



South Brighton Masterplan Project Aboriginal Heritage Assessment

Final Report V2

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Executive Summary

Project Details

The Brighton Council is presently preparing a masterplan for the South Brighton area, in the Southern Region of Tasmania. The area covered by the South Brighton Masterplan encompasses approximately 60ha. A small portion of this area at 33 Elderslie Road (approximately 10ha) has already been the focus of an Aboriginal heritage assessment undertaken by CHMA (2020) for the site of the proposed South Brighton High School.

CHMA and Rocky Sainty (AHO) have now been engaged by the Brighton Council to undertake an Aboriginal heritage assessment for the remainder of the area covered by the Masterplan. Figures 1-3 show the location and extent of the area covered by the assessment (the study area). The information generated from the assessment will be used to inform future planning decisions for these properties. This report presents the findings of the Aboriginal heritage assessment.

Registered Aboriginal Sites in the Vicinity of the Study Area

As part of Stage 1 of the assessment process, a search was undertaken of the Aboriginal Heritage Register (AHR) to determine whether any registered Aboriginal heritage sites are located within or in the general vicinity of the South Brighton Masterplan study area.

The search shows that there are a total of 35 registered Aboriginal sites that are located within an approximate 2km radius of the study area (search results provided by Kate Moody from AHT on the 7-1-2021). Based on the information provided on the AHR, it appears that one of these registered sites is located within the bounds of the study area. This is site AH11809, which is classified as an artefact scatter. The grid reference provided on the AHR for this site places it just within the eastern boundary of the study area. There are an additional four registered sites that are situated within 100m of the eastern boundary of the study area (AH10755, AH10756, AH10806 and AH11810). The grid references provided on the AHR for these sites place them outside the study area (see Figure 8). Sites AH10806 and AH11810 are both low density artefact scatters, with sites AH10755, AH10756 being isolated artefacts.

The detailed AHR search results are presented in section 4.3 of this report.

Summary of Results

The field survey was undertaken over a period of two days (27/1/2021 and 28/1/2021) by Stuart Huys (CHMA archaeologist) and Rocky Sainty (Aboriginal Heritage Officer). The field team walked a series of 11.2km of survey transects across the study area, with each transects averaging 5m in width.

The survey assessment resulted in the recording of one Aboriginal site, this being site AH11809, which is a low density artefact scatter comprising three stone

artefacts. Table i provides the summary details for site AH11809, with Figure i showing the location of the site. The detailed site description is provided in Appendix 2.

Besides site AH11809, no other Aboriginal heritage sites, suspected features, or specific areas of elevated archaeological potential were recorded during the survey assessment of the South Brighton Masterplan study area.

The AHR search results show that there are no other registered Aboriginal sites present within the study area boundaries. There are four registered sites which are situated along the Midland Highway, just to the south-east of the east boundary of the study area (sites AH10755, AH10756, AH10806 and AH11810). Based on the grid reference locations provided on the AHR, all four sites are confirmed as being located outside the study area. Site AH11810 is the closest of these sites and is situated immediately to the south of the southern boundary of the study area.

Surface visibility across the study area averaged 30%, which is in the low-medium range. Given these visibility constraints, it can't be stated with any certainty that there are no additional undetected Aboriginal sites within the study area. However, the effective coverage of 16 800 m² achieved during the survey was certainly sufficient to generate a basic impression of the general level of site densities that can be expected to occur in the study area. The overall impression generated through the observations made during the field survey program is the site and artefact densities throughout the study area are likely to be low to very low. If undetected Aboriginal sites are present, they are most likely to be isolated artefacts or low density artefact scatters. These sites would be representative of sporadic levels of Aboriginal movement and occupation through this landscape. There are no indications that there are any locales within the study area where elevated concentrations of sites or cultural deposits may be present, representing more intensive levels of Aboriginal occupation, such as interim camp locations.

The detailed survey results and discussions are presented in section 7 of this report.

Table i: Summary details for the Aboriginal site AH11809

AH No.	Grid Reference (GDA 94)	Site Type	Site Description
AH11809	E520583 N5271582 E520567 N5271572 E520564 N5271584 E520573 N5271591	Artefact scatter	Site is located around 70m to the north of the Midland Highway, within a cleared farm paddock, on the basal east side slopes of a hill, around 30m south-west of an un-named ephemeral drainage gully. The three artefacts were identified across an area measuring approximately 20m x 15m,

Significance Assessment

Site AH11809 has been assessed and allocated a rating of significance. A five tiered rating system has been adopted for the significance assessment; low, low-medium, medium, medium-high and high. Table ii provides the summary details for

significance ratings for site AH11809. A more detailed explanation for the assessment ratings are presented in section 8. of this report. Section 9 of the report presents a statement of social significance provided by Rocky Sainty for site AH11809, and the study area as a whole.

Table ii: Summary significance ratings for Aboriginal site AH11809

AH Number	Site Type	Scientific Significance	Aesthetic Significance	Historic Significance	Social Significance
AH11809	Artefact scatter	Low-Medium	Low-Medium	N/A	Medium-High

Management Recommendations

Heritage management options and recommendations provided in this report are made on the basis of the following criteria.

- Consultation with Rocky Sainty (Aboriginal Heritage Officer), and Aboriginal community organisations.
- The legal and procedural requirements as specified in the *Aboriginal Heritage Act 1975* (The Act).
- The results of the investigation as documented in this report; and
- Background research into the extant archaeological and ethno-historic record for the study area and the surrounding region.

Recommendation 1 (Site AH11809)

Site type: Artefact scatter

Grid Reference: (GDA 94)

- E520583 N5271582
- E520567 N5271572
- E520564 N5271584
- E520573 N5271591

Site AH11809 is classified as an Artefact scatter, which is located within the eastern portion of the study area (see Figure 13). The grid references above denote the site boundaries.

The preferred management option is to conserve site AH11809 in-situ and to protect the site from any impacts associated with the proposed development works. To this end, the following management strategies should be implemented.

- The site area should be plotted onto the development masterplan.
- Prior to works commencing, a durable, high visibility temporary barricading should be erected around the defined boundaries of the site with a 5m buffer applied on all sides. These barricades are to be removed at the completion of any development works.
- Construction contractors should be informed of the location of the site and informed that the site is not to be impacted.

All Aboriginal relics are protected under the *Aboriginal Heritage Act 1975* (The Act) and it is illegal to destroy, damage, deface, conceal or otherwise interfere with a relic,

unless in accordance with the terms of a permit granted by the Minister. If it is not possible to conserve site AH11809 in-situ, then the Proponent will need to apply for and obtain a Permit to impact this site before development works can commence within the site boundaries.

it is recommended that a condition of the Permit should be that the artefacts associated with site AH11809 will be salvage collected and relocated to a safe location outside the development footprint, but in the same general landscape setting. The salvage program to be implemented by an archaeologist and an AHO. A brief summary report should be prepared, documenting the outcome of the salvage program. The summary report will include details regarding the relocation point for the artefacts.

Recommendation 2 (Remainder of the study area)

Besides site AH11809, no other Aboriginal heritage sites, suspected features, or specific areas of elevated archaeological potential were recorded during the survey assessment of the study area. It is advised that there are no further archaeological investigations warranted for this area, and no additional Aboriginal heritage constraints to development activity proceeding.

Recommendation 3 (Registered sites close to the study area)

The AHR search results show that there are four registered site which are situated along the Midland Highway, just to the south-east of the east boundary of the study area (sites AH10755, AH10756, AH10806 and AH11810). Based on the grid reference locations provided on the AHR, all four sites are confirmed as being located outside the study area. Site AH10806 (an artefact scatter) is situated 55m to the south of the study area. Site AH10755 (an Isolated artefact) is located 65m to the south of the study area. Site AH11810 (an artefact scatter) is located immediately to the south of the study area and site AH10756 (an Isolated artefact) is 95m to the east (see Figure 13). These sites should be plotted onto the South Brighton Masterplan and it noted that these sites are not to be impacted.

Recommendation 4 (Unanticipated Discovery Plan)

It is assessed that there is generally a low to very low potential for undetected Aboriginal heritage sites to occur within the study area boundaries. However, if, during the course of proposed development works, previously undetected archaeological sites or objects are located, the processes outlined in the Unanticipated Discovery Plan should be followed (see Appendix 4). A copy of the Unanticipated Discovery Plan should be kept on site during all ground disturbance and development work. All personnel should be made aware of the Unanticipated Discovery Plan and their obligations under the *Aboriginal Heritage Act 1975* (the Act). Under section 10(3) of the Act, a person shall, as soon as practicable after finding a relic, inform the Director or an authorised officer of the find.

Recommendation 5 (Provision of Reports)

Copies of this report should be submitted to Aboriginal Heritage Tasmania (AHT) for review and comment.

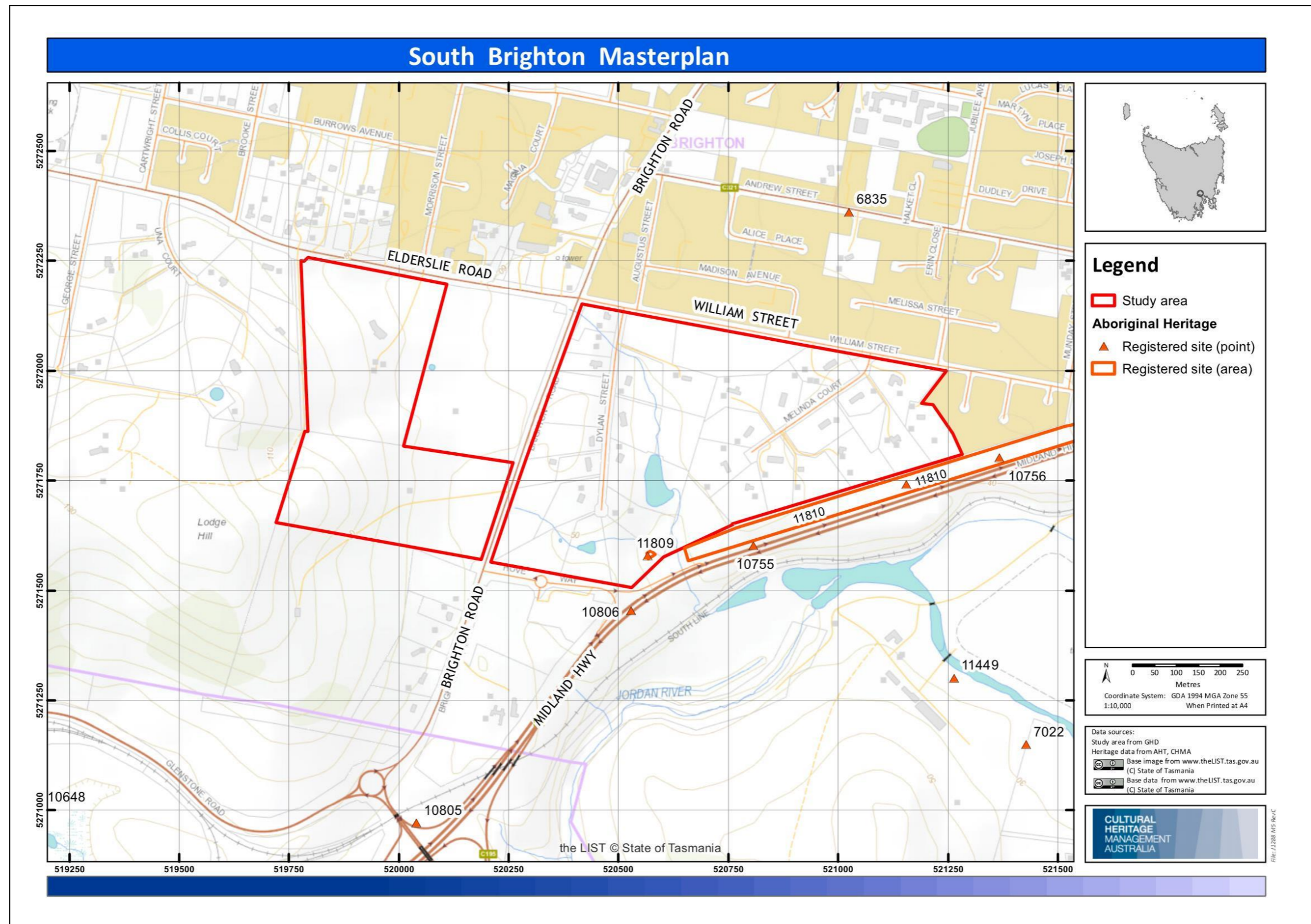


Figure i: Topographic map showing the location of site AH11809, which is located in the study area, and registered sites AH10755, AH10756, AH10806 and AH11810 which are located outside the study area

1.0 Project Outline

1.1 Project Details

The Brighton Council is presently preparing a masterplan for the South Brighton area, in the Southern Region of Tasmania. The area covered by the South Brighton Masterplan encompasses approximately 60ha. A small portion of this area at 33 Elderslie Road (approximately 10ha) has already been the focus of an Aboriginal heritage assessment undertaken by CHMA (2020) for the site of the proposed South Brighton High School.

CHMA and Rocky Sainty (AHO) have now been engaged by the Brighton Council to undertake an Aboriginal heritage assessment for the remainder of the area covered by the Masterplan. Figures 1-3 show the location and extent of the area covered by the assessment (the study area). The information generated from the assessment will be used to inform future planning decisions for these properties. This report presents the findings of the Aboriginal heritage assessment.

1.2 Aims of the Investigation

The principal aims of the current Aboriginal Heritage assessment are as follows.

- To undertake an Aboriginal cultural heritage assessment of the area covered by the South Brighton Masterplan (the study area as shown in Figures 1-3) The assessment is to be compliant with both State and Commonwealth legislative regimes, in particular the intent of the *Aboriginal Heritage Act 1975* and the associated *Aboriginal Heritage Standards and Procedures (June 2018)*.
- Search the Aboriginal Heritage Register (AHR) to identify previously registered Aboriginal heritage sites within and in the general vicinity of the study area.
- Undertake relevant archaeological, environmental and ethno-historical background research to develop and understanding of site patterning within the study area.
- To locate, document and assess any Aboriginal heritage sites located within the study area.
- To assess the archaeological and cultural sensitivity of the study area.
- To assess the scientific and Aboriginal cultural values of any identified Aboriginal cultural heritage sites located within the study area.
- Consult with (or ensure the Aboriginal community representative consults with) Aboriginal organisation(s) and/or people(s) with an interest in the study area in order to obtain their views regarding the cultural heritage of the area.
- To develop a set of management recommendations aimed at minimising the impact of future proposed developments in this area on any identified Aboriginal heritage values.
- Prepare a report which documents the findings of the Aboriginal heritage assessment and meets the standards and requirements of the current *Aboriginal Heritage Standards and Procedures* prepared by AHT, Department of Primary industries, Parks, Water and Environment.

1.3 Project Limitations

All archaeological investigations are subject to limitations that may affect the reliability of the results. The main constraint to the present investigation was restricted surface visibility due primarily to vegetation cover, and the presence of introduced fill materials, gravels and built surfaces in parts.

Surface visibility across the study area ranged between 10%-70%, with the estimated average visibility being 30%. There were a number of stock erosion scalds, vehicle tracks and stock tracks present within the study area that provided locales of improved surface visibility. The issue of surface visibility is further discussed in Section 6 of this report.

1.4 Project Methodology

A three stage project methodology was implemented for this assessment.

Stage 1 (Pre-Fieldwork Background Work)

Prior to field work being undertaken, the following tasks were completed by CHMA staff.

Consultation with Aboriginal Heritage Tasmania

AHT was contacted and informed that a field survey was to be undertaken for the South Brighton Masterplan Project. As part of this initial contact a search request of the Aboriginal Heritage Register (AHR) was submitted to AHT in order to ascertain the presence of any previously registered sites in the vicinity of the study area (search request dated 17-12-2020).

The collation of relevant documentation for the project

As part of Stage 1 the following research was carried out and background information was collated for this project.

- A review of the relevant heritage registers (AHR register) and the collation of information pertaining to any registered heritage sites located within the general vicinity of the study area.
- Maps of the study area.
- Relevant reports documenting the outcomes of previous Aboriginal heritage studies in the vicinity of the study area.
- Ethno-historic literature for the region.
- References to the land use history of the study area.
- GIS Information relating to landscape units present in the study area.
- Geotechnical information for the study area, including soil and geology data.

Consultation with Aboriginal Heritage Officer (AHO)

Rocky Sainty is the AHO for this project. As part of Stage 1 works Stuart Huys (CHMA archaeologist) was in regular contact with Rocky Sainty. The main purpose of this contact was to discuss the scope of the present investigations, to ratify the proposed methodology for the investigations and to co-ordinate the timeframes for implementing field work.

Stage 2 (Field Work)

Stage 2 entailed the field work component of the assessment. The field survey was undertaken over a period of two days (27/1/2021 and 28/1/2021) by Stuart Huys (CHMA archaeologist) and Rocky Sainty (Aboriginal Heritage Officer).

The field survey was undertaken on foot, with the field team walking a series of 11.2km of survey transects across the study area, with each transects averaging 5m in width. The survey transects were aligned so as to cover all parts of the study area. Section 6 provides further details as to the survey coverage achieved by the field assessment.

As part of the assessment, the field team attempted to relocate any registered Aboriginal sites that may be present in the immediate surrounds of the precinct (as identified through the AHR search). For any Aboriginal sites identified by the field team, the following details were recorded.

- The spatial extent of the site (polygon co-ordinates).
- The nature of Aboriginal heritage deposits and features associated with the site.
- Any intra-site variations that occur.
- The condition of the site, and any notable impacts to the site.
- Photos and site maps.
- Proposed management recommendations (as discussed between the archaeologist and AHO).

Aboriginal Heritage Register (AHR) forms for all located Aboriginal sites have been completed and submitted as part of the process.

Where Aboriginal sites were identified, the field team attempted to identify options for avoiding impacts to the identified spatial extent of these sites.

The results of the field investigation were discussed by Rocky Sainty and Stuart Huys. This included the potential cultural and archaeological sensitivity of the study area, and possible management options.

Stage 3 (Report Writing)

Stage three of the project involves the production of a Draft and Final Report that includes an analysis of the data obtained from the field survey, an assessment of archaeological sensitivity and management recommendations. The report has been prepared by Stuart Huys in consultation with Rocky Sainty. The report has been structured to comply with the standards and requirements of the current *Aboriginal Heritage Standards and Procedures* prepared by AHT, Department of Primary industries, Parks, Water and Environment. One electronic copy (PDF version) of the final draft report has been provided Aboriginal Heritage Tasmania (AHT) and the Brighton Council for review. A draft version of the report has also been provided to key Aboriginal stakeholders for review and comment. The outcomes of this consultation have been included in Appendix 3 of the final report.

In addition, CHMA has provided AHT with all site spatial data files, and mapping associated with the project (in ESRI shape file format (GDA94)).



Plate 1: Rocky Sainty, the designated AHO for the Project

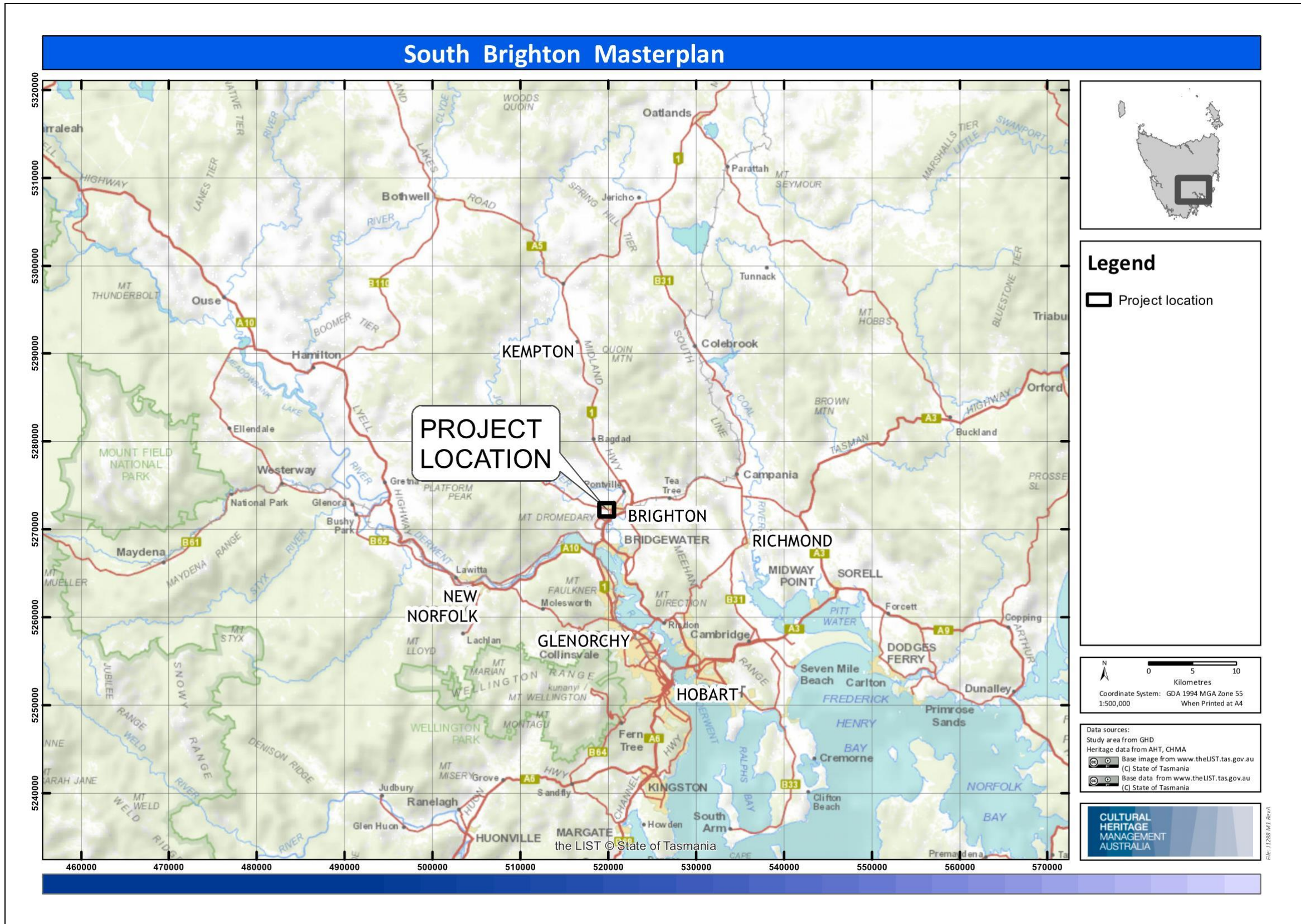


Figure 1: Topographic map showing the general location of the study area at Brighton in the Southern Region of Tasmania

