of earthworks.

The study area is within landforms that have been cleared and contain recent infrastructure, however, portions of the study area have not been changed in a clear and observable manner and the due diligence process must be applied. **Figure 2-1** shows the portion of the study area that has been clearly disturbed from the current Wentworth Health Service compound and the associated levee bank.

Figure 2-1: Disturbed portion of the study area.

In summary, it is determined that the proposal must be assessed under the Due Diligence Code of Practice. The reasoning for this determination is set out in **Table 2-1**.

Table 2-1: Determination of whether Due Diligence Code of Practice applies.

Item	Reasoning	Answer
Is the activity to be assessed under Division 4.7 (state significant development) or Division 5.2 (state significant infrastructure) of the EP&A Act?	The proposal will be assessed under Part 5 of the EP&A Act.	No
Is the activity exempt from the NPW Act or NPW Regulation?	The proposal is not exempt under this Act or Regulation.	No
Do either or both apply: Is the activity in an Aboriginal place? Have previous investigations that meet the requirements of this Code identified Aboriginal objects?	The activity will not occur in an Aboriginal place. No previous investigations have been undertaken for this proposal.	No
Is the activity a low impact one for which there is a defence in the NPW Regulation?	The proposal is not a low impact activity for which there is a defence in the NPW Regulation.	No
Is the activity occurring entirely within areas that are assessed as 'disturbed lands'?	The proposal is not entirely within areas of high modification.	No
Due Diligence Code of Practice assessment is required		

2.3 APPLICATION OF THE DUE DILIGENCE CODE OF PRACTICE TO THE PROPOSAL

To follow the generic due diligence process, a series of steps in a question/answer flowchart format (DECCW 2010: 10) are applied to the proposed impacts and the study area, and the responses documented.

2.3.1 Step 1

Will the activity disturb the ground surface or any culturally modified trees?

Yes, the proposal will impact the ground surface and may impact culturally modified trees.

The Wentworth Hospital redevelopment will impact the ground surface through earthworks. The site also contains clusters of native trees which will be impacted, hence a visual inspection is required to confirm if any of the trees are mature and have cultural modification.

2.3.2 Step 2a

Are there any relevant confirmed site records or other associated landscape feature information on AHIMS?

No, there are no previously recorded sites within the study area.

A search of the Aboriginal Heritage Information Management System (AHIMS) on 31 January 2023 was undertaken over Eastings 579950–589812 and Northings 6220274–6230256 (GDA 2020 Zone 55) covering a 10 square kilometre (km²) area. The search returned 102 previously recorded Aboriginal sites within the search area (see **Appendix 1**).

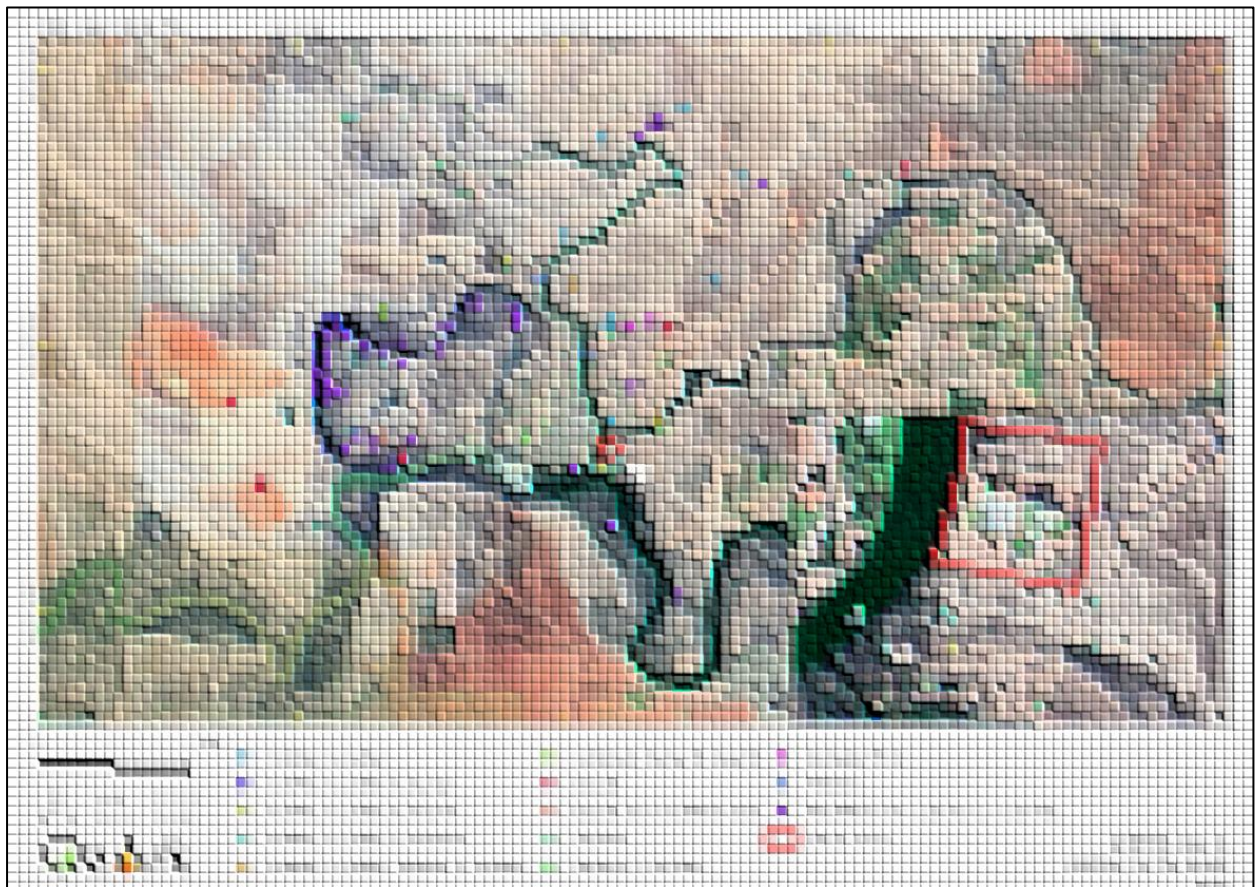
Figure 2-2 shows all previously recorded sites in relation to the study area and **Table 2-2** shows the types of sites that are close to the study area.

