

UniSA Mawson Lakes Campus: Indigenous Cultural Heritage Study.

FINAL REPORT



A report to
University of South Australia
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by

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1. INTRODUCTION

The University of South Australia (UniSA) have commissioned an Indigenous cultural heritage study of parts of their Mawson Lakes Campus (see Figures 1, 2 and 3). The study was to encompass two portions of land, Parts A and B, as shown in Figure 3 and described as follows.

Part A

The area marked A on Figure 3 is a proposed building site for the Centre for Environmental Risk Assessment and Remediation (CERAR) and Co-operative Research Centre for Contaminated Assessment and Remediation of the Environment (CRC CARE) at the Mawson Lakes Campus. It is proposed that the new building be constructed with two linked wings similar to Garth Boomer Building G, comprising of a Laboratories wing (1925m²) and Office accommodation wing (1783m²), with a courtyard space between the two wings. The total area of the development footprint will be approximately 3708m² and the building is likely to be two storeys high.

Part B

Part B comprises the remainder of the Mawson Lakes Campus, as shown on Figure 3.

The main aims of the study are as follows:

- 1) To identify areas of Aboriginal heritage significance, in relation to the provisions of the current *South Australian Aboriginal Heritage Act 1988*.
- 2) To determine the sensitivity/level of significance of any areas identified.
- 3) To inform UniSA of the likelihood of disturbing an area deemed significant or discovering an artefact through building works, and what might potentially be discovered on such a building site.

The fieldwork for the project was carried out on Monday 6 February 2006. The consultant was accompanied in the field by two representatives of the Kaurna Heritage

Board, the body considered to represent Kaurna interests in the region: Lynette Crocker and Joe Mitchell. Craig Westell also assisted in the field.

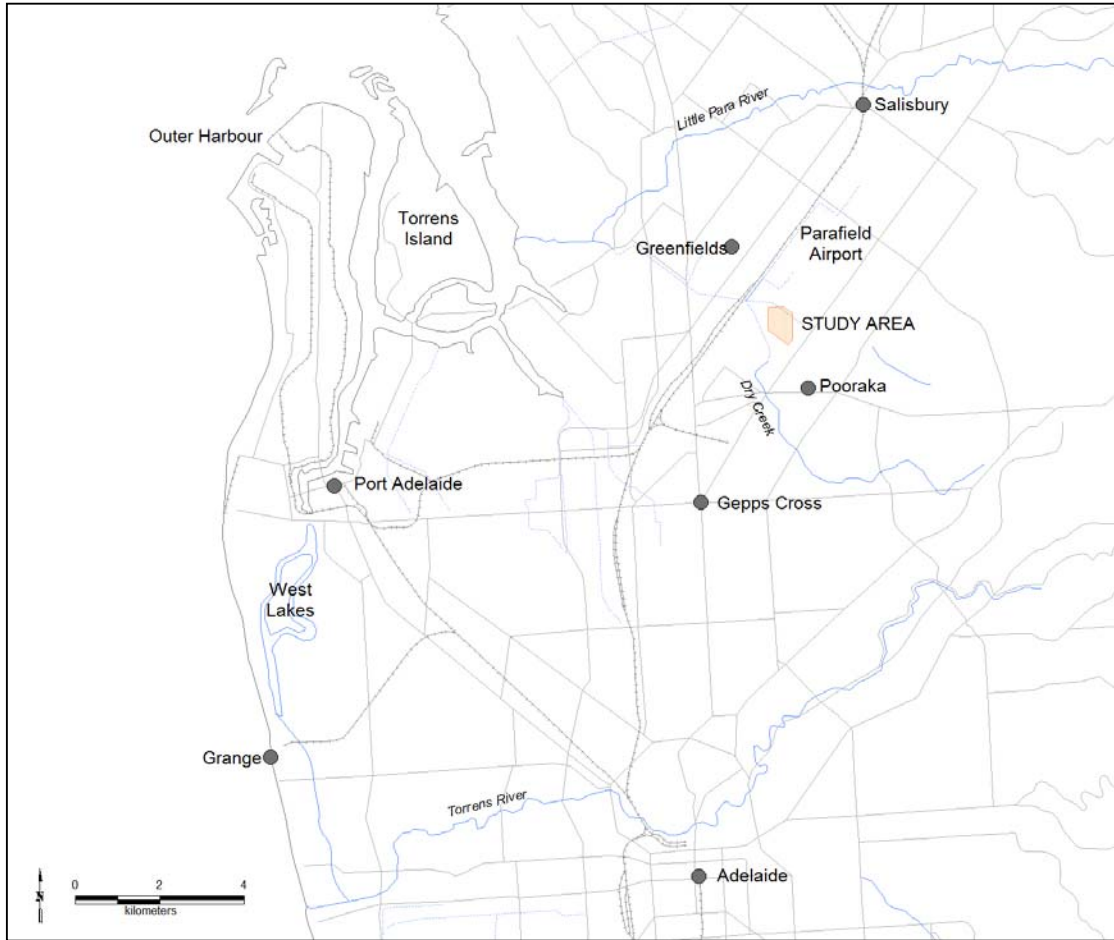


Figure 1: Location of the study area.

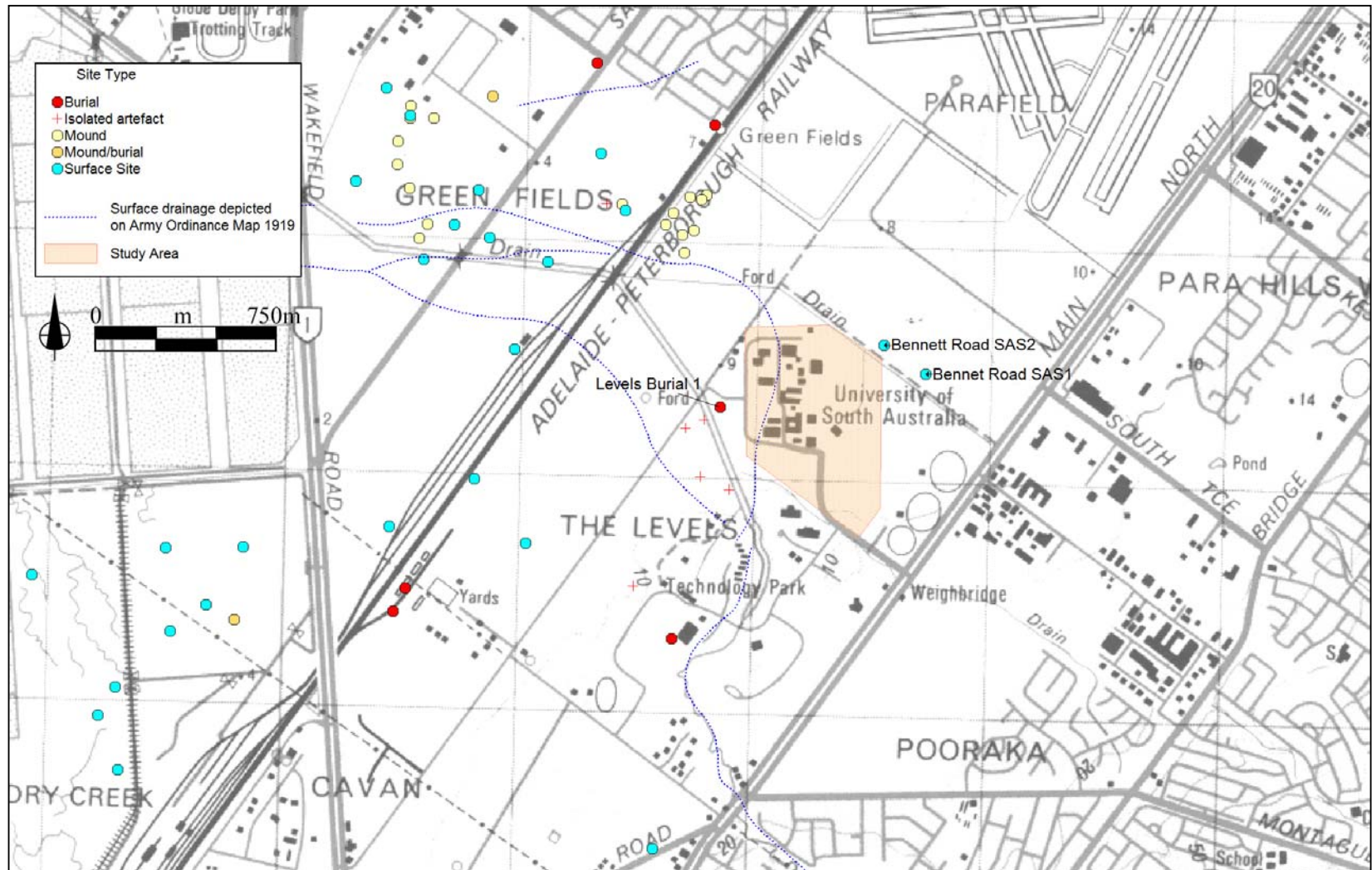


Figure 2: The study area showing the location of previously recorded Indigenous sites and the previous course of Dry Creek.