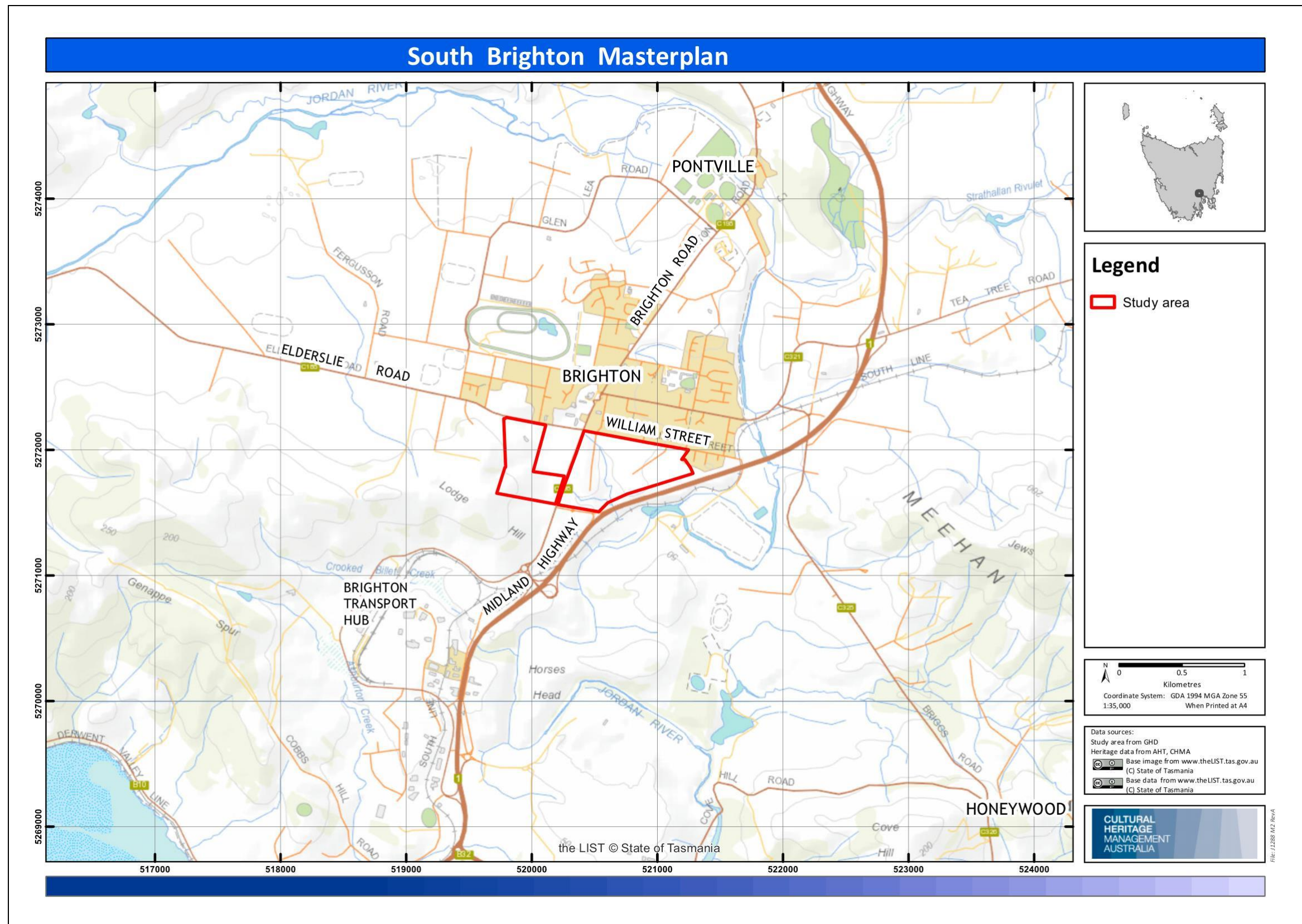


Figure 2: Topographic map showing the boundaries of the South Brighton Masterplan Project study area

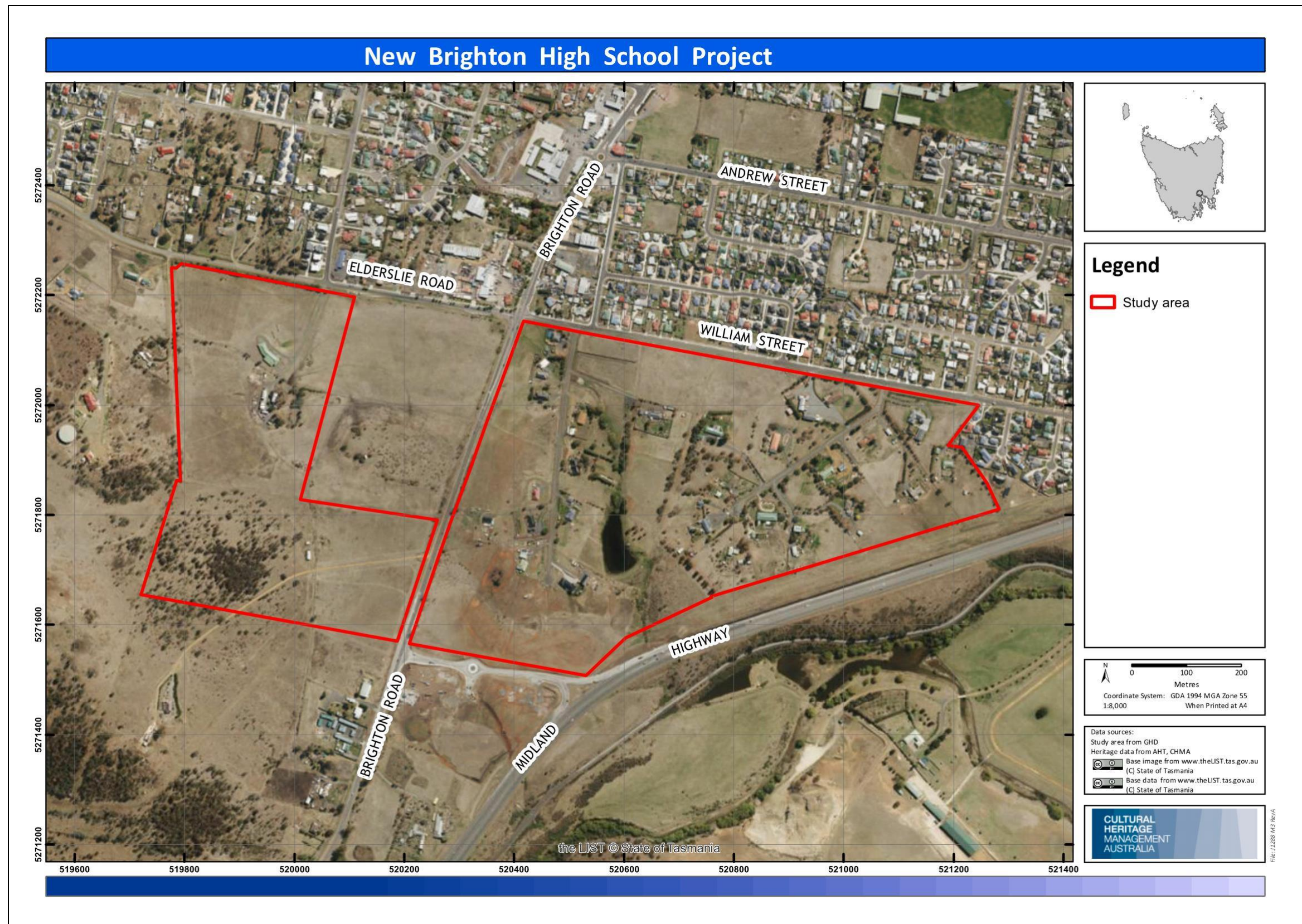


Figure 3: Aerial image showing the boundaries of the South Brighton Masterplan Project study area

2.0 Environmental Setting of the Study Area

2.1 Introduction

Prior to undertaking archaeological survey of the study area, it is necessary to characterise the landscape. This includes considering environmental factors such as topography, geology, climate, vegetation and past and current landscape use. An assessment of the environmental setting helps to develop an understanding of the nature of Aboriginal occupation and site patterning that might be expected to occur across the study area. In addition, it must be remembered that in Aboriginal society, the landscape extends beyond economic and technological behaviour to incorporate social geography and the embodiment of Ancestral Beings.

The archaeological context is generally only able to record the most basic aspects of Aboriginal behaviour as they relate to artefact manufacture and use and other subsistence related activities undertaken across the landscape such as raw material procurement and resource exploitation. The distribution of these natural resources occurs intermittently across the landscape and as such, Aboriginal occupation and associated archaeological manifestations occur intermittently across space. However, the dependence of Aboriginal populations on specific resources means that an understanding of the environmental resources of an area accordingly provides valuable information for predicting the type and nature of archaeological sites that might be expected to occur within an area.

The primary environmental factors known to affect archaeological patterning include the presence or absence of water, both permanent and ephemeral, animal and plant resources, stone artefact resources and terrain.

Additionally, the effects of post-depositional processes of both natural and human agencies must also be taken into consideration. These processes have a dramatic effect on archaeological site visibility and conservation. Geomorphological processes such as soil deposition and erosion can result in the movement of archaeological sites as well as their burial or exposure. Heavily vegetated areas can restrict or prevent the detection of sites, while areas subject to high levels of disturbance may no longer retain artefacts or stratified deposits.

The following sections provide information regarding the landscape context of the study area including topography, geology, soils and vegetation. Much of this information is derived from The LIST – the Tasmanian Government Land Information System.

2.2 Landscape Setting of the Study Area

The study area is located approximately 1km to the south of the main town centre of Brighton, in Southern Tasmania. The site encompasses approximately 50ha and is situated on the east side slopes of Lodge Hill. This prominent landscape feature is part of a broader series of hills and ridges that fringe the western margins of the Jordan River valley system. The crest of Lodge Hill, along the western boundary of the study area is flat to gently undulating and is typically very rocky. The upper and

middle east side slopes of Lodge Hill are typically steeply to moderately inclined, with slope gradients in the order of between 10°-25° within the west portion of the study area. On the lower east side slopes of the hill, within the east portion of the study area, the slope gradients decrease significantly, generally ranging from between 1° to 8° (see Plates 2 and 3).

There are no named or un-named water courses present within the study area. The headwaters of two un-named ephemeral drainage gullies are situated within the east portion of the study area. Both gullies are tributaries of the Jordan River. The major water course in the vicinity of the study area is the Jordan River, which is located around 200m to the east of the eastern boundary. The Jordan River has its' headwaters at Lake Tiberias, around 40km to the north-east of the study area. From here the river flows in a north-west direction through a broad open valley system, cutting across the Midland Highway near Jericho. It then enters more steeply incised hills just south of Melton Mowbray, where the river then loops around to the south-east, eventually emptying into the River Derwent at Herdsmans Cove. Cove Hill Bridge generally demarcates the point on the Jordan River where the tidal influence extends to. Immediately to the north of the bridge is a set of rapids, which acts as a physical barrier to the tidal extent. Downstream of the bridge, the Jordan River is subject to tidal influence, with the water being brackish.

The lower reaches of the Jordan River intersect with the River Derwent estuary system. The River Derwent estuary is a 'ria' or drowned river valley formed by coastal submergence about 6,000 years ago. The study area is situated around 1.5km to the north of the junction of the Jordan River and the River Derwent. The study area is located on the lower reaches of the Jordan River, around 4km to the north of the junction with the River Derwent.

The only other named water course in close proximity to the study area is crooked Billet Creek which is situated around 1km to the south. This ephemeral creek flows in a west to east direction down from the ranges associated with Lodge Hill and enters the Jordan River around the Horses Head.

The underlying geology across the study area is Tertiary Basalt. These basalts interface with Jurassic Dolerites to the west and south of the study area. The basalt is exposed to the surface across much of the study area, particularly on the crest and side slopes of Lodge Hill, within the central and western portion of the study area (see Plates 4 and 5). The soils across the study area are predominantly red/brown regolith clays which have been derived from the decomposition of the parent bedrock. Soil depth across the study area is typically quite shallow to skeletal, with the parent bedrock exposed to the surface throughout much of the area (see Plate 5).

The native vegetation across the study area has been largely cleared as part of past pastoral activity. There is a small patch of remnant casuarina forest inhabiting the upper side slopes and crest of Lodge Hill, within the south-west portion of the study area (see Plate 6). Across the remainder of the study the vegetation is dominated by a mixture of introduced and native grasses (see Plates 7 and 8).

The eastern portion of the study area, east of Brighton Road, is generally much more heavily disturbed compared with the western portion. This eastern portion has been subdivided into a number of small rural/residential lots, each around one to three hectares in size (see Plate 8). Each lot has homes and associated sheds and infrastructure built on the properties and have been landscaped. There are a network of sealed roads and driveways that provide access to these lots. From an Aboriginal heritage perspective, any sites located within the eastern portion of the study area are likely to have been heavily impacted or possibly destroyed through the development of these rural residential allotments.

Within the western portion of the study area, to the west of Brighton Road, the main disturbances are the pre-mentioned pastoral activities. Any Aboriginal heritage sites located within this part of the study area will most likely have been impacted to some degree by land clearing and pastoral activity. These disturbances are likely to be confined to the top 20-30cm of the soil horizon. The highest potential for more intact sites to be present is within the south-west portion of the study area, around the crest and upper side slopes of Lodge Hill, where there are remnant stands of Casuarinas still present.



Plate 2: View west across the western portion of the study area, towards Lodge Hill in the background, showing the topography of the study area



Plate 3: View east across the study area from the mid east side slopes of Lodge Hill, showing the typical topography of the study area



Plate 4: View west at exposed basalt bedrock on the upper side slopes of Lodge Hill



Plate 5: View east across the shallow to skeletal soils within the south-east portion of the study area, with weathered basalts exposed to the surface



Plate 6: View west at the remnant stand of casuarina forest on the crest and upper side slopes of Lodge Hill in the south-west portion of the study area



Plate 7: View north-east across the cleared pastoral land within the western portion of the study area



Plate 8: View south-east at one of the small rural/residential allotments within the east portion of the study area

3.0 Ethno-historic Background

3.1 Aboriginal Social Organisation in Tasmania

Ryan (2012) explains that the terms 'nation' and 'clan' are the preferred terms used by the Tasmanian Aboriginal community in place of 'tribe' and 'band' respectively. This terminology has been adopted in the following discussion. According to Jones (1974), the social organisation of Tasmanian Aboriginal society appears to have consisted of three social units, these being the hearth group, the band (clan) and the tribe (nation). The hearth group was the basic family unit and would generally have consisted of a man and woman, their children, aged relatives and sometimes friends and other relatives. The size of hearth groups would generally range from between 2-8 individuals (Jones 1974: Plomley 1983). Plomley (1983) provides a description made by Peron of a hearth group he encountered at Port Cygnet:

There were nine individuals in this family, and clearly they represented a hearth group, because Peron visited their campsite with its single hut. The group comprised an older man and wife, a younger man and wife, and five children, one a daughter (Oure-Oure) of the older man and wife, and the other four the children of the younger man and wife. (Plomley 1983:168).

The clan appears to have been the basic social unit and was comprised of a number of hearth groups (Jones 1974). Jones (1974:324-325) suggests that the clan owned a territory and that the boundaries of this territory would coincide with well-marked geographic features such as rivers and lagoons. Whilst the clan often resided within its territory, it also foraged widely within the territories of other clans. Brown (1986:21) states that the band was led by a man, usually older than the others and who had a reputation as a formidable hunter and fighter. Brown also suggests that the clan (as well as the hearth group) was ideally exogamous, with the wife usually moving to her husband's band and hearth group.

Each clan was associated with a wider political unit, the nation. Jones (1974:328-329) defines the tribe (or nation) as being:

...that agglomeration of bands which lived in contiguous regions, spoke the same language or dialect, shared the same cultural traits, usually intermarried, had a similar pattern of seasonal movement, habitually met together for economic and other reasons, the pattern of whose peaceful relations were within the agglomeration and of whose enmities and military adventures were directed outside it. Such a tribe had a territory, consisting of the sum of the land owned by its constituent bands...The borders of a territory ranged from a sharp well defined line associated with a prominent geographic feature to a broad transition zone. Jones (1974:328-329)

According to Ryan (2012:11), the Aboriginal population of Tasmania was aligned within a broad framework of nine nations, with each nation comprising between six to fifteen clans (Ryan 2012:14). The mean population of each nation is estimated to have been between 350 and 470 people, with overall population estimates being in the order of between seven to ten thousand people prior to European occupation (Ryan 2012:14).

Ryan (2012:15) presents a map showing the approximate boundaries for the nine Tasmanian Aboriginal Nations. This map shows that the Jordan River, from its mouth through to around St Peters Pass, formed the boundary between two nations, the Oyster Bay Nation and the Big River Nation (see Figure 4). The study area is on the boundary of these two nations, but probably sits within the land of the Big River Nation.

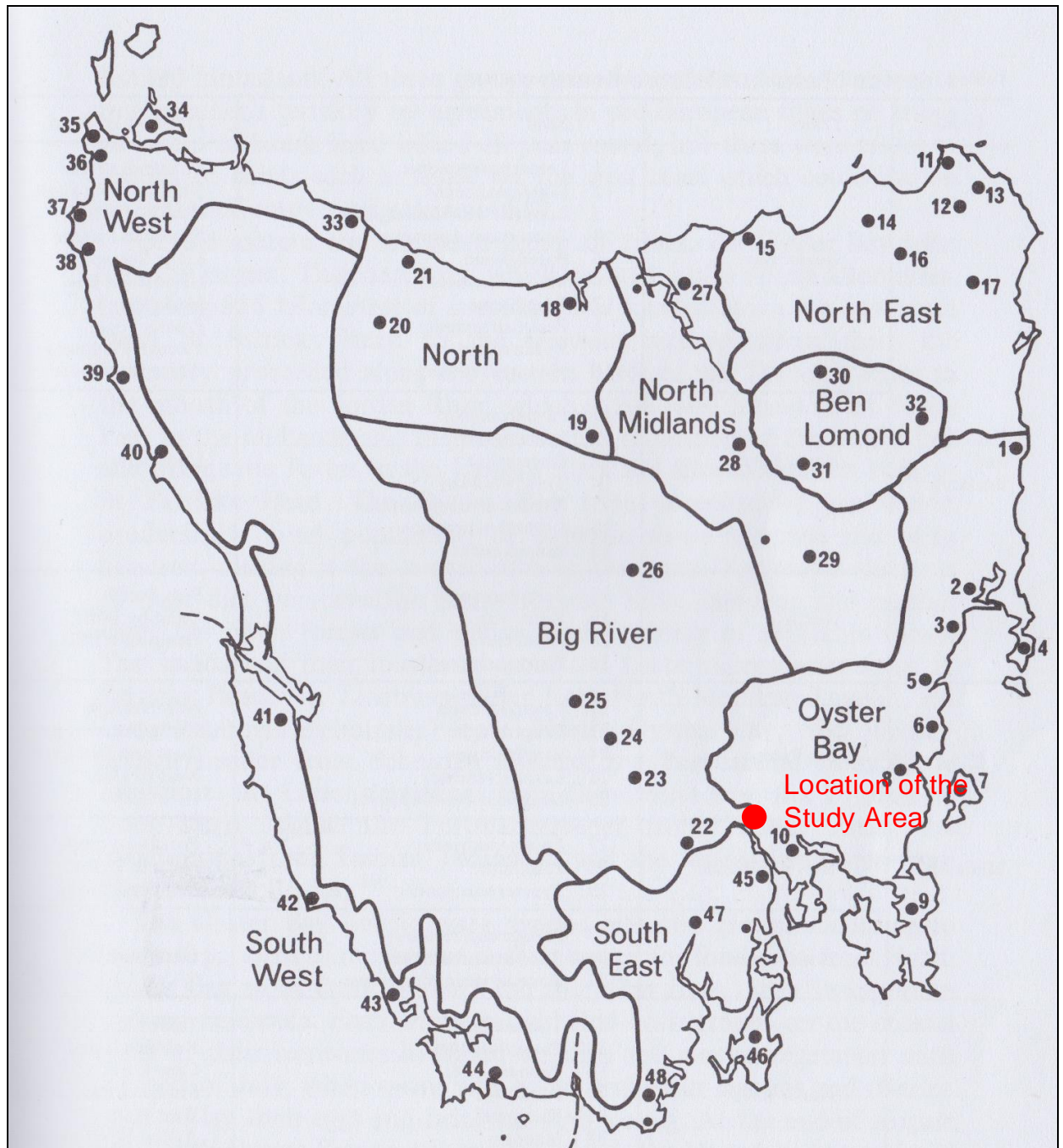


Figure 4: The location of the study area in relation to Aboriginal Nations of Tasmania (based on map from Ryan 2012:15)

The Oyster Bay Nation occupied the area to the east of the Jordan River, with their territory encompassing around 7800 square km. The Nation consisted of ten bands with an estimated total population of between 700-800 people, making it the largest Nation in Tasmania (Ryan 2012:17).

The area to the west of the Jordan River was believed to have been the Territory of the Big River Nation (Ryan 2012:15 and 26). The territory of the Big River Nation is described by Ryan as extending from around New Norfolk on the Derwent River, south-west through to the rugged Mountains beyond the source of the Derwent River, north to Surrey Hills, then east through the mountains to Quamby Bluff (encompassing all the lake country) and finally south along the Western Tiers and the Jordan River (Ryan 2012:26).

The Oyster Bay Nation

The movement of the Oyster Bay Nation through the landscape is thought to have been largely based on the seasonal availability of food resources. In this sense, the Oyster Bay Nation could be divided into two distinct groups: the northern group (from North Oyster Bay through to St Patricks Head) and the southern group (from Little Swanport through to the Tasman Peninsula) (Ryan 2012:18).

According to ethnographic material, of the ten bands that comprised the Oyster Bay Nation, it is the Moomairremener band from the southern group which probably occupied the land closest to the present study area. The southern Oyster Bay people started to move inland in early spring to hunt and fish. The Moomairremener generally commenced moving inland around September/October, travelling up the Derwent River towards New Norfolk, and across to Abysinia, and from there they would travel along the Clyde and Ouse Rivers. Travel was along well-defined routes, generally along the edges of the Band's territory. The two big attractions of the Big River country were the kangaroo hunting grounds around Great Lake and the Clyde and Ouse Rivers, and the availability of a potentially intoxicating gum procured from the *Eucalyptus gunii* tree. The Moomairremener would begin moving back through the Midlands in late February, early March, eventually returning to the coastal areas around June (Ryan 2012:17-20). These routes are shown in Figure 5 below.

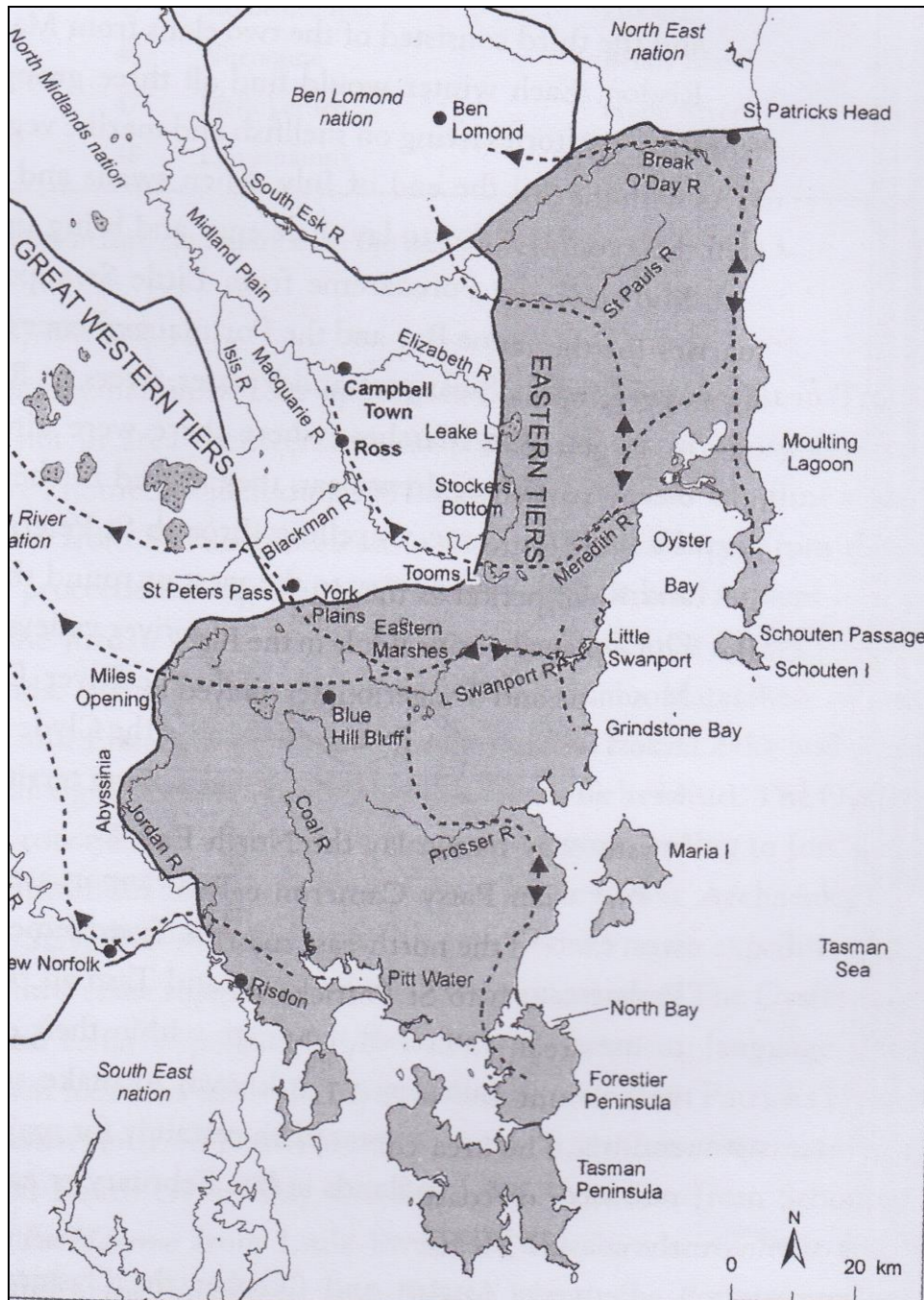


Figure 5: Seasonal movement of the Oyster Bay Nation clans (Ryan 2012:19)

The Big River Nation

The Big River Nation occupied the central highlands and are estimated to have numbered between four and five hundred people at the time of contact with European settlers (Ryan 2012:26). They were the only Tasmanian nation without access to a coastal strip. However, this was compensated by the highland lakes system, and visiting arrangements with the neighbouring North and Oyster Bay nations (Ryan 2012:19, 28). Through these relationships the Big River people had seasonal access to the east, north and west coasts, and to the ochre sources in the mountains to the north (Ryan 2012:28). The Big River Nation interacted with a greater number of diverse clans and families than any other Tasmanian nation (Ryan

2012:29). This suggests an active and dynamic social unit continually exposed to varying cultures and ideas (see Figure 6).

