




Aboriginal Cultural Heritage Due Diligence Assessment

20 Shepherd Street, Liverpool

Submitted to Liverpool City Council
On Behalf of Coronation Property Group Pty Ltd.

Report Revision History

Revision	Date Issued	Prepared by	Reviewed by	Verified by
01	21/05/15	Susan Kennedy <i>Senior Heritage Consultant</i>	Kerime Danis <i>Director - Heritage</i>	Kerime Danis <i>Director - Heritage</i>
02	26/05/15	Susan Kennedy <i>Senior Heritage Consultant</i>	Kerime Danis <i>Director - Heritage</i>	

This document is preliminary unless approved by a Director of City Plan Heritage.

CERTIFICATION

This report has been authorised by City Plan Heritage, with input from a number of other expert consultants, on behalf of the Client. The accuracy of the information contained herein is to the best of our knowledge not false or misleading. The comments have been based upon information and facts that were correct at the time of writing this report.

Copyright © City Plan Heritage P/L
ABN 46 103 185 413

All Rights Reserved. No material may be reproduced without prior permission. While we have tried to ensure the accuracy of the information in this publication, the Publisher accepts no responsibility or liability for any errors, omissions or resultant consequences including any loss or damage arising from reliance in information in this publication.

Table of Contents

1. Introduction.....	4
1.1 The Proposal	4
1.2 The Study Area.....	4
1.3 Methodology	6
1.4 Limitations.....	6
1.5 Previous Archaeological Investigations	6
1.6 Authorship.....	6
2. Legislative Context.....	7
2.1 National Parks and Wildlife Act (1974) (NP&W Act)	7
2.2 The Environmental Planning and Assessment Act (EPA&A Act).....	8
3. Aboriginal Historical and Archaeological Context	10
3.1 Aboriginal History in the Liverpool Region	10
3.2 European Land Use History & Site Disturbance	11
3.2.1 Early Ownership and Use of the Site.....	11
3.2.2 Early Use of the Adjacent Site	12
3.2.3 Construction of the Subject Building	12
3.2.4 Subsequent Major Phases of Development	13
3.2.5 1970's Subdivision of the Mill Site	13
3.3 Registered Aboriginal sites in the local area – AHIMS search results	14
4. Environmental Context.....	15
4.1 Landform and Geology	15
4.2 Hydrology.....	16
4.3 Flora & Fauna	16
5. Predictions	16
5.1 Site Types.....	17
5.2 Predictive Model	18
6. Site Survey	18
6.1 Introduction	18
6.2 Field Observations.....	19
6.3 Assessment of Aboriginal Archaeological potential	25
7. Conclusion & Recommendations	26
Appendix 1: AHIMS Searches.....	27

1. Introduction

City Plan Heritage has been engaged by Coronation Property to prepare an Aboriginal Cultural Heritage Due Diligence for 20 Shepherd Street, Liverpool.

During pre-DA consultation, Liverpool Council has drawn attention to the potential for Aboriginal Cultural Heritage on the site, issuing the following requirement:

e) Aboriginal heritage

A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System), shall be undertaken to determine if the site contains any Aboriginal objects or is of Aboriginal significance. Particularly in respect to Lighthouse park.

Should the search identify any Aboriginal objects on site, a "Due Diligence" report shall be undertaken and submitted to Council.

This report has been prepared in response to this requirement. The aims of this report are to identify any potential for Aboriginal sites which may be present within the study area and to assess the potential impact on any unidentified Aboriginal archaeology which may present within the study area.

1.1 The Proposal

It is proposed to redevelop the site to facilitate the new residential development which will be known as "The Paper Mills on Georges River". This development consists of two new buildings, comprising 245 residential apartments with a mix of one, two and three bedrooms. The existing buildings on site (the former Paper Mills) will also be redeveloped for community use.

The residential apartments are supported by communal facilities which include a large rooftop terrace with and BBQ facilities and pool to Building A, and large roof top terrace with BBQ facilities facing the river to Building B.

The proposed buildings lining Atkinson Street include 3-4 story walk up apartment buildings, townhouses and industrial buildings and their office spaces. The site is close to public transport facilities including Liverpool train station. Shepherd Street also provides access to Casula Power station and Light Horse Park, a riverside park.

The development of this site seeks to create an attractive location where people can live, and enjoy Liverpool's assets which includes the Georges River, the surrounding parks and the Casula power station.

The Atkinson Street boundary of the site provides both vehicular access to below-grade car parking and pedestrian access to the 2 proposed buildings. Pedestrian access to the building along the river occurs via a proposed public square defined by the building along Atkinson Street and the heritage building. The existing building to the south-west of the site is Sydney's first paper mill and will be transformed into a publicly used building consisting of market garden with a café, arts and crafts facilities and external terraces for outdoor seating.

1.2 The Study Area

The subject site is located on the eastern side of Shepherd Street and immediately west of the Georges River. The real property description of the site is Lot 1 of Deposited Plan 247485. No works are proposed in the vegetated area immediately adjacent to the subject site, and this area is excluded from this Due Diligence Assessment.