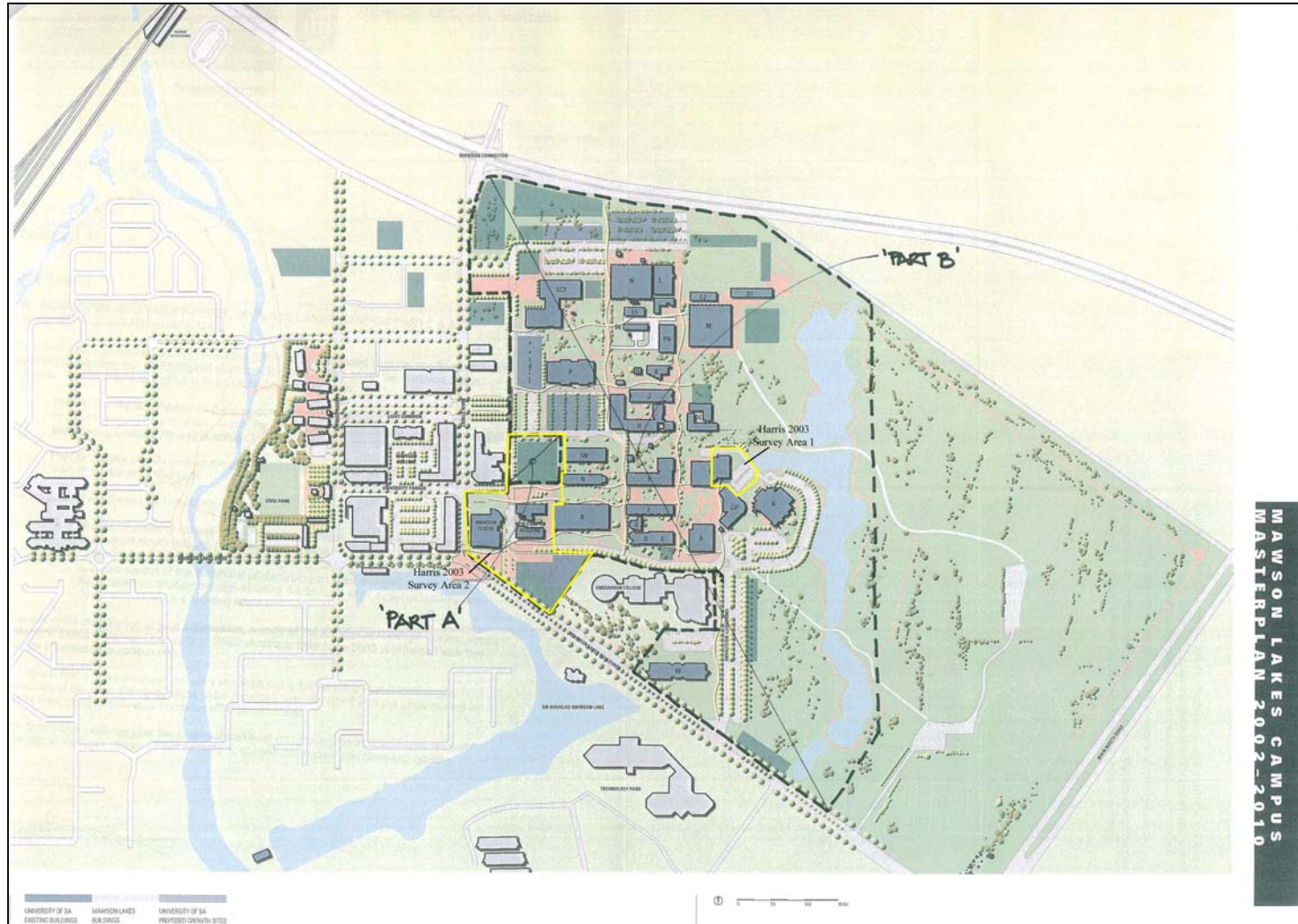


Figure 3: The study area in detail. Also shown are the locations where Harris (2003a) has previously undertaken research (boxed in yellow).

2. LEGISLATIVE FRAMEWORK

Indigenous heritage is protected at both the State and Federal level. The Australian government's power and role in heritage place management is however strictly limited. Except in the case of Indigenous place protection and World Heritage, it does not impinge upon state powers, cannot usually stop states from destroying places and cannot legislate to actively protect them. The essential protective legislation is state-generated (Pearson and Sullivan 1995:56). Following are details of relevant legislation covering Indigenous heritage in South Australia as well as Federally.

Aboriginal Heritage Act 1988

The *Aboriginal Heritage Act 1988*, provides blanket protection for all Aboriginal sites and objects in South Australia. An Aboriginal site is defined by the Act as being an area of land:

- a) that is of significance according to Aboriginal tradition;
OR
- b) that is of significance to Aboriginal archaeology, anthropology or history.

An Aboriginal object is defined by the Act as an object:

- a) that is of significance according to Aboriginal tradition
OR
- b) that is of significance to Aboriginal archaeology, anthropology or history.

The Department of Aboriginal Affairs and Reconciliation (DAARE) is required to keep a Register of Sites but it should be noted that all sites are protected, irrespective of whether they are on the Register or not.

Section 12 allows for a person proposing to undertake any action near a site to apply for a determination from the Minister as to the site's significance. Under Section 12(6), the Minister may then accept advice from an 'expert' on this matter and then make a determination as to whether the site is to be retained on the Register of Aboriginal Sites

or whether it should be removed from the Register. Sites or objects that are determined not to be significant may be excluded from the operations of the Act (Section 13). Partial disturbance or clearance of a site as, for example, would be required in the case of a proposal to excavate a trench across part of a site may be possible through the determination process.

Section 20 states that all people who ‘discover’ Indigenous sites or objects must report them to the Minister, through DAARE. Details providing particulars of the nature and location of the site, object or remains must be included. The penalty for such an offence is \$50,000 for a body corporate, or \$10,000 or imprisonment for 6 months in the case of an individual.

Section 21 states that a person must not, without the authority of the Minister, excavate land for the purpose of uncovering any Aboriginal site, object or remains. Similar penalties as described above apply to this Section of the Act.

It is an offence, under Section 23 of the Act, to collect, damage or destroy Aboriginal sites, objects or remains without the written authorisation of the Minister for Aboriginal Affairs. The penalty for such an offence is \$10,000 or imprisonment for six months in the case of an individual and \$50,000 in the case of a corporate body. Where a corporate body commits an offence under the AH Act, each member of the governing body is guilty of the same offence and is liable to the same penalty as an individual.

Under Section 24, the Minister may prohibit or restrict access to a site and also prohibit or restrict activities at or near a site. Prohibitions and restrictions made under this section require the approval of the Governor.