Travel was via well maintained and regularly used travelling routes. In return, neighbouring nations were granted access to the resources of the highlands in the territory of the Big River Nation. Oyster Bay people are known to have travelled up the Clyde and Ouse River valleys during the summer months to hunt, and to harvest the *Eucalyptus gunii* forests, a tree confined to the highlands that produces an intoxicating gum (Ryan 1996:20). Little is known of movement of clans across the territory of the Big River Nation (Ryan 2012:28). However, there is some evidence that people tended to congregate on the lakeshores, notably at the Great Lake, Arthurs Lake and Lake Echo (see Figure 6; Ryan 2012:17, 28).

The Big River Nation is believed to have comprised of five bands; the Leenowwenne people who lived west of the Derwent River north of New Norfolk, the Pangeringhe who lived on the west bank of the Derwent River just opposite the meeting of the Derwent and Clyde Rivers, the Braylwunyer people who lived on the hilly plains between the Ouse and Dee Rivers, the Larmairrenener people lived in the high country west of the Dee River and the Luggemairrernerpairner people who lived north of the Great Lake (Ryan 2012:26). The band that most likely occupied the area around Brighton was the Leenowwenne people (Ryan 2012:26).

Ryan (2012:28) states that the Big River and Oyster Bay Nations are thought to have had amicable and co-operative relationships, which included the provision of access to areas within each other's territorial lands. This being the case, and given that the Jordan River formed the boundary between two groups, the valley system is likely to have been even more intensively frequented and occupied by Aboriginal people than otherwise would have been the case. It is probable that clans from both Nations regularly moved through the valley system as part of their seasonal travels through their territories. Within the valley system, these groups would have had a series of favoured camp locations, where they regularly stayed for short durations. In all probability the camp locations would have been spaced between 5-10km apart (depending on local topography), which would constitute a comfortable days walk apart. The available evidence suggests that these favoured interim camp locations were most probably sited on elevated and level landscape features such as the spines of spur lines, and in close proximity to the Jordan River and its associated resources.

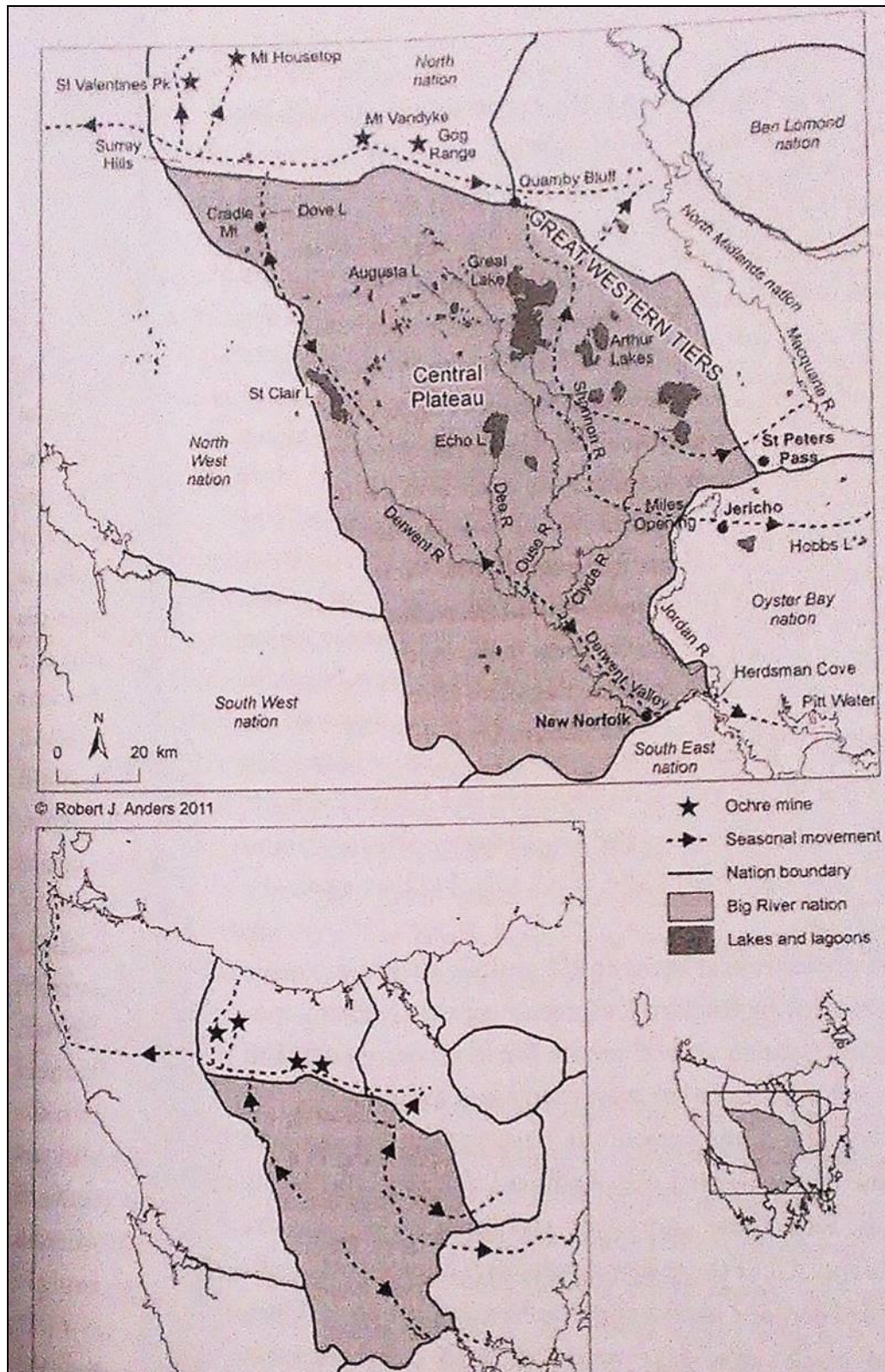


Figure 6: Seasonal movement of the Big River Nation (Ryan 2012:17)

The groups that frequented the Jordan Valley system are also likely to have had a small number of more permanent or 'base camp' locations scattered throughout their territories where they spent weeks at a time. These more permanent campsites would need to be situated in close proximity to a major resource zone, or even at the

interface of a series of resource zones in order for the groups to have access to sufficient food water etc. to sustain them for extended periods.

Material Culture, Social Customs and Ethnographic Sources

The ethnographic observations of early European explorers provide a valuable snapshot into aspects of the material cultural and social customs of the Aboriginal Nations inhabiting southeastern Tasmania. Primary among the ethnographic sources are the diaries of George Augustus Robinson, appointed as government Protector of Aborigines who followed a policy of conciliation with the ultimate aim of removing Aboriginal people to offshore islands (Plomley 2008:515). These observations are especially valuable where they describe to those items and practices that do not survive in the archaeological record.

While the early European explorers generally recorded the people of south east Tasmania as being mostly naked, there are references to kangaroo skin being used for capes, slings and binding for wounds. Both William Anderson (Cook's surgeon in 1777 when he anchored briefly in Adventure Bay) and Labillardiere (the 1793 expedition anchored in Recherche Bay) recorded seeing kangaroo skin used to bind injured feet (Dyer 2005:25). This was very effective it would seem as the people were able to keep up with their companions (Dyer 2005:26). Cook also recorded women using kangaroo skin slings to carry children, and there are several illustrations of this in the paintings by Petit and Lasueur from the Baudin expedition (Bonnemains *et al* 1988). The only other type of protective clothing that appears to have been worn on occasion was a sandal type covering worn on the soles of the feet, which was made from kangaroo skin or possibly a piece of bull kelp (Plomley 1983:123)

Ethnographic sources document a range of shelters used in Tasmania. The most common in the southeast were simple windbreaks of thick strips of bark woven together and supported on vertical wooden poles, as in the artwork from the Baudin expedition (Bonnemains *et al* 1988). Robinson reported seeing huts that were decorated with symbols he recognised as similar to those observed in rock engraving sites at Cape Grim (Plomley 2008:17). In June 1804 Lieutenant Governor Collins made contact with Aboriginal people living on the Huon River (Plomley 2008:18). He recorded an 'Aboriginal village' with about twenty families congregated at the site.

Burial customs were also observed by the ethnographers. Cremation was the usual form of disposing of a deceased person (Plomley 2008:17). Illustrations from the Baudin expedition show 'tombs' at Maria Island (Bonnemains *et al* 1988:131). These were bark tepee-like constructions built over remains that have been covered in fibres or leaves weighted down by rocks (Bonnemains *et al* 1988:131). Robinson also recorded that bones of the deceased, or ash from the cremation, was sometimes carried by relatives as an amulet (Plomley 2008:17).

Robinson recorded that Aboriginal people in the south east would travel along 'well beaten paths' and leave abalone shells at drinking places along rivers (Plomley 2008:59). He also recorded an instance of trying to convince his Aboriginal

companions to eat fish, and the strong reluctance they demonstrated (Plomley 2008:59).

Plomley (1983:185-194) provides a comprehensive account of the weapons and implements used by the Tasmanian Aborigines, based on the ethnographic accounts. It appears that the two main weapons used by the local inhabitants were the spear and the club. The spear was a simple flexible rod with a point at one end, the length of which appears to have varied significantly from between 6-12 feet. The club is described as a piece of wood about 60cm long, 2.5cm in diameter and slightly tapered toward the gripping end. This item is reported to have been used as a throwing stick as well as a club.

Plomley (1983:22) also makes reference to the use of a wooden spatula which was used primarily for removing shellfish from rocks.

In many of the early ethnographic accounts for the Southeast region, there is reference to the baskets carried by the Aboriginal people, however often there is very little detail regards their construction. One of the more detailed descriptions comes from Robinson (in Plomley 1966:58), while he was on Bruny Island.

"The native basket is made of rushes of a species of grass called iris. In preparing them for use they place the same on a slow fire which gives them a tenacity that enables the manufacturer to twist them into threads. These are plaited together and then formed into a basket which in shape is somewhat semiglobular."

There also a number of reports of water vessels constructed from the fronds of giant kelp which could hold up to five to ten litres of water (see Labillardiere 1800:190).

There are numerous ethnographic accounts for the Southeast region describing the watercraft used by the local inhabitants. One of the most detailed descriptions comes from Louis Freycinet, an officer on the Naturalist in 1802 (in Plomley 1983:119-120).

We have seen them and have measured several. They had the same dimensions and were constructed in exactly the same way. Three roles of the bark of the eucalypt made up its whole structure...These bundles when taken separately, resemble in a way the yard of a vessel, were joined at their ends, and this caused them to stick up in a point and make up the whole of the canoe. The assemblage was made quite firm with a sort of grass or sedge. In this state, the craft had the following dimensions-

Length inside 2.95m

Breadth outside 0.89m

Total height 0.65m

Depth inside 0.22m

Size at the ends 0.27m

The [group] can put five or six peoples in these canoes; but more commonly only three or four are taken at a time. Their paddles are plain pieces of wood...Usually they sit down to manoeuvre their canoes; in that case they place bundles of grass to serve as seats. At other times they stand up. We have seen them cross the Channel only in fine weather. One can imagine that

such a fragile and imperfect craft would never be able to make their way, let alone keep afloat, in a rough sea...It is to be noted that they always put a fire at one end of their canoes, and to prevent the fire from spreading they place under it a bed of earth or ashes of sufficient thickness.

Interestingly, although stone artefacts dominate the archaeological record for Tasmania (and Australia generally), there are few ethnographic accounts in Tasmania documenting their use. Those observations that are made, primarily relate to the finding of stone implements at campsites. Frustratingly, there are virtually no accounts regarding the form of the implements, how they were made, and what they were used for.

Robinson (in Plomley 1966:113) reports that he

"Obtained a stone from one of the Bruny natives with which they sharpen their waddies...It has the resemblance of flint and is found at the Isthmus of Brune.."

One of the very few descriptions of Aboriginal people carrying out quarrying activity comes from Raynor (in Roth 1899:151) who recounted that his father had come across about 20-30 Aboriginal people, men, women and children, at a quarry near Plenty on the southern side of the middle Derwent Valley.

Noisily chatting, they were breaking the stone into fragments, either by dashing them on the rocks or by striking them with other stones, and picking up the sharp edged ones for use...

This quarry was subsequently visited by Rhys Jones, who noted that the quarried material was an indurated cherty hornfels and that the quarry extended over an area of about 2 ½ hectares (Jones 1971:456).

Ethnographic observations of the Oyster Bay Nation specifically are quite common. Large gatherings of Aboriginal people assumed to be of the Oyster Bay Nation have been recorded in the ethnographic records. McGowan (1985:92) reports that in May 1804 a large group of Aborigines, variously estimated to be up to 500 individuals, including men women and children were observed hunting kangaroo near the first European settlement at Risdon Cove.

Robinson noted that a Mr Earl related '...that he had seen as many as 500 in one mob together, i.e. the Coal River mob.' (Robinson in Plomley 1966:595).

One of the earliest and more comprehensive descriptions of the Oyster Bay people comes from Lieutenant Le Dez who was a member of the Marion du Fresne expedition of 1772. The following account was written after he encountered Aboriginal people from the Oyster Bay Nation at Forestier Peninsula at North Bay.

Their usual height is 5 ½ feet, their colour very much approaches rust, but they rub themselves with black and make patterns in the form of a crescent on their bodies with this colour: their hair is cottony; they have very little beard, very white teeth, large, harsh features and a wild appearance. In

general they are badly built with thin bodies and slender legs and thighs. They speak with a singular vivacity and we were unable to distinguish any sounds other than these: la-ga – la-ga. I compared them with the inhabitants of New Holland of whom Dampier speaks. They appear to me widely dispersed or wandering like them in bands or in families and the fires we have often seen along the coast are probably the places where each band stops. They must naturally prefer places near the sea and in coves because of the ease with which they can find their sustenance there. I think they are seafood eaters because we found many places in the woods where they had stopped. One notices easily the place where they slept around a mound of ash and one sees, nearby, fish bones and many burnt shells. It appears that they are always naked and among those that we saw there was one that had a skin belt with long hairs and another had a white feather in his hair: was that a mark of distinction or an ornament. The women we saw only from a distance; they always stayed on the edge of the woods ready to run away (and) seemed to have as their only clothing a piece of skin which covered their breasts and reached to their thighs. I think they must suffer very much during the winter, which must be long and hard, because I do not think they have other ways of fending off the cold than by lighting fires. Thus they appreciate fire very much and when I saw them come to meet our sailors and offer them fire it occurred to me this element was the one they held most useful; it was a sign of friendship to offer it to us. Perhaps they behave in this way among themselves when they meet. We noticed that most of them, besides their spears and a few stones, carry a firebrand as well and each time they stop, and it is often only for a moment, they make a fire and gather round it. It is astonishing how many places we have found where they have lit a fire and how much the woods are devastated by it. We have seen few trees that were not injured at the foot and it was the same throughout the whole bay. We have covered almost all of it without encountering inhabitants or any of their retreats. It was only on the island in the NNE that we found a few pieces of bark, badly arranged with one end resting on a piece of wood set crosswise and the other on the ground; that formed, if you wish, a kind of hut. It seems that they had not long left it; one can conjecture from that that they make similar ones and we did not penetrate sufficiently into the woods to encounter them and that it is for that purpose or to make ropes (because we found a piece that was quite well twisted) that there are numerous trees that we saw stripped of their bark to a height of five or six feet...We have found nothing that could make us suspect that they have canoes or rafts...Their spears are nothing other than sticks about six feet long, pointed at the thick end. They are not poisoned at all... (Le Dez in Cox 2010:18-19).

Several early explorers and ethnographers have also left accounts of their observations of the Big River Nation that provide an insight into the economy, material culture and social customs of the people prior to European settlement.

Around the Lake Echo area, Robinson records Aboriginal hut sites along the margins of the marshy lagoons that intercept the rugged hills (Plomley 2008:543-44). There are often large numbers of huts that Robinson describes as 'villages' (Plomley

2008:548). When Robinson approaches the huts they are empty but show signs of having recently been occupied. He repeatedly describes the abundance of 'kangaroo' (Bennett's wallaby), 'native bread' (a tuber, *Polyporus myllitae*) and duck and bird life that abound: 'the place of resort ... and their hunting grounds' (Plomley 2008:542). There is also reference to a plant with a red berry that the Larmairrenener people call Murerleener (Plomley 2008:543). The plant was unknown to the Aboriginal people from the south with Robinson.

The valleys had been burnt by Aboriginal people, to facilitate access and attract game. Robinson records the evidence of this as he travels through the area around modern day Bronte Lagoon (Plomley 2008:545). Robinson also records the petrified wood artefacts that he finds across the southern plateau country (Plomley 2008:548). There are worn paths through the country that Robinson in some cases follows. One runs along the Dee River valley, and it seems that this was a major seasonal travel route for the Big River people (Plomley 2008:549). There is evidence that the Big River people put ochre in their hair. In a wonderful example of contact Robinson records that when his party passes through Campbell Town some of the Big River people pound a brick to a fine powder and mix with animal grease to apply a thick coat to their hair (Plomley 2008:535).

Subsistence and Economy

There are a number of other ethno-historic accounts that comment on the prevalence of shellfish and crustaceans in the diet of the local inhabitants (see Plomley 1966 and 1983), and the archaeological evidence (in the form of midden sites) provides tangible testimony to this. However, the ethnographic and archaeological evidence for the consumption of fish is comparatively very sparse. This has led to some suggestions that fish was not a component of the diet of the Tasmanian Aborigines (see Jones 1974).

Robinson provides an account of the 'chief' Mannalargennana of the Oyster Bay Nation cooking wallaby.

"...The animal is first thrown on the fire whole as is their custom with all animals, and when the hair is singed they take the carcase off the fire and rub off the scorched hair with their hands. This practice is tenaciously observed with all animals except the possum; the fur of this animal is first pulled off previous to its being placed on the fire. After the chief has rubbed the hair off the wallaby, he broke the fore leg by twisting it with his hands...He then cut the hind legs, after which he made a hole in the belly with his fingers and pulled out the entrails and then thrust in some hot ashes, the animal being previously roasted outside... (Robinson in Plomley 1966:548-549).

Possum also seems to have been frequently hunted. Plomley (1966:533) describes possums being knocked down out of trees with waddies, or trees were climbed to reach possum holes.

Unfortunately, there are very few accounts available for the hunting of other terrestrial fauna, however, it is likely that a much wider range of species were targeted, including echidna and smaller marsupials.

Certainly within the midlands region, birds and eggs appear to have also formed a major component of the diet of the local inhabitants, with swans, ducks and red bills being some of the main species targeted (Plomley 1966:217). However, there are very few accounts available for the south-east Tasmanian region, for the hunting of birds and the gathering of eggs. Nonetheless, it would be reasonable to assume that this also was carried out at certain times of the year.

Only a few plant foods are documented in the ethohistoric accounts as having been eaten. This includes a bulbous plant known as 'native bread' and a plant that has the appearance of asparagus which was found by the roots of peppermint trees (Plomley 1966). It is very likely that many more plant foods were eaten by the local Aboriginal population. Jones (1971:91-95) for example lists 70 edible plant species that are available in Tasmania and are likely to have been consumed at times of seasonal availability. This would include pig face, tree ferns, fern roots and a variety of seaweeds.

3.2 Cultural Contact and Frontier Violence

In the first years of the settlement at Hobart the surrounding areas became vital hunting grounds supplying kangaroo meat to the struggling colony on the brink of starvation (Alexander 2006:5). Hunting parties could be away from Hobart for months at a time, and would have needed to learn how to survive in the Tasmanian bush.

The economic importance of the kangaroo hunters to the success of the colony cannot be over emphasised. Without the supply of kangaroo meat the government would have been unable to meet the rations and maintain the settlement (Boyce 2009:52). However, the reliance of the colonisers on kangaroo brought them into direct conflict with the Aboriginal people. Access to seasonal kangaroo hunting grounds was central to the economies of both the Big River and Oyster Bay Nations.

At first, the Europeans were at an advantage as they had hunting dogs that greatly increased the numbers of kangaroo that a hunter could kill (Boyce 2009:52). The Aboriginal people quickly adapted to the use of dogs, an example of rapid cultural and economic adaptation. This brought the two groups onto a more even par (Boyce 2009:66). This period of parity only lasted while the European population was small; as early as 1806 the kangaroo populations around Hobart had been decimated and the hunters were being forced to move further north, towards the Brighton district (Boyce 2009:54). The settlement was literally starving, and there was a strong economic imperative for hunters to extend to the north in search of fresh sources of game. As the settlement continued to expand, both the colonists need for a meat supply, and their transformation of the hunting grounds into cleared, pastoral farms set the scene for an escalation in conflict (Boyce 2009).

Clashes with Aboriginal communities became more frequent and more violent as European settlement expanded. Lieutenant-Governor George Arthur proclaimed Martial Law in November 1828, leading to the active pursuit, capture and death of many Aboriginal people. A bounty was introduced in February 1830 of five pounds for every adult captured and two pounds for each child. In the two years between

November 1828 and November 1830 some twenty Aboriginal people were captured and a further sixty lost their lives (Ryan 2012:102).

A series of six 'roving parties' were established for the purposes hunting and capturing the remaining Aboriginal occupants of the settled areas. This military action resulted in a general increase in the scale of violent conflict between Europeans and Aboriginal people, and by 1830 it was decided that a full-scale military offensive was required in order to quell the Aboriginal uprising. This operation, termed the 'Black Line,' involved the assembly of 2000 men in October 1830, who formed a human chain that swept through the settled districts over a period of three weeks, with the aim of driving the remnant Aboriginal populations from these areas. At the time the military campaign was widely believed to have achieved its objectives, with virtually the entire Aboriginal population having been either killed, or driven out of the settled areas. In 1832 the proclamation of Martial Law was revoked (Ryan 2012:112-113).

The Black Line was Governor Arthur's response to repeated insistence from settlers that Aboriginal people should be removed from the midlands (Alexander 2006:15). This reflects the level to which conflict had reached by 1830. Over three weeks two thousand settlers formed a line across the midlands, attempting to drive Aboriginal people south onto the Tasman peninsula (Alexander 2006:15). The line passed through Brighton in October 1830; no Aboriginal people were captured in the district (Alexander 2006:16).

Whilst the Black Line itself proved to be a dismal failure, with the total capture of two Aborigines and death of another three, it was sufficiently distressing to the general Aboriginal community that more than two hundred people subsequently allowed themselves to be persuaded by George Augustus Robinson (the 'Protector of Aborigines') to relocate to Flinders Island in exchange for food, shelter and safety (Lines 1991:47). They were further promised that they would be returned to their former homes on the Tasmanian mainland as soon as possible.