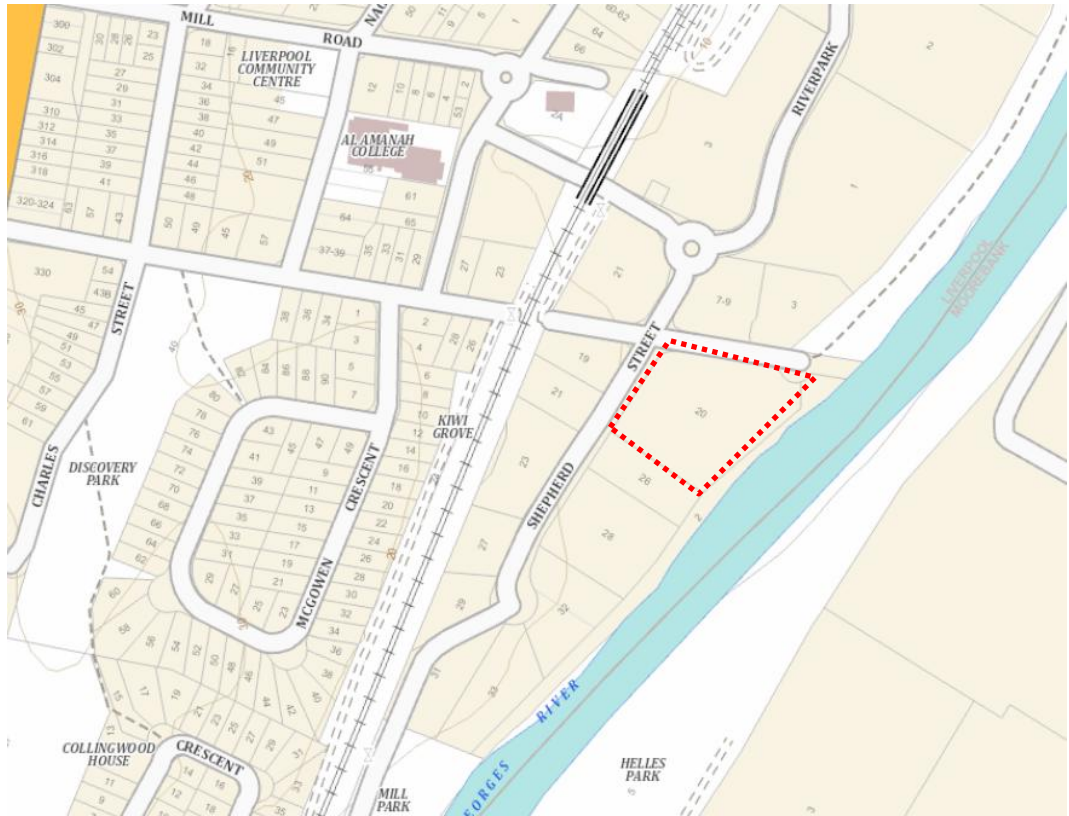


Figure 1: Map of the subject site. (Source: SIX Maps)



Figure 2: Aerial photo of the subject site showing dense industrial and residential development surrounding the subject site. (Source: SIX Maps)

1.3 Methodology

This report has been prepared in accordance with the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (2010), the *Burra Charter*, Australia ICOMOS (2013), and *NSW Heritage Manual*.

1.4 Limitations

In accordance with Liverpool Council's condition and our instructions, a preliminary due diligence assessment has been undertaken to review the historical, landscape and geological context of the subject site. No consultation was undertaken.

1.5 Previous Archaeological Investigations

The following Archaeological Studies have been prepared in relevant to 20 Shepherd Street Liverpool and have been reviewed as part of this study:

- Light Horse Park, Liverpool - Artefact Heritage Services (May 2011)
- Collingwood and Discovery Parks, Liverpool - Total Earth Care (March 2008)
- Hoxton Park Partial Sewerage Transfer - Central West Archaeological & Heritage Services (December 2002).
- Plan of Management Collingwood Precinct 2011, Liverpool Council (2011)
- Aboriginal Archaeological Report: New Brighton Golf Course, AHMS (March 2013)

1.6 Authorship

This report has been prepared by Susan Kennedy (Senior Heritage Consultant), who has a Bachelor of Arts (Archaeology/Anthropology), Masters of Maritime Archaeology, and Bachelor of Laws. She has over 10 years experience in heritage management, including in the assessment of Aboriginal Cultural Heritage and Archaeology.

Kerime Danis (Director-Heritage) has reviewed and endorsed its content. All photographs were taken by City Plan Heritage unless specified otherwise.

2. Legislative Context

In NSW the principle laws which deal with Aboriginal heritage are:

- *National Parks and Wildlife Act 1974*
- *Heritage Act 1977*
- *Environmental Planning and Assessment Act 1979*

The *National Parks and Wildlife Act* (NP&W Act) provides statutory protection for all Aboriginal objects and places in NSW. Areas are gazetted as Aboriginal places if the Minister is satisfied that there is enough evidence to show the area is, or was, of special significance to Aboriginal culture.

The Heritage Act protects the State's natural and cultural heritage. Aboriginal places or objects that are recognized as having high cultural value are listed on the State Heritage Register.

2.1 National Parks and Wildlife Act (1974) (NP&W Act)

The NP&W Act includes provisions for Aboriginal sites and objects. Although the NP&W Act gives a high level of protection to known Aboriginal objects, recent court decisions have reinforced that Part 6 gives the Director General (Office of Environment and Heritage) express powers to consent to the damage, destruction or defacement of Aboriginal objects by development activities.

There are a number of key sections in the NP&W Act, which are relevant to Aboriginal Heritage. These sections deal with the specific protection of:

- particularly significant Aboriginal sites by the Minister for the Environment (s.84),
- penalties relating to harming or desecrating Aboriginal objects and places (s.86),
- defences to prosecution and exemptions (s.87), including the process of due diligence,
- the requirement to notify the Director-General when finding a new site (s.89A),
- the issue and use of Aboriginal Heritage Impact Permits (AHIP) (s.90),
- the role of the Aboriginal Heritage Information Management System (AHIMS) (s.90Q), and
- the Director General's right to issue stop-work orders, interim protection orders and remediation directions (Part 6a, Division 1-3).