Table 2-2: Site types and frequencies of AHIMS sites near the study area.

Site Type	Number	% Frequency
Modified tree (carved or scarred)	50	48
Artefact scatter	10	10
Burial	10	10
Artefact scatter & midden	10	10
Hearth	7	7
Artefact scatter & hearth	3	3
Midden	3	3
Hearth & midden	2	2
Artefact scatter, hearth & midden	2	2
Isolated find	2	2
Artefact scatter & burial	1	1
Artefact scatter, burial & hearth	1	1
Burial & modified tree	1	1
Total	102	100

Modified trees are the most frequent site type in the general vicinity by a significant margin. This could be explained by the proximity of three waterways, the Murray River, the Darling River and Tuckers Creek, as this confluence is likely to have attracted high density Aboriginal occupation. This is also seen through the high frequency of artefact scatters, middens and burials, as these are direct evidence of long-term and continuous occupation in the region. As the study area occurs within proximity of the confluence of the Darling River, Murray River, and Tuckers Creek, all the previously recorded site types in the region are likely to be recorded, particularly artefact scatters and middens as these site types are located directly south of the study area (see **Figure 2-2**). Burials also remain a possibility in the northern portion of the study area, which appears to be relatively undisturbed at a desktop level, but are unlikely in the highly disturbed land within the levee bank (**Figure 2-1**).

Figure 2-2: Previously recorded sites in relation to the study area (pixelated for site protection)



2.3.3 Step 2b

Are there any other sources of information of which a person is already aware?

No, there are no other sources of information that would indicate the presence of Aboriginal objects in the study area.

Ethnographic Information

According to tribal maps (Tindale 1974) Aboriginal people of the Barkindji language group inhabited the Lower Darling region at the time of first contact with Europeans. This language group comprised people who spoke the sub-dialects Barindji, Barkindji, Danggali, Maraura, and Wiljakali. These tribes shared similar language and kinship systems, notably the division of members into matrilineal moieties (two-part social classification) known as Mukwara (wedge-tailed eagle) and Kilpara (raven) (Blows 1995 as cited in Cupper 2003).

From early European accounts and archaeological evidence it appears that Barkindji were hunter-fisher-gatherers living a semi-sedentary lifestyle. More generally across the region, rivers appear to have been the foci of Aboriginal lifestyles. This is no exception to the Barkindji, as their name means 'people of the Barkka' (Darling River). Rivers provided Aboriginal people with food in the forms of fish, shellfish, nuts, fruits, and tubers in addition to resources such as tree bark.

The story for most of the Barkindji tribe, however, was that within about ten years of the advance of pioneering European settlement, they were living adjacent to pastoral homesteads, often working as shepherds or in other labouring activities (Lans et al 1988 and Withers 1989 in Cupper 2007: B-14). By the turn of the nineteenth century many Barkindji resided on the Darling River near Pooncarie where an Aboriginal mission had been set up in 1911 (Hardie 1969).

Archaeological Assessments

In terms of archaeological research of the Lower Darling, there has been little systematic study undertaken, although there have been a few development driven projects over the dunefields and sandplains west of the Darling. The following provides a summary of a sample of studies completed in the general region of Wentworth in chronological order:

Hope and Jacobs 1982

One of the earliest broad-based archaeological studies conducted in the region was that by Hope and Jacobs (1982). This study was commissioned by ESSO Australia Ltd as a predictive tool for seismic surveys. The bulk of the study focussed on archaeologically sensitive landforms such as anabranches of the Darling River and lakes with lunettes. The most common site types in the region studied by Hope and Jacobs included shell middens, open campsites, burials, deposits in rock shelters, scarred trees, stone arrangements and quarries.