By 1835, the majority of the 220 Aborigines who arrived with Robinson at the Wybalenna Aboriginal establishment on Flinders Island had died from inadequate shelter, insufficient provisions and introduced disease. Birth rates were extremely low and few children survived infancy. In 1847 six Aborigines at Wybalenna made a petition to Queen Victoria asking that the promises made to them be honoured. In October 1847, the surviving 47 Aborigines were transferred to their final settlement at Oyster Cove (only 44 people survived the trip). Conditions at Oyster Cove were only marginally better than at Wybalenna and numbers continued to diminish.

4.0 Background Archaeology

4.1 Regional Studies

The study area is within the South-East region of Tasmania. There have been a number of Aboriginal archaeological studies undertaken within the south-east region over the past two decades. The majority of these have been in the form of survey assessments associated with proposed development activities, and have focused on discreet areas (these are summarised in section 4.2) However, there has also been some broader research based investigations undertaken in the region. Probably the most comprehensive of these and the one most pertinent to the present investigations are that of Officer (1980) and Brown (1986).

Officer (1980)

Iain Officer (1980) carried out an extensive survey of the Derwent Estuary region, as part of his thesis works. The areas covered by the survey investigations extended from Blinking Billy Point (west bank of River) and Trywork (east bank of River), upstream to New Norfolk. The survey assessment in this area involved walking a series of survey transects along the shoreline of the River, with transects in some areas extending up to 1km inland from the River.

In the course of his investigations, Officer recorded a total of 416 midden sites. Of these, 298 were located on the east bank of the River and 118 on the west bank (Officer 1980).

The shell midden sites identified by Officer were predominantly comprised of mussel (*Mytilus planulatus*, *Xenostrobus securus* or *Brachidontes rostratus*) and oyster (*Ostrea angasi*). A wide range of other shell fish species were represented in low numbers at a number of these sites (Officer 1980).

Stone artefacts were observed at 33 of the recorded midden sites (28 artefacts on the east bank and 5 artefacts on the west bank). A wide range of stone material types were represented in these artefact assemblages, including cherty hornfels, silicified breccia, mudstone, chalcedony, quartz, basalt and dolerite (Officer 1980).

Bone material was observed at only four midden site locations, indicating that for whatever reason, bone material in middens on the Derwent River is a rare occurrence (Officer 1980).

One of the areas intensively surveyed by Officer (1980) was Bedlam Walls, which lies on the east side of the Derwent River, between Geilston Bay and Risdon Cove and extends up to 1.2km inland from the shore of the River. Officer (1980) recorded a total of 74 sites in this area (sites AH 1184-1257). The vast majority of sites are classified as middens, however, three stone quarries and one rock shelter was also identified. A large number of the midden sites (28%) are described as being extensive, covering in excess of 1000m², with the largest site being over 8000m² (Officer 1980). The midden sites range from being located immediately on the shore line through to up to 530m inland from the shore. The dominant shell material

represented in these midden sites was the black mussel (*Mytilus planulatus*) and oyster (*Ostrea angasi*).

Officer (1980) notes that a local resident (Dr Jacklyn) also recorded a large number of Aboriginal sites in the Bedlam Walls area, in the period between 1965-1973. The sites recorded by Officer (1980) included those site identified by Dr Jacklyn. Officer identified an additional 19 midden sites to those identified by Jacklyn. As part of his recording efforts, Dr Jacklyn carried out an extensive salvage of stone artefacts in the Bedlam Walls area. Jennings (1983) subsequently undertook an analysis of this collection. Jennings (1983) reports that of the 1016 pieces of stone material collected by Dr Jacklyn, 991 pieces are determined as being stone artefacts, giving an average artefact density for the area of 381 artefacts/km². The majority of artefacts were collected from the shoreline area between Shag Bay and Geilston Bay (641 artefacts). Of the 991 artefacts, 633 were un-worked and 358 are worked. Stone material types represented in the assemblage include hornfels, quartzites, chalcedony and sub-basaltic hornfels (Jennings 1983).

Brown (1986)

Steve Brown (1986) was engaged to carry out the South East Tasmanian Archaeology Project. This was one of nine regional overview studies, funded through National Estate grants, which were directed at examining the Aboriginal archaeological resources of Tasmania. The aims or duty statement for the South East Tasmanian Archaeology Project was to define the prehistory of the region and to define present and potential future impacts on the Aboriginal heritage resources in the region.

As part of his research design, Brown (1986:49-50) divided the landscape of the south-east region into landform unit types. Five major landform unit divisions were identified. These were;

- small offshore islands,
- Bruny Island,
- coastal and estuarine environments (consisting of coastal margins, coastal plains, river estuaries, lagoons and swamps),
- inland hills, plains and river valleys, and
- inland mountains (alpine plateau).

Brown (1986:49-50) then collated available archaeological data for these landscape units, including the range of site types present, the site components and the distribution and frequency of sites. The data was generated from previous archaeological investigations undertaken in the region, as well as the findings from the field work carried out by Brown.

The field survey investigations implemented by Brown (1986:50-52) involved a selective sampling procedure, where block surveys were undertaken at three designated areas, these being Bruny Island, the Coal River, and Bothwell. In addition, more general survey assessments were carried out at a variety of locations. Of the five landscape units identified by Brown (1986), the most pertinent to the present investigations are the coastal and estuarine environments and the Inland

Hills, Plains and River Valleys zone. The following provides an overview of the findings, as presented by Brown (1986) for these two landform units.

Inland Hills, Plains and River Valleys

This landscape unit was the largest of the five unit divisions established by Brown (1986) for the South-east Tasmanian region. It is also the most pertinent landscape unit in relation to the present investigation, as the study area lies within a River valley system.

Brown (1986:93-97) reports that open artefact scatters are the most common site type identified in the Inland Hills, Plains and River Valley zone. The greatest number of these sites is reported as occurring on the valley and creek floors and the foot slopes adjoining these areas. It appears that site and artefact densities appear to be comparatively much lower on mid and upper hill slopes and on ridges and crests. The largest artefact scatters (those comprising over 50 artefacts) have a number of site location factors in common. They are all situated on well drained sandy soils. They are in slightly elevated positions above river and creek floodplains. They usually have a northerly aspect, and finally the sites are generally situated in close proximity to a fresh water source. For medium and small sized artefact scatters there appears to be no distinct pattern of distribution (Brown 1986:93-97).

The range of stone artefacts identified at sites in this zone includes the debris of stone artefact manufacturing and maintenance (fragments, flakes, flake fragments, flaked pieces and cores). Retouched stone artefacts include a large variety of scrapers. Unmodified cobbles have also been identified at a range of sites. The reduction of stone material appears to have occurred mainly at the source location. Backed artefacts appear to be absent from the site assemblages in this zone, and in South-east Tasmania in general, and pebble choppers appear to be rare (Brown 1986:94).

Numerous stone quarry/procurement sites have been identified in the Inland Hills and Plains zone. These sites range in size from areas where a few boulders of cobbles have been flaked through to extensive sites such as the Oyster Cover quarry site. The quarried stone material types include silcrete, quartzites, cherty hornfels, chalcedony and silicified breccia (Brown 1986:95).

Sandstone rock shelters and overhangs are common in the Inland hills and Plains zone. In the majority of instances artefacts are not found on the shelter floor surfaces. Brown (1985:94) postulates that this may be due to accelerated depositional rates in sandstone shelters. Paintings have been recorded at two sandstone rock shelters, with both occurring near Ellendale in the upper Derwent Valley (Brown 1985:97).

Interestingly, Brown (1986:96) reported that no ochre sources, ochre quarries, or stone arrangements had been identified in this zone.

Coastal and Estuarine Regions

The Coastal and Estuarine Regions consists of coastal margins, coastal plains, river estuaries, lagoons and swamps. It encompasses the Derwent River.

Brown (1986:79) notes that shell middens are by far the most common site type occurring within the coastal and estuarine environmental zone. A number of trends were observed in relation to the distribution of this site type within the coastal and estuarine environmental zone, and the composition of materials at these sites. These are summarised as follows.

- Middens are generally not present in areas with steep shore profiles.
- The greatest number of middens was identified on coast lines which contain a mixture of rocky headlands and short sandy beaches (mixed coast areas).
- On long sandy beaches the volume of midden material was found to decline with distance from a rocky coast.
- Middens are essentially comprised of two types; rocky coastal and bay estuarine, reflecting different landscape settings. However, middens with shell species common to both these types occur in intermediate zones such as estuary and lagoon mouths.
- The largest rocky coastal shell middens occur on rocky headlands and points, with associated rock platforms, where abalone, turbo, mussels and limpets occur.
- The bay estuarine type middens are generally composed predominantly of mussel and oyster shellfish species. The largest middens are found immediately adjacent to the shoreline, near to the shell fish resources. A few sizeable middens have been noted up to 500m inland, with smaller middens having been identified up to 1km inland.
- Shell middens in South-east Tasmania are comprised almost entirely of shell, and rarely contain large numbers of stone artefacts or faunal remains (Brown 1986:79-82).

Overview for the South-East Tasmanian Region

In summary, Brown (1986:99-102) has identified the following broad patterns of site type distribution in South-East Tasmania.

- Aboriginal archaeological sites occur in all parts of the landscape.
- The coastal margins (including off shore islands), coastal plains and river estuaries are very rich in archaeological resources and contain a high density of sites with large quantities of archaeological remains. The Derwent Estuary in particular was an area of rich archaeological resources.
- Inland sites are dominated by open artefact scatters and isolated artefacts. Artefact densities are highest along the river, rivulet and creek valley floors and adjacent to lower hill slopes, particularly where the hill slopes are gently inclined, with a north aspect, and have sandy well drained soils.
- Shell middens most frequently occur in close proximity to shellfish resources, particularly on cliff tops or headlands where there is easy access to these resources.
- Stone artefact quarries most frequently occur where there is a surface expression of geological contact zones, in particular between Jurassic dolerite and Triassic or Permian strata.

As a general statement, Brown (1986:102) summarises that site numbers and densities in South-east Tasmania are greatest within 300m of the present coastline and in the immediate vicinity of coastal lagoons.

In terms of environmental factors determining site location, Brown (1986:103) is of the opinion that topography is perhaps the most consistent and important factor. Sites in general, but particularly the larger ones (in terms of artefact numbers) are very seldom found on steep gradient slopes.

In terms of duration of Aboriginal occupation, Brown (1986:99-100) believes that the South-eastern Tasmanian region has probably been occupied by Aboriginal people for the past 20 000 years. However, he acknowledges that there are no conclusive dates for sites beyond 6000 years old for the region. Pleistocene dates have however been obtained for sites in close proximity to the region (Beginners Luck Cave and a cave on the Weld River).

4.2 Previous Aboriginal Heritage Assessments Undertaken in the Vicinity of the Study Area

There have been a large number of Aboriginal heritage assessments undertaken within the general vicinity of the Brighton and surrounds. Most have these have been undertaken as part of the planning processes for specific infrastructure projects, such as the Brighton Bypass and Brighton Transport Hub projects. The following provides a summary review for those assessments that are most relevant and in closest proximity to the study area.

Assessments of the Brighton Bypass undertaken by Stanton (2008a), CHMA (2008a, Everett 2008, Stone and Everett 2009)

Development of the Brighton Bypass was divided into two, with the northern and southern portions of the bypass meeting at the point of the proposed Bagdad Bypass route easement.

The original heritage assessment for the southern portion of the Bypass was undertaken by Stanton (2008a) and resulted in the identification of a single isolated find (AH10713). Subsequent investigations by CHMA (2008a) resulted in the discovery of an additional 6 sites (AH10801-ah10806). Five sites (5) were identified as small artefact scatters (comprising between 2 and 6 artefacts each) and the sixth was an isolated artefact. In addition, a number of areas of potential archaeological sensitivity were identified based on the presence of surface artefacts, presence of soil depth, lack of/minimal disturbance or modification and landform type. Sub-surface investigations in these areas recovered additional artefacts in 5 out of 120 test-pits, located on the following landform types:

- Two sites were found on gentle to moderating hill side slopes (with a 2 to 5 degree incline)
- Two sites were found flat to very gently sloping saddle areas
- One site was identified in the bed of a creek line.

Densities elsewhere along the route were found to be generally low, with increased densities only noted around saddles and creek lines.

Five Aboriginal sites were identified by Everett (2008) during his heritage assessment of the northern portion of the Brighton Bypass. These sites comprised 3 isolated finds and 2 artefact scatters, however Everett thought it possible that the three isolated finds represented extensions of the largest scatter identified comprising 30-40 artefacts. The second scatter comprised 12 artefacts and was located off Rifle Range Road.

During the follow up assessment Stone and Everett (2009) relocated 3 previously recorded sites (AH7464, AH8676 and AH9158) and seven new sites (AH10755 to AH10761). AH7464 is a silcrete stone procurement source with 2 artefacts found in association with the outcrop. AH8676 (one of the scatters identified by Everett in 2008) was found to be a far more extensive scatter than was first recorded extending some 1km to the south of Rifle Range Road. Stone and Everett (2009) recorded the site as a silcrete procurement and reduction site, located on a massive Tertiary sand body. The third site, AH9158 is also recorded to be a reduction site, comprising 23 artefacts and extending along a wide sand-sheet sitting parallel to and 150m east of the Bagdad Rivulet. The additional seven previously unrecorded sites comprised 5 scatters and 2 isolated finds and occur within the Jordan River Valley.

Site AH10757 was described as an extensive artefact scatter located on an alluvial flat on the west side of the Jordan River. The site was believed to potentially comprise stratified sub-surface artefact deposits and has now been subject to sub-surface testing (see below). Site AH10758 is described as an extensive artefact scatter extending along a 500m section of a ridge line overlooking the Bagdad Valley. Site AH10759 is an artefact scatter, comprising five artefacts, located on a hill slope beneath the crest of a basalt ridge line, overlooking a Tertiary palaeo-valley of the Jordan River. Site AH10760 is reported as being an extensive surface scatter of stone artefacts located on a strath terrace of Bagdad Rivulet, north of Rifle Range Road. Finally, site AH10761 is described as an extensive surface scatter of stone artefacts (60 artefacts), including a raw material source (chalcedony outcrop) located on a basalt ridge top at the confluence of the Bagdad Rivulet and an ephemeral tributary stream.

Test Excavations at Site AH10757 (the Jordan River Levee) by Paton 2010

Test excavations were carried out at site AH10757, or more commonly known as the Jordan River levee site, by Rob Paton in 2010. Original site descriptions included a surface scatter of stone artefacts on a floodplain landscape on the west bank of the Jordan River, near Brighton 30km north of Hobart (Stone and Everett 2009). The floodplain landscape consists of several geomorphic features, one of which is a levee bank deposit. The surface artefact scatter identified by Stone and Everett (2009) as AH10757, is primarily, but not entirely, associated with the levee deposit.

The levee bank deposit was assessed by Stone and Everett (2009) as having the potential to contain a deeply stratified cultural sequence. As such, controlled excavation of a targeted sample of the levee deposit, the Jordan River Levee (JRL) site, was recommended. This testing programme was to be undertaken in collaboration with the Tasmanian Aboriginal community represented by an Aboriginal Heritage Officer (AHO).

Sub-surface investigations revealed the existence of stone artefacts to a depth of about 70 centimetres below the surface. Average artefact densities equated to approximately 70 artefacts per square metre of excavated deposit. A total of 1403 stone artefacts were recovered from the excavations.

The age of the levee and the length of Aboriginal occupation at the site was determined via Optically Stimulated Luminescence (OSL), which records the last time sunlight fell on the sandy deposits before being covered. The OSL dates for the levee ranged between $26,600 \pm 2.6$ ka to $37,500 \pm 3.8$ ka. Age-depth curves provide a date for the bottom of the levee and the artefacts in these sediments of about 41,000 years. This is reported as the oldest site in Tasmania, and amongst the oldest in Australia (Paton 2010). Moreover, the analysis of the sediments indicated that the part of the levee that contains the archaeological material was mostly undisturbed (apart from the upper plough zone). This being the case then the site has the potential to allow for the identification and analysis of individual living floors and events from the distant past. As Paton (2010) states, this is almost unheard of from an open air site, anywhere in the world. Most sites with this potential are cave deposits that often reflect only a very small and specialised part of the lives of people. It should be noted that site AH10757 has been placed on the National Heritage List.

The Brighton Transport Hub (Stanton 2008b and 2008c; CHMA 2008b)

A series of archaeological investigations were recently undertaken at the Brighton Transport Hub, located immediately to the west of the southern section of the proposed Brighton Bypass route (on the west side of the Midlands Highway).

Three Aboriginal sites (AH10648, AH10649 and AH10650) were identified Stanton (2008b and 2008c). A total of 103 artefacts were identified at AH10648, concentrated around the northern basal slopes of a prominent hill. A scatter of 29 artefacts were identified at site AH10650 located along the southern portion of a broad flat spur line, on the northern side of Ashburton Creek, while site AH10649 comprised 3 artefacts with sub-surface potential near the Creek.

Following subsurface investigations at these sites by CHMA (2008b) site 10648 was found to comprise a range of cultural features including moderate-high densities of surface and sub-surface artefacts, stone procurement sites and an early European occupation site. Spatial and temporal links indicate the area is a single site complex including both AH10648 and AH10650.

A silcrete procurement site was found at AH10650 comprising a discreet concentration of silcrete/quartzite nodules (varying in size from a soccer ball to a medicine ball), which are located on the basal southern side slopes of a hill, on the northern margins of Ashburton Creek (grid reference E518633 N5269971). This is just to the south of the southern boundary of the Hub site. These nodules have been the focus of extensive procurement activity, with several thousand artefacts (mainly primary flakes and debitage) noted within a 50m radius of the nodules. Given the dominance of silcrete stone artefacts at site AH10650, and the close spatial association of the site with the silcrete procurement source, it appears that this site is

representative of sporadic activity associated with the procurement of stone from this source.

Primary areas of Aboriginal occupation were the elevated terraces on the southern and northern margins of Crooked Billet Creek with activity radiating out from the area. The terraces occur on a sheltered part of the small valley associated with Crooked Billet Creek at a point where the creek flattens to form a small swamp area. It is likely that these elevated terraces were regularly utilised as interim camp locations by Aboriginal people in the area. Foraging activity (including the procurement of stone materials) would have occurred in the broader valley area, with people returning to these terrace areas to process their harvests. The occupation of this area appears to have extended through to the 'Post Contact' period as evidenced by the presence of flaked bottle glass. There is some evidence to suggest that Aboriginal activity in this area during the 'Post Contact' period may have shifted from the terraces either side of the Creek, slightly to the east to the lower northern slopes of a nearby prominent hill. Why this is the case is uncertain (CHMA 2008b).

The likely scenario is that Aboriginal people were carrying out initial procurement and reduction activities at the procurement site itself, and then secondary reduction processing at other locations (including site AH10650). The results of the test pitting undertaken at site AH10650 indicate that the movement of the silcrete material from the stone procurement site was generally north toward Crooked Billet Creek and site AH10648. Secondary reduction processing appears to have been mainly carried out at site AH10648, and along the western edge of the hill summit between sites AH10648 and AH10650 (CHMA 2008b).

Horses Head (Huys 2009)

Stuart Huys conducted an archaeological survey of a 45ha parcel known as the Horses Head, on the eastern side of the Jordan River, midway between Brighton and Bridgewater. A total of seven archaeological sites were identified in the course of this assessment. Huys interpreted these results as reflecting moderate to high densities of artefacts occurring across the elevated, level spurline that dominated the Horses Head study area (Huys 2009:). The potential for subsurface artefacts to occur was highlighted by Huys. The level portions of the spur line, and the termination of the spur just above the river were identified as the points of highest archaeological potential.

Of the seven recorded sites, four sites were recorded as isolated artefacts, and three as artefact scatters. AH10900, AH10901, AH10903 and AH10906 were all recorded as isolated artefacts (Huys 2009:28-29). AH10902 is an artefact scatter consisting of five artefacts across the basal portion of the broad spur line. This site is located approximately 100m north east of the Jordan River. The second recorded artefact scatter is AH10904, an extensive scatter of over 100 artefacts. The site extends for approximately 275m along the NE-SW line of the spur. The highest density of artefacts at AH10904 correlated with the point at which the spur line is broadest and level (Huys 2009:28). The third recorded artefact scatter at the Horses Head is AH10905, comprising 24 artefacts on the south west, basal slopes of the spur line above the Jordan River.

Huys noted that a thick deposit of wind blown sand across the upper portions of the spur line and top of the hill provided the opportunity for sub-surface archaeological material to be present. Two discreet flaking floors were identified, indicating that remarkably low levels of disturbance have occurred on the hill summit (Huys 2009:30). The Horses Head is interpreted by Huys (2009:30) as likely to have operated as a focal point of Aboriginal activity in the Jordan River Valley. This site may well have operated in tandem with the Jordan River Levee site, excavated after the survey at Horses Head.

Brighton Waste Water Treatment Plant (Jones 2012)

Archaeologist Mike Jones and Aboriginal Heritage Officer Leigh Maynard undertook a survey of the Brighton Waste Water Treatment Plant (WWTP) on behalf of Sinclair Knight Merz. The study area was located at Cove Hill Road, Honeywood and Andrew Street, about 2km south of the Brighton town centre (Jones 2012:1).

Two previously unrecorded sites were identified at the Brighton WWTP in the course of this assessment, AH11450 and AH11451. AH11450 was recorded as a small artefact scatter located in a highly disturbed context. AH11451 was recorded as an isolated artefact (Jones 2012:38-41). AH11449 was recorded along the proposed rising main. This site is recorded as an isolated artefact (Jones 2012:43).

Jones (2012:51) interpreted these results as reflecting a 'background scatter' of isolated artefacts and small artefact scatters surrounding two repeatedly occupied camp sites: AH10757 (the Jordan River Levee) and AH7022. However, the high level of disturbance across the study area was also noted by Jones as likely to have obliterated some of the archaeological evidence of Aboriginal occupation of this area (Jones 2012:51.)

Brighton to Bridgewater Optical Fibre Cable Route (Paton 1994)

Rob Paton (archaeologist) conducted a survey of the Brighton to Bridgewater optical fibre cable route in 1994. The survey route followed the foothills along Cove Hill Road, crossed the Jordan River just north of Cove Bridge, and then traversed the rolling plains and hills south of Brighton (Paton 1994:1). The three sites identified by Paton (1994) were considered to be representative of sporadic use of the landscape by Aboriginal people moving between the coastline and inland resources (Paton 1994:10).

The survey led to the recording of three small artefact scatters, AH7022, AH7023 and AH7024. AH7022 is a small artefact scatter consisting of eight flakes (six chert and two quartzite). The site is located on a sandy deposit on the southern side of the Jordan River valley (Paton 1994:23). AH7023 is an isolated artefact, a chert single platform core, located 400m south east of the Jordan River (Paton 1994:24). The third site, AH7024, is a small artefact scatter consisting of three quartzite flakes. This site was recorded on east facing slopes about 500m south east of the Jordan River.

Bridgewater to New Norfolk Optical Fibre Cable Route (Paton 1995)

The following year, Paton returned to survey the Bridgewater to New Norfolk optical fibre cable route. The route followed the undulating hills between Bridgewater and New Norfolk, with a crossing of the Derwent River near Boyer (Paton 1995:4).

Two Aboriginal cultural heritage sites were identified during this survey. AH7173 was recorded as an isolated artefact on the north facing slopes of the Derwent River Valley (Paton 1995:22.) The site consists of a single chert flake. The second recorded site, AH7174, is a small artefact scatter located on a raised knoll on the southern edge of the Derwent River Valley. This site comprised eight flakes, including seven chert and one fine grained volcanic flake (Paton 1995:23).

Midland Highway Corridor (Parham 1993)

In 1993, archaeologist David Parham conducted a survey of a 1.5km section of the Midland Highway corridor, between The Lodge and the Boral Quarry access road. While several historical European sites were recorded, this survey did not identify any Aboriginal heritage sites. This was attributed to the limited size of the study area, and low levels of surface visibility (Parham 1993:10).

Brighton Camp (Stanton 2000)

Aboriginal Heritage Consultant Steve Stanton conducted an assessment of the Brighton Camp prior to its disposal by the Department of Defence. The study area incorporated over 60ha of land at Brighton, on the western side of the Midland Highway.

No Aboriginal heritage sites were identified. The high levels of disturbance identified across the study area were the main reason attributed to the lack of Aboriginal heritage sites identified during this survey (Stanton 2000).

