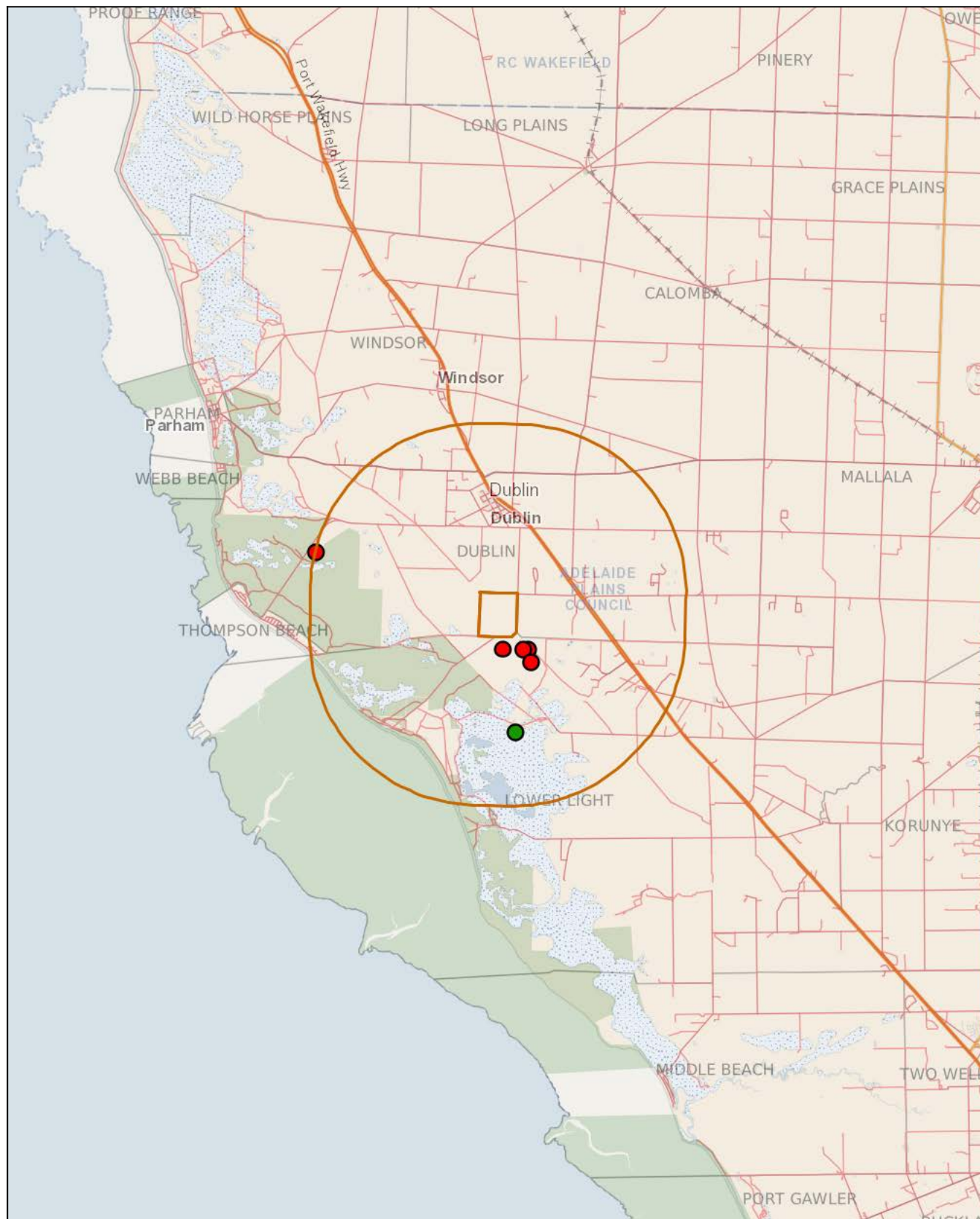


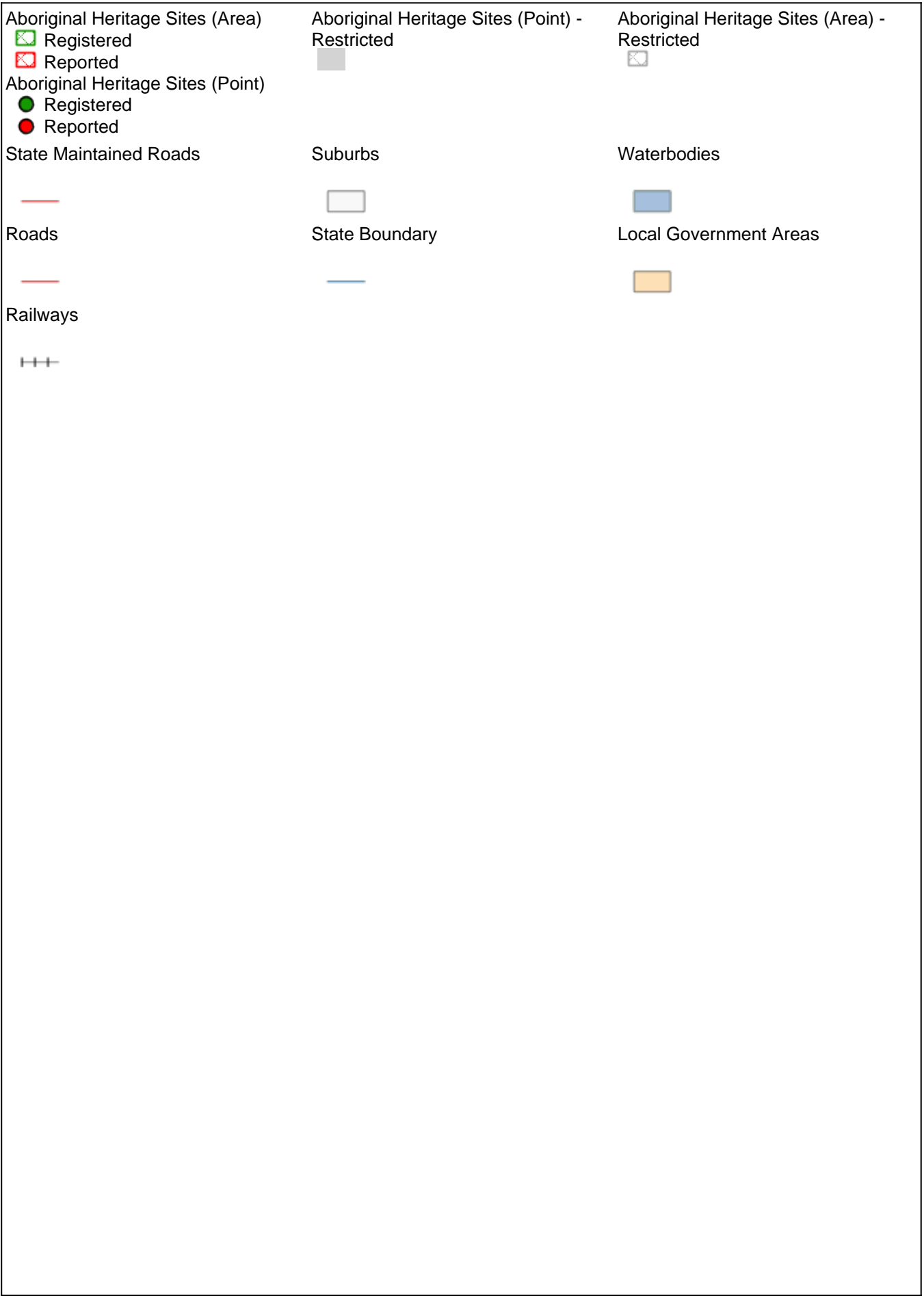
ABORIGINAL HERITAGE SITES

Reference Number:	4489
Buffer Distance (m):	5000



Metres 2,500 5,000 7,500

EPSG:3107 projection



Mackenzie Bensch
Groundwork Plus
16 Second Street
Nuriootpa 5355 South Australia

Dear Mackenzie

Thank you for the search request dated 13 Feb 2023. The search was based on the title details - Title Type: CT, Volume: 5633, Folio: 660. The address for this parcel is: 25 RUSKIN RD DUBLIN SA 5501. Your reference is 4489.

I advise that the central archive, which includes the Register of Aboriginal Sites and Objects (the Register), administered by Aboriginal Affairs and Reconciliation (AAR), has entries for Aboriginal sites within 5000m of this location.