Martin 1985

In 1985, Claremont Petroleum commissioned an archaeological survey, undertaken by Sarah Martin, to assess areas to be impacted by proposed land clearance in preparation for seismic surveying across approximately 130 kilometres (km) between Broken Hill and Wentworth. A total of 17 Aboriginal sites were recorded as well as a number of archaeologically sensitive landforms within the immediate vicinity. Additional sites were noted but not recorded as they were located outside of the prescribed survey corridor (Martin 1985: 16).

All site types recorded were open camp sites consisting of artefact scatters of varying density, preservation, and size, accompanied in most instances by hearth features evidenced by heat retaining stones or termite mound heat retainers, estimated at less than 5,000 years old (Martin 1985: 11–14). All sites were identified on low dunes, blow-outs on dune crests, or flat bottomed drainage basin landforms. Martin notes the regions lack of stone material suitable for tool manufacture as being manifest in the archaeological record through the small number of cores and a lack of knapping floors on sites recorded because of the survey (Martin 1985: 15). Further, the presence of adze-like tools (i.e. scrapers) was interpreted as an indication of the manufacture and maintenance of wooden tools on at least some of the sites (Martin 1985: 15).

Martin 1986

During 1986, the Public Works Department NSW (PWD) proposed to establish water filtration plants at Hay, Wentworth, and Balranald, NSW, in conjunction with the relevant local councils. Six Aboriginal sites were recorded because of Martin's study. Of most relevance to the current assessment are the four in situ sites recorded at Wentworth, consisting of one canoe tree, two middens and one open campsite with midden material. An additional two in situ sites were at Hay, consisting of one midden site and one scarred tree. Avoidance was recommended at all six sites.

In her report, Martin raised concerns regarding the presence of imported sands at the Balranald site containing midden material. This material was thought to derive from the source bordering dunes of a lake such as Lake Benanee or Lake Yanga; such dunes frequently contain middens and burials and both Sarah Martin and Joe Pappin of Balranald Local Aboriginal Land Council (LALC) were concerned that this was evidence of uncontrolled quarrying of Aboriginal sites in the region. At the time of the report, no resolution to the question of the material's source was available. Martin recommended that any sources of quarry material be archaeologically assessed prior to PWD works.

OzArk 2013

In 2013, OzArk (2013) conducted an Aboriginal heritage assessment that covered a portion of approximately 1.48 hectares of Lot 1 DP717938 located northeast of Buronga, approximately 31 km east of current study area. However, no Aboriginal sites or archaeologically sensitive landforms were recorded during the visual inspection.

OzArk 2020

In 2020, OzArk (2020) undertook Aboriginal heritage assessment for the proposed Copi Mineral Sands Project. The Project is located 75 km northwest of Wentworth in semi-arid landforms. A total of 81 Aboriginal sites were recorded during the assessment, including 49 isolated finds, 22 artefact scatters (including one subsurface scatter), six artefact scatters with potential archaeological deposit (PAD), one artefact scatter and hearth, two artefact scatters with hearths and PAD, one artefact scatter and scarred tree with PAD, and one PAD.

Most sites were recorded on the Lake Footslopes and Lunettes and Islands landforms during the survey. Artefact sites are the most recorded site type within the project area (n=80). Most artefact sites are low density due to their distance from reliable water sources. Recorded artefacts were largely manufactured from silcrete, quartz, chert and quartzite, while a low number of chalcedony artefacts were also identified. All recorded hearths (n=11) were identified in association with stone artefact sites. Most hearths (n=10) were located across the Lake Footslopes landform and one hearth was identified in the Sandplains and Dunes.

Conclusion

OzArk 2020 provides information on the landforms away from the river systems, while the other studies included landforms that are represented in the study area. Therefore, the findings of Martin (1985, 1986) are most applicable. The range of sites, or lack of sites, recorded during this investigations are therefore also likely to occur in the study area in landforms that have not been modified by previous constructions.

2.3.4 Step 2c

Are there any landscape features that are likely to indicate presence of Aboriginal objects?

Yes, portions of the study area contain landforms with identified archaeological sensitivity.

The Due Diligence Code (DECCW 2010) specifies several landscape features which are more likely to be associated with Aboriginal objects and which therefore require further assessment if present. These are areas that are: within 200 m of waters; located within a sand dune system; located on a ridge top, ridge line or headland; located within 200 m below or above a cliff face; within 20 m of or in a cave, rock shelter, or a cave mouth; and located on land that is not disturbed.

The study area is generally flat and within close proximity of the Murray River, Darling River and Tuckers Creek (**Figure 2-3**). This landform type is noted in the Due Diligence Code as having a heightened archaeological sensitivity and therefore a visual inspection of the study area is required in order to ground-truth the findings of the above desktop level assessment.