Contact details for DAARE are as follows:

Department of Aboriginal Affairs and Reconciliation
PO Box 3140 – Rundle Mall
ADELAIDE SA 5000
Ph: (08) 8226 8900/Fax: (08) 8226 8999

Aboriginal and Torres Strait Islander Heritage Protection Act 1984

Indigenous sites are also protected by Commonwealth legislation. The *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* and subsequent amendments provide for the preservation and protection of sites and objects of traditional significance to Indigenous people. Sites and objects can be protected both from physical threat and from the threat of desecration. Aboriginal tradition means the body of traditions, observances, customs and beliefs of Indigenous people generally or of a particular community or group of Indigenous people and includes any such traditions, observances, customs or beliefs relating to particular persons, areas, objects or relationships. The Commonwealth Act takes precedence over State legislation where there is conflict.

Indigenous people can apply to the Federal Minister for Aboriginal Affairs for an emergency declaration to protect a threatened site or area. Emergency declarations would only be made if it were considered that State heritage legislation did not adequately protect a site or object. Before making a declaration, the Federal Minister must consult with the State Minister for Aboriginal Affairs to determine whether State legislation gives the necessary protection to the site or objects. If the Federal Minister is satisfied that the State or Territory laws offer protection, then a declaration will not be made.

Emergency declarations, giving temporary protection to a site or object, can apply for 30 or 60 days. If the Minister is satisfied that the site or objects are still under threat, long-term protection can be provided. Contravention of declarations made in relation to significant Indigenous areas or objects is an offence. At present, there are no areas or sites under the protection of this Act within the study area.

Environment and Heritage Legislation Amendment Act (No. 1) 2003

Australian Heritage Council Act 2003

Australian Heritage Council (Consequential and Transitional Provisions) Act 2003

Together, these three Acts provide protection for Australia's natural, Indigenous and non-Indigenous heritage.

The new features include:

- A new National Heritage List of places of national heritage significance.
- A new Commonwealth Heritage List of heritage places owned or managed by the Commonwealth.
- The creation of the Australian Heritage Council, an independent expert body to advise the Minister on the listing and protection of heritage places.
- Continued management of the Register of the National Estate.

The first of the Acts amends the *Environmental Protection and Biodiversity Conservation Act 1999* to include 'national heritage' as a new matter of National Environmental Significance and protects listed places to the fullest extent under the Constitution. It also establishes the National Heritage List and the Commonwealth Heritage List.

The second of the Acts establishes a new heritage advisory body to the Minister for the Environment and heritage, the Australian Heritage Council, and retains the Register of the National Estate.

The third of the Acts repeals the *Australian Commission Act 1975*, amends various Acts as a consequence of this repeal and allows the transition to the new heritage system.

Following are details of each of the Heritage Lists and the protection offered to places on them (taken from www.deh.gov.au/heritage/law/heritageact/index.html).

National Heritage List

The National Heritage List is a list of places with outstanding heritage value to our nation, including places overseas. So important are the heritage values of these places that they are protected under the Australian Government's *Environment Protection and*

Biodiversity Conservation Act 1999 (EPBC Act). This means that a person cannot take an action that has, will have, or is likely to have, a significant impact on the national heritage values of a national heritage place without the approval of the Australian Government Minister for the Environment and Heritage. It is a criminal offence not to comply with this law and there are significant penalties.

Commonwealth Heritage List

The Commonwealth Heritage List is a list of places managed or owned by the Australian Government. The list will include places, or groups of places, that are in Commonwealth lands and waters or under Commonwealth control, and are identified by the Minister as having Commonwealth heritage values. These places will be protected under the EPBC Act, which requires that actions:

- taken on Commonwealth land which are likely to have a significant impact on the environment will require the approval of the Minister
- taken outside Commonwealth land which are likely to have a significant impact on the environment on Commonwealth land, will require the approval of the Minister
- taken by the Australian Government or its agencies which are likely to have a significant impact on the environment anywhere, will require approval by the Minister.

As the definition of 'environment' in the EPBC Act includes the heritage values of places, these provisions of the Act in the context of their operation, provide protection for the values of Commonwealth Heritage places.

Register of the National Estate

Under the new system, the Register of the National Estate is retained as an evolving record of Australia's natural, cultural and Indigenous heritage places that are worth keeping for the future. The Australian Heritage Council compiles and maintains the Register. Places on the Register that are in Commonwealth areas, or subject to actions by the Australian Government, are protected under the EPBC Act by the same provisions that protect Commonwealth Heritage places (see above).

3. THE STUDY AREA

The UniSA Mawson Lakes Campus lies approximately 12km northeast of Adelaide, bounded by Main North Road, Parafield Airport, Technology Park and the recent Mawson Lakes urban development (see Figures 1, 2 and 3). The area was previously known as The Levels.

The study area is located in the upper parts of the Dry Creek outwash plain, immediately downstream of the point in which Dry Creek had formerly broken-out from a clearly defined, incised course and into a series of distributary channels (see Figures 2 and 4). The topography is relatively flat, with minimal grades typically of less than 1%. Land varies from around 15m AHD (Australian Height Datum) to 1m AHD, being highest in the southeast and lowest in the northwest.

Prior to storm water mitigation and the realignment of Dry Creek, periodic flooding of the watercourse would have maintained a complex of interconnected wetlands throughout the area. Fenner noted that Dry Creek would spread out from the poorly defined channel during flood into a wide sheet of flowing water (Fenner 1927), with low-lying areas occupied by a semi-permanent bog during the wetter months (Miles 1950).

Today, Dry Creek retains its original course for several kilometres from the base of the Para Fault escarpment, flowing within a deeply incised gully, up to 5m deep, and tracing a meandering course across the upper outwash fan. Approximately 1km southwest of the study area its channel has been both realigned and enlarged with the creek now constituting one of the most significant storm water drains in the region. The stream's load is now diverted through artificial wetlands, in the Mawson Lakes/Greenfields area, to the shore of the Port River Estuary. While the artificial wetlands were originally intended to purify storm waters for potential re-sell for agricultural use, the presence of shallow saline aquifers and consequent contamination has affected the commercial viability of these schemes (Belperio and Harbison 1992).

The Mount Lofty Ranges, defined locally by the Para Fault Escarpment, lie less than 2km to the southeast of the study area while mangrove woodlands fringing the coastline of St. Vincent Gulf and the Port River estuary are clearly visible 4km to the northwest.

Kraehenbuehl (1996) suggests the area maintained a mix of grasslands of *Stipa* and *Danthonia* spp., which would have occupied the bulk of the area, and *Eucalyptus* woodlands dominated by *E. camaldulensis* (red gum) and *E. leucoxylon* (blue gum), which would have been restricted to the course of Dry Creek. Samphire marshlands and low shrubland occupied the coastal fringe immediately to the west.

The area obviously encompassed a diverse range of habitats and resources available to Kurna people, lying within an ecotone between alluvial and estuarine environments.

Today, the area represents a largely built, urbanised landscape, with a range of university buildings, roads and infrastructure surrounded by cultivated lawns and landscaped areas.

4. INDIGENOUS CULTURAL BACKGROUND

The Northern Adelaide Plains formed part of the territorial lands of the *Kurna* nation which, according to Norman Tindale, former ethnologist with the South Australian Museum, extended from Cape Jervis in the south to Crystal Brook in the north, with the western scarp of the Mount Lofty Ranges approximating their eastern boundary (Gill 1909, Tindale 1974). The extent of this territory has, in recent years, been formalised through a Native Title Claim lodged with the Australian Native Title Tribunal (Kurna Peoples Native Title claim [SC00/1]).