Cultural Heritage Sites (Point) in the property:

Map Number	Site Number	Site Type	Site Status
6528	2262	Burial	Registered
6529	4561	Archaeological	Reported
6529	4562	Archaeological	Reported
6529	4563	Archaeological	Reported
6529	4564	Archaeological	Reported
6529	5113	Archaeological	Reported

Cultural Heritage Sites (Area) in the property:

Map Number	Site Number	Site Type	Site Status
6529	4561	Archaeological	Reported
6529	4562	Archaeological	Reported
6529	4563	Archaeological	Reported

The enclosed map identifies the approximate site location. It should be noted however that the site indicator does not reflect the actual area of the site; as this will vary from site to site, depending on the site information contained in the Central Archive.

The applicant is advised that sites or objects may exist in the proposed development area, even though the Register does not identify them. All Aboriginal sites and objects are protected under the *Aboriginal Heritage Act 1988* (the Act), whether they are listed in the central archive or not. Land within 200 metres of a watercourse (for example the River Murray and its overflow areas) in particular, may contain Aboriginal sites and objects.

Pursuant to the Act, it is an offence to damage, disturb or interfere with any Aboriginal site, object or remains (registered or not) without the authority of the Premier. If the planned activity is likely to damage, disturb or interfere with a site, object or remains, authorisation of the activity must be first obtained from the Premier under Section 23 of the Act. Section 20 of the Act requires that any Aboriginal sites, objects or remains, discovered on the land, need to be reported to the Premier. Penalties apply for failure to comply with the Act. It should be noted that this Aboriginal heritage advice has not addressed any relevant obligations pursuant to the *Native Title Act 1993*.

Please be aware in this area there are Aboriginal groups/organisations/traditional owners that may have an interest. These may include:

Kurna Yerta Aboriginal Corporation
Chairperson: Les Wanganeen

Address: C/- South Australian Native Title Services Level 4 345 King William Street ADELAIDE SA 5000

Telephone:

Email:

Contact Officer: Tom Jenkin

Telephone: 08 81102800

Email: tomj@nativetitlesa.org info@nativetitlesa.org

Terms and conditions for use of information derived from the central archive:

- Information derived from the central archives is confidential under section 10 of the *Aboriginal Heritage Act 1988* (the Act)
- Under section 35 of the Act, information derived from the central archives must not be divulged contrary to Aboriginal tradition unless authorised under these terms and conditions.
- Breaches of sections 10 and 35 of the Act may attract fines of up to \$10,000 or imprisonment for 6 months.
- The Applicant agrees to use the confidential information solely for the approved purpose in line with the specified current or contemplated approved use, subject to any restrictions of use detailed on this request form.
- The Applicant agrees that they are only authorised to disclose or transfer the confidential information to parties listed on this form and in accordance with any restrictions of use detailed on this request form.
- The Applicant agrees that all confidential information must remain marked "confidential", including where the information is shared in accordance with the approved use detailed on this request form.
- The Applicant will keep all information derived from the central archives (either digital or hard copy) in a secure location/format.
- If there has been any unauthorised release or use of any information derived from the central archives other than for the approved purpose and/or approved use in accordance with the restrictions of use, the Applicant will notify AAR immediately.
- All information derived from the central archives (both digital and any hard copies) must be destroyed once no longer required for the approved purpose, unless an updated central archives access information request form has been approved by AAR.

If you require further information, please contact the Aboriginal Heritage Team on telephone (08) 8303 0738 or send to our generic email address AAR.HeritageSites@sa.gov.au

Yours sincerely,

**HERITAGE INFORMATION TEAM
ABORIGINAL AFFAIRS & RECONCILIATION**

20 April 2023



Cultural Heritage Desktop Assessment for the Leinad Land Developments, Dublin, South Australia

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The professional advice and opinions contained in this report are those of the consultants, Australian Cultural Heritage Management Pty Ltd, and do not represent the opinions and policies of any third party.

The professional advice and opinions contained in this report do not constitute legal advice.

Abbreviations

Term	Meaning
ACHM	Australian Cultural Heritage Management Pty Ltd
AHA	<i>Aboriginal Heritage Act 1988 (SA)</i>
DPC-AARD	Department of the Premier and Cabinet - Aboriginal Affairs and Reconciliation Division
KNCHA	Kaurna Nation Cultural Heritage Association Inc.
NTA	<i>Native Title Act 1993 (Cwth)</i>
LLD	Leinad Land Developments (Dublin) Pty Ltd
PAD	Potential Archaeological Deposit
SAM	South Australian Museum

Executive Summary

This report documents the results of an Aboriginal cultural heritage desktop analysis for Leinad Land Developments (Dublin) Pty Ltd (LLD) investigation area, Dublin, South Australia. The investigation area is in the traditional lands of the Kurna people, who have an active native title claim, listed as the Kurna Peoples Native Title Claim (SC00/1; SAD6001/00).

This report details relevant project information, heritage protection legislation, research into previously recorded Aboriginal cultural heritage sites in the project area and recommendations in relation to any potential impacts the proposed activities could have on heritage sites congruent with responsibilities under heritage protection legislation.

The main heritage instrument with relevance in the State of South Australia is the *Aboriginal Heritage Act 1988* (AHA), which provides protection for all Aboriginal heritage in South Australia.

Whilst this desktop report did not identify any specific Aboriginal cultural heritage sites within the investigation area and subject site, this does not necessarily indicate that there are no Aboriginal cultural heritage sites within the project area. It is likely the lack of sites is representative of a lack of survey through the area. The number of Aboriginal cultural sites recorded in the vicinity of the investigation area (Table 6-1), and previous skeletal finds in the general vicinity (Table 6-2) indicates a high potential for the discovery of similar heritage features within the project area. If future ground disturbing activities are contemplated there are two options recommended to manage potential Aboriginal sites, which are identified below.

Archaeological Survey of all Ground Disturbance Locations

As the best risk mitigation tool, a comprehensive heritage survey, consisting of anthropological and archaeological components, of all areas proposed for ground disturbance should be considered. This may identify anthropological and/or archaeological sites at or near works locations, based upon surface indications, identification of significant cultural sites by Kurna participants and analysis of landforms in relation to previous discoveries. Heritage surveys may directly identify the presence of previously unreported heritage sites, or at the very least, physical inspections of the proposed ground disturbance areas will provide the basis for assigning the most effective and appropriate monitoring and mitigation measures for the work program.

Kurna Monitoring or Earthworks with Limited Archaeological Survey

If an on ground heritage survey is not deemed necessary LLD should engage at least two Kurna heritage monitors to monitor any earthworks, with an archaeologist engaged to be 'on call' during the excavations in the event specialised archaeological input is required for potential Aboriginal site discovery. This should also include an Aboriginal Site Discovery Procedure to be used during earthworks (the recommended site discovery procedure is included in Appendix 1).

Risk Management and Mitigation

It is noted that there is no legal requirement to do an Aboriginal heritage survey; however, an Aboriginal heritage survey is often undertaken during the planning stage of a project as a risk minimising and due diligence strategy to reduce the prospect of costly delays during construction.

The assessment of heritage risks and appropriate mitigation strategies can only be effectively achieved through a heritage survey or inspection of project areas involving ground disturbing activities, by qualified and experienced anthropologists and archaeologists and where required in consultation with traditional owner representatives from the Kurna Nations Cultural Heritage Association Inc. (KNCHA). The further management of the risk of disturbance to previously unrecognised heritage sites or objects, which lie buried and cannot be detected through surface inspection can be managed in medium-high risk locations through the employment of Aboriginal heritage monitors for those ground disturbing activities, with an archaeologist on call for any to assess and potential heritage sites or objects found. In very high risk cases, it may be recommended to incorporate an intermediate sub-surface assessment of a works location either through archaeological test excavations (often machine assisted) or remote sensing techniques (such as ground penetrating radar).

The monitoring/on call recommendations are more suitable for situations where there is no ground visibility whatsoever prior to earth moving (this includes, but is not limited to, paved footpaths). Even then, this is an inherently less satisfactory process with higher risk of causing damage to sites, objects and remains (punishable

under the terms of the AHA), because without at least a short archaeological and anthropological inspection, there will be no expert guidance available regarding the actual need for monitoring or the likely nature of discoveries that might occur (for example, Kurna monitors are not trained archaeologists).