Figure 2-3: Study area in relation to 200m drainage buffer.



2.3.5 Step 3

Can harm to Aboriginal objects or disturbance of archaeologically sensitive landscape features be avoided?

No. Landforms with identified archaeological sensitivity may be impacted by the proposal.

Aboriginal sites identified through the AHIMS search do not occur within the study area and thus, there is no risk of harm to previously recorded sites. However, relevant landforms containing increased potential for Aboriginal objects are present within the study area. Hence, a visual inspection of the study area is required to assess whether Aboriginal objects exist within these landforms and to determine whether any harm will occur.

2.3.6 Step 4

Does a desktop assessment and the OzArk 2022 visual inspection confirm that there are Aboriginal objects or that they are likely?

No, the OzArk 2022 visual inspection of the study area indicated that Aboriginal objects will not be harmed by the proposal.

The visual inspection of the study areas was undertaken by OzArk Archaeologists, Brendan Fisher and Barry Kerton, on 28 February 2022 with the assistance of Mr James Toomey

representing the Dareton LALC. The study area was inspected to ground-truth levels of disturbance that are unable to be distinguished at a desktop level, and assess areas with increased archaeological sensitivity (the entire study area is within 200 m of the Murray River, Darling River, and Tuckers Creek). All mature, native vegetation within the study area was inspected for cultural modification.

The survey coverage is shown on **Figure 2-4**. The northern, undisturbed portion of the study area was also systematically inspected. The remaining portion of the study area was also inspected, however, it has been significantly disturbed from the current and previous Wentworth Health Service buildings, and the creation of the associated levee bank surrounding the compound. Views of the study area are also shown in **Figure 2-5**.

Figure 2-4: Pedestrian coverage of the study area.

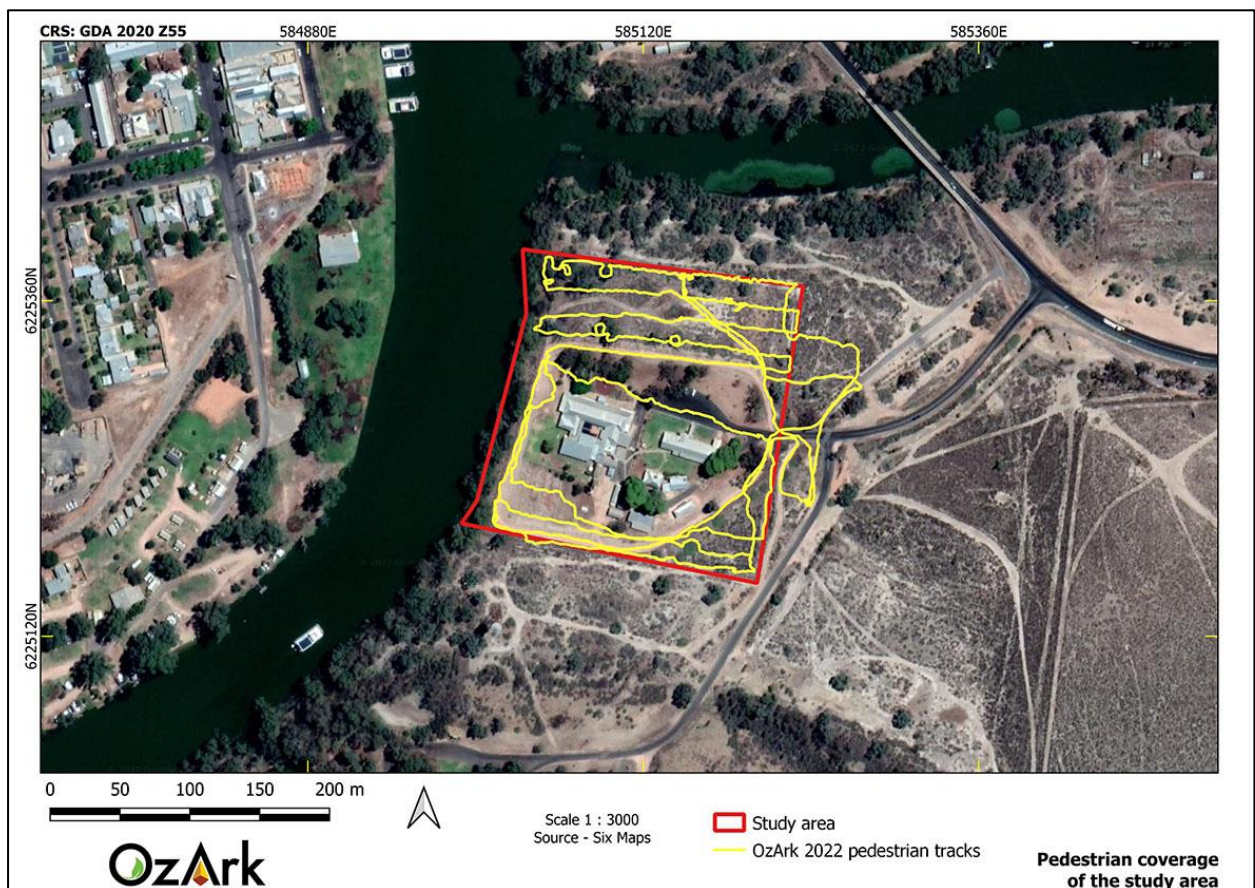


Figure 2-5: Views of the study area.