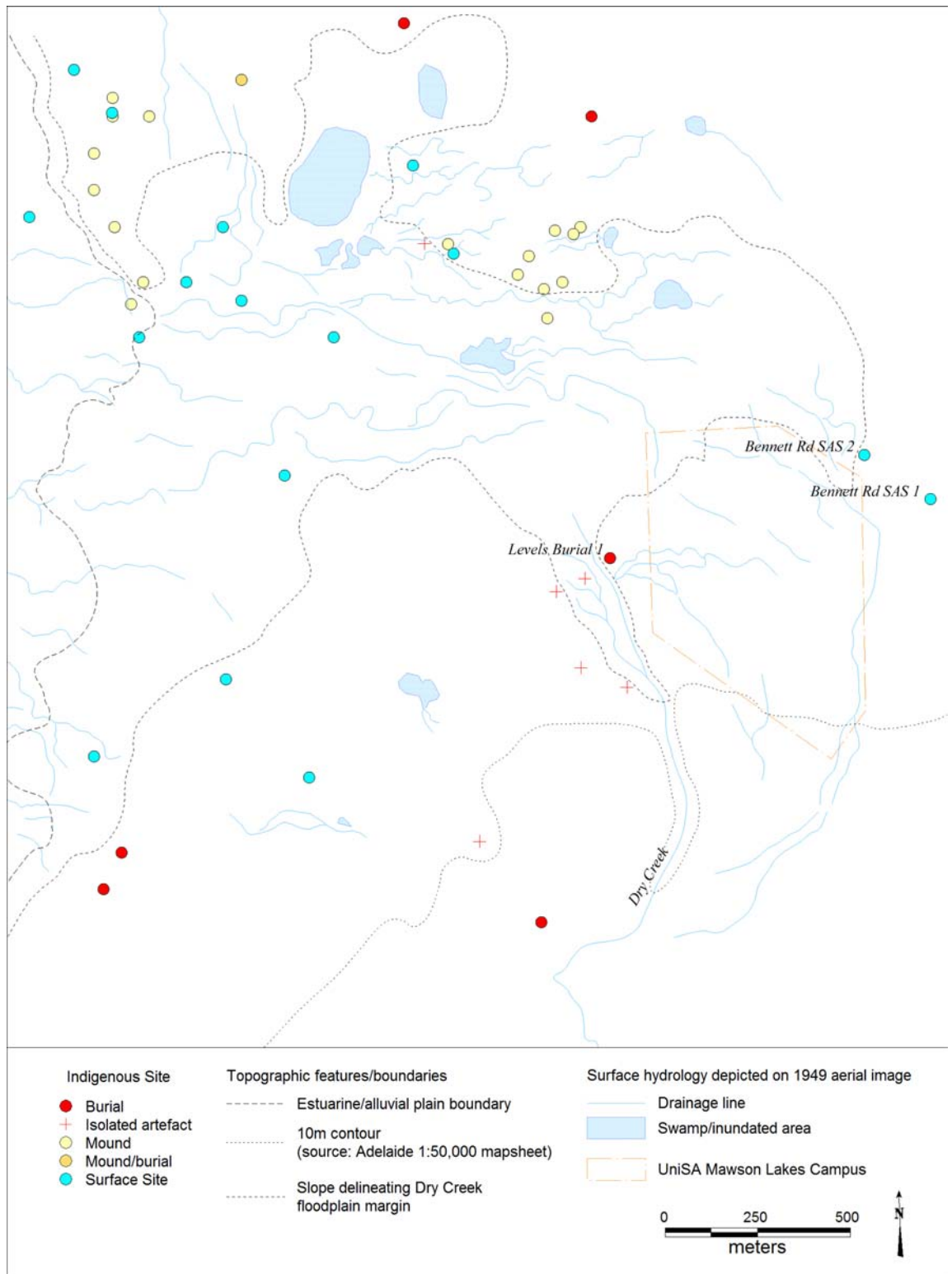


Figure 4: Locations of previously recorded Indigenous sites together with key pre-contact landscape features.

Tindale identified a number of clans or hordes within the Kaurna, including the *Tandanya* clan, which occupied the Adelaide area and the country stretching north to Gawler (Tindale 1974:213). The *Tandanya* itself comprised a number of smaller local groups of which the *Wirra* is thought to have ranged over all the country between Angaston, Lyndoch, Port Adelaide, Yatala and Tea Tree Gully (Tindale and Sheard 1926). Matthew Moorhouse, Protector of Aborigines, refers to the 'Wirra tribe' in his Quarterly Report dated 14/1/1840 as the northern neighbours of the 'Adelaide tribe', whose range extended up to 10 miles north of Adelaide, while the Wirra group inhabited the borders of the Para River. However, Harvey, an early European settler in the area (he owned land between North Adelaide and Enfield and had grazing rights for the land between Gepps Cross and Smithfield), believed the 'Wiera Group' occupied the land now known as The Levels (Harvey 1990:33).

The territory of the Kaurna included estuarine wetlands, beach fronts, plains and ranges, all of which provided a variety of environments and utilisable resources. With the onset of autumn, the people are thought to have moved towards the foothills to make more substantial winter shelters. This area would have supplied more firewood, was close to inland forests where mammals were hunted, but was still in close proximity to aquatic food sources such as bulrush roots and freshwater crayfish from the numerous swamps and creeks in the lower Mount Lofty Ranges and Adelaide Plains (Clarke 1991:58). As Clarke (1991:58) points out however, this 'quasi-sedentary' lifestyle would not have restricted the utilisation of different ecological zones, due to the relatively narrow Adelaide Plains and their close proximity to the Ranges. Indeed, foods such as red gum seed, leaf lerp, acacia gum and plant nectar, which were all foods obtained inland from the coast, were mostly available in the warmer months when most of the population was thought to have been situated along the coast (Clarke 1991:58).

A variety of implements were used by the Kaurna, including two main types of spear. Both were sometimes barbed with stone flakes: one was from 2-4m in length and was thought to have been used as a fishing spear; the other was smaller, around 2m in length, with a notched end, allowing it to be thrown with the aid of a spear-thrower. This smaller spear is thought to have been used in the hunting of larger game (Ross 1984:5).

Other tools included wooden clubs, shields, digging sticks, sharpened sticks for climbing trees, wooden shovels, baskets and mats made from rushes, bark dishes, stone hatchets, cutting tools and nets made from fibre (Cawthorne 1926, Angas 1847, Ellis 1976, Ross 1984). Skin cloaks, sewn with bark fibre or animal sinews and bone needles, were worn by both men and women (Thomas 1925). The skins of possums, rabbit-eared bandicoot, wallaby and kangaroo were all used for cloak manufacture, however, the skins of smaller animals, particularly possums, which were more pliable than the skins from larger animals, are believed to have been preferred (Ellis 1976:117).

The Kaurna are thought to have suffered a dramatic decline following European settlement. As Lucas (1991:13) states:

There is considerable evidence to suggest that the Kaurna suffered a dramatic population decline both immediately before and immediately after white settlement. Sturt (1833), Angas (1847), Stirling (1911) and other writers confirm the occurrence of a smallpox epidemic which traveled down the Murrumbidgee and Murray River systems in the late 1820s and which Stirling traced to contaminated materials arriving on a ship in the colony of Sydney.

Indeed, missionaries Teichelmann and Schurmann, who lived with the Kaurna at the Native Location in Adelaide, recorded a Kaurna word for the disease, *Nguya*, meaning pustule (Teichelmann and Schurmann 1840:34). They told Teichelmann and Schurmann that the disease had come from the east and had reduced their numbers considerably. Their only defence against it was a song, the *nguya palti*.

Other causes of mortality amongst the Kaurna included dysentery and venereal infections and, between 1843 and 1845, there were twice as many deaths as births amongst the Adelaide tribe (Cleland and Tindale 1936:24).

In addition to the effects of disease on Kaurna populations, with the Adelaide region the focus of early colonial settlement, the Kaurna were among the first Aboriginal groups in South Australia to suffer the impacts of European colonisation and widespread alienation

from their traditional lands and resources. Wyatt, as Interim Protector of Aborigines in the 1830s, sought to have some of the newly created country sections allocated to Aboriginal people, to allow them to undertake pastoral and agricultural activities similar to that done by the Europeans. If the reserves were not used, they could be leased, and a portion of the rent used by the government for the 'support of the natives' (Wyatt, Report of the Protector of Aborigines, 30 June 1838, GRG24/1/1838/197A3). In the whole of Adelaide, 52 sections comprising approximately 8,000 acres were set aside between 1840 and 1859. By 1864, 48 of these had been sold or leased: the Kaurna simply rejected the system and ignored many of them (Harris 1999:33).