Furthermore, Aboriginal heritage site locations have a high degree of association with water features - including streams, wetlands and coastal dunes. The Samphire Coast area, with its proximity to coastal resources and trade routes was for thousands of years part of a highly populated Aboriginal landscape with a relatively high density of sites, objects and remains. Consequently, development in this area has a high probability of encountering Aboriginal heritage sites and potentially burials.

The recommended mitigation measures described in this report will ensure that any ground disturbing works associated with this project does not result in any offences under the AHA, or damage to significant Aboriginal heritage. However, consultation on this matter should take place with KNCHA before such measures are implemented, to ensure that they satisfy their legitimate cultural heritage and native title interests.

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1 Introduction

Australian Cultural Heritage Management Pty Ltd (ACHM) has been engaged by Leinad Land Developments (Dublin) Pty Ltd (LLD) to carry out a desktop study of Aboriginal cultural heritage in the proposed project area in Dublin, South Australia approximately 3 km northeast of Thompsons Beach. The investigation area is in the traditional lands of the Kurna people, who have an active native title claim, listed as the Kurna Peoples Native Title Claim (SC00/1; SAD6001/00).

The purpose of this report is to inform LLD of the presence of previously registered and/or known Aboriginal cultural heritage sites within the general vicinity of the proposed project areas, the likelihood of any items and/or sites of Aboriginal cultural heritage being situated within the areas, and areas and/or landscape features considered more likely to contain Aboriginal cultural heritage items and/or sites. This report also addresses LLD's responsibilities under current heritage protection legislation.

Information in this report relating to Aboriginal cultural heritage was located by searching the Central Archive and Register of Aboriginal Sites and Objects maintained by Department of Premier and Cabinet - Aboriginal Affairs and Reconciliation Division (DPCC-AARD), the South Australian Museum (SAM) Collection Database, and the ACHM corporate archives. Aboriginal cultural heritage survey reports and literature relating to mythologies and oral histories were reviewed to provide the background history of Aboriginal culture and a further understanding of the likely cultural heritage issues within the proposed Dublin project area.

This report assesses the potential risk with regards to conducting work that could impact upon Aboriginal cultural heritage. The information identified during the research process will also guide recommendations regarding the management of Aboriginal cultural heritage during the development process.

Desktop Research Method

This study employed the following methods:

1. Searches for previously recorded heritage sites in the study areas (within 5 km of the investigation area) in the following archives; the Register of Aboriginal Sites and Objects and the Central Archive held by DPC-AARD, the SAM Sites Register, as well as the corporate archives of ACHM.
2. Examination of previous research regarding Aboriginal cultural heritage in the general vicinity of the investigation area, to provide an indication of the types and degrees of cultural heritage issues that may be present for the general area.
3. Identification of both State and Commonwealth legislative requirements relating to Aboriginal heritage and Native Title.
4. Identification of the Aboriginal cultural group with traditional cultural interests in the locality, and their representative and interests with respect to Aboriginal heritage and Native Title issues.
5. Identification and provision of contact details for the legal representative of the Aboriginal group with interests in the area, for the purposes of developing Work Area Agreements etc.

2 Project Description & Project Survey Area

2.1 Project Description

LLD is seeking to develop a residential housing estate at Dublin, located approximately 73 km north of Adelaide on the Port Wakefield Road (Map 2-2).

2.2 Project Survey Area

The investigation area is just southwest of the current Dublin Township and approximately 3 km northeast of Thompsons Beach. The survey area falls within the Kurna Peoples Native Title Claim area (SC00/1; SAD6001/00) (Map 2-1).

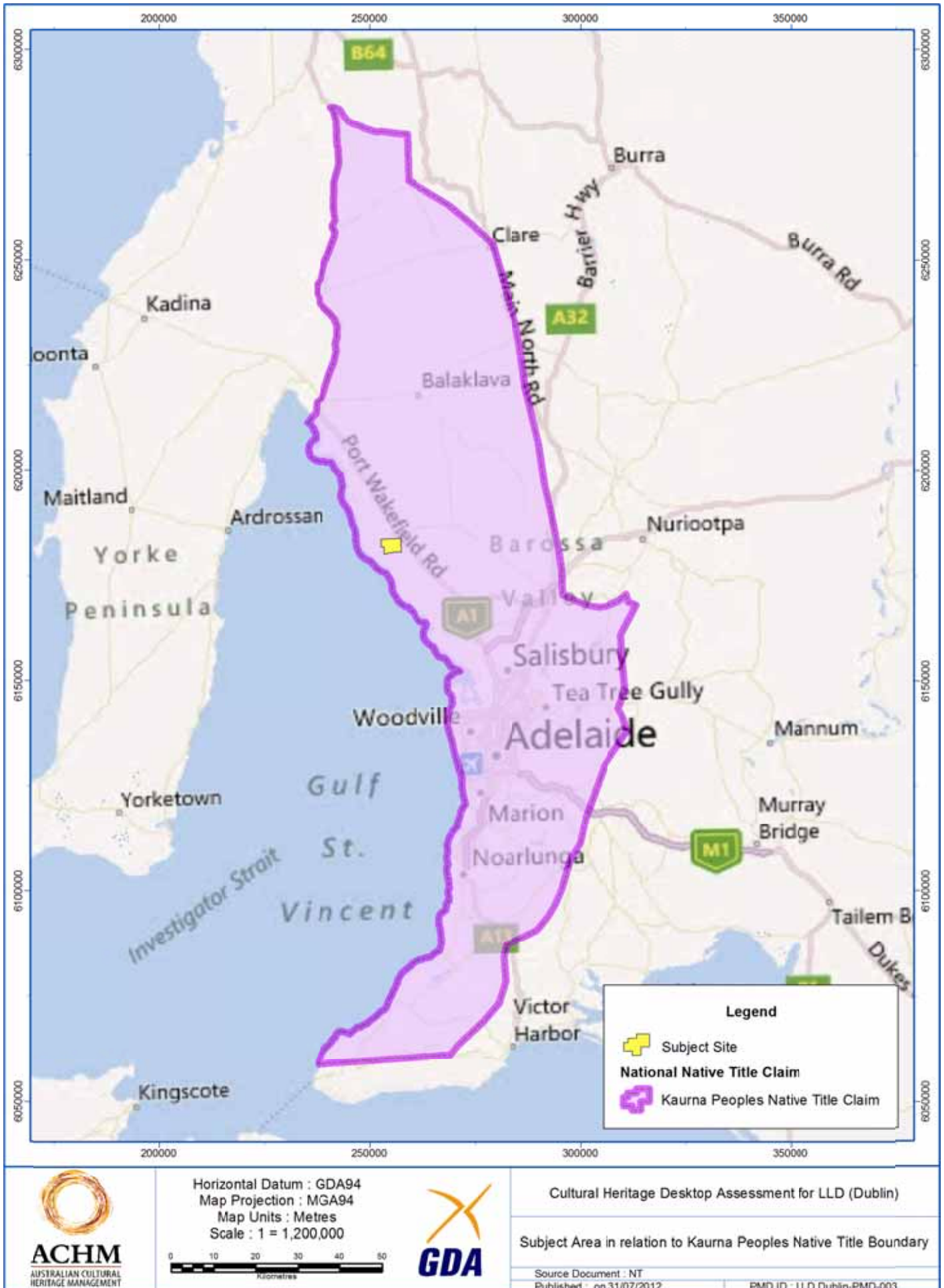
2.3 Project Limitations

This is a desktop report only and as such there is no expectation that field survey or stakeholder engagement be undertaken. Consultation with Kurna could lead to further and more in depth cultural knowledge of the study area. The contact details for the Kurna Nation Cultural Heritage Association Inc. (KNCHA) for all survey requests or any other correspondence are as follows;