	
<p>1. View to the south in the eastern portion of the study area showing the flood levee bank surrounding the current Wentworth Health Services complex.</p>	<p>2. View to the south in the central portion of the study area along the flood levee bank.</p>
	
<p>3. View to the south in the western portion of the study area along the flood levee bank.</p>	<p>4. View to the west in the southeastern portion of the study area along the flood levee bank.</p>
	
<p>5. View to the west in the southcentral portion of the study area showing the disturbed area in Figure 2-1.</p>	<p>6. View to the southwest in the southcentral portion of the study area showing the disturbed area in Figure 2-1.</p>

Discussion of OzArk 2022 visual inspection

No Aboriginal sites were recorded as a result of the field inspection, and although the study area is situated on the banks and floodplains of the Murray River, Darling River and Tuckers Creek (considered archaeologically sensitive due to the proximity to each of the waterways), the high levels of land use disturbance have reduced the potential to record intact archaeological sites. These disturbances include the original construction of the Wentworth Health Services buildings, since the late 1800s and throughout the twentieth century, as well as the large levee bank that surrounds the compound. This levee bank was created from the soils that would have occupied the study area, particularly within the area that the current health service compound is located, as multiple soil borrow pits were noted.

Although the deposits beneath the existing hospital complex could not be assessed, it is noted that the levels of disturbance here are likely to have been high from the original construction of the first hospital in the late 1880's and its subsequent redevelopment through the twentieth century. Inspection of this area would not be possible in the future either due to the identified presence of asbestos, which will require specialist removal as part of the proposed hospital redevelopment.

Ground surface exposure (GSE) across the study area surrounding the hospital buildings averaged 40%, with the remainder of the study area covered in shrubs and weeds (**Plate 1**). Ground surface visibility (GSV) was provided in areas of tracks and erosion along fence lines. GSV within these exposures was generally high ranging from 60% to 100% (**Plate 2** and **Plate 3**). The archaeologically sensitive landform of the study area that was identified at a desktop level, contained area that had not been subject to clear and obvious disturbances (northern portion of the study area), however, no Aboriginal objects or potential archaeological deposits were identified here and land use disturbances were more significant than was clear on aerials.

2.4 CONCLUSION

The due diligence process has resulted in the outcome that an Aboriginal Heritage Impact Permit (AHIP) is not required. The reasoning behind this determination is set out in **Table 2-3**.

Table 2-3: Due Diligence Code of Practice application.

Step	Reasoning	Answer
Step 1 Will the activity disturb the ground surface or any culturally modified trees?	The proposed works will disturb the ground surface through construction. The proposal may impact mature, native vegetation and therefore may harm culturally modified trees.	Yes
If the answer to Step 1 is 'yes', proceed to Step 2		
Step 2a Are there any relevant records of Aboriginal heritage on AHIMS to indicate presence of Aboriginal objects?	AHIMS indicated that there are no Aboriginal sites within the study area. No recorded Aboriginal sites will be harmed by the proposal.	No

Step	Reasoning	Answer
Step 2b Are there other sources of information to indicate presence of Aboriginal objects?	There are no other sources of information to indicate that Aboriginal objects are likely in the study area, although it is noted that there is a potential for landforms in the region to contain Aboriginal objects.	No
Step 2c Will the activity impact landforms with archaeological sensitivity as defined by the Due Diligence Code?	Landforms with identified archaeological sensitivity are present as portions of the study areas are within 200 m of 'waters' (i.e. the Murray River, Darling River and Tuckers Creek).	Yes
If the answer to any stage of Step 2 is 'yes', proceed to Step 3		
Step 3 Can harm to Aboriginal objects listed on AHIMS or identified by other sources of information and/or can the carrying out of the activity at the relevant landscape features be avoided?	The proposal will impact landforms with archaeological sensitivity as identified in the Due Diligence Code: landforms within 200 m of 'waters'.	No
If the answer to Step 3 is 'no', a visual inspection is required. Proceed to Step 4.		
Step 4 Does the visual inspection confirm that there are Aboriginal objects or that they are likely?	The visual inspection recorded no Aboriginal objects in the study area. Landforms with identified archaeological sensitivity that were identified at a desk-top level were found during the inspection to have low archaeological potential due to the significant surface and subsurface disturbances present.	No
Conclusion		
AHIP not necessary. Proceed with caution.		