Maynard and McConnell 2003

Anne McConnell and Leigh Maynard were engaged to undertake an Aboriginal heritage assessment for a proposed natural gas pipeline development in the Greater Hobart region. The assessment focused on an off take station which was located approximately 2km north of Bridgewater, and the distribution pipeline which extended south to the centre of Hobart, via a section of this pipeline ran from Bridgewater to Old Beach, following the alignment of the East Derwent Highway.

The survey assessment did not identify any Aboriginal heritage sites or areas of cultural heritage value either on or in the immediate vicinity of the investigated areas. Apart from the Hobart City Centre, there were no areas where there was considered to be an elevated potential for sub-surface Aboriginal heritage deposits to be present (Maynard and McConnell 2003:11).

Sainty 2007

Rocky Sainty was engaged by the Brighton Council to carry out an Aboriginal heritage assessment for a proposed walking track between Old Beach and Bridgewater. A section of this track runs through the current study area.

The survey resulted in the identification of two Aboriginal sites (AH1372 and AH1335), with sites having been previously recorded and registered. Site AH1372 is classified as a shell midden deposit, which was located at the Green Point Nature Reserve. This is around 500m to the west of the current study area, on the west side of Herdsmans Cove. Site AH1335 was also classified as a shell midden, and is located within the coastal reserve at Swan Park, Gagebrook, on the eastern side of Herdsmans Cove.

CHMA 2011

CHMA (2011) was commissioned by GHD (on behalf of DIER) to undertake further Aboriginal heritage assessment work for the proposed Bridgewater Bridge replacement project. This is around 2km to the west of the current study area. In the course of the field survey assessment two Aboriginal heritage sites were identified and recorded (Sites AH1383/7775 and AH11190).

Site AH1383/7775, is situated on the northern foreshore of the Derwent River, within 200m east of the existing Bridge. The site had been previously identified by both Officer (1980) and Stanton (1997). The site was described by CHMA (2011) as an extensive thin veneer of broken shell material that was observed to extend over an area measuring approximately 100m (east-west) x 10m (north-south). The shell material was exposed along a series of small erosion patches that occur primarily around the bases of a row of mature pine trees that extend along this section of the foreshore. The shell has been heavily fragmented, and much of the material has been burnt. Despite the heavily fragmented nature of the shell material, two types of shell fish could be identified as being definitively represented in the midden, these being black mussel (*Mytilus planulatus*) and oyster (*Ostrea angasi*). A small number of stone artefacts were also observed to be in association with this shell.

Site AH11190 is classified as an isolated artefact which is situated approximately 100m south of the southern foreshores of the Derwent River, and 300m down-stream (east) of the existing Bridge. The artefact was located on a graded vehicle track that runs in an east-west direction across the lower slopes of a hill. These slopes run from south-west to north-east down towards the southern margins of the Derwent River. The gradient of these lower slopes, in the vicinity of where the artefact was identified is between 2-4°.

Besides the two Aboriginal sites described above, no additional Aboriginal sites or areas of potential archaeological sensitivity were identified within the bounds of the proposed Bridgewater Bridge Replacement corridor.

CHMA (2013)

CHMA (2013) was engaged by Boral to undertake an Aboriginal heritage assessment for a 25ha subdivision proposal on Boral land located immediately to the east of the Midland Highway, with Cove Hill Road delineating the southern boundary. This is just to the west of the current study area.

During the course of the field survey CHMA (2013) identified a total of seven Aboriginal sites were identified. Five of these sites were classified as isolated

artefacts, with the remaining two sites being small artefact scatters, each comprising less than five artefacts. CHMA (2013:61) was of the opinion that give the very shallow soil deposits it was very unlikely that there were any significant deposits of sub-surface artefacts associated with any of these sites. CHMA (2013:61) noted a strong correlation between the distribution of the seven recorded sites and the variation of geology and soils across the study area. All seven sites were located within the portion of the study area where the sandstone conglomerates occur, with the soils in this area being skeletal gravels that have been derived from the bedrock.

CHMA 2017

CHMA (2017) was engaged by the Brighton Council to undertake an Aboriginal heritage assessment for the replacement of the existing Cove Hill Bridge over the Jordan River, which is located approximately 1.5m to the east of the current study area. During the course of the field survey assessment, the field team recorded one Aboriginal heritage site (site AH13314), which was classified as an artefact scatter, comprising two stone artefacts. The site was located on the east bank of the Jordan River, on the upstream side (north side) of the Cove Hill Bridge, approximately 15m from the bridge foundations (CHMA 2017).

CHMA 2019

CHMA (2019) was engaged by Retail Fuel Developments Pty Ltd to undertake an assessment for a proposed service centre at 40 Brighton Road, Brighton. The area encompassed 6ha and was situated just to the south-east of the present study area, in a very similar landscape setting.

No Aboriginal sites were identified during the field survey assessment and the search of the AHR undertaken for this project showed that there were no registered Aboriginal sites located within the study area boundaries. Surface visibility throughout the study area was reported to be quite good and the negative survey results were assessed as accurately reflecting the absence of Aboriginal sites. CHMA assessed the area is assessed as being of very low archaeological sensitivity (CHMA 2019).

CHMA 2020

Most recently, CHMA (2020) was engaged to undertake an Aboriginal heritage assessment For 33 Elderslie Road Brighton, which is the proposed location for the new South Brighton High School site. The site encompassed approximately 10 hectares of land on the corner of Elderslie and Brighton Road. This is sandwiched between the north-west and the north-east portion of the current study area.

No Aboriginal sites were identified during the field survey assessment of the 33 Elderslie Road study area and the search of the AHR undertaken for this project shows that there are no registered Aboriginal sites that are located within the study area boundaries.

CHMA (2020) interpreted the negative survey results as being an accurate indication that site and artefact densities within the study area was likely to be low to very low, consistent with sporadic activity.

4.3 Registered Aboriginal Sites in the Vicinity of the Study Area

As part of Stage 1 of the assessment process, a search was undertaken of the Aboriginal Heritage Register (AHR) to determine whether any registered Aboriginal heritage sites are located within or in the general vicinity of the South Brighton Masterplan study area.

The search shows that there are a total of 35 registered Aboriginal sites that are located within an approximate 2km radius of the study area (search results provided by Kate Moody from AHT on the 7-1-2021). Table 1 provides the summary details for these 35 sites, with Figure 7 showing the reported location of the 35 sites in relation to the study area boundaries (based on information generated from the AHR).

The vast majority of these sites are classified as either artefact scatters (20 sites), or isolated artefacts (13 sites). There are also two Aboriginal stone quarries recorded in the general surrounds of the study area (sites AH307 and AH7464). However, it is noted on the AHR that one of these sites has been determined not to be a quarry (AH7464).

Based on the information provided on the AHR, it appears that one of these registered sites is located within, the bounds of the study area. This is site AH11809, which is classified as an artefact scatter. The grid reference provided on the AHR for this site places it just within the eastern boundary of the study area (see Figure 8). The site was recorded by Entura (2013), as part of the South East Irrigation Scheme assessment. The site is described as an artefact scatter comprising three stone artefacts that were scattered across an area measuring 25m x 10m. The site was reported to be situated on the west side of a dissected gully which is a tributary of the Jordan River. The site is highlighted in red in Table 1.

There are an additional four registered sites that are situated within 100m of the eastern boundary of the study area (AH10755, AH10756, AH10806 and AH11810). The grid references provided on the AHR for these sites place them outside the study area (see Figure 8). Sites AH10806 and AH11810 are both low density artefact scatters, with sites AH10755, AH10756 being isolated artefacts.

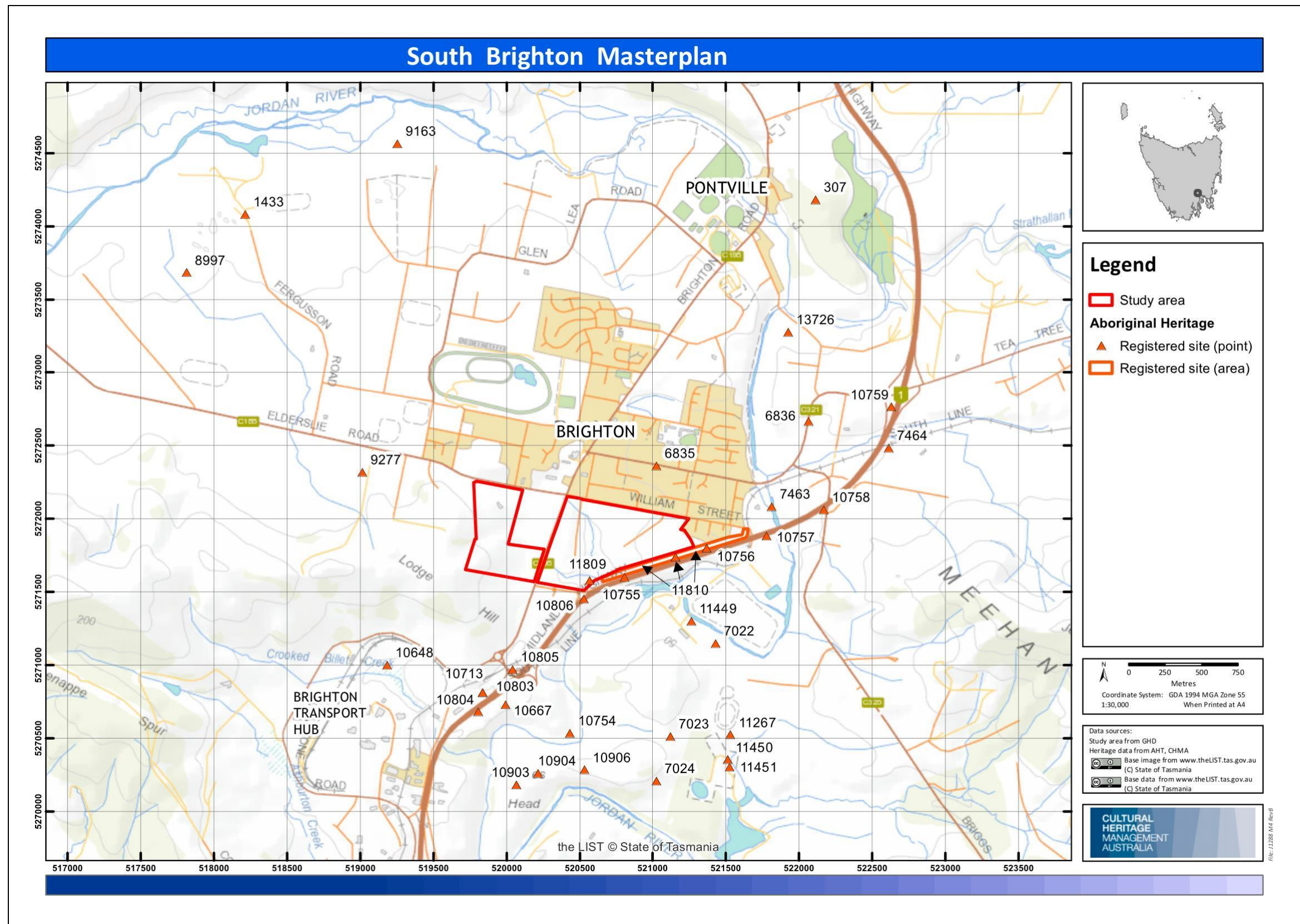
Permit 09/11 was granted to undertake subsurface testing at site AH10755. However, according to the CHMA (2012) report for the Brighton Bypass (Northern Section) the isolated artefact could not be relocated, and no subsurface testing or further work was subsequently recommended for this site. The Midland Highway was subsequently constructed through this area. Permit 09/11 was granted to undertake subsurface testing at AH10756. However, the CMHA (2012) report for the Brighton Bypass (Northern Section), noted that the site was avoided by construction and was to be retained in situ. No subsurface testing appears to have been undertaken.

The surface artefacts associated with AH10806 were salvaged under Permit 09/08 as part of the Brighton Bypass project, and subsurface testing did not identify any additional subsurface deposits. The Midland Highway was subsequently constructed through this area. Site AH11810 was recorded by Entura (2013) as part of the survey assessment of the South East Irrigation Scheme. The site was described as a low

density artefact scatter, with the artefacts situated within a linear stockpile of re-deposited soils measuring approximately 1km x 30m, above the cutting of the Brighton Bypass. This places the artefacts just to the south of the southern boundary of the study area. The artefacts associated with this site are clearly out of context.

**Table 1: Summary details for registered Aboriginal sites within a 2km radius of the South Brighton Masterplan study area
(Based on the results of the AHR search dated 7-1-2021)**

AH Site Number	Site Type	Locality	Grid Reference (GDA94) Easting	Grid Reference (GDA94) Northing
307	Artefact Scatter, Stone Quarry	Pontville	522112	5274182
10648	Artefact Scatter	Bridgewater	519182	5271001
10667	Artefact Scatter	Bridgewater	519992	5270729
10713	Isolated Artefact	Bridgewater	519837	5270814
10754	Isolated Artefact	Bridgewater	520433	5270536
10755	Isolated Artefact	Brighton	520807	5271602
10756	Isolated Artefact	Brighton	521367	5271802
10757	Artefact Scatter	Brighton	521776	5271882
10758	Artefact Scatter	Brighton	522167	5272061
10759	Artefact Scatter	Brighton	522628	5272764
10803	Artefact Scatter	Bridgewater	519838	5270812
10804	Artefact Scatter	Bridgewater	519807	5270680
10805	Artefact Scatter	Bridgewater	520039	5270971
10806	Artefact Scatter	Brighton	520529	5271454
10903	Isolated Artefact	Bridgewater	520069	5270183
10904	Artefact Scatter	Bridgewater	520217	5270260
10906	Isolated Artefact	Bridgewater	520532	5270284
11267	Isolated Artefact	Honeywood	521531	5270524
11449	Isolated Artefact	Brighton	521263	5271301
11450	Artefact Scatter	Honeywood	521510	5270354
11451	Isolated Artefact	Honeywood	521524	5270303
11809	Artefact Scatter	Brighton	520566	5271579
11810	Artefact Scatter	Brighton	521155	5271741
1433	Artefact Scatter	Brighton	518212	5274082
6835	Isolated Artefact	Brighton	521024	5272361
6836	Isolated Artefact	Brighton	522066	5272667
7022	Artefact Scatter	Brighton	521427	5271149
7023	Isolated Artefact	Bridgewater	521119	5270514
7024	Artefact Scatter	Bridgewater	521025	5270210
7463	Artefact Scatter	Brighton	521812	5272082
7464	Not a Site, Stone Quarry	Brighton	522612	5272482
8997	Artefact Scatter	Brighton	517812	5273682
9163	Artefact Scatter	Brighton	519252	5274562
9277	Artefact Scatter	Brighton	519014	5272318
13726	Isolated Artefact	Brighton	521923	5273274



**Figure 7: Topographic map showing the location of registered Aboriginal sites within a 2km radius of the South Brighton Masterplan study area
(Based on the results of the AHR search dated 7-1-2021)**



**Figure 8: Aerial image showing the location of the registered Aboriginal sites located in closest proximity to the South Brighton Masterplan study area
(Based on the results of the AHR search dated 7-1-2021)**

5.0 Predictive Modelling

5.1 Introduction to Predictive Modelling

Predictive modelling, in an archaeological context, is a fairly straightforward concept and has been utilised by archaeologists in Australia for a number of years as a tool for undertaking research into Aboriginal heritage sites. In summary, predictive modelling involves the collation of information generated from previous archaeological research in a given region, and using this information to establish patterns of Aboriginal site distributions within the landscape of that particular region. On the basis of perceived patterns of site distribution, archaeologists can then make predictive statements regarding the potential for various Aboriginal site types to occur within certain landscape settings, and can make preliminary assessments regarding the potential archaeological sensitivity of landscape types within a given region.

5.2 Predictive Models; Strengths and Weaknesses

It should be acknowledged that most, if not all predictive models have a number of potential inherent weaknesses, which may serve to limit their value. These include, but may not be limited to the following:

- 1) The accuracy of a predictive model is directly influenced by the quality and quantity of available site data and information for a given region. The more data available and the greater the quality of that data, the more likely it is that an accurate predictive model can be developed.
- 2) Predictive modelling works very well for certain types, most particularly isolated artefacts and artefact scatters, and to a lesser extent scarred trees. For other site types it is far more difficult to accurately establish distribution patterns and therefore make predictive modelling statements. Unfortunately, these site types are generally the rarer site types (in terms of frequency of occurrence) and are therefore generally the most significant sites.
- 3) Predictive modelling (unless it is very sophisticated and detailed) will generally not take into account micro-landscape features within a given area. These micro features may include (but is certainly not limited to) slight elevations in the landscape (such as small terraces) or small soaks or drainage depressions that may have held water. These micro features have been previously demonstrated to occasionally be focal points for Aboriginal activity.
- 4) Predictive modelling to a large extent is often predicated on the presence of watercourses. However, in some instances the alignment of these watercourses has changed considerably over time. As a consequence, the present alignment of a given watercourse may be substantially different to its alignment in the past. The consequence of this for predictive modelling (if these ancient water courses are not taken into account) is that predicted patterns of site distributions may be greatly skewed.

5.3 A Predictive Model of Site Type Distribution for the Study Area

The findings of previous archaeological investigations undertaken in the general vicinity of the study area and the information generated from the AHR search, shows that Artefact scatters and Isolated artefacts are the two most commonly recorded site types in the general surrounds of the study area, and are assessed as being the most likely site types to be encountered in the study area. As described in section 2 of this report, there are no water courses within the study area itself, with the closest major water course (the Jordan River) being situated around 200m to the east). Given this distance from nearest major riverine valley system, it is anticipated that site and artefact densities within the study area are likely to be low.

Aboriginal stone quarry sites have also been recorded in the study area surrounds. However, this site type is much rarer, and given the nature of the geology around the study area, which is dominated by Basalt (which is not usually suited for stone artefact manufacturing), this site type is much less likely to be encountered.

The following provides a definition of these site types and a general predictive statement for their distribution within the study area. It should be noted, that given the quite high levels of disturbance that has occurred within the study area footprint, any sites that may be present in the study area are likely to have been impacted to some extent.

Artefact Scatters and Isolated artefacts

Definition

Isolated artefacts are defined as single stone artefacts. Where isolated finds are closer than 50 linear metres to each other they should generally be recorded as an Artefact Scatter. Artefact scatters are usually identified as a scatter of stone artefacts lying on the ground surface. For the purposes of this project, artefact scatters are defined as at least 2 artefacts within 50 linear metres of each other. Artefacts spread beyond this can be best defined as isolated finds. It is recognised that this definition, while useful in most instances, should not be strictly prescriptive. On some large landscape features for example, sites may be defined more broadly. In other instances, only a single artefact may be visible, but there is a strong indication that others may be present in the nearby sediments. In such cases it is best to define the site as an Isolated Find/Potential Archaeological Deposit (PAD).

Artefact scatters can vary in size from two artefacts to several thousand, and may be representative of a range of activities, from sporadic foraging through to intensive camping activity. In rare instances, campsites which were used over a long period of time may contain stratified deposits, where several layers of occupation are buried one on top of another.

Predictive Statement:

Previous archaeological research in the region has identified the following pattern of distribution for this site type:

- Stone artefact scatters are numerous within the larger river valley systems;

- The largest open artefact scatters tend to be situated on well-drained sandy soils, in slightly elevated positions above river and creek floodplains, with a north aspect;
- Site and artefact densities on the lower lying flood plains of watercourses tend to be comparatively lower. This may be reflective of the fact these low lying areas were less favoured as camp locations, due to such factors as rising damp and vulnerability to flooding; and
- Site and artefact densities also tend to be comparatively lower in areas away from watercourses, and on moderate to steeply sloping terrain.

On the basis of the above broad modelling, it would be expected that site and artefact densities across the study area would be comparatively low, with low density artefact scatters or isolated artefacts most likely to be present. These site types would most likely be situated within the eastern portion of the study area, where the topography is more gently undulating and is in closer proximity to the Jordan River. This is supported by the AHR search results, which show a number of recorded Aboriginal sites close to the east boundary of the study area.

Stone Procurement/Quarry Sites

Definition

A stone procurement site is a place where stone materials were obtained by Aboriginal people for the purpose of manufacturing stone artefacts. Quarry sites on the other hand have some evidence of the stone being actively extracted using knapping and/or digging. Stone procurement sites are often pebble beds in water courses (where there may be little or no evidence of human activity) or naturally occurring lag deposits exposed on the surface. Quarry sites are usually stone outcrops, with evidence of knapping and pits dug to expose the rock. Concentrations of hammer stones and a thick layer of knapping debris are often present.

Predictive Statement

Two stone quarry/procurement sites have been recorded within the general surrounds of the study area (AH 344 and 7464), however AH7464 was later confirmed as not being a quarry. These sites are characteristically localities where Aboriginal people have been exploiting discreet deposits of silcrete or quartzite nodules. The geology of the study area comprises rock types that are generally not conducive to the manufacturing of stone artefacts (Basalt). As such, it is unlikely that quarry/procurement sites will encountered. However, given that contact geology zones occur in the general vicinity of the study area, there is a slim possibility that small patches of silcrete or quartzite nodules may occur in the study area, and if this is the case then procurement sites may be present.

6.0 Survey Coverage of the Study Area

Survey Coverage

Survey coverage refers to the estimated portion of a study area that has actually been visually inspected during a field survey. The field survey was undertaken on foot, with the field team walking a series of 11.2km of survey transects across the study area, with each transects averaging 5m in width. This equates to a survey coverage of 56 000m². Whilst the survey transects were aligned to cover most parts of the study area, the field team did avoid some of the very highly disturbed parts of the east portion of the study area, within the rural/residential allotments. Figure 10 shows the alignment of survey transects that were walked throughout the study area.

Surface Visibility

Surface Visibility refers to the extent to which the actual soils of the ground surface are available for inspection. There are a number of factors that can affect surface visibility, including vegetation cover, surface water, built structures and the presence introduced gravels or materials.

Surface visibility across the study area ranged between 10%-70%, with the estimated average visibility being 30%. This is in the low-medium range (see Figure 9 for visibility guidelines). Grass cover and introduced gravels and built surface were the main impediment to visibility (see Plates 9 and 10). There were a number of stock erosion scalds, vehicle tracks and stock tracks present within the study area that provided locales of improved surface visibility (see Plates 11-13). In order to increase the effective survey coverage within the study area, all areas where there were improved conditions of visibility were inspected in detail.

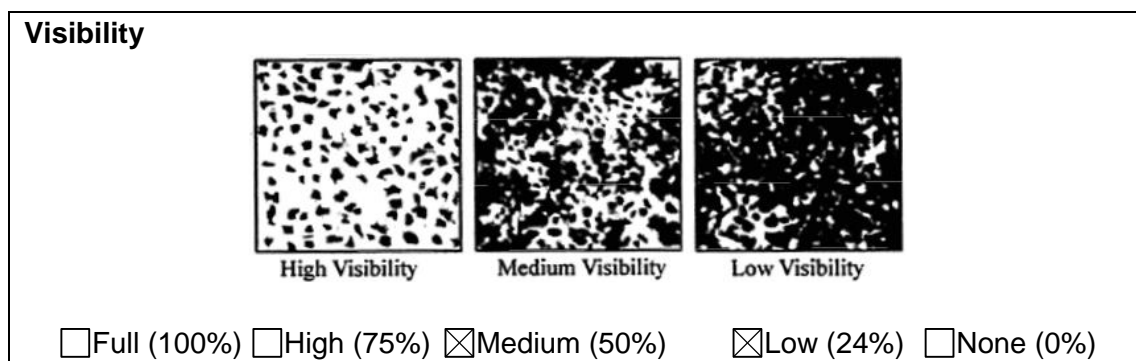


Figure 9: Guidelines for the estimation of surface visibility

Effective coverage

Variations in both survey coverage and surface visibility have a direct bearing on the ability of a field team to detect Aboriginal heritage sites, particularly site types such as isolated artefacts and artefact scatters, which are the two site types most likely to be encountered in the study area. The combination of survey coverage and surface visibility is referred to as effective survey coverage. Table 2 presents the estimated effective survey coverage achieved during the course of the survey assessment of the South Brighton Masterplan study area. The table shows that while the team covered an area of 56 000m², the effective coverage was reduced to 16 800m². This

level of effective coverage is deemed to be sufficient for the purposes of generating a reasonable impression as to the extent, nature and distribution of Aboriginal heritage sites across the study area.