These relevant sections are detailed below:

NP&W Act – Section 84

This section provides protection for 'Aboriginal places'. Aboriginal places have been defined by the Act as 'areas of cultural significance to the Aboriginal community'. An area will only be regarded as an Aboriginal Place if the Minister is satisfied that sufficient evidence exists to conclude the area was or is of significance to the Aboriginal community. There are currently no Aboriginal places gazetted within the eight partner Council boundaries.

NP&W Act – Section 86 and 87

Under section 86 it is an offence to harm or desecrate an Aboriginal object or a declared Aboriginal place. This section sets out the penalties and regulations (NPW Regulations, Part 8A) and describes what is included and excluded as harm. Penalties exist for individuals and corporations.

Section 87 provides for defences to harm done to an Aboriginal object if:

- it was authorised by an Aboriginal Heritage Impact Permit (AHIP),
- due diligence determined that no Aboriginal object would be harmed,

- compliance with regulations or an approved code of practice was followed, and
- it is shown as a low impact act or omission.

Section 87 also provides exemptions for certain activities, mainly emergency fire fighting or hazard reduction work under the Rural Fires Act 1997, or emergency work under the State Emergency and Rescue Management Act 1989.

NP&W Act – Sections 90 to 90R

These sections provide details about the Aboriginal Heritage Impact Permit (AHIP) system as regulated by the Director-General of the DECCW. Different sections deal with the application for a permit as well as transfers, refusals, variations, restrictions, conditions, appeals, and other aspects. Section 90Q describes the role of the Aboriginal Heritage Information Management System (AHIMS), which holds the database of recorded Aboriginal site information in NSW.

In short, if Aboriginal objects are present or likely to be present and an activity will harm those objects, then an AHIP application will be required.

NP&W Act Part 6A Stop work orders, interim protection orders and remediation directions

These sections provide details on how the Director-General can make a stop work order (Division 1) to actions that are likely to significantly affect an Aboriginal object or Aboriginal place; an interim protection order (Division 2) for an area of land which has cultural significance; and remediation directions (Division 3) relating to harm to Aboriginal objects and places.

2.2 The Environmental Planning and Assessment Act (EP&A Act)

The EP&A Act provides protection by considering impacts on Aboriginal heritage in land use and planning decisions.

The three main areas are:

- Planning instruments allow particular uses for land and specify constraints. Aboriginal heritage is a value which should be assessed when determining land use;
- Section 90 of the EP&A Act lists impacts which must be considered before development approval is granted. Aboriginal heritage is one of these possible impacts;
- State government agencies act as the determining authority on the environmental impacts of proposed activities and must consider a variety of community and cultural factors, including Aboriginal heritage, in their decisions.¹

There are three key sections (along with associated regulations, schedules and guidelines) in the EP&A Act, which are relevant to Aboriginal Heritage:

EP&A Act - Part III

Part III governs the preparation of the following three planning instruments:

- State Environmental Planning Policies (SEPP's);
- Regional Environmental Plans (REP's); and
- Local Environmental Plans. (LEP's)

These planning instruments cover permissible uses and potential constraints on the land use. When assessing potential uses and constraints during the preparation of a planning instrument, guidelines produced by the Department of Planning New South Wales must be

¹ Heritage Branch of the Dept of Planning NSW, Aboriginal Heritage - <http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/infoaboriginal.pdf>

followed. These guidelines specify that Aboriginal sites and places of significance should be assessed as part of the process. Once developed, the planning instruments, such as LEP's, may specify the level of assessment required in relation to environmental assessment or more specifically Aboriginal heritage investigations for development applications.

The study area is within the Liverpool LGA. The Liverpool LEP 2008 (Part 5, Clause 5.10) make standard provision for the protection of Aboriginal objects and Aboriginal places of heritage significance.

(8) Aboriginal places of heritage significance

The consent authority must, before granting consent under this clause to the carrying out of development in an Aboriginal place of heritage significance:

(a) consider the effect of the proposed development on the heritage significance of the place and any Aboriginal object known or reasonably likely to be located at the place by means of an adequate investigation and assessment (which may involve consideration of a heritage impact statement), and

(b) notify the local Aboriginal communities, in writing or in such other manner as may be appropriate, about the application and take into consideration any response received within 28 days after the notice is sent.

There are no Aboriginal items within the subject site that are listed in the Liverpool LEP 2014.

EP&A Act - Part IV

This section of the legislation governs the decision making process by local government (consent) authorities during a development application. Section 79C, under Part IV, describes types of impact which must be considered before development approval is granted. It states that consideration must be given for the impact of that development on the environment. It is legally understood that this should be taken to include Aboriginal sites and heritage.

Part IV also covers the integrated development approvals (IDA) process whereby the approvals of State government agencies are linked to the development consent process. If an Aboriginal site will be impacted by a development, requiring an Aboriginal Heritage Impact Permit under s90 of the NP&W Act, then the OEH becomes an approval body.

EP&A Act - Part V

This section of the legislation governs the decision making process by State government (determining) authorities related to activity approval. In the decision making process, under Section 111, it is the State government agencies' duty to consider environmental impacts; and then under Section 112, determine whether the level of impact is sufficient to require the preparation of an Environmental Impact Statement (EIS).