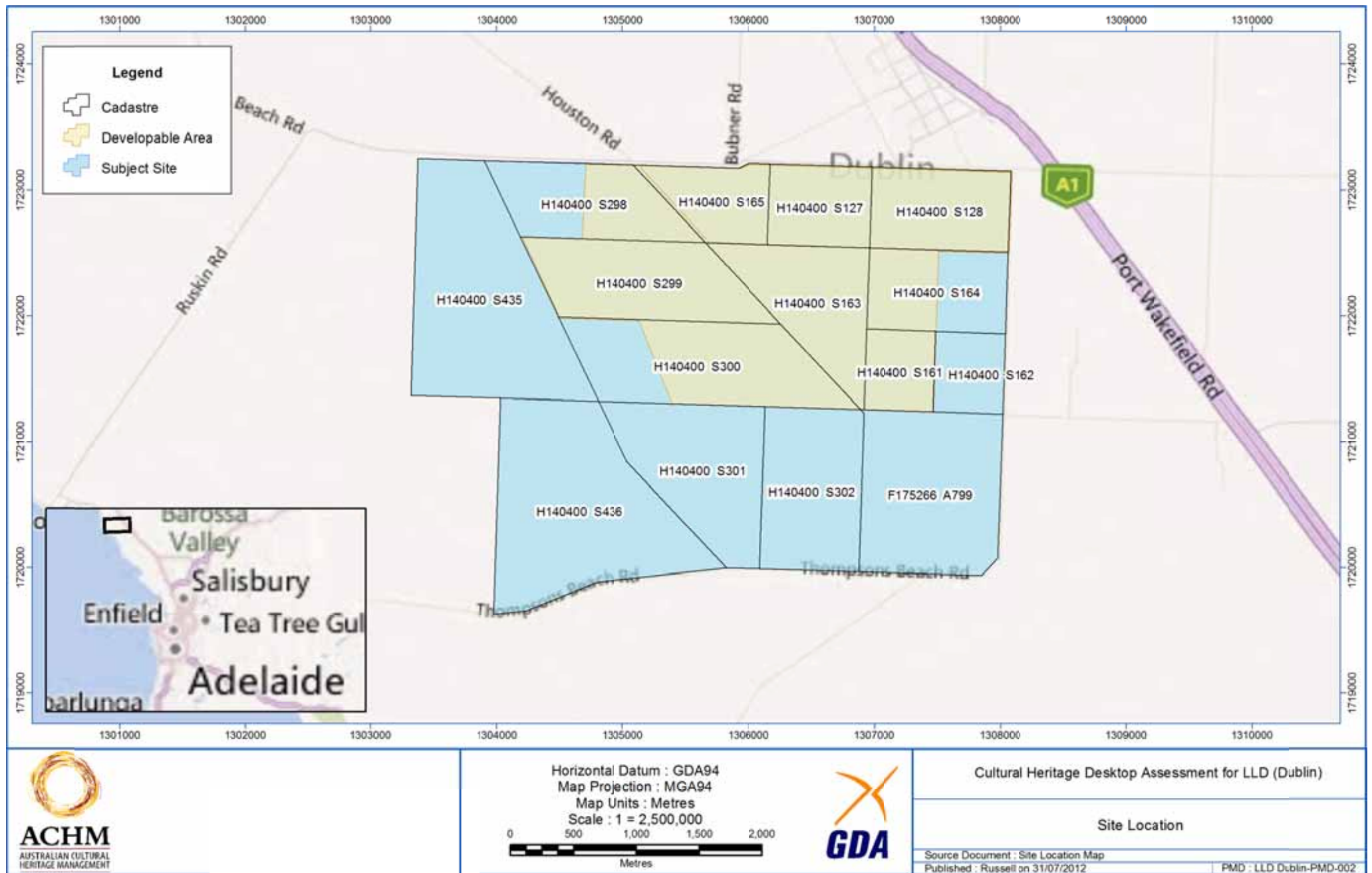
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Level 1
345 King William Street
Adelaide SA 5000

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F: 8410 0566
E: eriggs@camattalempens.com.au

Ms Riggs will ensure the KNCHA Chairperson and executive board are notified as required.



Map 2-1: Subject Area in relation to Kaurna Peoples Native Title Boundary



Map 2-2: Site Location

3 Kurna Background

This section of the report summarises previous literature detailing the Aboriginal occupation of the Northern Adelaide Plain and Samphire Coast of Gulf St Vincent.

3.1 Kurna

The Northern Adelaide Plains and associated coastal region are located within the Ancestral lands of the Kurna Aboriginal group (Edwards 1972; Tindale 1974). In pre-colonial times there were more than 20 local Kurna clans along the plains, from Crystal Brook in the north to Cape Jervis in the south. In the summer months large-scale gatherings and ceremonial progressions took place along the coastline. This included fishing, meeting and trading with visitors from other Aboriginal clans, and following and celebrating the creation journeys of Kurna Creation Ancestors, such as Tjirbruki (Tindale 1987). During the winter, Kurna moved inland to sheltered locations in the Mount Lofty Ranges foot hills (Tindale 1987) and in villages along coastal streams such as the Gawler and the Para Rivers. Places of particular cultural significance exist throughout the greater Adelaide area and particularly along the watercourses and the coastline. Some of these are related to the creation stories of Ancestors such as Tjilbruke, while others are archaeological campsites and burial sites that indicate historic occupation of Aboriginal people.

Kurna people engaged with the wide range of ecosystems available within the Adelaide region, which included "coastal sand dunes, marshes and lagoons, riverine estuaries and littoral zones, the plains and undulating foothills to the north and the Mount Lofty Ranges to the east" (Wood 1994:9).

There is a high correlation between Aboriginal archaeological sites and major water courses in South Australia (Thorley 2001). Modelling studies have demonstrated that the availability of fresh water correlates directly with important traditional living places in Australia (Draper, Builth, Mott, Czerwinski and Maland 2001; McDonald 1997). Areas with plentiful water supplies and associated natural resources (such as bark for implements, animals etc.) were prime locations for camping grounds and are often associated with extensive archaeological resources. Hearths, food remains and stone tools are representative but not exclusive of the archaeological resources most commonly found in these locations (Blair 1997; Gara and Turner 1982). Creek overflow areas were also targeted for burial grounds for their soft sandy and easy to excavate soils (Gara and Turner 1982). Water sources are also anthropologically significant, as they feature in various creation and ancestor mythologies (Tindale 1987) and may have imposed social restrictions such as those related to gender or age placed upon their access or use. Areas in the vicinity of major water courses have an elevated risk of containing buried archaeological material, including human remains. (Blair 1997; Gara and Turner 1982; Tindale 1987).

There is historical evidence of Aboriginal occupation throughout the northern plains of Adelaide and the Gawler region. This is supported by numerous archaeological discoveries throughout the area. The Gawler region was an environment rich in food and water resources needed for regular Aboriginal seasonal occupation prior to colonial contact. The evidence of archaeological sites and artefacts, including human remains, demonstrate that both the northern Adelaide Plains and Gawler region were well utilised over a long period. Colonel Light and other explorers mentioned the presence of Kurna people as they travelled across the Para district and up to the Barossa (Whitelock 1989:12).

In 1840, Dr Matthew Moorhouse, the then Protector of Aborigines in South Australia, estimated the populations of the tribes with which he had communication, including the Muliakki tribe of Port Gawler (in Howchin 1934: 3):

- 1) *Inhabiting Muliakki, Milner Estate [aka Port Gawler Station] (Port Gawler).....20*
- 2) *The Wirra Tribe, or those inhabiting the border of the Para River.....120*
- 3) *The Adelaide Tribe, or those inhabiting a district from 10 miles north of Adelaide, to the foot of Mount Terrible (Myponga)80*

Newspaper articles report findings of Aboriginal sites in the Northern Adelaide Plains region from the early 1900s through to the 1960s. One correspondent wrote to the Editor of the Adelaide Advertiser newspaper in January 1906 about the Aboriginal history and archaeological sites of the northern plains:

...the tribe of Aborigines afterwards known as the Adelaide tribe, because their haunts embraced the plains between the neighbourhood of Brighton and that of Gawler, used to make the Little Para, which runs through Salisbury, a rendezvous. Early settlers have often told stories of their meetings with companies of natives in the district, on their way north...There are few localities where better evidence of the popularity of the place as a native resort in the early days can be found than along

the banks of the serpentine watercourse, and even trees bear testimony to the boatbuilding industry of the coloured race...Further evidence of the fact that the natives used to congregate there has been found on many occasions by the turning over of small hillocks on the slopes near the creek, which had been built up by generations in the process of baking the game and fish on which the blacks used to live. The remains of numerous Aboriginal ovens have been unearthed, and the soil, which was little else than decomposed vegetable matter and ashes, has been spread over many of the gardens as manure... ..In addition to these facts the discovery of Aboriginal skeletons and skulls at various times along the Para has proved beyond a doubt that the place was a burial ground also long before the white man took possession of the country. (Advertiser 22/1/1906)

The 'Aboriginal ovens' referred to in this excerpt are now known as 'mounds' to contemporary archaeologists. In 1926 the Register reported that the remains of six Aboriginal people were discovered at a quarry six miles from Two Wells. A Mr E. A. Brooks of Two Wells told the reporter that:

...it was not unusual for the remains of aboriginies [sic] to be found in the district. Many skulls and even complete skeletons had been discovered by the Gawler River, and in the vicinity of the town there were a number of mounds, measuring up to 25 ft. in length and about 2 ft. broad, akin to the larger "barrows" found in England and other parts of Europe, which are thought to have served for burial places for the people that lived there in prehistoric times. (Register 22/4/1926:9)

The Adelaide Plains were also subjected to 'firestick farming' (Whitelock 1989), the practice of controlled burning to ensure a continual supply of food by creating favourable conditions for preferred vegetation as well as driving out game (Wood 1994:9). It is likely that this annual practice would have altered the structure of the soil, "further selecting for and against specific types of vegetation" (Wood 1994:9).