Table 2: Effective Survey Coverage achieved within the 33 South Brighton Masterplan study area

Total Area Surveyed	Estimated Surface Visibility	Effective Survey Coverage
11 200m x 5m = 56 000m ²	30%	16 800 m ²



Plate 9: View west across the south-west portion of the study area showing typical levels of surface visibility of around 30%, with grass cover being the main impediment



Plate 10: View north across the east portion of the study area, showing typical levels of grass cover restricting surface visibility to around 30-40%



Plate 11: View south-east along a vehicle track within the west portion of the study area providing improved surface visibility



Plate 12: View west at erosion scalds and sparse vegetation cover on the south-east boundary of the study area providing locales of improved visibility



Plate 13: View north-west along stock tracks within the east portion of the study area providing improved visibility



Figure 10: Survey transects walked within the boundaries of the South Brighton Masterplan study area

7.0 Survey Results and Discussion

The survey assessment resulted in the recording of one Aboriginal site, this being a low density artefact scatter comprising three stone artefacts. The site is located in the same position as registered site AH11809, which was recorded by Entura (2013), and it is assumed that this is the same site.

The site is positioned close to the east boundary of the study area, around 70m to the north of the Midland Highway, within a cleared farm paddock, on the basal east side slopes of a hill, 30m south-west of an un-named ephemeral drainage gully. The three artefacts were identified across an area measuring approximately 20m x 15m, as defined by the grid references above. Surface visibility in the area where the site was identified was restricted to around 30% due to grass cover. It is possible that additional undetected artefacts are associated with the site, however, based on the observed surface expression, artefact densities would be expected to be low.

Table 3 provides the summary details for site AH11809, with Figures 11 and 12 showing the location of the site. The detailed site description is provided in Appendix 2.

Table 3: Summary details for the Aboriginal site AH11809

AH No.	Grid Reference (GDA 94)	Site Type	Site Description
AH11809	E520583 N5271582 E520567 N5271572 E520564 N5271584 E520573 N5271591	Artefact scatter	Site is located around 70m to the north of the Midland Highway, within a cleared farm paddock, on the basal east side slopes of a hill, around 30m south-west of an un-named ephemeral drainage gully. The three artefacts were identified across an area measuring approximately 20m x 15m, <i>Artefact details</i> <ul style="list-style-type: none">- Red silcrete flake 42mm x 36mm x 12mm- Grey chert flake 64mm x 59mm x 16mm- Red/grey silcrete flake 41mm x 33mm x 11mm

Further Discussions

Besides site AH11809, no other Aboriginal heritage sites, suspected features, or specific areas of elevated archaeological potential were recorded during the survey assessment of the South Brighton Masterplan study area. The field survey confirmed that there are no raw stone material types present within the study area that would be in any way suited for artefact manufacturing, with the parent bedrock being a coarse grained, highly weathered basalt. The basalt material would not be suited for artefact manufacturing. The presence of potential Aboriginal quarries or procurement sites within the study area can therefore be ruled out.

The AHR search results show that there are no other registered Aboriginal sites present within the study area boundaries. There are four registered site which are

situated along the Midland Highway, just to the south-east of the east boundary of the study area (sites AH10755, AH10756, AH10806 and AH11810). Based on the grid reference locations provided on the AHR, all four sites are confirmed as being located outside the study area. Site AH10806 (an artefact scatter) is situated 55m to the south of the study area. Site AH10755 (an Isolated artefact) is located 65m to the south of the study area. Site AH11810 (an artefact scatter) is located immediately to the south of the study area and site AH10756 (an Isolated artefact) is 95m to the east (see Figure 12).

As described in section 6 of this report, surface visibility across the study area averaged 30%, which is in the low-medium range. Given these visibility constraints, it can't be stated with any certainty that there are no additional undetected Aboriginal sites within the study area. However, the effective coverage of 16 800 m² achieved during the survey was certainly sufficient to generate a basic impression of the general level of site densities that can be expected to occur in the study area. The overall impression generated through the observations made during the field survey program is the site and artefact densities throughout the study area are likely to be low to very low. If undetected Aboriginal sites are present, they are most likely to be isolated artefacts or low density artefact scatters. These sites would be representative of sporadic levels of Aboriginal movement and occupation through this landscape. There are no indications that they are any locales within the study area where elevated concentrations of sites or cultural deposits may be present, representing more intensive levels of Aboriginal occupation, such as interim camp locations.

These survey findings and the interpretation of these findings are generally consistent with the outcomes of the assessments undertaken by CHMA (2019) for 40 Brighton Road (which is located immediately to the south of the current study area, and for the CHMA (2020) assessment for 33 Elderslie Road (which is situated between the north-east and north-west portions of the study area). Both of these areas are sited in a very similar landscape setting, and no Aboriginal sites were identified in either of these areas.

The explanation for the apparent low levels of Aboriginal activity across the study area is most probably linked to a combination of resource availability and micro-topography. The regional findings show that site and artefact densities across the South East Region are elevated in areas close to major resource zones, such as major river valleys, along coastal and estuarine margins. The Jordan River and the River Derwent are the two major water courses in this part of the South East Region and are the biggest resource zones. Aboriginal activity is most likely to have been concentrated along these two river valleys, and this is supported by the archaeological record which shows high densities of sites within both river valleys. Away from these major resource zones, site densities tend to decrease significantly. The study area is situated around 450m from the Jordan River, on the fringes of the river valley, and over 2km from the River Derwent. There are no sand bodies present in the study area that would provide well drained camp site locations, and there are no water courses within or in the immediate vicinity of the study area that would provide a localised source of water. Additionally, there are no stone resources

present in the study area which would be suitable for artefact manufacturing. Based on the above pattern of site distribution, site and artefact densities in this type of landscape setting would be expected to be very low, reflecting sporadic activity.

The most likely interpretation is that people accessed this area on a short term basis, as part of seasonal movement patterns. Because visitations to these areas are of a short duration, and intermittent, large scale cultural deposits do not accumulate. The people would carry the majority of their tool kit with them, as they needed to be highly mobile in order to make the most of the seasonal resources and trade opportunities. Artefacts discarded by such groups are likely to be those that are easily replaced. Rates of discard are expected to be low, resulting in low density archaeological sites and isolated artefacts.

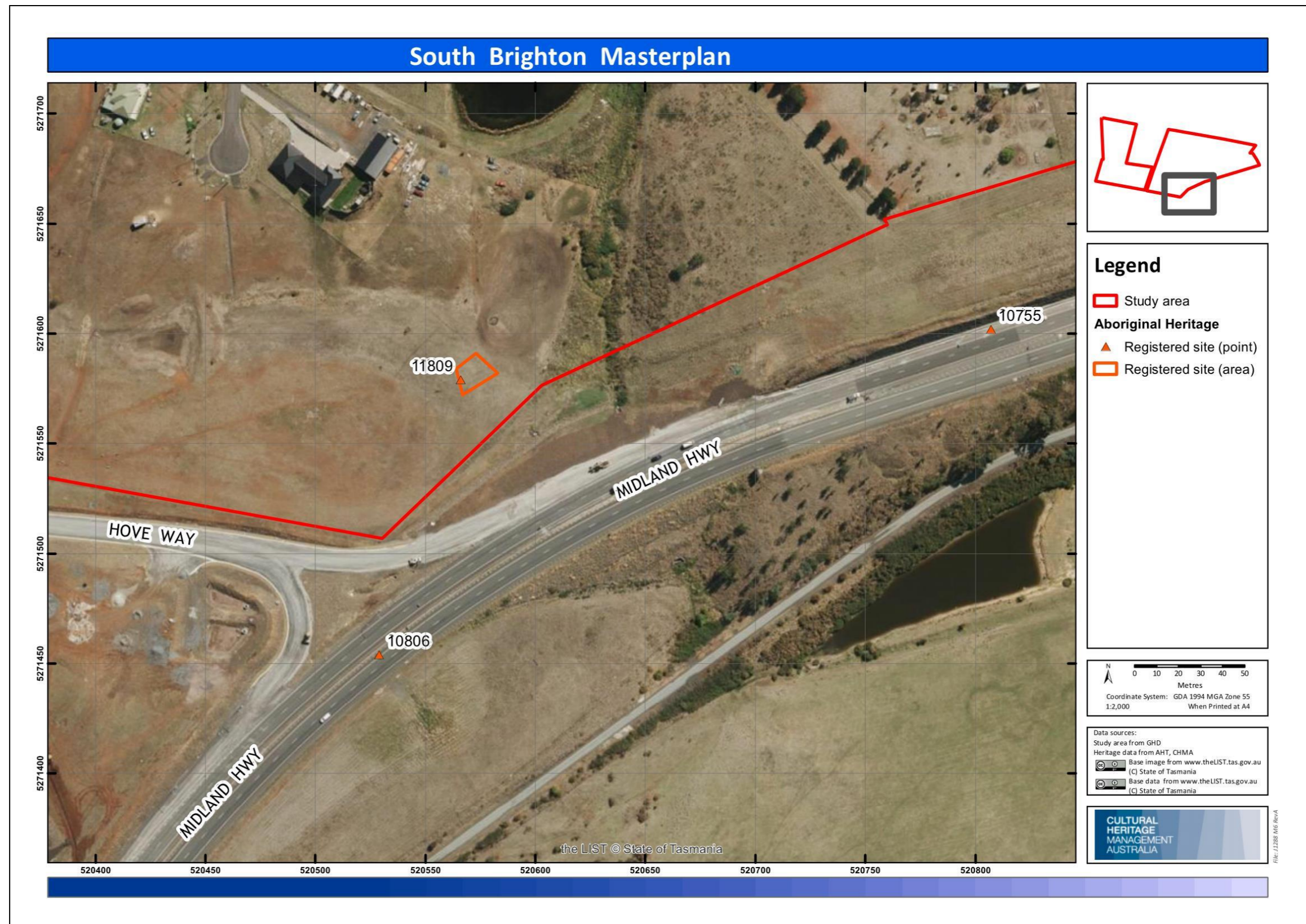


Figure 11: Aerial image showing the location of site AH11809, which was recorded during the survey assessment of the South Brighton Masterplan study area

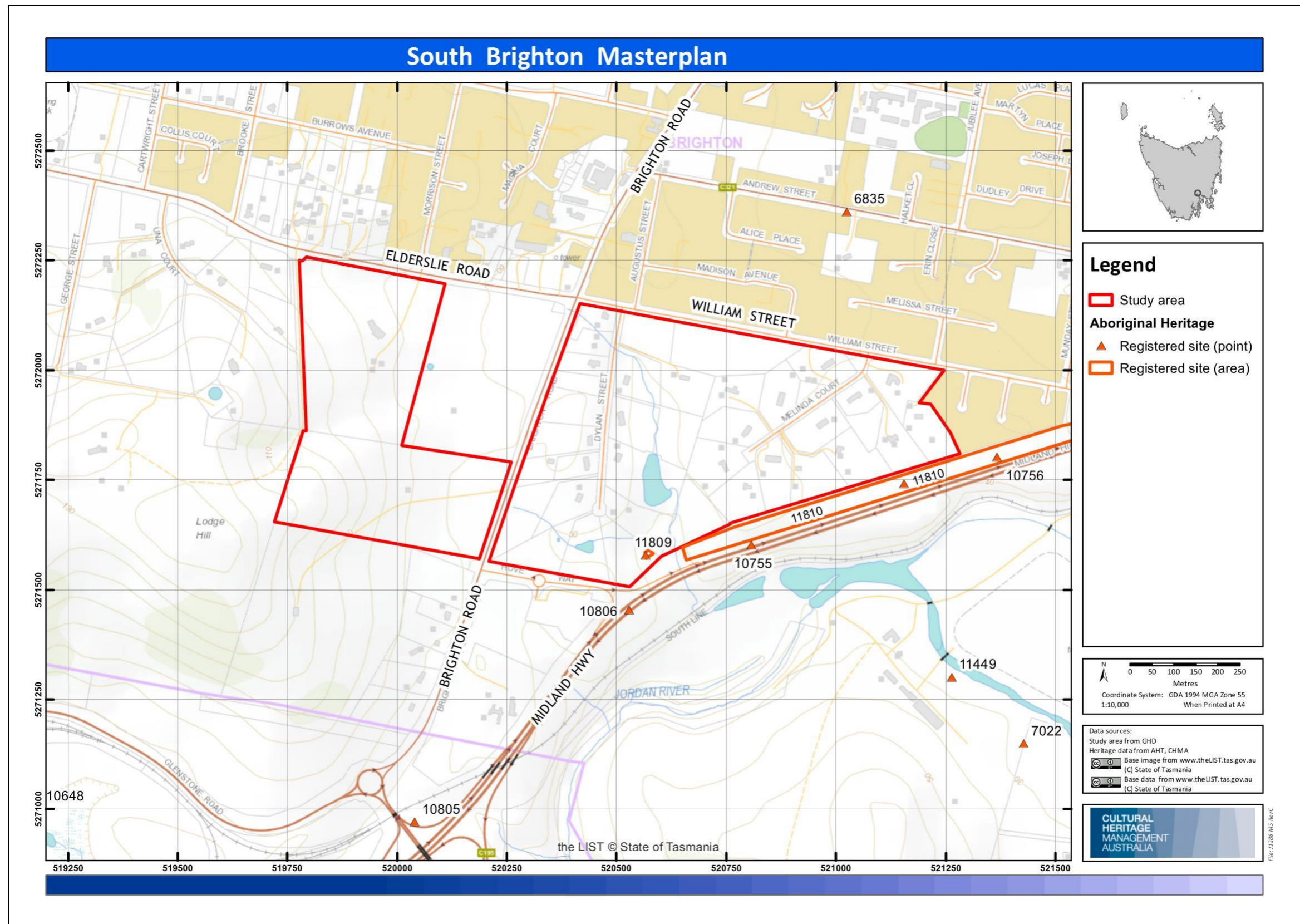


Figure 12: Topographic map showing the location of site AH11809, which is located in the study area, and registered sites AH10755, AH10756, AH10806 and AH11810 which are located outside the study area

8.0 Site Significance Assessments

The following provides an outline of the processes used to assess the significance of any cultural heritage sites that were identified during the course of the assessment.

8.1 Assessment Guidelines

There are several different ways of defining types of significance, and many practitioners have developed their own system of significance assessment. However, as Sullivan and Pearson (1995) point out, there seems to be a general advantage in using a set of criteria which is already widely accepted. In Australia cultural significance is usually assessed against the Burra Charter guidelines and the Australian Heritage Commission guidelines (ICOMOS 1988, 1999).

8.2 The Burra Charter

Under the guidelines of the Burra Charter 'cultural significance' refers to the 'aesthetic, historic, scientific, social or spiritual value for past, present or future generations' of a 'place' (ICOMOS 1999:2). The guidelines to the Burra Charter comment:

"Although there are a variety of adjectives used in definitions of cultural significance in Australia, the adjectives 'aesthetic', 'historic', 'scientific' and 'social' ... can encompass all other values".

The following provides the descriptions given for each of these terms.

Aesthetic Value

Aesthetic value includes aspects of sensory perception for which criteria can and should be stated. Such criteria may include consideration of the form, scale, colour, texture and materials of the fabric; the smells and sounds associated with the place and its use (Marquis-Kyle & Walker 1992).

Historic Value

A place may have historic value because it has influenced, or has been influenced by, an historic figure, event, phase or activity. It may also have historic value as the site of an important event. For any given place the significance will be greater where evidence of the association or event survives in situ, or where the settings are substantially intact, than where it has been changed or evidence does not survive. However, some events or associations may be so important that the place retains significance regardless of subsequent treatment (Marquis-Kyle & Walker 1992).

Scientific Value

The scientific or research value of a place will depend upon the importance of the data involved or its rarity, quality or representativeness and on the degree to which the place may contribute further substantial information.

A site or a resource is said to be scientifically significant when its further study may be expected to help current research questions. That is, scientific significance is defined as research potential (Marquis-Kyle & Walker 1992).

Social Value

The social value of a place is perhaps the most difficult value for heritage professionals to substantiate (Johnston 1994). However, social value is broadly defined as ‘the qualities for which a place has become a focus of spiritual, political, natural or other cultural sentimental to a majority or minority group’ (ICOMOS 1988:30). In *What is Social Value*, Johnston (1994) has provided a clear definition of social value:

“Social value is about collective attachment to places that embody meaning important to a community, these places are usually community owned or publicly accessible or in some other way ‘appropriated’ into people’s daily lives. Such meanings are in addition to other values, such as the evidence of valued aspects of history or beauty, and these meanings may not be apparent in the fabric of the place, and may not be apparent to the disinterested observer”. (Johnston 1994:10)

Although encompassed within the criterion of social value, the spiritual value of a place is a new addition to the Burra Charter (ICOMOS 1999:1). Spiritual value is predominantly used to assess places of cultural significance to Indigenous Australians.

The degree to which a place is significant can vary. As Johnston (1994:3) has stated when trying to understand significance a ‘variety of concepts [are] used from a geographical comparison (‘national’, ‘state’, ‘local’) to terms such as ‘early’, ‘rare’, or ‘seminal’’. Indeed, the Burra Charter clearly states that when assessing historic significance, one should note that for:

“any given place the significance will be greater where evidence of the association or event survives in situ, or where the setting are substantially intact, than where it has been changed or evidence does not survive”. (ICOMOS 1988:29)

8.3 Significance Criteria Relevant to Indigenous Sites

Indigenous heritage sites and places may have educational, tourism and other values to groups in society. However, their two principal values are likely to be in terms of their cultural / social significance to Aboriginal people and their scientific / archaeological significance. These are the two criteria that are commonly used in establishing the significance of Aboriginal sites. The following provides an explanation of these criteria.

1) Aboriginal Cultural / Social Significance

This relates to the value placed upon a site or suite of sites by the local or regional Aboriginal community. The identification and assessment of those sites that are significant to Aboriginal people is a matter for Aboriginal people. This assessment can only be made by the appropriate Aboriginal representatives of the relevant communities.

2) Scientific (Archaeological) Significance

Archaeological significance values (or scientific values) generally are assessed on the potential of a site or place to generate knowledge through archaeological research or knowledge. Bowdler (1984) states that the scientific significance should be assessed according to timely and specific research questions (research potential) and site representativeness.

Research potential entails the potential of a site or suite of sites for scientific research and excavation. This is measured in terms of a site's ability to provide information on aspects of Aboriginal culture. In this respect, the contents of a site and their state of preservation are important considerations.

Representativeness takes account of how common a site type is (Bowdler 1984). That is, it allows sites to be evaluated with reference to the known archaeological record within the given region. The primary goal of cultural resource management is to afford the greatest protection to a representative sample of sites throughout a region. The corollary of a representative site is the notion of a rare or unique site. These sites may help to understand the patterning of more common sites in the surrounding area, and are therefore often considered of archaeological significance. The concept of a rarity cannot be easily separated from that of representativeness. If a site is determined to be rare, then it will by definition be included as part of the representative sample of that site type.

The concepts of both research potential and representativeness are ever changing variables. As research interests shift and archaeological methods and techniques change, then the criteria for assessing site significance are also re-evaluated. As a consequence, the sample of site types which are used to assess site significance must be large enough to account for the change in these variables.

8.4 Summary Significance Ratings for Recorded Sites

Site AH11809 which was recorded during the survey assessment of the South Brighton Masterplan study area, has been assessed and allocated a rating of significance, based on the criteria presented in section 8.2. As discussed in section 8.2, Aboriginal sites are usually assessed in terms of their scientific and social significance. The concepts of Aesthetic significance and Historic significance are rarely applied in the assessment of Aboriginal sites unless there is direct evidence for European/Aboriginal contact activity at the site, or the site has specific and outstanding aesthetic values. However, based on advice received from AHT, aesthetic and historic significance values have also been taken into consideration as part of the assessment of site AH11809.

A five tiered rating system has been adopted for the significance assessment; low, low-medium, medium, medium-high and high. Table 4 provides the summary details for significance ratings for site AH11809. A more detailed explanation for the assessment ratings are presented in sections 8.5 to 8.7. Section 8.8 provides an assessment of significance in relation to the *Aboriginal Heritage Act 1975* (the Act), Section 9 of this report presents a statement of social significance provided by Rocky Sainty for site AH11809, and the study area as a whole.

Table 4: Summary significance ratings for Aboriginal site AH11809

AH Number	Site Type	Scientific Significance	Aesthetic Significance	Historic Significance	Social Significance
AH11809	Artefact scatter	Low-Medium	Low-Medium	N/A	Medium-High

8.5 Scientific Significance for Recorded Sites

Archaeological (or scientific) significance values generally are assessed on the potential of a site or place to generate knowledge through archaeological research or knowledge. Bowdler (1984) states that the scientific significance should be assessed according to timely and specific research questions (research potential) and site representativeness. Research potential entails the potential of a site or suite of sites for scientific research and excavation. This is measured in terms of a site's ability to provide information on aspects of Aboriginal culture. In this respect, the contents of a site and their state of preservation are important considerations. Representativeness takes account of how common a site type is (Bowdler 1984).

Site AH11809 is classified as a low density artefact scatter comprising a minimum of three artefacts. Isolated artefacts and artefact scatters are two of the most common site types recorded in the Region, and more broadly, the State of Tasmania (as demonstrated through the AHR search results for this project). As such, the scientific significance of artefact scatters and isolated artefacts usually relates primarily to their research potential as opposed to the rarity of the site type. The potential exception to this is where comparatively rare artefact types (either tool or stone material types) are represented in assemblages.

In this instance, site AH11809 is assessed as being of low-medium scientific significance. The rationale for this assessment is as follows.

- 1) The site is a common site type in the region and as such rarity is not a consideration.
- 2) The artefacts associated with the site are chert and silcrete flakes. This tool type and the two stone material types are commonly represented in artefact assemblages across the region. As such, rarity is again not a consideration.
- 3) The site has been subject to moderate levels of prior disturbance associated with land clearing and farming activity. This disturbance has reduced the research potential of the site.
- 4) It is assessed that there is some potential for additional undetected surface artefacts to be associated with site AH11809, however artefact densities are likely to be low. Given the skeletal nature of the soil deposits, there is very little potential for sub-surface artefact deposits to be present. This further limits the research potential of the site.

8.6 Aesthetic Significance of Recorded Sites

Aesthetic value includes aspects of sensory perception for which criteria can and should be stated. Such criteria may include consideration of the form, scale, colour, texture and materials of the fabric; the smells and sounds associated with the place and its use (Marquis-Kyle & Walker 1992).

Site AH11809 is situated on the western fringes of the Jordan River Valley. It is within cleared farm land that is fringed by urban development. The aesthetic significance of this landscape setting is assessed as being low-medium.

8.7 Historic Significance of Recorded Sites

A place may have historic value because it has influenced, or has been influenced by, an historic figure, event, phase or activity. It may also have historic value as the site of an important event. For any given place the significance will be greater where evidence of the association or event survives in situ, or where the settings are substantially intact, than where it has been changed or evidence does not survive. However, some events or associations may be so important that the place retains significance regardless of subsequent treatment (Marquis-Kyle & Walker 1992).

Historic significance is not an attribute often considered when assessing the significance of Aboriginal sites, unless there is direct evidence for some form of European/Aboriginal contact activity. In this instance no such evidence exists for site AH11809 As such the concept of historic significance is not applicable to this site.

8.8 Significance Under the Aboriginal Heritage Act 1975

In Tasmania, the *Aboriginal Heritage Act 1975* (the Act) is the primary Act for the treatment of Aboriginal cultural heritage. Under Part 1, Section 2(8) of the *Aboriginal Heritage Act 1975*, Aboriginal tradition and significance is defined as follows.

Aboriginal tradition means –

- (a) the body of traditions, knowledge, observances, customs and beliefs of Aboriginal people generally or of a particular community or group of Aboriginal people; and
- (b) any such tradition, knowledge, observance, custom or belief relating to particular persons, areas, objects or relationships;

significance, of a relic, means significance in accordance with –

- (a) the archaeological or scientific history of Aboriginal people; or
- (b) the anthropological history of Aboriginal people; or
- (c) the contemporary history of Aboriginal people; or
- (d) Aboriginal tradition.