As mentioned in Part IV, 'environmental impacts' under the law should be taken to include Aboriginal sites and places. Furthermore, the Department of Planning New South Wales have developed a set of guidelines for interpretation of Section 112 which requires that Aboriginal heritage is assessed as part of the process.²

² <http://www.aboriginalheritage.org/sites/legislation.php>

3. Aboriginal Historical and Archaeological Context

3.1 Aboriginal History in the Liverpool Region

The Liverpool area is within Cabrogal land. The Cabrogal were Darug language speakers. Aboriginal people were quickly disenfranchised from their traditional territories as colonists appropriated land and resources. The smallpox epidemics of 1789 killed a large portion of Aboriginal people of the Sydney region, even those who had not yet come into contact with Europeans. Despite this fragmentation of their culture Aboriginal people have continued to live along the Georges River to the present day. A large Aboriginal camp was located at Salt Pan Creek to the east of Liverpool until the 1930s when its people were forcibly removed to La Perouse.³

Geogre's River plays a particularly important role in the Cultural history of the Indigenous grounds of Liverpool:

"It has been suggested that the Georges River may have formed a natural boundary between Darug and Dharawal speakers, in much the same way as Port Jackson and the Kuringai speakers. Ethnographic accounts, the 1828 census, and blanket returns, indicates that the Cabrogal clan of the Darug lived in the Liverpool – Cabramatta area (Kohen 1993:21), northwest of the Georges River.

The Georges River was one of the early sites of large-scale conflict between the deposed Darug people (led by Pemulwuy of the Bidjigal clan) and early settlers. In 1801, Governor King responded to the Darug's attacks on settlers and Government sheep at Parramatta, Georges River and Prospect Hill, by issuing a Government and General order that all Aborigines in these districts "be driven back from the settlers habitations by firing on them" (Kohen 1993:64). From this a series of retaliations developed into open warfare, which lasted for almost a year and resulted in numerous deaths on both sides (Kohen 1993:64).

Despite the tremendous social and economic upheaval experienced by the Darug people, both the 1828 census and records taken between 1832 and 1843, in the 'Returns of Aboriginal Natives' show that Liverpool/ Georges River was among the tribes listed for the Cumberland Plain.

Further, mainly due to topography, the soils in the study area are skeletal, with little opportunity having been provided for the build up of deposits. The thinness of the potential artefacts-bearing layer and the high level of disturbance as a result of various European land uses mean the likelihood of intact archaeological deposits surviving here is extremely low .

Representatives from the Tharawal and Gandangara communities have confirmed the site as a significant meeting place in the region between their two groups.

*The site overlooks the upper tidal reaches of the Georges River, a significant place of aquatic resources for indigenous peoples."*⁴

Archaeological studies have been undertaken in the vicinity of the site. Searches of the AHIMS report archives and other investigations indicate that the most recent studies were:

- Light Horse Park, Liverpool - Artefact Heritage Services (May 2011)
- Collingwood and Discovery Parks, Liverpool - Total Earth Care (March 2008)

³ Light Horse Park, Liverpool - Artefact Heritage Services, pg 4

⁴ 'Management Requirements for Lands Associated with Collingwood house at Liverpool NSW' by Casey Lowe Associates on behalf of Liverpool Council, June 1997.

- Hoxton Park Partial Sewerage Transfer - Central West Archaeological & Heritage Services (December 2002).

Investigations carried out at a number of sites within in the Liverpool area indicate that initial occupation of this area commenced relatively late in the Holocene period, that is, less than 3000 years ago, and continued until close to the time of European arrival. Cultural material present in excavated deposits reflects a predominantly 'inland' economy with minimal exploitation of estuarine resources.⁵

3.2 European Land Use History & Site Disturbance⁶

In November of 1810 Governor Macquarie and his party agreed on a site 'fit for the purpose' of laying out a town. The impetus for settling this region was to explore the potential of the surrounding land to supply the colony with food. This endeavour proved fruitful and by the 1850s Liverpool had become a major centre for the processing of primary produce and supported a wide range of industries.

Liverpool lies on the banks of the Georges River and was connected to Sydney and the southern hinterland by the Great South Road, later to become the Hume Highway. In 1856 the railway was extended from Parramatta through to Liverpool, enabling the town to become a transport hub linking river, road and rail for the movement of goods and produce.

The subject site was originally part of the Collingwood Estate. Known as Bunker's Farm, it was a landholding whose succession of early owners were each closely associated with the early economic development of Liverpool. The location of the farm in relation to the Georges River and the railway encouraged commercial speculation

3.2.1 Early Ownership and Use of the Site

Captain Ebenezer Bunker (1761 - 1836), an American Loyalist, mariner and trader, arrived in Port Jackson in 1791 as Master of the Third Fleet convict ship the 'William and Anne'. Land grants made to him in 1804 and 1810 in the Liverpool area totalled 1000 acres (including the subject land). His home, Collingwood House, still stands on a rise looking out over Liverpool Road (Hume Highway).

In 1853 James Henry Atkinson purchased the Collingwood Estate from Samuel Dean Gordon. Atkinson was a wool merchant, entrepreneur and politician who planned to develop an industrial estate on the property based on the English mill-town model.⁷

The arrival of the railway to Liverpool in 1856 encouraged people like Atkinson to develop secondary industries based on surrounding primary industries, which included beef and sheep farming. and the development of new industries on the estate lands.

Atkinson built a large private railway siding developing the estate as a depot for the transfer of pastoral and agricultural produce. He expanded this business to include an abattoir, a woolwash and fellmongery for the tanning hides and pelts⁸ Atkinson subdivided the Collingwood Estate in 1859, retaining the industrial and commercial components, and selling the homestead and the undeveloped land to James Gillespie.⁹

Five years later in 1864 the Australian Paper Company purchased 8 hectares (20 acres) of land on the river bank between Collingwood House and Atkinson Street from Gillespie⁵ with plans to construct one of Australia's earliest, and perhaps largest, paper making ventures.