The disruption to subsistence practices saw the Kaurna rely more and more heavily on the European settlers for rations. Ration depots were established at many locations throughout the settled districts in the late 1840s and Kaurna people from the Adelaide area were 'encouraged' to relocate to the depots established at Clarendon, Willunga, McLaren Vale, and Wellington. Some of the depots continued to operate almost continually for many decades, while others operated intermittently as seasonal conditions or population fluctuations warranted. The permanent depots were usually operated through police stations (the Gepps Cross police station is known to have been a ration depot), but the more temporary depots were operated by other government officials e.g. postmasters or judges, or in some cases by "reputable" members of the public. At these depots, supplies of flour, tea and sugar were distributed to women, children, the sick and destitute; able-bodied men were expected to support themselves and their families through employment on the stations and farms.

Brock and Kartinyeri (1989) suggest that from the ration depots, people gradually made their way to the missions at Point McLeay (Raukkan) (founded in 1859) and Point Pearce (founded in 1868). Despite this, semi-permanent fringe-camps persisted at Pinkie Flat, on the Torrens near the Morphett Street Bridge, The Patawalonga at Glenelg and at Port Adelaide. Fringe camps existed at these and other places around the outskirts of Adelaide until at least the 1920s and 1930s, although they were frequently closed down by the police and their residents dispersed or forcibly returned to the missions.

5. POST-CONTACT LAND USE

The study area is located on Section 898, Hundred of Yatala. The majority of the region was originally settled by Charles Brown Fisher and his family in the mid 1840s (records held at the Land Titles Office, Adelaide, Department of Environment and Planning 1991:70). Fisher was associated with South Australia's early pastoral industry and the property became one of the state's leading merino sheep studs producing sheep and wool. During this period, the paddocks of The Levels were consistently used by the Adelaide Hunt Club (John Lewis 1980). The property passed to E.W. Pitts in the 1860s and 1870s and he was instrumental in extending the fame of 'The Levels'. The estate, comprising nearly 3,000 acres, was then sold to H.W. Morphett at auction in December 1889 before it passed to the pastoral company Elder Smith Goldsbrough Mort in 1909. From this time, the property was used to agist sheep and cattle in association with the nearby Gepps Cross abattoirs, built in 1913. Other landholders in the area included S. Ferry and E. Short, both of who were farmers.

Of particular historical interest, is the small European settlement known as *Rathmines* which existed in what is now the golf course section of UniSA (Harris 2003a:6). A newspaper article (undated) states that:

His parents came ... to a little settlement called Rathmines long since vanished at the southern end of what is known as the Parafield Aerodrome [in operation since 1927]. [This settlement was] opposite the Lass O'Gowrie Inn (undated newspaper article on the death of Mr C.J. Brown, LH SAL 1 BI00010 cited in Harris 2003a:6).

Other references are as follows:

[Most settlers who went beyond Adelaide went to the hills where water could easily be found, however some ventured onto the Plain. Some of these were Irish and of these some] ... stayed around Montague Village ... others went about two miles north, now the southern part of the Parafield Aerodrome. At one time a

part of this area was known as Rathmines after a southern suburb of Dublin ... Round this locality ... the old Lass O'Gowrie Inn was build and here also ... a private school. It was here the rushes grew, readily available as thatch, and water was close to the surface [so] that the early settlers built their huts of pine and daub near this spot along what became known later as the Cross Keys Road (Catholic Church Notes LH SAL 1 RE00025 cited in Harris 2003a:6-7).

While Harris (2003a:7) states that no dates have been obtained for the period Rathmines existed, the Lass O'Gowrie Inn is known to have existed from 1849-1855 (Hoad 1986:337). It is likely that it coincided with the opening of the area for settlement in 1848 (Harris 2003a:7).

6. ARCHAEOLOGICAL AND ANTHROPOLOGICAL BACKGROUND

Research for this component of the study has included a search of the Register of Sites and Objects, maintained by DAARE, previously completed archaeological and anthropological reports for the area, records of collections held at the South Australian Museum (SAM), and a search of the Register of the National Estate. In summary, there are no previously recorded sites on the DAARE Register of Sites and Objects, nor are there any sites listed on the Register of the National Estate within the current study area. A large number of sites are, however, recorded in the immediate area.

A considerable amount of archaeological and anthropological research has been undertaken in the general study region in recent years. This body of work suggests that the Dry Creek outwash plain may have acted as a major residential centre for Kaurna people prior to European settlement. Underlying this assertion, is the significant number and range of occupation sites that have been recorded, with most sites being located around the eastern periphery of the plain in a narrow arc fringing the lower lying (i.e. more flood prone) parts (see Figures 2 and 4). Much of this material was recorded by Wood (1995) during a study of the then proposed Mawson Lakes development.

Previously documented and recorded sites include earthen mound sites, campsites/stone artefact scatters and burials. Following are details of these site types and their locations in relation to the present study area (see some of their locations on Figures 2 and 4).

Earthen mound sites

Earthen mounds occur typically as low accumulations of sediment saturated with ash and charcoal, containing masses of heat retainer (baked clay fragments, calcrete nodules, river cobbles) and typically low numbers of artefacts and small amounts of faunal remains. Most measure around 20-30m in diameter and less than a metre in height. Larger mounds, up to 50m in diameter, have also been recorded, though are far less common. These larger mounds invariably contain burials, and in comparison with the smaller type, also contain significant occupational remains, including stone artefacts and diverse faunal assemblages.

Local interpretations have invariably viewed mounds as 'tribal ovens' with the mound simply forming through the construction and subsequent collapse of huts built around re-used fireplaces at favoured camping locations. A 1908 newspaper article makes mention of:

... small hillocks on the slopes near the creek [Little Para River], 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 [sic] ovens have been unearthed, and the soil, which was little else but decomposed vegetable matter and ashes, has been spread over many of the gardens as manure
(*Advertiser* 5/11/1908).

The relatively limited distribution of mounds within the Kaurna territories (they are most commonly found in a narrow arc of coastal plain fringing the eastern margins of the Port River estuary and outwash plains associated with the major watercourses) would suggest, however, that they represent a mode of habitation, or at least derive from some cultural activity, specific to this area. One of the most compelling theories developed for interstate examples, and readily applicable to the local context, is that the mounds represent engineered structures, developed through the repeated habitation of specific

locations in order to create artificially raised areas. Such structures may have facilitated access to habitats that would have otherwise been periodically inaccessible through flooding or the widespread occurrence of poorly drained soils (see for example Peterson 1973, Coutts *et al.* 1979:86, Lourandos 1983, Williams 1987:317-318, 1988:8, 95, 215). The Dry Creek area certainly fits this scenario with a well documented history of flooding.

Another theory worth considering is that mounds result from the large scale processing of aquatic vegetable stuffs, such as *Typha* spp. Martin (1996) cites the intensive processing of plant products as a probable mechanism in the development of mounds in Hay Plain region. *Typha* was a staple food in the area and while the shoots could be eaten raw, the roots required extensive steaming in ovens before they were edible. It was also used extensively for nets, baskets and woven traps, items that were used in the collection of the very same foodstuffs typically located within the Hay Plain mounds (including fish, yabbies, water birds) (Martin 1996). Similarly, vegetable fibre was used extensively by the Kaurna and the processing of plant materials would have been an integral component of the subsistence strategies employed by them. Stephens (1890:491) describes flax, which proliferated in the swamps around Port Adelaide, as being important in the manufacture of nets. The relative paucity of faunal and lithic materials within the majority of local mounds would be consistent with them forming through the coalescing of ovens built primarily for the processing of vegetable matter.