In accordance with the *Aboriginal Heritage Standards and Procedures 2018*, Aboriginal heritage assessments in Tasmania have addressed the issue of significance as per the Burra Charter 2013. This approach has been adopted for this assessment (see sections 8.1 to 8.7 above). However, AHT have now advised that in order to ensure compliance with the *Aboriginal Heritage Act 1975* (the Act), assessments are now also to also consider significance and Aboriginal tradition as defined in the Act.

The Act came into effect in 1975, which is several decades before the Burra Charter Guidelines and protocols for determining significance were developed. To a large extent, the definitions of Aboriginal tradition and significance, as defined under Section 2(8) of the Act are covered by the Burra Charter, and have been addressed in this report.

The archaeological or scientific history of Aboriginal people (a) is covered under the concept of Scientific significance. This component of significance, as it relates to site AH11809, have been addressed in detail in sections 8.2, 8.3 and 8.5 of this report.

Aboriginal cultural, social and spiritual significance under the Burra Charter relates to the value placed upon a site or suite of sites by the local or regional Aboriginal community (see sections 8.2 and 8.3 of this report). The definition of Aboriginal tradition, as provided in the Act, is broadly covered under this section of the Burra Charter. As is the anthropological history of Aboriginal people (b), the contemporary history of Aboriginal people (c) and Aboriginal tradition (d).

The notion of Aboriginal cultural, social and spiritual significance, and the assessment of these values is a matter for Aboriginal people, and can only be made by the appropriate Aboriginal representatives of the relevant communities. Section 9 of this report presents a statement of cultural/social significance provided by Rocky Sainty for site AH11809, recorded during the current assessment, and the study area as a whole. Rocky Sainty is an experienced Aboriginal Heritage Officer, and a respected member of the Tasmanian Aboriginal community. In addition, the report has been sent out to a range of Aboriginal communities for review and comment. The results of the consultation program are presented in Appendix 3.

As described in section 3 of this report, the available ethnographic information indicates that the study area is within land traditionally occupied by the Leenowwenne people of the Big River Nation. Site AH11809 is one of a number of sites recorded within and along the fringes of the Jordan River Valley that provide tangible evidence for the occupation of this area by the Leenowwenne people. These sites retain a level of significance and importance to the present-day Tasmanian Aboriginal community (see section 9).

8.0 Consultation with Aboriginal Communities and Statement of Aboriginal Significance

The designated Aboriginal Heritage Officer (AHO) for this project is Rocky Sainty. One of the primary roles of the Aboriginal Heritage Officer is to consult with Aboriginal community groups. The main purpose of this consultation process is:

- to advise Aboriginal community groups of the details of the project,
- to convey the findings of the Aboriginal heritage assessment,
- to document the Aboriginal social values attributed to Aboriginal heritage resources in the study area,
- to discuss potential management strategies for Aboriginal heritage sites, and
- to document the views and concerns expressed by the Aboriginal community representatives.

Aboriginal Heritage Tasmania (AHT) has advised that there have been some changes to the accepted approach to Aboriginal community consultation, based on recommendations made by the AHC on 28 April 2017. These changes relate to cases where the AHC consider it may be sufficient for a Consulting Archaeologist (CA) or Aboriginal Heritage Officer (AHO) to consult only with the Aboriginal Heritage Council.

The Council recommended that consultation with an Aboriginal community organisation is not required for a proposed project when:

There are less than 10 isolated artefacts that are not associated with any other nearby heritage; or

The impact of the project on Aboriginal heritage:

- is not significant; or
- will not destroy the heritage; or
- affects only part of the outer approximately 20% of a buffer around a registered site

The CA and AHO will need to demonstrate in Aboriginal heritage reports including map outputs:

- that the proposed impact on the Aboriginal heritage within the project area is not significant and why;
- that the project activity will not destroy the heritage;
- that the proposed impact to the site buffer is not adjacent to a significant component of the registered site polygon.

One Aboriginal site was recorded during the survey assessment of the South Brighton Masterplan study area (site AH11809). This site is situated within an area where it is possible that residential development may occur, and it is therefore possible that the site will be impacted. Besides site AH11809, no other Aboriginal heritage sites were identified within the study area, and it is assessed that there is generally a low potential for undetected Aboriginal sites to be present.

Because there is a risk that site AH11809 may be impacted by future development, the decision has been made to still circulate this report to relevant Aboriginal community organisations for comment. The results of the consultation process are presented in Appendix 3 of this report.

Rocky Sainty has provided a statement of the Aboriginal cultural values attributed to site AH11809 and the study area as a whole. This statement is presented below.

Statement of Cultural/Social Significance by Rocky Sainty

Aboriginal heritage provides a direct link to the past, however is not limited to the physical evidence of the past.

It includes both tangible and intangible aspects of culture. Physical and spiritual connection to land and all things within the landscape has been, and continues to be, an important feature of cultural expression for Aboriginal people since creation. Physical evidence of past occupation of a specific place may include artefacts, living places (middens), rock shelters, markings in rock or on the walls of caves and/or rock shelters, burials and ceremonial places. Non-physical aspects of culture may include the knowledge (i.e. stories, song, dance, weather patterns, animal, plant and marine resources for food, medicines and technology) connected to the people and the place.

While so much of the cultural landscape that was **lutruwita** (Tasmania) before invasion and subsequent colonization either no longer exists, or has been heavily impacted on, these values continue to be important to the Tasmanian Aboriginal community, and are relevant to the region of the project proposal.

There was one site identified during our survey of the South Brighton study area, (site AH11809). This was an artefact scatter comprising three artefacts. The site has been assessed by the archaeologist (Stuart Huys) as being of low-medium scientific significance. Whilst I accept this view, I have advised that the site is of Medium-high social significance to the Tasmanian Aboriginal community. The site may be at risk of being impacted by proposed residential development activity. I would advocate that if possible, the site should be protected and conserved. Alternatively, if the site can't be avoided, then prior to residential development in this area occurring, the artefacts should be collected and relocated to a safe location in the general area which will not be impacted by the development. This is reflected in the management recommendations made in this report (see section 11). Besides site AH11809, I did not note any other potential Aboriginal heritage sites in the study area, and on the whole, I believe there is a reduced potential for additional Aboriginal sites to be present. This is based on my observations made during the field survey assessment, together with my previous experiences in the surrounding area where I carried out a range of surveys assessments.

Even if the site of the project proposal contains no evidence of Aboriginal heritage there is always the cultural resources (flora, fauna, aquaculture or any other resource values that the earth may offer) and the living landscape, which highlight the high significance to the Aboriginal cultural heritage values to the

country.

The study area incorporates land that has been subject to high levels of landscape modification from land clearing and farming, as well as rural/residential development. Through this, much of the traditional resources of the area are now gone.

10.0 Statutory Controls and Legislative Requirements

The following provides an overview of the relevant State and Federal legislation that applies for Aboriginal heritage within the state of Tasmania.

10.1 State Legislation

In Tasmania, the *Aboriginal Heritage Act 1975* (the Act) is the primary Act for the treatment of Aboriginal cultural heritage. The Act is administered by the Minister for Aboriginal Affairs, through Aboriginal Heritage Tasmania (AHT) in the Department of Primary Industries, Parks, Water and the Environment (DPIPWE). AHT is the regulating body for Aboriginal heritage in Tasmania and '[n]o fees apply for any application to AHT for advice, guidance, lodgement or permit application'.

The Act applies to 'relics' which are any object, place and/or site that is of significance to the Aboriginal people of Tasmania (as defined in section 2(3) of the Act). The Act defines what legally constitutes unacceptable impacts on relics and a process to approve impacts when there is no better option. Aboriginal relics are protected under the Act and it is illegal to destroy, damage, deface, conceal or otherwise interfere with a relic, unless in accordance with the terms of a permit granted by the Minister. It is illegal to sell or offer for sale a relic, or to cause or permit a relic to be taken out of Tasmania without a permit (section 2(4) qualifies and excludes 'objects made, or likely to have been made, for purposes of sale').

Section 10 of the Act sets out the duties and obligations for persons owning or finding an Aboriginal relic. Under section 10(3) of the Act, a person shall, as soon as practicable after finding a relic, inform the Director or an authorised officer of the find.

It should be noted that with regard to the discovery of suspected human skeletal remains, the *Coroners Act 1995* takes precedence. The *Coroners Act 1995* comes into effect initially upon the discovery of human remains, however once determined to be Aboriginal the *Aboriginal Relics Act* overrides the *Coroners Act*.

In August 2017, the Act was substantively amended and the title changed from the *Aboriginal Relics Act 1975*. As a result, the AHT *Guidelines to the Aboriginal Heritage Assessment Process* were replaced by the *Aboriginal Heritage Standards and Procedures*. The Standards and Procedures are named in the statutory *Guidelines* of the Act issued by the Minister under section 21A of the Act. Other amendments include:

- An obligation to fully review the Act within three years.
- Increases in maximum penalties for unlawful interference or damage to an Aboriginal relic. For example, maximum penalties (for deliberate acts) are 10,000 penalty units (currently \$1.57 million) for bodies corporate other than small business entities and 5,000 penalty units (currently \$785,000) for individuals or small business entities; for reckless or negligent offences, the maximum penalties are 2,000 and 1,000 penalty units respectively (currently \$314,000 and \$157,000). Lesser offences are also defined in sections 10, 12, 17 and 18.

- Prosecution timeframes have been extended from six months to two years.
- The establishment of a statutory Aboriginal Heritage Council to advise the Minister.

Section 21(1) specifies the relevant defence as follows: "It is a defence to a prosecution for an offence under section 9 or 14 if, in relation to the section of the Act which the defendant is alleged to have contravened, it is proved ... that, in so far as is practicable ... the defendant complied with the guidelines".

10.2 Commonwealth Legislation

There are also a number of Federal Legislative Acts that pertain to cultural heritage. The main Acts being; *The Australian Heritage Council Act 2003*, *The Aboriginal and Torres Strait Islander Heritage Protection Act 1987* and the *Environment Protection and Biodiversity Conservation Act 1999*

Australian Heritage Council Act 2003 (Comm)

The *Australian Heritage Council Act 2003* defines the heritage advisory boards and relevant lists, with the Act's Consequential and Transitional Provisions repealing the Australian Heritage Commission Act 1975. The Australian Heritage Council Act, like the Australian Heritage Commission Act, does not provide legislative protection regarding the conservation of heritage items in Australia, but has compiled a list of items recognised as possessing heritage significance to the Australian community. The Register of the National Estate, managed by the Australian Heritage Council, applies no legal constraints on heritage items included on this list.

The Aboriginal and Torres Strait Islander Heritage Protection Act 1987.

This Federal Act was passed to provide protection for the Aboriginal heritage, in circumstances where it could be demonstrated that such protection was not available at a state level. In certain instances, the Act overrides relevant state and territory provisions.

The major purpose of the Act is to preserve and protect from injury and desecration, areas and objects of significance to Aborigines and Islanders. The Act enables immediate and direct action for protection of threatened areas and objects by a declaration from the Commonwealth minister or authorised officers. The Act must be invoked by, or on behalf of an Aboriginal or Torres Strait Islander or organisation.

Any Aboriginal or Torres Strait Islander person or organization may apply to the Commonwealth Minister for a temporary or permanent 'Stop Order' for protection of threatened areas or objects of significant indigenous cultural heritage.

The Commonwealth Act 'overrides' State legislation if the Commonwealth Minister is of the opinion that the State legislation (or undertaken process) is insufficient to protect the threatened areas or objects. Thus, in the event that an application is made to the Commonwealth Minister for a Stop Order, the Commonwealth Minister will, as a matter of course, contact the relevant State Agency to ascertain what

protection is being imposed by the State and/or what mitigation procedures have been proposed by the landuser/developer.

In addition to the threat of a 'Stop Order' being imposed, the Act also provides for the following:

- If the Federal Court, on application from the Commonwealth Minister, is satisfied that a person has engaged or is proposing to engage in conduct that breaches the 'Stop Order', it may grant an injunction preventing or stopping such a breach (s.26). Penalties for breach of a Court Order can be substantial and may include a term of imprisonment;
- If a person contravenes a declaration in relation to a significant Aboriginal area, penalties for an individual are a fine up to \$10,000.00 and/or 5 years gaol and for a Corporation a fine up to \$50,000.00 (s.22);
- If the contravention is in relation to a significant Aboriginal object, the penalties are \$5,000.00 and/or 2 years gaol and \$25,000.00 respectively (s.22);
- In addition, offences under s.22 are considered 'indictable' offences that also attract an individual fine of \$2,000 and/or 12 months gaol or, for a Corporation, a fine of \$10,000.00 (s.23). Section 23 also includes attempts, inciting, urging and/or being an accessory after the fact within the definition of 'indictable' offences in this regard.

The Commonwealth Act is presently under review by Parliament and it is generally accepted that any new Commonwealth Act will be even more restrictive than the current legislation.

Environment Protection and Biodiversity Conservation Act 1999 (Comm)

This Act was amended, through the Environment and Heritage Legislation Amendment Act (No1) 2003 to provide protection for cultural heritage sites, in addition to the existing aim of protecting environmental areas and sites of national significance. The Act also promotes the ecologically sustainable use of natural resources, biodiversity and the incorporation of community consultation and knowledge.

The 2003 amendments to the *Environment Protection and Biodiversity Conservation Act 1999* have resulted in the inclusion of indigenous and non-Indigenous heritage sites and areas. These heritage items are defined as:

'indigenous heritage value of a place means a heritage value of the place that is of significance to indigenous persons in accordance with their practices, observances, customs, traditions, beliefs or history;

Items identified under this legislation are given the same penalty as actions taken against environmentally sensitive sites. Specific to cultural heritage sites are §324A-324ZB.

Environment and Heritage Legislation Amendment Act (No1) 2003 (Comm)

In addition to the above amendments to the *Environment Protection and Biodiversity Conservation Act 1999* to include provisions for the protection and conservation of heritage, the Act also enables the identification and subsequent listing of items for

the Commonwealth and National Heritage Lists. The Act establishes the *National Heritage List*, which enables the inclusion of all heritage, natural, Indigenous and non-Indigenous, and the *Commonwealth Heritage List*, which enables listing of sites nationally and internationally that are significant and governed by Australia.

In addition to the *Aboriginal and Torres Strait Islander Heritage Protection Act 1987*, amendments made to the *Environment Protection and Biodiversity Conservation Act 1999 (Cth)* enables the identification and subsequent listing of indigenous heritage values on the Commonwealth and/or National Heritage Lists (ss. 341D & 324D respectively). Substantial penalties (and, in some instances, gaol sentences) can be imposed on any person who damages items on the National or Commonwealth Heritage Lists (ss. 495 & 497) or provides false or misleading information in relation to certain matters under the Act (ss.488-490). In addition, the wrongdoer may be required to make good any loss or damage suffered due to their actions or omissions (s.500).

11.0 Aboriginal Cultural Heritage Management Plan

Heritage management options and recommendations provided in this report are made on the basis of the following criteria.

- Consultation with Rocky Sainty (Aboriginal Heritage Officer), and Aboriginal community organisations.
- The legal and procedural requirements as specified in the *Aboriginal Heritage Act 1975* (The Act).
- The results of the investigation as documented in this report; and
- Background research into the extant archaeological and ethno-historic record for the study area and the surrounding region.

Recommendation 1 (Site AH11809)

Site type: Artefact scatter

Grid Reference: (GDA 94)

- E520583 N5271582
- E520567 N5271572
- E520564 N5271584
- E520573 N5271591

Site AH11809 is classified as an Artefact scatter, which is located within the eastern portion of the study area see Figure 13). The grid references above denote the site boundaries.

The preferred management option is to conserve site AH11809 in-situ and to protect the site from any impacts associated with the proposed development works. To this end, the following management strategies should be implemented.

- The site area should be plotted onto the development masterplan.
- Prior to works commencing, a durable, high visibility temporary barricading should be erected around the defined boundaries of the site with a 5m buffer applied on all sides. These barricades are to be removed at the completion of any development works.
- Construction contractors should be informed of the location of the site and informed that the site is not to be impacted.

All Aboriginal relics are protected under the *Aboriginal Heritage Act 1975* (The Act) and it is illegal to destroy, damage, deface, conceal or otherwise interfere with a relic, unless in accordance with the terms of a permit granted by the Minister. If it is not possible to conserve site AH11809 in-situ, then the Proponent will need to apply for and obtain a Permit to impact this site before development works can commence within the site boundaries.

It is recommended that a condition of the Permit should be that the artefacts associated with site AH11809 will be salvage collected and relocated to a safe location outside the development footprint, but in the same general landscape setting. The salvage program to be implemented by an archaeologist and an AHO. A brief summary report should be prepared, documenting the outcome of the salvage

program. The summary report will include details regarding the relocation point for the artefacts.

Recommendation 2 (Remainder of the study area)

Besides site AH11809, no other Aboriginal heritage sites, suspected features, or specific areas of elevated archaeological potential were recorded during the survey assessment of the study area. It is advised that there are no further archaeological investigations warranted for this area, and no additional Aboriginal heritage constraints to development activity proceeding.

Recommendation 3 (Registered sites close to the study area)

The AHR search results show that there are four registered site which are situated along the Midland Highway, just to the south-east of the east boundary of the study area (sites AH10755, AH10756, AH10806 and AH11810). Based on the grid reference locations provided on the AHR, all four sites are confirmed as being located outside the study area. Site AH10806 (an artefact scatter) is situated 55m to the south of the study area. Site AH10755 (an Isolated artefact) is located 65m to the south of the study area. Site AH11810 (an artefact scatter) is located immediately to the south of the study area and site AH10756 (an Isolated artefact) is 95m to the east (see Figure 13). These sites should be plotted onto the South Brighton Masterplan and it noted that these sites are not to be impacted.

Recommendation 4 (Unanticipated Discovery Plan)

It is assessed that there is generally a low to very low potential for undetected Aboriginal heritage sites to occur within the study area boundaries. However, if, during the course of proposed development works, previously undetected archaeological sites or objects are located, the processes outlined in the Unanticipated Discovery Plan should be followed (see Appendix 4). A copy of the Unanticipated Discovery Plan should be kept on site during all ground disturbance and development work. All personnel should be made aware of the Unanticipated Discovery Plan and their obligations under the *Aboriginal Heritage Act 1975* (the Act). Under section 10(3) of the Act, a person shall, as soon as practicable after finding a relic, inform the Director or an authorised officer of the find.

Recommendation 5 (Provision of Reports)

Copies of this report should be submitted to Aboriginal Heritage Tasmania (AHT) for review and comment.

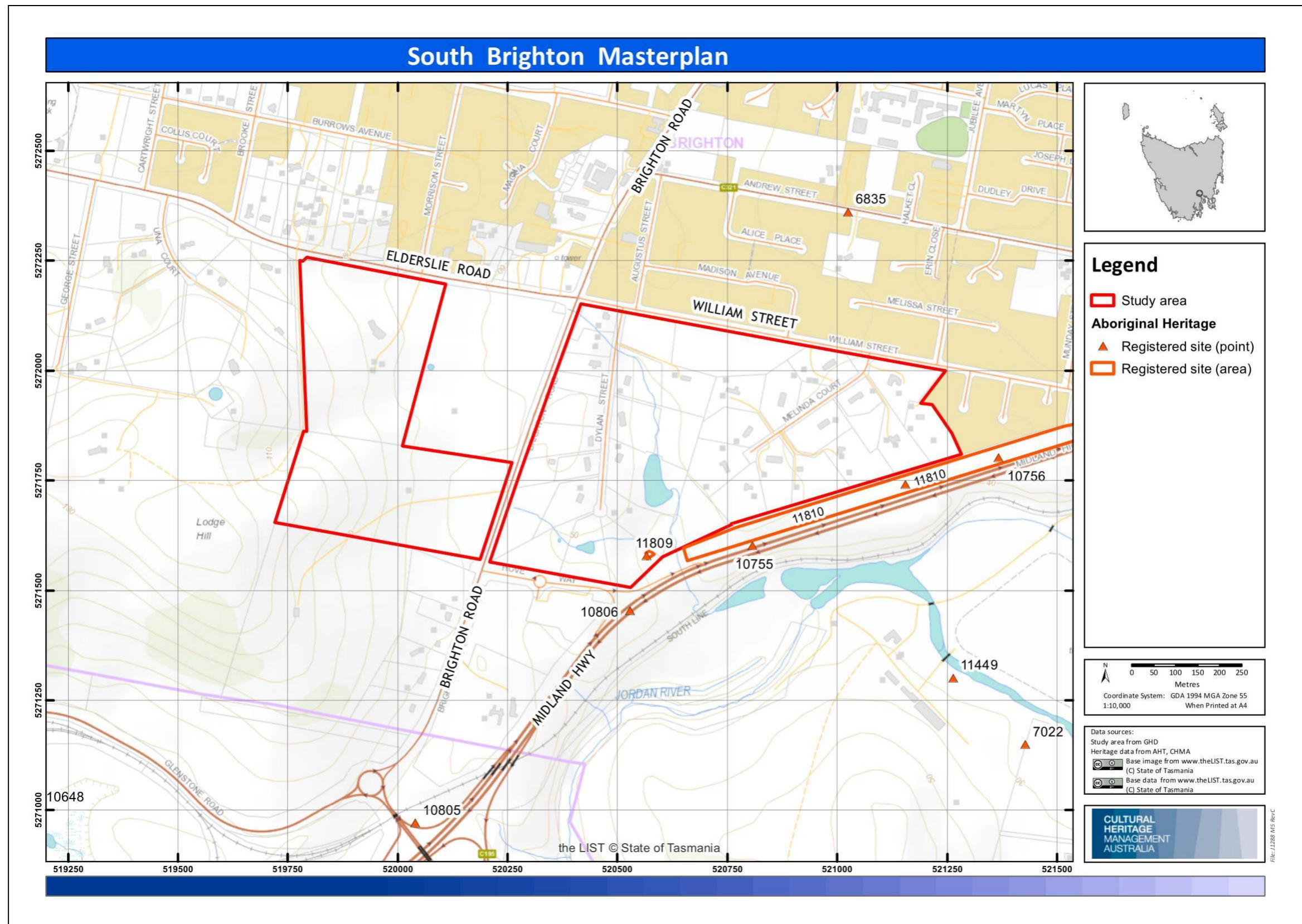


Figure 13: Topographic map showing the location of site AH11809, which is located in the study area, and registered sites AH10755, AH10756, AH10806 and AH11810 which are located outside the study area

References Cited

- Alexander, A. 2006 *Brighton and Surrounds*. Brighton Council: Brighton, Tas.
- Arthur, G. 1828 *Dispatch to Viscount Goderich, Secretary of state for War and Colonies, Jan 10, 1828*. Mitchell Library Archive Collection, A1205: Dispatches to the Governor of New South Wales Vol. 16 1829.
- Australian ICOMOS
1988 *Guidelines to the Burra Charter*.
1999 *The Burra Charter*.
- Backhouse, J. 1843 *A Narrative of a visit to the Australian Colonies*. Hamilton, London: Adams and Co.
- Bass, J. 1799 In Collins, D. (ed) 1971 *An Account of the English Colony in New South Wales Vol 2, London 17989-1802*, Facsimile Edition. Adelaide: Adelaide Library Board, South Australia.
- Baudin, N. 1974 *The Journal of Post Captain Nicolas Baudin Commander-in-Chief-of the Corvettes Geographe and Naturaliste*. Translated from French by C. Cornell, Adelaide: Libraries Board of South Australia.
- Blundell, V. 2003 *The Art of Country: aesthetics, place and Aboriginal identity in north-west Australia*. In D. Trigger and G. Griffiths (eds), *Disputed Territories: Land, Culture and Identity in Settler Societies*. Hong Kong: Hong Kong University Press.
- Bonnemains, J., E. Forsyth and B. Smith (eds)
1988 *Baudin in Australian Waters: the artwork of the French voyage of discovery to the southern lands 1800-1804*. Oxford University Press and the Australian Academy of the Humanities: Melbourne.
- Boyce, J. 2009 *Van Diemen's Land*. Black Inc: Melbourne.
- Brown, S. 1986 *Aboriginal Archaeological Resources in South East Tasmania. An Overview of the Nature and Management of Aboriginal Sites, Occasional Paper No.12*. Hobart: National Parks and Wildlife Service, Tasmania.
1991 *Aboriginal Archaeological Sites in Eastern Tasmania: A Cultural Resource Management Statement. National Parks and Wildlife Service Occasional Paper No.31*. Hobart: National Parks and Wildlife Service.