⁵ Navin Officer Heritage Consultants 1997: 4-45

⁶ The following history is extracted from the CMP for 20 Shepherd Street, Liverpool (GBA, November 2014), pages 7-12.

⁷ Heritage Council website site- Collingwood <http://www.visit,heritage.nsw.gov.au>

⁸ Heritage Council website site- Collingwood <http://www.visit,heritage.nsw.gov.au>

⁹ Heritage Council website site- Collingwood <http://www.visit,heritage.nsw.gov.au>

3.2.2 Early Use of the Site

The foundation stone of the new Collingwood Paper Mill was laid in 1865, the following year paper making machinery arrived from England with the mill commencing operations in January of 1868.¹⁰

The site contained a complex of structures built around a large hip roofed two storey brick building. Several single storey buildings with clerestory lights running the length of their pitched roofs faced the river. Drawings of the mill at the time show a cluster of smaller buildings, a large industrial chimney stack, a series of pens and fencing and large water filled ponds to complete the enterprise.

The mills' location at that time was in a relatively remote area meaning that there were substantial costs for the owners who also had to accommodate their employees. 1872 saw the property put up for sale with Messrs. Richardson and Wrench; it was sold three years later to Messrs. Williams and Murray who became the new proprietors.

An article published in the Sydney Morning Herald of May 1881 describes the mill and surrounds at the time of Williams and Murray's ownership as comprising "about 13 acres of fertile land, situate on the Georges River, which is navigable for vessels of low tonnage, and the buildings are accessible by rail.

These buildings, including all workmen's' cottages are all of the most substantial description and otherwise suited to the paper making business. Their extent may be imagined when it is known that they occupy 5 ½ acres of the property.

Pumping apparatus used at the time was capable of throwing 100,000 gallons per hour, and an abundant supply of clean water was available from the river.

Machinery in use included four hp to 50 hp, 12 rag engines, six rag and fibre boilers, and one very large high pressure fibre boiler. The paper making machine itself was seven feet wide, with a speed of 120 feet per minute, and there were five sets of rollers of two different types, as well as paper cutting, wrapping and wiping machinery.

At this time, the industry was using 100 tons of coal per week to fire the boilers, and employed an average of 110 people with the mill working full time.

As the city grew and the area became less remote the adverse environmental impacts generated by the industrial processes, namely pollution of the river and any number of foul odours, became a public nuisance.

3.2.3 Construction of the Existing Buildings

The paper mill ceased operations in 1910 when the site was purchased by Henry Bull and Co. who established the Challenge Woollen Mills Pty Ltd producing 'blankets and other piece goods.'¹¹

The existing paper mill buildings were extended and modified in 1914 to suit this new use. The extensions to the mill are attributed to the Sydney architect T. H. Houghton, and contracted to Mr. W. E. Wearne at a cost of £3000.¹² The extension building is the major building on the subject site. The architect, TH Houghton is reputed to have also been responsible for the design of the Cold Stores at Pyrmont in Sydney.

By 1915 the factory is working to capacity with Messrs Henry Bull's output of blankets and woollens from the Challenge Woollen Mills, Liverpool, being commandeered by the Federal Defence Department in order to supply the demand on account of the expeditionary forces.¹³

¹⁰ Heritage Council website site- Collingwood <http://www.visit,heritage.nsw.gov.au>

¹¹ City of Liverpool Gazette, p16

¹² City of Liverpool Champion, "Paper Works at Liverpool" 1881, p5

¹³ Sydney Morning Herald, 24 March 1914; 21 April 1914.

3.2.4 Subsequent Major Phases of Development

The 1930s saw the Challenge Woollen Mills employing 200 hundred people, making them the largest employer in the district.¹⁴

In the mid 1940's wool supplies were delivered by rail to Liverpool Station, and teams of horses from the mill were used to pull the railcars to the factory siding for the wool to be woven.¹⁵ This process became mechanised, and wool started to be bought to the mill by motor lorry.¹⁶



Figure 3: 1943 Aerial (Source: SIX Maps)

The corner building (which no longer exists) appears sometime between the 1947 and 1961, as indicated in aerial images from these dates.

For the next three decades the mill continued to operate and remained a major employer in the area. Photographic evidence from early 1970s shows the mill buildings are substantially intact.¹⁷

In 1971 a new company, Challenge Textiles Ltd, was formed and a new semi worsted spinning system installed to produce carpet yarns.¹⁸ Challenge Textiles produced yarn for carpet tufters in wool, acrylic, rayon and nylon. 210 employees worked in three shifts' with equal numbers of male and female workers.¹⁹

3.2.5 1970's Subdivision of the Mill Site

In 1972 McGrath (Wholesale) Pty Ltd purchased the site, since which time it has continued to be used for vehicle servicing and pre-sale preparation until McGraths moved this use to a site in Moorebank mid 2011. The site is now generally unoccupied, and is used for

¹⁴ Ibid, p 5

¹⁵ Ibid, p5

¹⁶ NSWDL Aerial photo, NSW 1908-5195

¹⁷ City of Liverpool Champion, p 5

¹⁸ City of Liverpool, p 5

¹⁹ Ibid

occasional motor repairs at the rear. A display unit for the proposed development is also located within the existing building, though this is not currently available for public access.

Photographic evidence from 1978 shows the early mill buildings on the adjacent site having been demolished and Shepherd Street having been constructed. The 1914 former factory extension appears to be all that has been retained of the primary mill buildings. The small corner building can be seen, as can the new entry and offices along the northern elevation. The subject site is fenced with a vacant lot now lying where the earliest mill buildings once stood.²⁰

3.3 Registered Aboriginal sites in the local area – AHIMS search results

Basic searches of the Aboriginal Heritage Information System (AHIMS) database were undertaken on 20 March 2015 within 0m to 200m buffer. No identified sites were located within the vicinity of the subject site. Based on the AHIMS data, there is little potential for Aboriginal sites to occur within the study area.