A common association between mounds and freshwater springs also seems evident. Indeed, a freshwater spring is known to have existed on Section 898, the current study area (Ralph Gransdon, pers. comm.). This is also testified to in an article in the St. John's Church Parish Magazine (April 1960):

At Rathmines, 2 miles south of Salisbury, where the Lass O'Gowrie Hotel stood was a spring which had been used by natives (LH SAL 1 RE00016 cited in Harris 2003a:7).

The preservation of mounds on the Adelaide Plains is likely to have been impacted through the activities of market gardeners and others who, according to Norman Tindale,

actively sought out the rich organic mound sediment for use as fertilizer, perhaps even on a commercial basis (Tindale Notebook II, 21/2/1957).

Campsites/stone artefact scatters and isolated artefacts

Numerous campsites/stone artefact scatters and isolated artefacts have been recorded in the general region (Edmonds 1990, Wood 1991, 1992a, 1992b, 1994a, 1994b, 1995, 1998a, 1998b, Nicholson 1996, also see Walshe 1998). As the sites were recorded during surveys for developments (i.e. South Road/Salisbury Highway Connector and its associated wetlands, ICI Penrice 'K Pond'), only a small number of these sites and isolated artefacts remain, the rest either having been collected prior to destruction, or destroyed by construction associated with the various developments.

A total of 16 stone artefact scatters and six isolated artefacts were recorded during the survey for the Mawson Lakes urban development (Wood 1995). Most of the artefacts comprising these sites were subsequently collected by Kaurna community representatives. The majority of the sites were located on slightly elevated land adjacent to small ephemeral creeklines and swamps. These drainage lines are likely to have been tidal prior to the construction of extensive levees and flap gates which now act to exclude tidal waters. The sites contained artefacts in relatively low densities, manufactured predominantly from quartz, although silcrete, quartzite and flint artefacts were also present, as were burnt limestone cobbles (hearthstones) and haematite (ochre).

Wood (1999a) undertook a study of the proposed extension of Bennett Road, from Main North Road to Salisbury Highway (immediately north of the present study area). A total of two stone artefact scatters (see Figure 2 for their locations) and six isolated artefacts were recorded during the survey, all immediately north of Bennett Road. It was also highlighted that further cultural material may be present but was obscured at the time of the survey by vegetative cover.

A further survey was carried out in the area by Wood (2001), when the proposed road alignment was changed. A section of land south of Bennett Road, in the Mawson Lakes Campus, was surveyed at this time and no sites were found. Although ground surface visibility was good at the time of the survey, it was pointed out that the area had been

extensively disturbed in the past, with some land being under bitumen and used as a car park.

Wood (1999b) also undertook a study for the Parafield Airport Master Plan. In addition to the two stone artefacts recorded previously (Wood 1999a), a number of amorphous quartz pieces were found in the vicinity of Kings Road.

In addition to the above, some artefacts from the general area are now housed in the South Australian Museum. These include three hammerstones which were found near an area that was known as the 'Stockade' (now known as Yatala). Whilst the location is general only, the record states that the artefacts were found between the Stockade and the abattoirs, adjacent to Dry Creek.

In addition to campsites and stone artefact scatters, the remains of a wooden boomerang were discovered adjacent to the junction of Port Wakefield Road and the Dry Creek drain during bridge construction in the early 1990s. Earthmoving equipment uncovered the boomerang and a small number of stone artefacts from a depth of approximately 1.4m (it is unclear as to how this depth relates to the original ground surface, i.e. the material may have been buried under road fill).

Burials

There are numerous Aboriginal skeletal remains held in the South Australian Museum which have been uncovered over the years in areas surrounding the study area, e.g. Dry Creek, The Levels, Two Wells, Torrens Island, North Para Road, Salisbury, Buckland Park, Parafield Gardens, Pooraka, the Little Para River, etc.

In 1938 there was reference to a burial at Gepps Cross, although the location is general (*Advertiser* 19/8/1938, p. 25). The burial, which was of an individual aged over 10 years of age, was found in the 'Gepps Cross paddocks' and mention is made that the area may have been a burial ground although no other burials were uncovered at the time. The skeletal remains are currently in the South Australian Museum.

There was also a reference to burials in the Gepps Cross area much earlier, in 1868. Two human skulls were found 'near Gepps Cross' (*Adelaide Observer* 1/8/1868). The article

mentioned that the area was a well-known fighting ground and other skeletal remains and ‘native implements’ had been previously found there.

In addition, there are two burials recorded at The Levels, about 1km to the south of the present study area, and one near Parafield Airport, less than 1km from the present study area.

Figure 2 shows the closest previously recorded burial site to the present study area (DAARE Site No. 6628-3009 The Levels Burial 1). Harris (2003a:14) discusses this burial in detail. The skeletal remains were found on the surface in the bed of the Dry Creek drain, which, in this section, still approximated the course of the original creek. The remains were reburied approximately 100m northwest from Area A as depicted on Figure 3 (grid reference 281850E 6145300N AGD66 – see Figure 2), between University Parade and Light Common (see Figure 3).

Other burials in the area on the DAARE Register of Sites and Objects include (see Figure 2):

- DAARE Site No. 6628-2802 The Levels Burial 2, located approximately 1.5km southwest of Area A. The remains of two complete adult males were found in a creek gully and have been reburied in the Greenfields wetlands.
- DAARE Site No. 6628-211 Parafield Gardens Burial. This site comprises two separate burial grounds, one containing two individuals and a second containing six. It is likely that these burials were in a mound site at one time as the site card describes them being ‘in approximately 30cm black loam with clay substrate. Burnt river pebbles and ash’.
- DAARE Site No. 6628-6769. This burial was found within the Mawson Lakes housing development and was reburied in a nearby reserve.

A summary of Harris (2003a, 2003b)

The most recent study conducted within the UniSA Mawson Lakes Campus itself was undertaken by Harris (2003a, 2003b). Two areas earmarked for building construction were investigated during this study; Survey Area 1 was for a planned extension to the current library while Survey Area 2 related to the Building T development (this latter area includes the current Area A surveyed as part of this project and shown on Figure 3). Both locations, as is the case throughout the Campus area generally, had sustained considerable modification with artificial fill, landscaping and various infrastructure having impacted greatly on the integrity of land surfaces. As such, the ground survey proved largely inconclusive.

Based on the geological profile provided by way of a number of geotechnical core samples, Harris (2003a:18) argued that if cultural materials were to be encountered, they would most likely be found within the upper most units including the “topsoil, the recent alluvial sand and possibly the very top of the older alluvial clay” (Harris 2003a:18). These units encompass the top 0.8m of the profile under which the profile extends into the Pleistocene Pooraka Formation, Keswick Sand and Hindmarsh Clays, all likely to be sterile. Cultural materials incorporated into recent channels incised into these older units, or excavated into the them (e.g. graves) may occur at depth greater than 0.8m.

Given this, and due to the fact that a number of burials had been found in areas immediately surrounding the Mawson Lakes Campus, a recommendation was made to assess subsurface deposits in the areas where footings would be constructed, through testing by means of mechanical boring (Harris 2003a). As Harris (2003b:2) states:

There was no desire to prevent building going ahead in this area, but concern was expressed by the Kaurna representatives that should burials be found that they be left along under the new building and that any footings etc. be redesigned to allow them to stay undisturbed. Reburial as previously practiced in the Adelaide area is perceived as having been poorly handled and is no longer considered a suitable option.

An extensive program of archaeological test pits (mechanical auger holes) were excavated throughout both proposed development areas (Harris 2003b). Results in Survey Area 1 suggested that the original topsoil and alluvial sand had been largely removed and replaced by a cover of artificial fill to a depth of 0.6m. Cultural materials were unlikely to be found below this depth. Results for Survey Area 2 indicated the presence of a former, shallow, sand filled drainage channel (approximately 0.7m deep) incised into a more 'typical' profile of artificial fill placed over a previously cut surface. Harris (2003a:21) argued that the presence of this channel would heighten the archaeological sensitivity of the immediate area. This channel appears to coincide roughly with the northern distributary branch of Dry Creek depicted on the 1919 Army Ordinance map.