CHMA

- 2008a *Brighton Bypass Southern Route Alignment, Aboriginal Heritage Assessment*. A Report to Pitt and Sherry.
- 2008b *Brighton Transport Hub. Stage 1 Investigations; Summary Report*. A Report to Pitt and Sherry.
- 2011 *Bridgewater Bridge Planning Study Aboriginal Cultural Heritage Assessment*. A Report to GHD.
- 2013 *Proposed Subdivision of Boral Land at Bridgewater, South East Tasmania: Aboriginal Heritage Assessment*. A report to Boral.
- 2017 *Cove Hill Bridge Replacement Project at Brighton: Aboriginal Heritage Assessment*. A report to the Brighton Council.
- 2019 *Brighton Service Centre Project 40 Brighton Road, Brighton – Aboriginal Heritage Assessment*. A report to Retail Fuel Developments Pty Ltd.
- Collins, D. 1971 *An Account of the English Colony in New South Wales Vol 2, London 17989-1802*. 1971 Facsimile Edition, Adelaide: Libraries Board of South Australia.
- Dyer, C. 2005 *The French Explorers and the Aboriginal Australians 1772-1839*. University of Queensland Press: St Lucia, Qld.
- Entura 2013 *South East Irrigation Scheme Pumps and Pipelines Aboriginal Heritage Assessment Report*. A report to Tasmanian Irrigation.
- Everett, A. 2008 *Midland Highway, Brighton Transport Project: Aboriginal Cultural Heritage Assessment*. A Report to GHD Pty Ltd.
- Hiatt, B. 1967 The food quest and the economy of the Tasmanian Aborigines. *Oceania* 38:99-133 and 38:190-219.
- Huys, S. (CHMA) 2009 A Preliminary Aboriginal Cultural Heritage Assessment of the Horses Head, Bridgewater, Tasmania. Unpublished report to BCMG Limited.
- Jones, M. 2012 Proposed Brighton WWTP and Rising Main, South East Tasmania. An unpublished report to Sinclair Knight Merz and Southern Water.

- Jones, R. 1969 Fire-stick farming. *Australian Natural History* 16(7):224-228.
- 1974 Tasmanian Tribes, Appendix in N.B. Tindale, *Aboriginal Tribes of Australia*. Berkeley: University of California Press.
- Kelly, J. 1881 Boat Expeditions Round Tasmania, 1815-16 and 1824. Reports of the Tasmania House of Assembly No. 107.
- Labillardiere, J.J.H.
 1800 *Voyage in search of La Perouse performed by order of the Constituent Assembly during the years 1791, 1792, 1793 and 1794*. London: John Stockdale.
- Lines W. 1991 *Taming the Great South Land: a history of the conquest of nature in Australia*. University of Georgia Press: Athens, Georgia
- Maynard, L. and McConnell A.
 2003 *Tasmanian Natural Gas Distribution Project: Hobart Area Distribution Pipeline (Bridgewater-Glenorchy-Hobart-Sandy Bay) Aboriginal Cultural Heritage Assessment Stage 2*. Report for Powerco Australian Holdings Pty Ltd.
- McGowan, A. 1985 Archaeological Investigations at Risdon Cove Historic Site: 1978-1980. *National Parks and Wildlife Service Tasmania, Occasional Paper No.10*.
- Mortimer, G. 1791 *Observations and Remarks made during a Voyage etc*. London: Mortimer.
- Officer, I 1980 *Survey of Derwent River Aboriginal midden and quarry sites*. Unpublished B.Ed. Thesis (TCAE Hobart).
- Parham, D. 1993 Midland Highway, Bridgewater to Brighton: Boral Quarry Access Road to "The Lodge". Unpublished report to the Department of Transport and Works.
- Paton, R. 2010 Final Archaeology Report on the Test Excavations of the Jordan River Levee. Unpublished Report to the Tasmanian Aboriginal Centre and DIER.
- 1995 An Archaeological Investigation of the Bridgewater to New Norfolk Optical Fibre Cable Route. Unpublished report to Telstra Tasmania.
- 1994 An Archaeological Investigation of the Brighton to Bridgewater Optical Fibre Cable Route. Unpublished report to Telecom Tasmania.

Plomley, N.J.B

1966 *Friendly Mission: The Journals of Augustus Robinson 1829-1834, 1st Edition*. Hobart: Tasmanian Historical Research Association.

1983 (ed.) *The Baudin Expedition and the Tasmanian Aborigines 1802*. Hobart: Blubberhead Press.

2008 *Friendly Mission: The Tasmanian journals of George Augustus Robinson, 1829-1834*. Second Edition. Edited by Plomley, N. J. B. Queen Victoria Museum and Art Gallery and Quintus Publishing. Hobart, Tas.

Roth, H.L. (ed.) 1891 *Corzet's Voyage to Tasmania, New Zealand...in the years 1771-17712*. London: Truslove and Shirley.

Ryan, L. 2012 *Tasmanian Aborigines: a History Since 1803*. Crow's Nest, NSW: Allen and Unwin.

Sainty, R. 2007 *A Survey for Aboriginal Heritage at Derwent Estuary Foreshore Walkway Old Beach to Bridgewater Walking Track*. A report for the Brighton Council.

Stanton, S.

2008a *Aboriginal cultural heritage assessment: Midland Highway – Brighton Bypass (Southern Section)*. A Report to Pitt and Sherry (Hobart).

2008b *Aboriginal cultural heritage assessment: Brighton Transport Hub – Toll Site*. A Report to Pitt and Sherry (Hobart).

2008c *Aboriginal cultural heritage assessment: Brighton Transport Hub – Toll Site (Extension of Study Area)*. A Report to Pitt and Sherry (Hobart).

2008d *Aboriginal Cultural Heritage Assessment – Brighton Transport Hub*. Unpublished report to Pitt and Sherry.

2008e *Aboriginal Cultural Heritage Assessment: Brighton Transport Hub – Boral East Site*. Unpublished report to Pitt and Sherry.

2000 *An Aboriginal Cultural Heritage Assessment of the Brighton Camp, at Brighton on Southern Tasmania*. Unpublished report to Inspiring Place Pty Ltd and the Tasmanian Aboriginal Land Council.

Stone, T. and Everett, A.

2009 *Proposed Brighton Bypass Northern Section Aboriginal Site Survey*. A Report to GHD Pty Ltd.

Glossary of Terms

Aboriginal Archaeological Site

A site is defined as any evidence (archaeological features and/or artefacts) indicating past Aboriginal activity, and occurring within a context or place relating to that activity. The criteria for formally identifying a site in Australia vary between States and Territories.

Artefact

A portable object that has been humanly made or modified (see also stone artefact).

Assemblage (lithic)

A collection of complete and fragmentary stone artefacts and manuports obtained from an archaeological site, either by collecting artefacts scattered on the ground surface, or by controlled excavation.

Broken Flake

A flake with two or more breakages, but retaining its area of break initiation.

Chert

A highly siliceous rock type that is formed biogenically from the compaction and precipitation of the silica skeletons of diatoms. Normally there is a high percentage of cryptocrystalline quartz. Like chalcedony, chert was valued by Aboriginal people as a stone material for manufacturing stone tools. The rock type often breaks by conchoidal (shell like) fracture, providing flakes that have hard, durable edges.

Cobble

Water worn stones that have a diameter greater than 64mm (about the size of a tennis ball) and less than 256mm (size of a basketball).

Core

A piece of stone, often a pebble or cobble, but also quarried stone, from which flakes have been struck for the purpose of making stone tools.

Core Fragments

A piece of core, without obvious evidence of being a chunky primary flake.

Cortex

The surface of a piece of stone that has been weathered by chemical and/or physical means.

Debitage

The commonly used term referring to the stone refuse discarded from knapping. The manufacturing of a single implement may result in the generation of a large number of pieces ofdebitage in an archaeological deposit.

Flake (general definition)

A piece of stone detached from a nucleus such as a core. A complete or substantially complete flake of lithic material usually shows evidence of hard indenter initiation, or occasional bending initiation. The most common type of flake is the 'conchoidal flake'. The flake's primary fracture surface (the ventral or inside surface) exhibits features such as fracture initiation, bulb of force, and undulations and lances that indicate the direction of the fracture front.

Flake fragment

An artefact that does not have areas of fracture initiation, but which displays sufficient fracture surface attributes to allow identification as a stone artefact fragment.

Flake portion (broken flake)

The proximal portion of a flake retaining the area of flake initiation, or a distal portion of a flake that retains the flake termination point.

Flake scraper

A flake with retouch along at least one margin. The character of the retouch strongly suggests shaping or rejuvenation of a cutting edge.

Nodules

Regular or irregular cemented masses or nodules within the soil. Also referred to as concretions and buckshot gravel. Cementing agents may be iron and/or manganese oxides, calcium carbonate, gypsum etc. Normally formed in situ and commonly indicative of seasonal waterlogging or a fluctuating chemical environment in the soil such as; oxidation and reduction, or saturation and evaporation. Nodules can be redistributed by erosion. (See also 'concretion').

Pebble

By geological definition, a waterworn stone less than 64 mm in diameter (about the size of a tennis ball). Archaeologists often refer to waterworn stones larger than this as pebbles though technically they are cobbles.

Quartz

A mineral composed of crystalline silica. Quartz is a very stable mineral that does not alter chemically during weathering or metamorphism. Quartz is abundantly common and was used by Aboriginal people throughout Australia to make light-duty cutting tools. Despite the often unpredictable nature of fracture in quartz, the flakes often have sharp cutting edges.

Quartzite

A hard silica rich stone formed in sandstone that has been recrystallised by heat (metaquartzite) or strengthened by slow infilling of silica in the voids between the sand grains (Orthoquartzite).

Retouch (on stone tools)

An area of flake scars on an artefact resulting from intentional shaping, resharpening, or rejuvenation after breakage or blunting of a cutting edge. In resharpening a cutting edge the retouch is invariably found only on one side (see also 'indeterminate retouched piece', retouch flake' etc).

Scraper

A general group of stone artefacts, usually flakes but also cores, with one or more retouched edges thought to have been used in a range of different cutting and scraping activities. A flake scraper is a flake with retouch along at least one margin, but not qualifying for attribution to a more specific implement category. Flake scrapers sometimes also exhibit use-wear on the retouched or another edge.

Silcrete

A hard, fine grained siliceous stone with flaking properties similar to quartzite and chert. It is formed by the cementing and/or replacement of bedrock, weathering deposits, unconsolidated sediments, soil or other material, by a low temperature physico-chemical process. Silcrete is essentially composed of quartz grains cemented by microcrystalline silica. The clasts in silcrete are most often quartz grains but may be chert or chalcedony or some other hard mineral particle. The mechanical properties and texture of silcrete are equivalent to the range exhibited by chert at the fine-grained end of the scale and with quartzite at the coarse-grained end of the scale. Silcrete was used by Aboriginal people throughout Australia for making stone tools.

Site Integrity

The degree to which post-depositional disturbance of cultural material has occurred at a site.

Stone Artefact

A piece (or fragment) of stone showing evidence of intentional human modification.

Stone procurement site

A place where stone materials is obtained by Aboriginal people for the purpose of manufacturing stone artefacts. In Australia, stone procurement sites range on a continuum from pebble beds in water courses (where there may be little or no evidence of human activity) to extensively quarried stone outcrops, with evidence of pits and concentrations of hammerstones and a thick layer of knapping debris.

Stone tool

A piece of flaked or ground stone used in an activity, or fashioned for use as a tool. A synonym of stone tool is 'implement'. This term is often used by archaeologists to describe a flake tool fashioned by delicate flaking (retouch).

Use wear

Macroscopic and microscopic damage to the surfaces of stone tools, resulting from its use. Major use-wear forms are edge fractures, use-polish and smoothing, abrasion, and edge rounding bevelling.

Appendix 1

Gazetteer of Recorded Sites

AH No.	Grid Reference (GDA 94)	Site Type	Site Description
AH11809	E520583 N5271582 E520567 N5271572 E520564 N5271584 E520573 N5271591	Artefact scatter	<p>Site is located around 70m to the north of the Midland Highway, within a cleared farm paddock, on the basal east side slopes of a hill, around 30m south-west of an un-named ephemeral drainage gully. The three artefacts were identified across an area measuring approximately 20m x 15m,</p> <p><i>Artefact details</i></p> <ul style="list-style-type: none"> - Red silcrete flake 42mm x 36mm x 12mm - Grey chert flake 64mm x 59mm x 16mm - Red/grey silcrete flake 41mm x 33mm x 11mm

Appendix 2

Detailed Site Descriptions

Site Name: AH11809

Site Type: Artefact

Grid references: (GDA 94)

- E520583 N5271582
- E520567 N5271572
- E520564 N5271584
- E520573 N5271591

Original Site Description

Site AH11809 site was originally recorded by Entura (2013), as part of the South East Irrigation Scheme assessment. The site was described as an artefact scatter comprising three stone artefacts that were scattered across an area measuring 25m x 10m. The site was reported to be situated on the west side of a dissected gully which is a tributary of the Jordan River. The artefacts described at the site were two cherty hornfel flakes and a silcrete hammerstone.

Current Site Description

During the course of the current survey assessment, a low density artefact scatter comprising three stone artefacts was identified at the same location as reported for site AH11809. Given the correlation in location, and site contents, it is assumed that this is site AH11809.

The site is located around 70m to the north of the Midland Highway, within a cleared farm paddock, on the basal east side slopes of a hill, 30m south-west of an unnamed ephemeral drainage gully. The slope gradients in the area where the site was located is around 1-2°. The closest named water course to the site is the Jordan River, which is situated approximately 450m to the east. The three artefacts were identified across an area measuring approximately 20m x 15m, as defined by the grid references above.

Surface visibility in the area where the site was identified was restricted to around 30% due to grass cover. Given these visibility constraints, it is possible that additional surface artefacts are present in this area. Soils in the area are quite shallow brown clays, which have a limited potential to comprise sub-surface artefact deposits. Based on the observed surface expressions, artefact densities would be expected to be low. The site has been subjected to moderate levels of disturbance through prior land clearing and pastoral activity.

It should be noted that one of the artefacts recorded during the current assessment appears to be consistent with an artefact recorded by Entura (2013). The other two artefacts do not correlate with the Entura (2013) recordings. This means that two previously recorded stone artefacts at the site were not relocated during the current recording. It is likely that these two artefacts are still present in this area but have been covered by vegetation or worked their way back into the soil deposits.

Artefact Details

- Red silcrete flake 42mm x 36mm x 12mm
- Grey chert flake 64mm x 59mm x 16mm
- Red/grey silcrete flake 41mm x 33mm x 11mm



Plate 1: View south at the location of site AH11809



Plate 2: View north at the location of site AH11809



Plate 3: Red silcrete flake from site AH11809



Plate 4: Grey chert flake from site AH11809

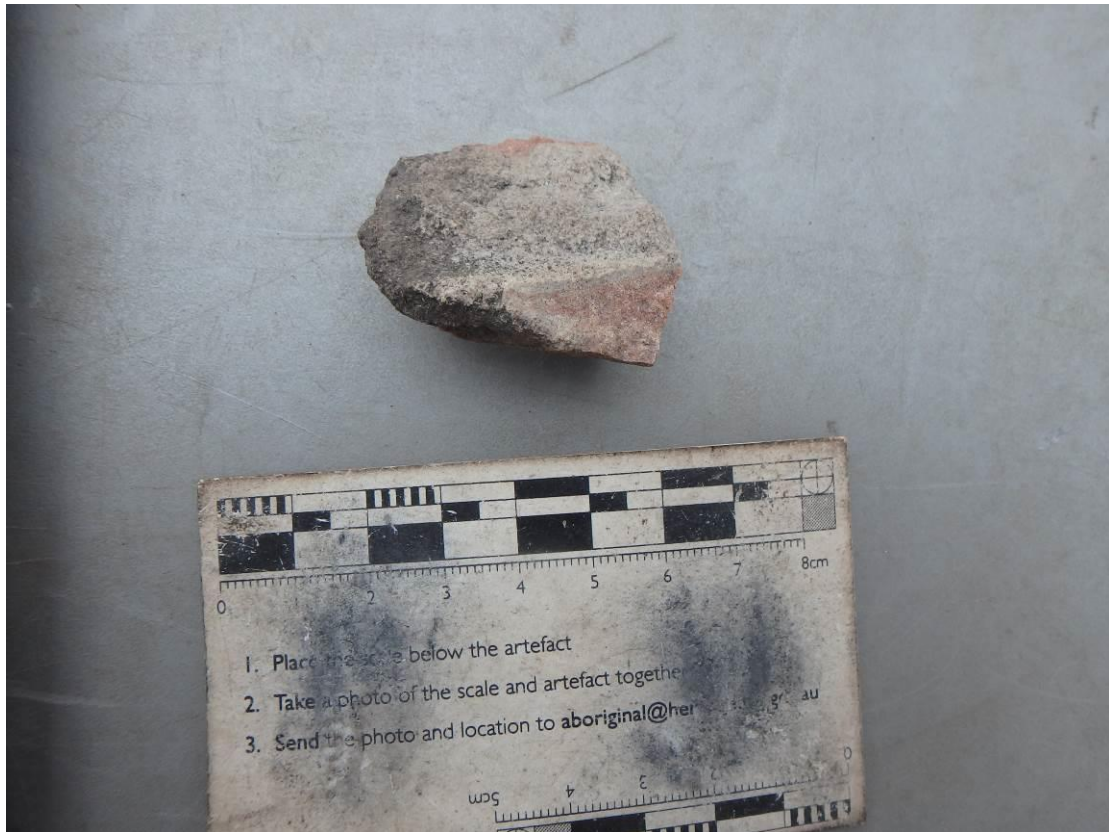


Plate 5: Red/grey silcrete flake from site AH11809

Appendix 3

Aboriginal Community Consultation Outcomes

ABORIGINAL COMMUNITY CONSULTATION – SOUTH BRIGHTON MASTERPLAN AHR

Organisation	Information Letter Sent out	Response	Meeting Date	Summary of Comments and Feedback
Tasmanian Aboriginal Centre (TAC) – Heather Sculthorpe	27 July Initial email	No response	N/A	N/A
Parrdarrama Pungenna Aboriginal Corporation Peter MacDonald	27 July Initial email	No response	N/A	N/A
South East Tasmanian Aboriginal Corporation (SETAC) Jaime Currie	27 July Initial email sent to Tracey Dillon – but re-sent to correct contact on 28 July 2021	No response	N/A	N/A
Weetapoona Aboriginal Corporation	27 July Initial email	No response	N/A	N/A
Karadi Aboriginal Corporation	27 July Initial email	No response	N/A	N/A

Initial email: List of organisations:

From Rocky Sainty rockysainty@gmail.com

bcc Heather Sculthorpe heather.s@tacinc.com.au
Rachel Dunn RDunn@karadi.org.au
Stuart Huys stuart@chma.com.au
Tracey Dillon tracey.dillon@setac.org.au
petermac.ppac@gmail.com petermac.ppac@gmail.com
weetapoona Aboriginal Corporation weetapoona@hotmail.com

Date 27 Jul 2021, 1:24 pm

Dear Organisations

Attached is the report for the South Brighton Masterplan. Can you review and forward to me any comments by August 16 2021.

Thanks

Rocky Sainty

Aboriginal Heritage Consultant

0437372000

Appendix 4

Unanticipated Discovery Plan

Unanticipated Discovery Plan

Procedure for the management of unanticipated discoveries of Aboriginal relics in Tasmania

For the management of unanticipated discoveries of Aboriginal relics in accordance with the *Aboriginal Heritage Act 1975* and the *Coroners Act 1995*. The Unanticipated Discovery Plan is in two sections.

Discovery of Aboriginal Relics other than Skeletal Material

Step 1:

Any person who believes they have uncovered Aboriginal relics should notify all employees or contractors working in the immediate area that all earth disturbance works must cease immediately.

Step 2:

A temporary 'no-go' or buffer zone of at least 10m x 10m should be implemented to protect the suspected Aboriginal relics, where practicable. No unauthorised entry or works will be allowed within this 'no-go' zone until the suspected Aboriginal relics have been assessed by a consulting archaeologist, Aboriginal Heritage Officer or Aboriginal Heritage Tasmania staff member.

Step 3:

Contact Aboriginal Heritage Tasmania on **1300 487 045** as soon as possible and inform them of the discovery. Documentation of the find should be emailed to **aboriginal@heritage.tas.gov.au** as soon as possible. Aboriginal Heritage Tasmania will then provide further advice in accordance with the *Aboriginal Heritage Act 1975*.

Discovery of Skeletal Material

Step 1:

Call the Police immediately. Under no circumstances should the suspected skeletal material be touched or disturbed. The area should be managed as a crime scene. It is a criminal offence to interfere with a crime scene.

Step 2:

Any person who believes they have uncovered skeletal material should notify all employees or contractors working in the immediate area that all earth disturbance works cease immediately.

Step 3:

A temporary 'no-go' or buffer zone of at least 50m x 50m should be implemented to protect the suspected skeletal material, where practicable. No unauthorised entry or works will be allowed within this 'no-go' zone until the suspected skeletal remains have been assessed by the Police and/or Coroner.

Step 4:

If it is suspected that the skeletal material is Aboriginal, Aboriginal Heritage Tasmania should be notified.

Step 5:

Should the skeletal material be determined to be Aboriginal, the Coroner will contact the Aboriginal organisation approved by the Attorney-General, as per the *Coroners Act 1995*.

Guide to Aboriginal site types

Stone Artefact Scatters

A stone artefact is any stone or rock fractured or modified by Aboriginal people to produce cutting, scraping or grinding implements. Stone artefacts are indicative of past Aboriginal living spaces, trade and movement throughout Tasmania. Aboriginal people used hornfels, chalcedony, spongelite, quartzite, chert and silcrete depending on stone quality and availability. Stone artefacts are typically recorded as being 'isolated' (single stone artefact) or as an 'artefact scatter' (multiple stone artefacts).

Shell Middens

Middens are distinct concentrations of discarded shell that have accumulated as a result of past Aboriginal camping and food processing activities. These sites are usually found near waterways and coastal areas, and range in size from large mounds to small scatters. Tasmanian Aboriginal middens commonly contain fragments of mature edible shellfish such as abalone, oyster, mussel, warrener and limpet, however they can also contain stone tools, animal bone and charcoal.

Rockshelters

An occupied rockshelter is a cave or overhang that contains evidence of past Aboriginal use and occupation, such as stone tools, middens and hearths, and in some cases, rock markings. Rockshelters are usually found in geological formations that are naturally prone to weathering, such as limestone, dolerite and sandstone.

Quarries

An Aboriginal quarry is a place where stone or ochre has been extracted from a natural source by Aboriginal people. Quarries can be recognised by evidence of human manipulation such as battering of an outcrop, stone fracturing debris or ochre pits left behind from processing the raw material. Stone and ochre quarries can vary in terms of size, quality and the frequency of use.

Rock Marking

Rock marking is the term used in Tasmania to define markings on rocks which are the result of Aboriginal practices. Rock markings come in two forms; engraving and painting. Engravings are made by removing the surface of a rock through pecking, abrading or grinding, whilst paintings are made by adding pigment or ochre to the surface of a rock.

Burials

Aboriginal burial sites are highly sensitive and may be found in a variety of places, including sand dunes, shell middens and rock shelters. Despite few records of pre-contact practices, cremation appears to have been more common than burial. Family members carried bones or ashes of recently deceased relatives. The Aboriginal community has fought long campaigns for the return of the remains of ancestral Aboriginal people.

Further information on Aboriginal Heritage is available from:

Aboriginal Heritage Tasmania
Natural and Cultural Heritage Division
Department of Primary Industries, Parks, Water and Environment
GPO Box 44 Hobart TAS 7001

Telephone: **1 300 487 045**

Email: **aboriginal@heritage.tas.gov.au**

Web: **www.aboriginalheritage.tas.gov.au**

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