A further Extensive Search within a one kilometre radius of the study area was undertaken on to ascertain whether there are any previously recorded Aboriginal sites within the proximity study area.

A total of three sites were identified within a 1km radius by the extensive AHIMS search and one Aboriginal Place (Collingwood Park), annexed at Appendix 1.

The AHIMS search results reveal that a two site types are:

- An artefact and open campsite
- Artefact and Potential Archaeological Deposit
- An additional potential archaeological deposit

An extensive Search was also undertaken within the following parameters in order to gain further insight into the archaeological context of the surrounding area:

	Latitude	Longitude
From	-33.9402	150.9078
To:	-33.9221	150.9363

This search area in the context of the subject site is shown in Figure 4. The following results were indicated and are annexed at Appendix 2:

Site ID	Site name	Context	Site status	Site features
45-5-2538	HPR-ST-1	Open site	Valid	Modified Tree (Carved or Scarred) : -
45-5-2540	Liverpool Weir ocs1	Open site	Valid	Artefact : -
45-5-2883	MB.1	Open site	Valid	Artefact : -
45-5-2912	Brickmakers Creek	Open site	Destroyed	Artefact : 8
45-5-3629	Collingwood Park (CW 1)	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -
45-5-4274	MA3A	Open site	Valid	Artefact : 1
45-5-4275	MA4A	Open site	Valid	Artefact : 1
45-5-4277	MA7A	Open site	Valid	Modified Tree (Carved or Scarred) : 1
45-5-4279	MA6A	Open site	Valid	Modified Tree (Carved or Scarred) : 1
45-5-4280	MA PAD1	Open site	Valid	Potential Archaeological Deposit (PAD) : 1
45-5-4281	MA PAD2	Open site	Valid	Potential Archaeological Deposit (PAD) : 1
45-5-4282	MA10	Open site	Valid	Artefact : 1, Potential Archaeological

²⁰ NSW DL Aerial photo, NSW 2714-23

				Deposit (PAD) : 1
45-5-4425	MA11	Open site	Valid	
45-5-4426	MA12	Open site	Valid	

Of particular note is the proximity of the site to Collingwood Precinct Aboriginal Place. The special significance of the Aboriginal Place include the high ridge line 'high ground' meeting place for Dharawal, Gandagara and Dahrug people, which was also a vantage point during the pre contact era enabling country to be observed and monitored. The place is associated with early engagement, and at times conflict, between European settlers and Aboriginal peoples. The 'vista' from the high ground provides a corridor south east to the Georges River across remnant vegetation and riverine environment.²¹



Figure 4: AHIMS data showing mapped AHIMS results (shown in green) within the vicinity of the subject site (shown by the red star). Note the declared Aboriginal Place shown in blue. (Source: AHIMS Extensive Search with City Plan Heritage overlay).

4. Environmental Context

4.1 Landform and Geology

Topographically, the site is located within a low lying broad and generally flat terrain with the Georges River as a local low point running along the eastern site boundary. In the site vicinity, the natural ground surface generally slopes upward toward north and west at 1 to 2°

The 1:100,000 Penrith Geological Map (in which the subject site is located) indicates the site is underlain by Clayey Quartzose sand and clay.

²¹ Government Gazette No. 40, 6 March 2009

4.2 Hydrology

The Georges River is located immediately adjacent to the development area. The Georges River is a major waterway that extends from its headwaters south of Sydney near Coalcliff to its mouth at Mountain Bay. The river is tidal and brackish below Liverpool and freshwater above it. The proximity of the Georges River would have made the study area attractive to Aboriginal inhabitants.

4.3 Flora & Fauna

Liverpool City Council area stretches from the Georges River at East Hills to the Nepean River at Wallaia . With its gently undulating Wianamatta Shale country and remnants of the original open forest and woodland, it provides a cross-section of the Cumberland Plain landscape.

The site is now cleared of all vegetation. An adjacent area, in between the river and the subject site, provides some indication of the site's vegetation prior to clearing. This area consists of clumps of woody weeds and small trees including Large-leaf Privet, Camphor Laurel and Mulberry mostly occur along the northern and eastern sections of the site smothered in the invasive vines such as Balloon Vine and Morning Glory.

Small patches of the native chenopod species Climbing Saltbush (*Einadia nutans*) occur in the eastern section of the site.

The weedy grassland generally provides very poor habitat for terrestrial fauna. A flora and fauna study conducted by ACS Environmental Limited in the immediate vicinity (28 Shepherd Street). The only fauna observed in this report was the Dark-flecked Garden Sunskink (*Lampropholis delicata*) within areas of Kikuyu.²²

Before clearing, the region surrounding the study area would have provided an abundance of native animals as a food source. In marine or estuarine environments, Aboriginal people caught fish and collected shellfish. There are many accounts by Europeans of Aboriginal people living in canoes on rivers and by the ocean, fishing and cooking the fish on small fires within vessels. It was noted by early European settlers that large shell middens lined the Georges River. These were later mined for lime, but their description suggests that the river provided a rich and stable food source for Aboriginal people.