The Adelaide region was the focus of early colonial settlement and the Kurna were among the first Aboriginal groups in South Australia to suffer the impacts of colonisation and widespread alienation from their traditional lands and resources. This disruption to their usual subsistence practices saw the Kurna rely more heavily on European settlers for rations (Wood 1994).

3.2 Burials and Mound Sites

When European colonisation of South Australia commenced in 1836, Kurna settlements on the Adelaide Plains near coastal streams and wetlands featured numerous large, semi-permanent habitation sites. Through the accumulation of occupation debris and the incorporation of burials, these sites became distinctive artificial mounds on the landscape. Rapid expansion of European settlement and accompanying landscape changes displaced traditional Kurna settlement and subsistence practices although Aboriginal camps were still in existence in the mid-19th century (see Figure 3-1 below for a painting of an Aboriginal settlement in what is now North Adelaide. Note the old Adelaide Bridge on the left and Aboriginal camps along the river banks - already the trees have thinned, and there is a field of tree stumps at centre rear).



Figure 3-1: Robert Davenport watercolour of Adelaide from the north bank of the River Torrens, 1843-49, Adelaide. Courtesy of the Art Gallery of S.A.

Mounds have been subjected to intense scientific investigation over recent years and are considered to be of national and international archaeological significance (Draper, Czerwinski and Mott 2000). Mound sites occur as low accumulations of sediment saturated with white ash and charcoal, containing rock material that acts as a heat retainer, such as baked clay fragments, calcrete nodules and river cobbles (Wood 2005). Mound sites often

contain low numbers of artefacts and small amounts of faunal remains, and are commonly 20 m to 30 m in diameter and less than a metre high. Burials are often located in larger mounds (Wood 2005). In some cases, evidence of Aboriginal occupation spanning periods of thousands of years can be found within mounds (Draper, Czerwinski and Mott 2000).

Tindale recognised that mounds have a high archaeological significance through this request for a site inspection:

The most noticeable feature of the two acre area appears to be two oblong mounds standing approximately 3ft. above the general surface of the plain and composed in large part of ash and other aboriginal camp debris. ... The earth of the two mounds is similar to the earth used by glasshouse tomato growers and others as a fertilizer.situation of the mounds and their relationship to the water hole suggests to me that it was a living place of the local aborigines, that it seems probable that when the land was being first surveyed the small 2 acre area was made a reserve because the aborigines were still in occupation. Since aborigines bury their dead in their camps it is not unlikely that it was also a place of burial, but there is little to indicate that this was the case. One can only assume that it was a normal camping site for the aborigines and that one or more burials may be present. ...It is the experience of those who have gathered this material commercially that it is seldom that aboriginal bones are found in it and that it is as a rule, the result of the occupation of the site by people and of the burning of many fires. (Tindale 1957:421)

The mounds referred to by Tindale were subject to physical investigative sounding and produced archaeological material. Further accounts of mound disturbance in the general indicate the potential for mound features to contain archaeological deposits including correspondence by the SAM:

We are glad to receive such remains of the Australian aborigines. I would be glad if you were willing that our Ethnologist (Mr N.B. Tindale) should visit the site sometime in the near future, and recover any further remains which may be available. We understand, from Mr Segnit, that many aboriginal bones were disturbed when a mound was being removed, and the bones found were reburied in a hole on the site. We would be grateful to know whether the position of this re-burial is exactly known, and if so whether it would be possible for us, readily, to recover the specimens. (Hale 1950: letters)

Not all reused camp sites will be mound sites. For example, sites in coastal dunes in Moana are an example of reused camp sites that are not mound sites. Some mound sites may be predominantly oven sites, while other mound sites may not contain burials; certainly, burials occur in other settings also. Mound sites that contain ovens and burials are most likely to be camp sites - semi permanent or at least frequently reoccupied villages. Debris from shelters and huts (such as timber, earth, mud, grass and reeds) undoubtedly forms part of the bulk of the ashy, organic-laden dark earth which comprises the mounds, and is the most clearly identifying feature of the mounds.

Mound sites have also been identified in the Murray and Darling Rivers and the lower Murray Lakes. It is possible these may be ubiquitous on major riverine floodplains and wetland margins and thus associated with most major Australian capital cities and large regional centres located in these geographic situations.

Over the last 20 years, the cumulative results of archaeological, historical and ethnographic research are beginning to provide some understanding of these sites, as well as the identification and protection of remaining mound sites on the margins of the expanding city (Draper et al. 2000, for details see Greenfields Burial Site section below).

The coastal strip west of Port Wakefield Road, between the alluvial and estuarine habitats, contains numerous mounds and other sites (Wood 2005). Burials also occur further to the east. The following research is an overview of the Greenfields burial site.

3.3 Greenfields Burial Site

A number of mound sites have been located within the Adelaide Plains area. One of the most significant mound sites on the Adelaide Plains is the Greenfields site (Draper, Czerwinski and Mott 2000). The information in this section of the report is drawn from the Draper, Czerwinski and Mott 2000.

The site is located just north of the Greenfields wetlands area. It is a low mound (about 80m in diameter and up to a metre higher than the surrounding plain) on the flood plain of Dry Creek. The food remains found at the site were very well preserved and included fish (snapper, mulloway and bream), birds, shellfish (freshwater mussels, abalone, cockles), crabs, reptiles, kangaroo, wallabies, bettongs, bandicoots, several smaller mammals and fragmented emu shell and dingo bones. Two burials of complete dingoes were found, which signifies a very different status for those particular canines. The stone artefacts found at the site include larger cobble grindstones, hammers, and anvils, as well as a variety of cutting tools such as cobble choppers, knife like flakes

of quartz and quartzite, small chisels and adzes of quartz and imported chert and small, mass-produced barbs for spears and saw-knives, made from quartz, quartz crystal, silcrete and chert.

The mound also contains many traditional indigenous burials. Some of these burials were accidentally damaged and partially or entirely removed during construction of a factory. Part of the mound was removed by earthmoving machinery for garden fill. Most of these remains have been reburied.

In archaeological and anthropological terms, the Greenfields site has world class significance. The archaeological materials from the Greenfields excavations have enormous scientific potential for the Kurna people and the world at large. The materials are unique record (in terms of preservation and availability for study) of a permanent Kurna settlement on the northern Adelaide plains and wetlands before European colonisation, for perhaps the preceding 3,000 years. The broader significance of the site lies not only in the extensive and well preserved archaeological record, but also in the major contribution to scientific knowledge, which it offers with respect to traditional hunter-gatherer settlement systems and the nature and role of permanent living places, and the relationship of such places to hunter-gatherer use of wetland ecosystems.

3.4 Discussion

The evidence presented in this section of the report demonstrates that a range of archaeological artefacts, human remains, dwelling places, and painting sites have been identified in the Northern Adelaide plains and the coastal region north of Adelaide where the Dublin proposed project area is located. Levels of activity were higher around water sources and courses, as these geographical features were critical to the survival of Aboriginal populations. Water sources and courses are considered culturally and spiritually significant by the Kurna people and alluvial soils have the potential to contain burial sites.

4 Aboriginal Heritage Protection Legislation

This section outlines information on relevant Aboriginal and Non-Aboriginal heritage protection legislation

4.1 *Aboriginal Heritage Act 1988 (SA)*

The AHA is administered by the DPC-AARD. Any Aboriginal site, object or remains, whether previously recorded or not, is covered under the blanket protection of the AHA. The Act provides the following definition of an Aboriginal site in Section 3.

“Aboriginal Site” means an area of land

(a) That is of significance according to Aboriginal tradition; or

(b) That is of significance according to Aboriginal archaeology, anthropology or history.