In summary, Harris (2003a:22) reiterated that cultural materials, if present, would most likely be encountered within the upper half a metre of profile in loose alluvial sand and topsoil. Over much of her study area, these units had been removed prior to the placement of artificial fill. No burials were encountered nor other sites identified in any of the excavated holes. While three stone artefacts were identified, all had been brought into the area as fill: two were found on the surface and the third at a depth of 200mm (Harris 2003b:6).

Anthropological sites

Lucas (1991) and Warrell (1995) have previously undertaken anthropological studies for the proposed MFP developments (Warrell for the Mawson Lakes development). No localised mythologies were recorded during these studies but it was stressed by both researchers that Kurna people maintain strong connections to their country. As Lucas (1991:31) states:

The original owners of the land which includes the MFP-Australia site were effectively excluded from any productive use of, or any ritual or religious association with, the area within three decades of white settlement. The specificity of any such association was therefore broken around the middle of the nineteenth century. There no longer appears to be any site-specific knowledge of the area. Contemporary Kurna

descendants do, however, know unequivocally that this *is* an Aboriginal landscape, based on their own historical knowledge, the testimony of Ivaritji and the physical evidence of archaeology. ... there is amongst contemporary Kurna descendants a far more generalised concern for the land which once belonged to their forbears and a desire to have that 'belonging' recognised. ... The landscape itself, and particularly any area which reveals an Aboriginal usage ... or contains archaeological remains, has the capacity to recall a pre-existing Aboriginal presence. Such associations can be appropriated to the task of reconstructing an Aboriginal identity which clearly asserts a relationship to land. The evidence of use is in itself sufficient evidence that "Aboriginal people were always here".

Summary

The archaeological sensitivity of the Mawson Lakes - The Levels - Greenfields areas is well established and indeed, evidence suggests that the region, which encompasses the Dry Creek outwash plain, operated as a major residential centre for Kurna people. The resource potential of the area is obvious with access to a diverse suite of terrestrial, alluvial and estuarine habitats. Materials excavated from the large Greenfields mound, an extensive burial mound located 1.5km northwest of the present study area, describe a broad-based economy exploiting both terrestrial and marine habitats. The faunal assemblage within the mound included a variety of fish (snapper, mulloway, bream), bird, shellfish (freshwater mussel, abalone, cockle, etc.), emu eggshell, crabs, reptiles, kangaroos, wallabies, bettongs, bandicoots and a number of other small mammals (Draper 1992).

A similarly diverse account of Kurna subsistence was recorded in *The South Australian* in 1842 (see also Angas 1847, Stephens 1890:491, Thomas 1925, Cawthorne 1926, Ellis 1976, Ross 1984, Gara 1988):

These people are truly omnivorous, but the nature of their food depends much upon the season of the year. In spring vegetables and grubs are their chief subsistence, either in a raw or cooked state; in the

commencement of summer the eggs and young of birds, kangaroos, emus, fish, lizards, iguanas etc. During the hotter months opossums and the gum of the wattle (*Acacia frangens*); in the autumn the *Tarnma* or honeysuckle blossom soaked in water... and the *Mantiri*, an indigenous berry. In the winter a variety of roots, and opossums and other animals ... (*The South Australian* 11/1/1842).

The diverse faunal resources are likely to have been matched by the range of plant stuffs which proliferated throughout the ephemeral wetlands, open plains and creeklines.

Figure 4 provides the locations of archaeological sites previously recorded within the general study region (see also Figure 2). Also shown are landscape features that have been noted previously by the consultant during various field studies and supplemented through interpretation of aerial photography predating the establishment of the campus (EGI Aerial Survey 6 - Photo 35, 10/1/1949) and from current topographic mapping (Adelaide 1:50,000 map sheet).

Of particular note is the occurrence of a low, though prominent, slope, which, in part, bounds the outwash plain of Dry Creek and is likely to have contained flood waters to a large degree. Despite significant modification to local landscapes, this feature can still be traced for hundreds of metres, and, indeed, the main Adelaide-Gawler rail line parallels it for some distance, having been positioned above the low-lying, flood-prone areas to the north of the slope.

A number of patterns are evident in the distribution of the sites in relation to this boundary/slope. These include the following:

- The feature represents a highly sensitive landscape setting with large numbers of sites recorded in proximity to it.
- Local mound sites (n=18) are closely aligned along the slope with all occurring within 180m of it. In addition, over 90% of local mounds are located above the slope.
- All burials occur above the slope.

- The majority of sites occurring below the slope comprise stone artefact scatters, though this site type also occurs above the slope.
- Site density declines markedly with distance above the slope. This point is illustrated in Figure 5, which shows the numbers and cumulative percentages of sites (n=31) recorded at various distances above the slope. A clear decline in site numbers with distance is evident with nearly 90% of the sites occurring within 200m of the slope.

This landscape feature would have provided an obvious foci for intensive habitation, presenting an elevated situation adjacent to the resource rich habitats of the Dry Creek outwash plain, areas that would have been otherwise prone to periodic flooding.

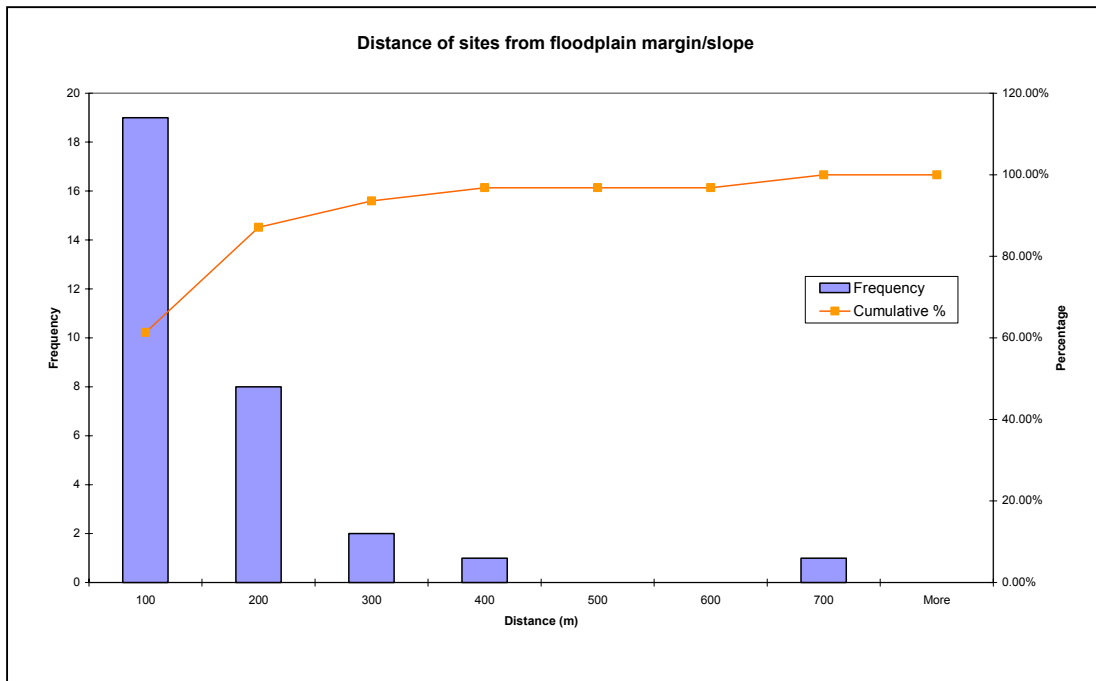


Figure 5: Histogram showing the decline in site numbers with distance from the Dry Creek outwash plain margin.

7. SURVEY METHODOLOGY, RESULTS AND DISCUSSION

Part A (see photo on front cover)

Pedestrian survey was undertaken over this entire area. The area is highly modified with the margins having been landscaped with raised mounds and tree plantings and the remaining area covered with a veneer of introduced gravels and other sediments. Buried infrastructure, including drains, have also been previously constructed. No cultural materials were recorded during the survey.