In addition to ample maritime resources from the river, animals such as kangaroos, wallabies, and possums were used as both a food source and also for tool making. For example, tail sinews are known to have been used as a fastening cord, whilst 'bone points' which would have functioned as awls or piercers are an often abundant part of the archaeological record. Ethnographic observations of early European settlers noted that Aboriginal people used a variety of animal parts; claws, talons, bone, skin, teeth, shell, fur and feathers for a variety of tools and non-utilitarian functions. The nearby coastline would have provided an abundance of marine resources, including eels, fish, shellfish and birds. In summary, the study area would have provided a variety of resource and suitable climatic conditions for year round occupation by traditional Aboriginal groups inhabiting the area.²³

5. Predictions

The following section predicts the nature and distribution of evidence, such as the nature and distribution of evidence of Aboriginal land use in the subject area based on the information collected in the previous Sections to be clarified on Site Survey.

Assumptions about Aboriginal land use patterns are made on the basis of archaeological information gained from the local area, from observations made by Europeans after settlement of the area, and from information known about available natural resources.

²² ACS Environmental, 28 Shepherd Street (Flora & Fauna Report): Page 4

²³ Steele

Archaeological data gathered in the locality suggests that Aboriginal sites would be found across the landscape; with concentrations expected in close proximity to water sources, located on slopes within the sandstone geological unit. The main limitations to the survivability of archaeological material in the study area include the impacts of excavation and levelling activities associated with the previous mill development.

5.1 Site Types

Material traces of Aboriginal occupation exist throughout the landscape and are known as Aboriginal sites. The primary site types that are found in the Liverpool region are as follows:

Stone artefacts

Flaked and ground stone artefacts are the most common trace of Aboriginal occupation in the region. Aboriginal people used particular techniques to flake stone and these changed over time. The approximate age of a tool can often be diagnosed by the way that it was made. Stone artefacts are most often found in scatters that may indicate an Aboriginal campsite was once present. Stone artefacts may also be found as isolated finds. Stone tools in the region are most often made from raw materials known as silcrete, tuff and quartz. These are all easily flaked and form sharp edges, which can be used for cutting or barbing spears.

It is possible that stone artefacts, either on the surface, or buried, exist within the proximity of the study area.

Rock shelters (and associated deposits)

Rock shelters were used by Aboriginal people for habitation, rest places and as art or ceremonial sites. Deposits can build up on the floor of these shelters over time and bury traces of Aboriginal occupation. If these deposits are not disturbed, rock shelters can provide an intact stratigraphy that can tell us about the way Aboriginal occupation changed through time.

Due to the lack of appropriate landforms, there are unlikely to be rock shelters present on the site.

Shell middens

Shell middens are remains of campsites in which the primary traces are shell and/or bones of fish. Shell middens are often found close to rivers or streams and are either along banks or within enclosed shelters.

Given the proximity to permanent water sources, there is high potential for a shell midden to be present within the study area.

Rock engravings/Rock art

Rock engravings are often found in Hawkesbury geologies on flat sandstone platforms. Shapes of animals, ancestor figures or other symbols were carved into the sandstone. Weathering has affected the visibility of many rock engravings. Other rock art of various forms has also been recorded in the Sydney area. Stencils, charcoal drawings and paintings are examples of the techniques used by Aboriginal people. Rock art is relatively rare, but is more common on sandstone geologies.

Due to the lack of appropriate stone, there is low potential for engravings to be present within the study area.

Grinding grooves

Grinding grooves are created by repeated movement of stone across an abrasive rock such as sandstone, often using water. Grinding was used for sharpening axes and other tools

also forms them. Grinding is also used to process secondary material, such as grass seeds. Grinding grooves are often found on the banks of streams or rock pools. Grinding grooves are normally present within suitable sandstone outcropping.

Due to the lack of appropriate stone, there is low potential for grinding features to be present within the study area.

Potential Archaeological Deposits (PADs)

Areas are classified as PADs if there is a likelihood of archaeological material existing below the ground surface, or on the ground surface but obscured from view. An Aboriginal object does not need to be recorded for an area of PAD to be specified.

It is possible that PADs are present within the study area adjacent to the Georges River.

5.2 Predictive Model

Based on the landscape context, historical evidence of Aboriginal land use, distributions of natural resources, and previous archaeological studies in the area, the following predicative statements are made:

- Aboriginal sites will be located in areas of least ground disturbance, namely immediately adjacent to the Georges River.
- The potential for Aboriginal sites is limited by the levels of ground surface disturbance within the development area.
- Rock shelters and grinding features are unlikely to be present, as the study area is not situated on a sandstone geological unit and the area has been previously impacted.
- Shell deposits are likely to be located within the study area, as it is in close proximity to a significant water resource. However, these are unlikely to be located in areas that have been significantly disturbed.
- Scarred trees are unlikely to be present as almost all original vegetation has been cleared from the study area.
- Areas of PAD would not be identified across areas of significant impact.

6. Site Survey

6.1 Introduction

An inspection of 20 Shepherd Street was undertaken on 10 April 2015 by City Plan Heritage in order to clarify the findings of the Predictive Model. A survey was undertaken of the entire area.

The site inspection was undertaken on foot. The documentation of observations that included a consideration of landforms on the property, topography, existing vegetation; the nature of sandstone/ground exposures/visibility; and the extent of visible disturbance.

The key area surveyed for Aboriginal Heritage was the northern portion of the site where disturbance was minimal. Though this area is not part of the subject development, it provided the only indication of pre-disturbance conditions due to the level of construction within the subject site. The areas that were focused upon were the exposures with low levels of disturbance as these areas would be more likely to yield intact Aboriginal artefacts.

6.2 Field Observations

In general, 20 Shepherd Street is an area that has been subject to extensive ground clearing and surface excavation. While no deep (basement level) excavation associated with large scale development has occurred, the site has been subject to levelling, ground clearance, and shallow (1m) excavation associated with building construction, and further excavation associated with the installation of services.