3 MANAGEMENT RECOMMENDATIONS

The undertaking of the due diligence process resulted in the conclusion that the proposed works will have an impact on the ground surface, however, no Aboriginal objects or intact archaeological deposits will be harmed by the proposal. This moves the proposal to the following outcome:

AHIP application not necessary. Proceed with caution. If any Aboriginal objects are found, stop work, and notify Heritage NSW (02) 9873 8500 (heritagemailbox@environment.nsw.gov.au). If human remains are found, stop work, secure the site and notify NSW Police and Heritage NSW.

To ensure the greatest possible protection to the area's Aboriginal cultural heritage values, the following recommendations are made:

- 1) The proposed work for the redevelopment Wentworth Hospital may proceed at within the study area without further archaeological investigation under the following conditions:
 - a) All land and ground disturbance activities must be confined to within the study area, as this will eliminate the risk of harm to Aboriginal objects in adjacent landforms. Should the parameters of the proposal extend beyond the assessed areas, then further archaeological assessment may be required.
 - b) All staff and contractors involved in the proposed work should be made aware of the legislative protection requirements for all Aboriginal sites and objects.
- 2) This assessment has concluded that there is a low likelihood that the proposed work will adversely harm Aboriginal cultural heritage items or sites. If during works, however, Aboriginal artefacts or skeletal material are noted, all work should cease and the procedures in the *Unanticipated Finds Protocol* (**Appendix 2**) should be followed.
- 3) Inductions for work crews should include a cultural heritage awareness procedure to ensure they recognise Aboriginal artefacts (see **Appendix 3**) and are aware of the legislative protection of Aboriginal objects under the NPW Act and the contents of the *Unanticipated Finds Protocol*.
- 4) The information presented here meets the requirements of the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*. It should be retained as shelf documentation for five years as it may be used to support a defence against prosecution in the event of unanticipated harm to Aboriginal objects.

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PLATES



Plate 1: View to the west in the northern portion of the study area showing the dense weed and shrub cover and areas of exposure.



Plate 2: View of an example of 60% GSV in some sections of the study area.



Plate 3: View to the west in the southern portion of the study area showing 100% GSV.

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Extensive search Site list report