It is an offence under Section 23 of the AHA to damage, disturb or interfere with an Aboriginal site, objects or remains unless written authorisation from the Minister for Aboriginal Affairs and Reconciliation has been obtained. Penalties for an offence under this section are up to \$10,000 or six months imprisonment in the case of an individual, or \$50,000 in the case of a corporate body.

The AHA is highly relevant given the potential to encounter Aboriginal sites in the project area. The AHA provides no legal requirement to do an Aboriginal heritage survey; however, an Aboriginal heritage survey is often undertaken during the planning stage of a project as a risk minimising and due diligence strategy to reduce the prospect of delays during construction. In the case of the current investigation area, the Kurna peoples are the appropriate Traditional Owners to consult under the terms of the AHA. Consultation with Kurna peoples via the Kurna Nation Cultural Heritage Association Inc. (KNCHA) will satisfy the consulting requirements of the AHA.

4.2 *Aboriginal & Torres Strait Islander Heritage Protection Act 1984 (Cwth)*

The Commonwealth *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* provides a mechanism for the Commonwealth Minister for Sustainability, Environment, Water, Population and Communities to make declarations regarding the protection of an Aboriginal area when the Minister is satisfied that, under State or Territory law, there is ineffective protection of the area from a threat of injury or desecration. Declarations made under this Act may involve restricting activities and/or access to an Aboriginal site.

Under section 22 of the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984*, it is an offence to conduct behaviour or partake in an action that contravenes a declaration made by the Minister. Where this relates to an Aboriginal place, the penalties applicable under this section are \$10,000 or imprisonment for five years, or both, for an individual, and \$50,000 for a corporate body. Where an Aboriginal object is concerned, the penalties are \$5000 or imprisonment for two years, or both, for an individual, and \$25,000 for a corporate body.

If the requirements of the AHA are adhered to, the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* will likely have no relevance for Aboriginal sites found to exist within the project area.

4.3 *Environment Protection & Biodiversity Conservation Act 1999 (amended 2003) (Cwth)*

The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (amended 2003) (EPBC Act) protects places of national cultural and environmental significance from damage and interference by establishing a National Heritage List (for places outside of Commonwealth land) and a Commonwealth Heritage List (for places within Commonwealth land). Under the EPBC Act any action that has, will have or is likely to have a significant impact on a place of national cultural and/or environmental significance must be referred to the Minister for Sustainability, Environment, Water, Population and Communities for approval. The EPBC Act sets out a procedure for obtaining approval, which may include the need to prepare an environmental impact statement for the proposed action (an action is defined in section 523 of the Act to include a project, a development, an undertaking, or an activity or series of activities).

The EPBC Act is only relevant in relation to an Aboriginal site if the site is entered onto the National Heritage List or the Register of the National Estate. There is currently no requirement for referral to the Commonwealth Department for Environment and Heritage under the EPBC Act if the site is not entered onto one of these registers, and the Act will have little relevance for any such Aboriginal site existing within the project area.

4.4 *Native Title Act 1993 (Cwth)*

The Commonwealth *Native Title Act 1993* (NTA) is part of the Commonwealth's response to the High Court's decision in *Mabo v Queensland (No.2)* and adopts the common law definition of native title, defined as the rights and interests that are possessed under the traditional laws and customs of Aboriginal people in land and waters, and that are recognised by the common law. These rights may exist over Crown Land but do not exist over land held as freehold title.

The NTA recognises the existence of an Indigenous land ownership tradition where connections to country have been maintained and where acts of government have not extinguished this connection.

The project area is within the claimed traditional lands of the Kurna people, who have registered a native title claim over the area (SC00/1; SAD6001/00). However, given that the entire Dublin investigation area is freehold title, LLD is not legally required to consult with the Kurna people under the NTA should the area be subjected to ground disturbing activities at a later date.

4.5 *Native Title (South Australia) Act 1994*

As stated above, the Commonwealth Native Title Act 1993 is part of the Commonwealth's response to the High Court's decision in *Mabo v Queensland (No. 2)* and adopts the common law definition of native title defined as the rights and interests that are possessed under the traditional laws and customs of Aboriginal people in land and waters, and that are recognised by the common law. Provisions within the Commonwealth NTA allow for the States to develop their own native title legislation, provided the State legislation does not conflict with the Commonwealth Act.

South Australia has enacted an alternative State right to negotiate scheme as authorised by the Commonwealth under section 43 of the NTA. This scheme is operative and to date comprises the Native Title (South Australia) Act 1994, Land Acquisition (Native Title) Amendment Act 1994, Mining (Native Title) Amendment Act 1994, Opal Mining Act 1995 and the Environment, Resources and Development Court (Native Title) Amendment Act 1995. Regulations are in force for all these Acts together with Rules of Court for the Environment, Resources and Development Court.

4.6 Discussion

From this overview of statutory requirements, it has been identified that the heritage protection legislation with most relevance for the Dublin investigation area is the South Australian AHA. If LLD adheres to the requirements of the AHA, no other heritage protection legislation should have operational relevance to the proposed works.

5 Environmental Background

This section of the report provides a brief overview of the relevant details regarding environment, natural history and land use of the project area. The area is situated on a plain characterised by agricultural land, natural samphire shrub and the coastal dunes characteristic of the natural coastline of Gulf St Vincent.

5.1 Geography

The proposed project area is immediately west of the South Australian town of Dublin, 60 km north of Adelaide. The proposed project area lies at the meeting of the Northern Adelaide Plains and the Samphire Coast of the Gulf St Vincent.

5.2 Soils

The plains are situated on the St Vincent Sedimentary Basin. The sediments are composed of clayey sand and marl, limestone and gravel (Henschke 1976:4). The sediments forming the basin are underlain by a Precambrian basement (Henschke 1976:4). Additionally, the plains contain aquifers of varying depth (Bulmer 1985:2).

5.3 Climate

The Samphire Coast lies in a temperate zone, with hot dry summers and cold and often wet winters.

5.4 Vegetation

Prior to European occupation of the land, the coastal areas of South Australia were vegetated with such species as Swamp Paper-bark (*Melaleuca hamaturorum*), Marsh Saltbush (*Atriplex paludosa* ssp. *paludosa*), Berry Saltbush (*Atriplex semibaccata*), Ruby Saltbush (*Enchylaena tomentosa* var. *tomentosa*), Short-leaf Bluebush (*Maireana brevifolia*), Salt Bluebush (*Maireana oppositifolia*), Seaberry Saltbush (*Rhagodia candolleana* ssp. *candolleana*) and Coast Bonefruit (*Threlkeldia diffusa*) (Kraehenbeuhl 1996). Nitre-bush (*Nitraria billardierei*) can also be found on higher ground (Berkinshaw 2009:34). Human activity has extensively cleared these species. Introduced aggressive weeds African Boxthorn (*Lycium ferocissimum*) and Tree Mallow (*Lavatera maritima*) are encroaching on the area particularly around Thompsons Beach (Purnell, Peter and Clemens 2011:28).

The coastal area contains samphire flats which are covered by extremely high spring tides, intertidal mangroves (*Avicennia marina* var. *resinifera*) and intertidal sand and mudflats (PIRSA n.d). Some of the mudflats are colonised by garweed (*Zostera muelleri*). In the upper intertidal zone mangroves are reduced in size landwards and give way to a variety of samphire species, including Beaded Glasswort (*Tecticornia flabelliformis*) and Blackseed Glasswort (*Tecticornia pergranulata*) as well as saltbush on the salt flats of the supratidal zone.

5.5 Native fauna

Gulf St Vincent is of international significance in regard to its shorebird populations and habitats (Purnell, Peter and Clemens, 2011:6). Thompsons Beach and adjacent salt pans in particular are a critical high-tide roosting and feeding habitat for shorebirds (Purnell, Peter and Clemens, 2011:58). This habitat supports significant populations of Great Knot (*Calidris tenuirostris*), Red Knot (*Calidris canutus*), Red-necked Stint (*Calidris ruficollis*) and Bar-tailed Godwit (*Limosa lapponica*), among others (Purnell, Peter and Clemens, 2011: 38).

5.6 European Land Use

Prior to non-Indigenous occupation, the Northern Adelaide Plains were open country (Smith 1979:4). There may have been scattered stands of trees, however there is no reliable European record of this (Kraehenbeuhl 1996:151). This area is now characterised by agricultural land, sparse residential development and road infrastructure. Non-major roads and tracks allow access to the coast for fishing and small-scale recreational holiday activities with limited attendant infrastructure.