Beyond the eastern boundary of the site, however, fewer disturbances appear to have occurred with activity generally limited to ground clearance associated with landscaping activities.

However, the site inspection indicated the area to the river is steeply graded- as steep as 45° at some points. This steep gradient meant that the site was not accessible, although a viewing deck provided appropriate access to determine site conditions.

Although the slope of this area would generally have meant this area was less desirable for Aboriginal people, who would have favoured flatter areas adjacent to the river bank, the potential for Aboriginal Cultural heritage within this vegetated area remains high. However, as no development is proposed within this area and further analysis of this area is not required for the subject proposal.



Figure 5: Shepherd Street frontage



Figure 6: Shepherd Street frontage



Figure 7: Driveway and landscaping works to the northern side of the side



Figure 8: Sealed surfaces to at the eastern most portion, looking north.



Figure 9: Sealed surfaces to at the eastern most portion, looking south.



Figure 10: Northern portion of the site, looking west



Figure 11: Access provided to the river, looking east.



Figure 12: One of the few overgrown areas with unsealed surface



Figure 13: Detail of overgrown area, showing gravel and previously sealed surfaces.



Figure 14: Eastern portion of the site, looking south.

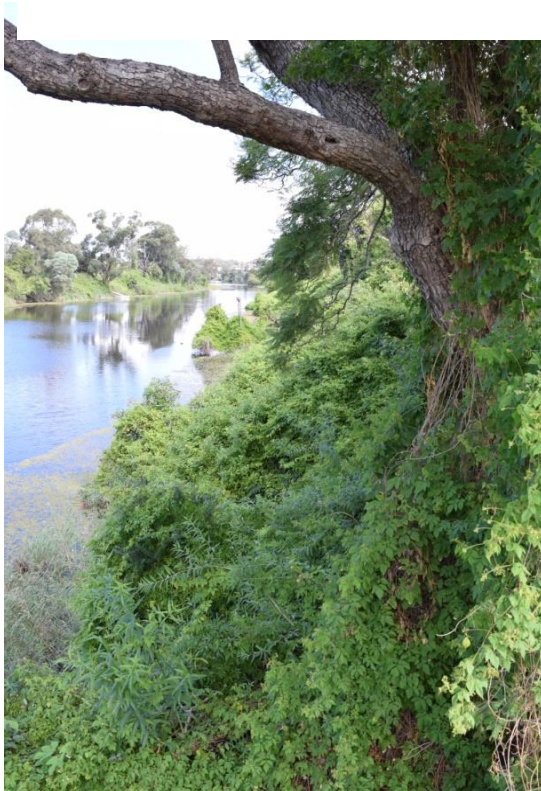


Figure 15: Area adjacent to the Georges River, not part of the subject site



Figure 16: Area adjacent to the Georges River, not part of the subject site

6.3 Assessment of Aboriginal Archaeological potential

The background Aboriginal archaeological heritage research, site inspection, analysis and assessment at 20 Shepherd Street, Liverpool indicate that:

- The development area itself would have contained significant natural resources (water sources) and Aboriginal Settlement is likely. However, the level of disturbance to the development site is such that any evidence of this activity would have been destroyed.
- No specific areas of Potential Aboriginal Archaeological Sensitivity relative to the proposed works have been identified in the course of preparing this report. As the proposed construction works are limited to areas of high disturbance. There is no likelihood that the proposal will impact any unidentified Archaeological deposits. It is considered that no further action is necessary regarding Aboriginal Heritage within the Development Area.
- The study area has been highly disturbed. No Aboriginal archaeological sites were located during the site survey, and it is improbable that any archaeological site or deposits remain intact within the zone of development impacts. The study area has low archaeological potential.
- It is noted that the above assessment is limited only to Lot 1 of Deposited Plan 247485. Should any subsequent works occur within the foreshore area, it is recommended that additional assessment in relation to Aboriginal Cultural Heritage be undertaken.

7. Conclusion & Recommendations

This assessment includes a detailed analysis of the land in terms of its regional indigenous context incorporating a research of AHIMS Database and other readily available Aboriginal studies within the region, landscape context, topography, existing or historic waterways in the area, flora and fauna, and geology.

Georges River is located immediately adjacent to the subject site and therefore the area would have a large array of subsistence resources available to Aboriginal people, and is very likely have been used by Aboriginal people for its proximity to the Georges River. However the results of the survey indicate that the area has been heavily impacted by past development of the Paper Mill. The examination of the environmental contexts indicated that the effects of clearing and development throughout the site is likely to mean that Aboriginal objects if found will not be in situ nor will they be associated with significant archaeological deposits.

No Aboriginal sites or areas where Aboriginal objects are likely to occur beneath the ground surface were identified within the proposed impact areas during the site inspection. It is concluded that the study area has low archaeological potential.

The assessment concludes that there are no previous Aboriginal sites or places recorded within the site or the adjacent area. It is therefore recommended that there are no known Aboriginal archaeological constraints on the proposed development.

As such, the proposed works will have no adverse impact on any unidentified Aboriginal Heritage. Areas where excavation is proposed have been previously disturbed as part of the existing school development and are considered not to have any archaeological potential. It is considered that no further action is necessary regarding Aboriginal Heritage.

If unforeseen Aboriginal objects are uncovered during development, work should cease and a heritage consultant, OEH and the Darkinjung Local Aboriginal Land Council should be informed. If human remains are found, work should cease, the site should be secured and the NSW Police and the OEH should be notified.

If changes are made to the development proposal that may result in impacts to areas not covered by this assessment, further archaeological assessment will be required.

CITY PLAN HERITAGE

May 2015



Appendix 1: AHIMS Searches