Item ID	Item Name	Category	Weight	Material	Color	Size	Price	Stock	Supplier	Notes
001	Red Dress	Women's	1.2	Cotton	Red	M	\$25.00	10	ABC Fashion	Size M, Color Red
002	Blue Jeans	Men's	0.8	Denim	Blue	L	\$18.00	20	XYZ Clothing	Size L, Color Blue
003	Yellow Shirt	Unisex	0.5	Cotton	Yellow	S	\$12.00	50	DEF Apparel	Size S, Color Yellow
004	Green Pants	Women's	1.0	Wool	Green	M	\$30.00	5	GHI Fashion	Size M, Color Green
005	Black Hat	Unisex	0.3	Fabric	Black	One Size	\$8.00	30	JKL Accessories	One Size, Color Black
006	White Sneakers	Unisex	0.7	Canvas	White	M	\$22.00	15	MNO Shoes	Size M, Color White
007	Orange Scarf	Unisex	0.2	Knit	Orange	One Size	\$5.00	40	PQR Accessories	One Size, Color Orange
008	Grey Jacket	Men's	1.5	Wool	Grey	L	\$45.00	3	RST Fashion	Size L, Color Grey
009	Pink Blouse	Women's	0.9	Silk	Pink	M	\$35.00	7	UVW Fashion	Size M, Color Pink
010	Dark Blue T-shirt	Unisex	0.4	Cotton	Dark Blue	S	\$10.00	60	XYZ Apparel	Size S, Color Dark Blue
011	Light Green Dress	Women's	1.1	Cotton	Light Green	M	\$28.00	8	ABC Fashion	Size M, Color Light Green
012	Black Socks	Unisex	0.1	Cotton	Black	One Size	\$2.00	100	DEF Socks	One Size, Color Black
013	White Socks	Unisex	0.1	Cotton	White	One Size	\$2.00	100	DEF Socks	One Size, Color White
014	Red Socks	Unisex	0.1	Cotton	Red	One Size	\$2.00	50	DEF Socks	One Size, Color Red
015	Blue Socks	Unisex	0.1	Cotton	Blue	One Size	\$2.00	50	DEF Socks	One Size, Color Blue
016	Yellow Socks	Unisex	0.1	Cotton	Yellow	One Size	\$2.00	50	DEF Socks	One Size, Color Yellow
017	Green Socks	Unisex	0.1	Cotton	Green	One Size	\$2.00	50	DEF Socks	One Size, Color Green
018	Black Socks	Unisex	0.1	Cotton	Black	One Size	\$2.00	50	DEF Socks	One Size, Color Black
019	White Socks	Unisex	0.1	Cotton	White	One Size	\$2.00	50	DEF Socks	One Size, Color White
020	Red Socks	Unisex	0.1	Cotton	Red	One Size	\$2.00	50	DEF Socks	One Size, Color Red
021	Blue Socks	Unisex	0.1	Cotton	Blue	One Size	\$2.00	50	DEF Socks	One Size, Color Blue
022	Yellow Socks	Unisex	0.1	Cotton	Yellow	One Size	\$2.00	50	DEF Socks	One Size, Color Yellow
023	Green Socks	Unisex	0.1	Cotton	Green	One Size	\$2.00	50	DEF Socks	One Size, Color Green
024	Black Socks	Unisex	0.1	Cotton	Black	One Size	\$2.00	50	DEF Socks	One Size, Color Black
025	White Socks	Unisex	0.1	Cotton	White	One Size	\$2.00	50	DEF Socks	One Size, Color White
026	Red Socks	Unisex	0.1	Cotton	Red	One Size	\$2.00	50	DEF Socks	One Size, Color Red
027	Blue Socks	Unisex	0.1	Cotton	Blue	One Size	\$2.00	50	DEF Socks	One Size, Color Blue
028	Yellow Socks	Unisex	0.1	Cotton	Yellow	One Size	\$2.00	50	DEF Socks	One Size, Color Yellow
029	Green Socks	Unisex	0.1	Cotton	Green	One Size	\$2.00	50	DEF Socks	One Size, Color Green
030	Black Socks	Unisex	0.1	Cotton	Black	One Size	\$2.00	50	DEF Socks	One Size, Color Black
031	White Socks	Unisex	0.1	Cotton	White	One Size	\$2.00	50	DEF Socks	One Size, Color White
032	Red Socks	Unisex	0.1	Cotton	Red	One Size	\$2.00	50	DEF Socks	One Size, Color Red
033	Blue Socks	Unisex	0.1	Cotton	Blue	One Size	\$2.00	50	DEF Socks	One Size, Color Blue
034	Yellow Socks	Unisex	0.1	Cotton	Yellow	One Size	\$2.00	50	DEF Socks	One Size, Color Yellow
035	Green Socks	Unisex	0.1	Cotton	Green	One Size	\$2.00	50	DEF Socks	One Size, Color Green
036	Black Socks	Unisex	0.1	Cotton	Black	One Size	\$2.00	50	DEF Socks	One Size, Color Black
037	White Socks	Unisex	0.1	Cotton	White	One Size	\$2.00	50	DEF Socks	One Size, Color White
038	Red Socks	Unisex	0.1	Cotton	Red	One Size	\$2.00	50	DEF Socks	One Size, Color Red
039	Blue Socks	Unisex	0.1	Cotton	Blue	One Size	\$2.00	50	DEF Socks	One Size, Color Blue
040	Yellow Socks	Unisex	0.1	Cotton	Yellow	One Size	\$2.00	50	DEF Socks	One Size, Color Yellow
041	Green Socks	Unisex	0.1	Cotton	Green	One Size	\$2.00	50	DEF Socks	One Size, Color Green
042	Black Socks	Unisex	0.1	Cotton	Black	One Size	\$2.00	50	DEF Socks	One Size, Color Black
043	White Socks	Unisex	0.1	Cotton	White	One Size	\$2.00	50	DEF Socks	One Size, Color White
044	Red Socks	Unisex	0.1	Cotton	Red	One Size	\$2.00	50	DEF Socks	One Size, Color Red
045	Blue Socks	Unisex	0.1	Cotton	Blue	One Size	\$2.00	50	DEF Socks	One Size, Color Blue