Part B (see Plate 1)

A reconnoiter of the remaining portions of the campus was undertaken, much of which is under existing buildings, roads, landscaping and other built infrastructure. The remaining portions of vacant land, ostensibly along the eastern edge of the study area, include an area of the golf course (south eastern corner of Part B) and flat lying areas fringing a large artificially excavated wetland. Pedestrian survey of these areas was undertaken though ground surfaces were invariably found to contain amounts of introduced gravels and other fill, or had obviously been leveled or otherwise modified to some degree. Vegetative cover varied from bare ground to dense grass. Detailed inspection of the open drain paralleling Bennet Road was also undertaken (it should be noted that this feature had been inspected previously by Wood 1999a and Wood 2001). No sites or cultural materials were recorded in any of these areas.

While no archaeological sites or materials were identified at the Mawson Lakes campus, this result most certainly reflects the levels of disturbance and the fact that few of the original land surfaces remain intact. The area has clearly sustained considerable modification following European occupation and the preservation of cultural sites and materials is likely to be highly compromised. The results of Harris (2003a, 2003b), for instance, suggest that within the Mawson Lakes Campus itself, original land surfaces have been excavated, leveled and filled to varying degrees.

Based on previous studies in the immediate areas, however, it could reasonably be argued that heritage sites existed in and around the campus area though have since been destroyed or built over. Indeed, sites continue to be found in the general area with a burial, for instance, unearthed during road construction within the Mawson Lakes housing

development in recent times. Given the proven sensitivity of this area, there remains the potential for further such sites to occur during ‘ground-breaking’ construction work.

No specific localised mythologies were provided during the course of the study. It should be noted, however, that throughout the site visit, Kaurna representatives repeatedly stated their belief that, despite radical modification to the landscape, the Mawson Lakes area retains a significant level of cultural importance. This is underscored by the wealth of archaeological evidence with the occurrence of large numbers of burials being particularly significant.



Plate 1: Area in the north of the campus, looking south along the artificial wetland.

8. RECOMMENDATIONS

As discussed above, clear patterns of site distribution are evident in the region. In particular, there exists an elevated sensitivity in areas fringing the Dry Creek outwash plain, defined in part by a prominent break-in-slope (it should be noted that radical landscape modification has largely obscured this feature together with much of the original surface drainage). A zone extending 200m above this feature could be regarded as having heightened sensitivity with site occurrence declining markedly beyond this. This zone, together with the location of the slope, are depicted in Figure 6. The illustration should be seen as indicative only with features having been derived largely through interpretation of aerial photography, and, as such, some flexibility should be used when viewing it. As can be seen, the zone extends in an arc trending roughly through the centre of the study area, further highlighting the sensitivity of this particular location.

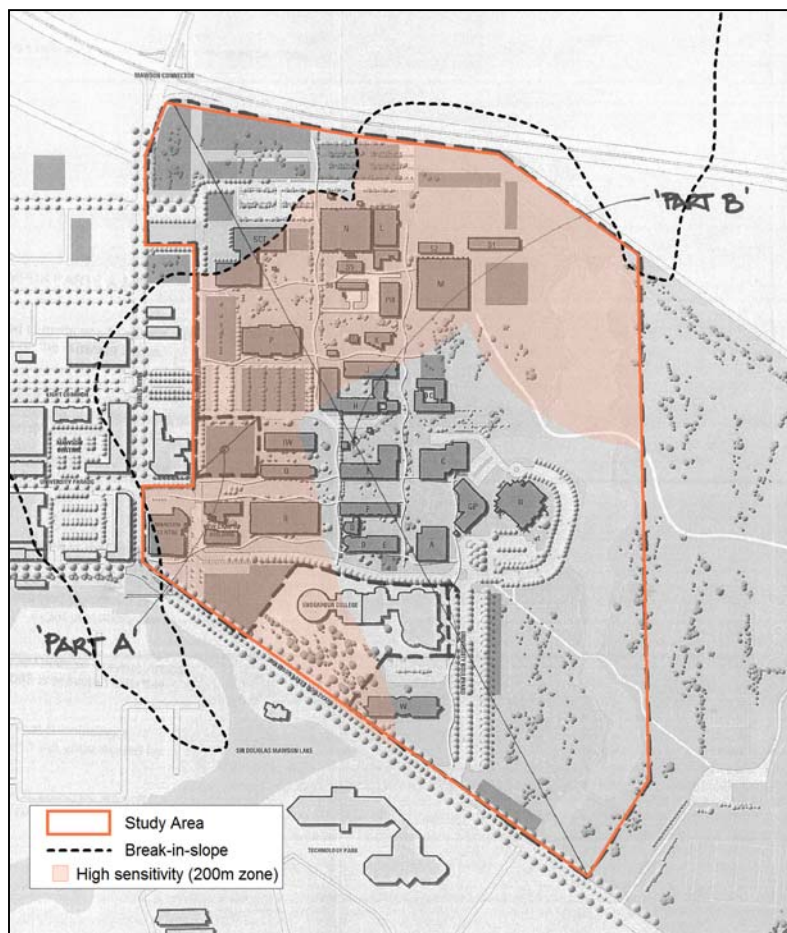


Figure 6: The study area showing the area regarded as having heightened archaeological sensitivity.

The following recommendations are made in relation to the cultural heritage study carried out for Parts A and B of the UniSA Mawson Lakes Campus (see Figure 3 and 6) and with consideration of the predicted archaeological sensitivity of the area, as discussed above.

Part A

Part A lies within the area deemed to have high predictive archaeological sensitivity (see Figure 6). Despite the fact that no cultural material was found on the surface in this area, there exists the potential for subsurface cultural material to exist. As such, it is recommended that a similar course of action be undertaken as that followed by Harris in 2003, i.e. detailed sub-surface testing through mechanical augering. Prior to this however, the Kaurna, along with the archaeologist, should meet with the developer and their engineer to discuss the extent and depth of all footings and any other constructions, e.g. lift-wells, which will disturb the ground surface. It should be pointed out that a permit, under Section 21 of the *Aboriginal Heritage Act 1988*, would be required prior to undertaking any test excavations.

Part B

No cultural material was found during the survey of Part B of the study area. As can be seen in Figure 6, a significant portion of Part B lies within the area of high predictive sensitivity though much of this is already under various buildings and infrastructure. The preservation of archaeological materials in these developed areas is likely to have been severely impacted upon. A similar recommendation to that presented in Part A above is advised in the advent of future construction work being undertaken in the remaining areas of high predictive sensitivity within Part B. Recommendations for the remaining areas, i.e. comprising the southeastern and northwestern portions of Part B lying beyond the zone, should take into account the lower predictive sensitivity in these areas, with a less detailed program of pre-construction test excavation considered appropriate. The specifics of any excavation would need to be determined through future discussions with the Kaurna community and archaeologist.

In addition to the above, the Kaurna community encourage efforts by the university to re-establish natural habitats throughout the campus area. In particular, the wetland feature along the eastern side of the campus offers habitat for a variety of birds including ibis,

duck and water hen together with a range of aquatic plants (reeds, rushes) that are likely to have proliferated in the ephemeral swamp and marshlands of the Dry Creek outwash plain. It was suggested that future landscaping could easily encompass some of the aspirations of the Kurna community. For instance, opportunities for Kurna to harvest materials, such as gum nuts for jewelry making, seeds for cooking, etc. should be explored and the appropriate species planted. We would encourage direct consultation between the UniSA and the Kurna to meet these aims. Contact details for the Kurna Heritage Board are as follows:

Kurna Heritage Board
c/- Tappa Iri Business Centre
PO Box 907
NOARLUNGA CENTRE SA 5168
Telephone: (08) 8326 3103
Fax: (08) 8326 3113

The proponent is again advised that all Aboriginal archaeological sites, objects and remains in South Australia are protected by provisions of the *Aboriginal Heritage Act, 1988*, which makes it an offence to collect, damage or destroy Aboriginal sites, objects or remains without the written authorisation of the Minister for State Aboriginal Affairs (see above for relevant contact details).

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