6 Heritage Register Searches

The following sections of this desktop report provide details of previously identified Aboriginal cultural heritage objects and/or sites within or adjacent to the current survey area as per the records of the available Aboriginal cultural heritage databases and the reports of previous Aboriginal cultural heritage surveys conducted in the general region.

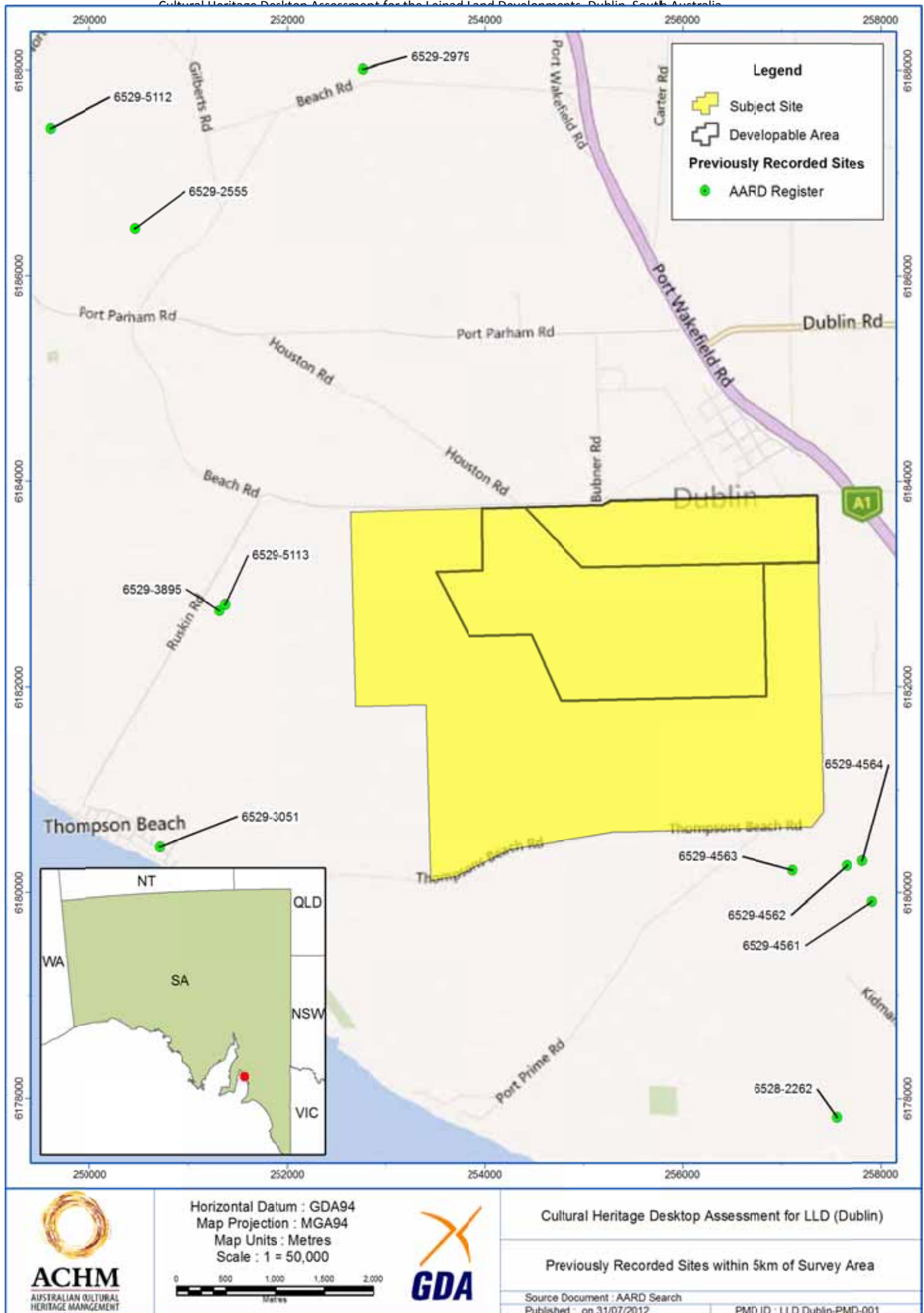
6.1 DPC-AARD Central Archive

The Central Archive, including the Register of Aboriginal Sites and Objects, is maintained by DPC-AARD. The archive is a database of previously recorded Aboriginal sites in the state. A search of the database allows previously recorded Aboriginal sites in a survey area to be identified before development activities or ground disturbing works are carried out. If a search of the database does not result in the identification of any previously recorded sites, unknown or unrecorded sites may still be present.

A search of the Central Archive revealed no recorded Aboriginal heritage sites within the immediate footprint of the Dublin investigation area (Map 6-1). However there are several recorded Aboriginal sites within close proximity of the subject site boundary. In particular, Dublin Artefact Site 3 (3747-4563), Dublin Artefact Site 2 (3746-4562) and Dublin Campsite 1 (3748-4564) are approximately 500 m from the southeast corner of the subject site boundary, as shown in Table 6-1 below. Map 6-1 also details adjacent Aboriginal sites in the Port Parham and Windsor areas including burial sites at Windsor (5484-2979), Thompson's Beach (5487-3051) and Light Beach (5472-2262). These sites provide both a confirmation of past Aboriginal activity in the general vicinity of the project area, and an indication of the types of sites that may be encountered.

AARD Site Number	AARD Site Name	AARD Site Type	AARD Site Status
5487-3051	Thompson Beach Burial 1	Burial	Registered
3121-3895	Dublin Dune Artefact Site	Artefact scatter	Reported
3745-4561	Dublin Artefact Site 1	Artefact scatter	Reported
3746-4562	Dublin Artefact Site 2	Artefact scatter	Reported
3747-4563	Dublin Artefact Site 3	Artefact scatter	Reported
3748-4564	Dublin Campsite 1	Campsite	Reported
5472-2262	Light Beach Burial Site 1	Burial Site	Registered
5477-2555	Port Parham Surface Site	No detail	Registered
5484-2979	Windsor Campsite/Burial Site	Campsite/burial	Registered
9466-5112	Port Parham Artefact Site 2	Artefact scatter	Reported
9468-5113	Port Parham Artefact Site 3	Artefact scatter	Reported

Table 6-1: Aboriginal sites on the DPC-AARD Central Archive within 5 km of the survey area



Map 6-1: Previously Recorded Sites within 5km of Survey Area

6.2 SA Museum Database

The SAM database documents Aboriginal cultural material and human remains held by the museum. The database contains information such as how and when materials and remains were acquired, and where they came from. Not all items have exact acquisition dates and/or precise details of the locations where they were found. Unfortunately, many of these details have been lost as the items were donated to the museum by members of the public. Due to these limitations, the records listed on the SAM database serve only as a guide to the types of Aboriginal cultural material and/or human remains which may be present in an area.

The SAM database was searched to see if any artefacts or skeletal remains have been located in the survey areas and the surrounding suburbs. The following keywords were used during the searches: Dublin and Windsor.

The search returned five results for Dublin: two of skeletal remains, one of cultural material, and the remainder unspecified. The search also returned six results for Windsor: two of skeletal remains and the remainder unspecified. Table 6-2 below gives details of these results.

Registry Number	Date Acquired	Description	Locality	Comments
A13194		Skull with jaw and partial skeleton	Dublin	Donated by Police
A38425	20/12/90	Skull, lower jaw and bones, almost complete skeleton	Dublin	
A47524	14/06/55		Dublin	Donated from estate of Rev J. C. Jennison
A47545		Grindstone	Dublin	
A50395	23/04/57		Dublin	Collected by Rev Jennison
G5857	1/01/84	Skull and partial skeleton	Windsor 2km west of Dublin, Section 333	Donor T. Williams. 200m north of old Parham Road. Recovered by Police
A29904	1/12/89		Windsor	Donated W. Simons. Found on eroded sand dune
A38836	1/08/59	Skull, jaw and partial skeleton	Windsor	One mile west of Windsor in sand hills
A4753	14/06/55		Windsor	Donated from estate of Rev J. C. Jennison
A47533	14/06/55		Windsor	Acquired by the Rev J. C. Jennison in 1928
A48096	20/06/55		Windsor	Purchased Ashley, C. S.

Table 6-2: Aboriginal Artefacts from the SAM Database

6.3 ACHM Corporate Archive

The ACHM corporate archive holds records of all heritage surveys conducted by ACHM consultants since the company commenced operation more than ten years ago. The archive was searched for details of previous cultural heritage survey reports and/or desktop reports concerning survey areas relevant to the Dublin development site. It should be noted that while an excellent resource, the ACHM corporate archives are by no means definitive.