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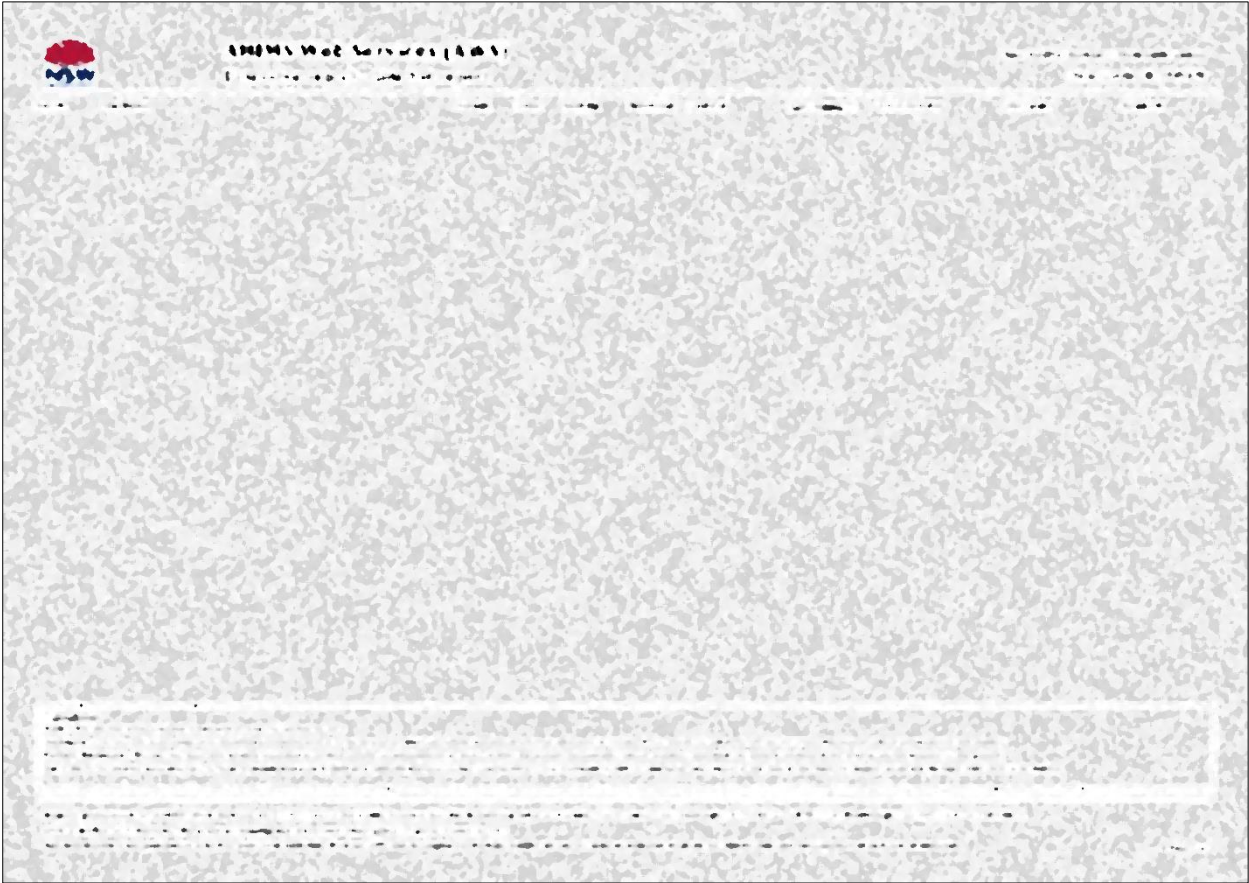
Extensive search Site list report

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1. *Journal of the American Statistical Association*, 1991, 86, 1037-1042. This article forms the basis for the following work in the paper. See also Bunn (1991, 1992, 1993), Nishiyama (1992, 1993, 1994) and others for the use of neural networks in forecasting time series data.

with a number of the above mentioned persons, and that the said persons

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APPENDIX 2: ABORIGINAL HERITAGE: UNANTICIPATED FINDS PROTOCOL

An Aboriginal artefact is anything which is the result of past Aboriginal activity. This includes stone (artefacts, rock engravings etc.), plant (culturally scarred trees) and animal (if showing signs of modification; i.e. smoothing, use). Human bone (skeletal) remains may also be uncovered while onsite.

Cultural heritage significance is assessed by the Aboriginal community and is typically based on traditional and contemporary lore, spiritual values, and oral history, and may also consider scientific and educational value.

Protocol to be followed if previously unrecorded or unanticipated Aboriginal object(s) are encountered:

1. If any Aboriginal object is discovered and/or harmed in, or under the land, while undertaking the proposed development activities, the proponent must:
 - a. Not further harm the object
 - b. Immediately cease all work at the particular location
 - c. Secure the area to avoid further harm to the Aboriginal object
 - d. Notify Heritage NSW as soon as practical on (02) 9873 8500 (heritagemailbox@environment.nsw.gov.au), providing any details of the Aboriginal object and its location; and
 - e. Not recommence any work at the particular location unless authorised in writing by Heritage NSW.
2. If Aboriginal burials are unexpectedly encountered during the activity, work must stop immediately, the area secured to prevent unauthorised access and NSW Police and Heritage NSW contacted.
3. Cooperate with the appropriate authorities and relevant Aboriginal community representatives to facilitate:
 - a. The recording and assessment of the find(s)
 - b. The fulfilment of any legal constraints arising from the find(s), including complying with Heritage NSW directions
 - c. The development and implementation of appropriate management strategies, including consultation with stakeholders and the assessment of the significance of the find(s).
4. Where the find(s) are determined to be Aboriginal object(s), recommencement of work in the area of the find(s) can only occur in accordance with any consequential legal requirements and after gaining written approval from Heritage NSW (normally an Aboriginal Heritage Impact Permit).

APPENDIX 3: ABORIGINAL HERITAGE: ARTEFACT IDENTIFICATION

	
A retouched silcrete flake	A quartz flake
	
Microliths (scale = 1 cm)	Volcanic flakes
	
Flake characteristics (scale = 1 cm)	A mudstone/tuff core from which flakes have been removed