The following is a review of the most relevant investigations that have been previously undertaken in the vicinity of the survey area.

6.3.1 N.K. Butler, Furniss and N.J. Butler (2010)

ACHM was engaged by SA Water to undertake an archaeological and anthropological cultural heritage survey along the proposed route of the Port Wakefield Water Supply Upgrade, South Australia.

A search of the SAM Database revealed many entries for archaeological material found within the area surrounding Port Wakefield; however, these entries included very little detail as to what the finds consisted of, or their specific location.

No new sites of anthropological or archaeological significance were recorded within the project area during the surveys. However, KNCHA participants present on the anthropology survey indicated that the general area is of cultural significance to the Kurna people because of several Creation Ancestors (or 'Dreaming') stories that pass through the area. Based on an assessment of the proximity to and elevation above the Wakefield River, and the presence of previously recorded Aboriginal sites within the survey area, there was considered to be a medium to high risk of encountering subsurface archaeological sites and/or objects during the proposed ground disturbance along the pipe alignment.

6.3.2 Liebelt and Morley (2007)

This report focuses on Aboriginal heritage issues in relation to the proposed Lower Gawler River Flood Mitigation and Riparian Rehabilitation works. During the two day Aboriginal cultural heritage survey the complete length of the Lower Gawler River levee alignments was walked, including both the northern and southern bank levees. An area of land between the north levee alignment and the banks of the Gawler River (flanked by the Pt Wakefield highway to the west and the Old Pt Wakefield road to the east) was also considered in relation to a proposed rehabilitation wetland area. During the survey three Aboriginal sites were identified. Additional to the locations where Aboriginal sites were recorded, landforms with the potential to contain buried archaeological sites were identified.

6.3.3 Houghton et al. (2008)

This report documents the Aboriginal cultural heritage survey of a development site at Buckland Park, northern Adelaide, South Australia. The development site was approximately 1,308 hectares, between Port Gawler and Virginia, and is bordered to the north by the Gawler River. The Aboriginal heritage survey of the Buckland Park Development site identified three previously recorded Aboriginal sites and six previously unrecorded Aboriginal sites within the survey area.

These sites, although not displaying any recognisable stratigraphy in their current state, show evidence of extensive Aboriginal land use of the area. These sites included artefact scatters of flaked stone, scarred trees and the identification of land forms (see sections 3.1 and 3.2 above) suggesting the potential for sub-surface archaeological deposits that would require monitoring by Traditional Owners during the proposed excavation works.

6.3.4 Hobbs et al. (2011)

ACHM in conjunction with KNCHA undertook an Aboriginal cultural heritage consultation and inspection of the entirety of the proposed Buckland Park Development in northern Adelaide, South Australia; following on from earlier work undertaken in 2008 (see 6.4.3 above).

As a result of the Aboriginal cultural heritage inspection and consultation, no new Aboriginal sites were recorded within the limited survey area specifically addressed within this report, however one previously recorded potential archaeological deposit (PAD 5), was rerecorded with more defined boundaries; this PAD now encompasses the ETSA land parcel. In addition, a previously recorded site, WAL01-012, intersects with Precinct 1.

6.3.5 N.J. Butler and Sivak (2011)

ACHM was engaged by the South Australian Department of Planning and Local Government (via Connor Holmes Pty Ltd) to undertake a desktop study of Aboriginal and European cultural heritage for the township of Virginia Development Plan Amendment, South Australia.

Historical records show that the land immediately surrounding the investigation area has been home to intense cultural activities both prior to European colonisation as well as since. When European immigrants first began to settle on the northern plains of Adelaide, the area, particularly in the vicinity of Buckland Park, was home to known tribes of Aboriginal people who were sub-groups of the larger Kurna nation. Archaeological discoveries over recent years have confirmed this occupation, and excavations of 'mounds' (the accrued sedimentary remnants of traditional ovens, see sections 3.2 and 3.3 above) suggest continual occupation and cultural activity, in some cases, for thousands of years. Larger mounds have also been known to contain human burials. It must also be noted that other burials have been discovered to the north, east and south of the investigation area, but these are commonly situated adjacent to watercourses. There were no registered DPC-AARD sites within the area researched.

6.4 Discussion

This section of the report summarises the previously identified Aboriginal cultural heritage objects and/or sites within or adjacent to the current project area as per the records of the available Aboriginal cultural heritage databases and the reports of previous Aboriginal cultural heritage surveys conducted throughout the general region.

Whilst this desktop report did not identify any specific cultural heritage sites within the investigation area, this does not necessarily indicate that there are no cultural heritage sites extant. The number of Aboriginal cultural heritage sites recorded in the vicinity of the investigation area (Table 6-1), and previous skeletal finds (Table 6-2) indicates a high likelihood for the discovery of Aboriginal heritage sites within the project area.

Additionally, existing evidence suggests that the entire Samphire Coast of Gulf St Vincent was once a place of intense cultural activity by local Kurna peoples. Consequently, there is a strong likelihood of the investigation area containing features of Aboriginal cultural significance, including artefact scatters, campsites and human remains. Burials in particular, may be encountered in coastal dunes and along the banks of creeks draining into the sea.

7 Recommendations

If future ground disturbing activities are contemplated, there are two options recommended to manage potential Aboriginal sites and heritage value concerns, which are identified below.

Aboriginal Cultural Heritage Survey of all Ground Disturbance Locations

Cultural heritage surveys are not specified as a requirement under the rubric of consultation in the AHA. However, a cultural heritage survey consisting of Kurna participants and anthropological and archaeological components of all areas proposed for ground disturbance should be considered as the best risk mitigation tool. A survey may identify anthropological and/or archaeological sites at or near works locations, based upon surface indications, identification of significant cultural sites by Kurna participants and analysis of landforms in relation to previous discoveries. Heritage surveys may directly identify the presence of previously unreported heritage sites, or at the very least, physical inspections of the proposed ground disturbance areas will provide the basis for assigning the most effective and appropriate monitoring and mitigation measures for the work program.

Kurna monitoring or Earthworks with limited archaeological survey

If an on ground heritage survey is not deemed necessary it is recommended that LLD should engage at least two Kurna heritage monitors to monitor any earthworks, with an archaeologist engaged to be 'on call' during the excavations in the event specialised archaeological input is required for potential Aboriginal site discovery. This should also include an Aboriginal Site Discovery Procedure to be used during earthworks (the recommended site discovery procedure is included in Appendix 1). This monitoring/on call recommendation is more suitable for situations where there is no ground visibility whatsoever prior to earth moving (this includes, but is not limited to, paved footpaths).

The recommended mitigation measures described in this report will ensure that any ground disturbing works associated with the investigation area do not result in any offences under the AHA, or damage to significant Aboriginal heritage. However, consultation on this matter should take place with KNCHA before such measures are implemented, to ensure that they satisfy their legitimate cultural heritage and native title interests.

8 Conclusion

Whilst this desktop report did not identify any specific cultural heritage sites within the investigation area, this does not necessarily indicate that there are no cultural heritage sites extant. The number of Aboriginal cultural heritage sites recorded in the vicinity of the investigation area (Table 6-1), and previous skeletal finds (Table 6-2) indicates a high likelihood for the discovery of Aboriginal heritage sites within the project area.

Furthermore, Aboriginal heritage site locations have a high degree of association with water features, including streams, wetlands and coastal dunes. The Samphire Coast area, with its proximity to coastal resources and trade routes was for thousands of years part of a highly populated Aboriginal landscape with a relatively high density of sites, objects and remains. Consequently, development in this area has a high probability of encountering Aboriginal heritage sites and potentially burials.

The main piece of heritage protection legislation with regards to the investigation area is the South Australian AHA. Although there is no legal requirement within this Act for a developer to undertake an Aboriginal heritage survey, an Aboriginal heritage survey is often undertaken during the planning stage of a project as a risk minimising and due diligence strategy to reduce the prospect of costly delays during construction.

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Legal Case

Mabo v Queensland (No 2) (1992) 175 CLR 1

Legislation

Aboriginal Heritage Act 1988 (SA)

Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Cwth)

Environment Protection & Biodiversity Conservation Act 1999 (amended 2003) (Cwth)

Native Title Act 1993 (Cwth)

Native Title (South Australia) Act 1994

10 Appendix 1



Procedure to follow if potential Aboriginal skeletal remains and/or an archaeological site are found

