Note text and images identifying the locations of Aboriginal places have been redacted.
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Executive summary

Biosis Pty Ltd was commissioned by Whittlesea City Council on behalf of the Victorian Planning Authority (VPA) to undertake an Aboriginal cultural heritage impact assessment for the Shenstone Park Precinct Structure Plan. The aim of the assessment is to identify any Aboriginal cultural heritage constraints on future development of the study area.

Study area

The study area is located south of Donnybrook Road and east of Langley Park Drive, in Donnybrook. The study area is situated in the Parish of Kalkallo and the local government area of the City of Whittlesea. Cadastral details for the study area are found in Table 2.

Activity

The overarching activity is development associated with the Shenstone Park Precinct Structure Plan in the Northern Urban Growth Corridor at Donnybrook. Activities likely to be undertaken include residential housing, utility installation, development of a local town centre, a community hub, a primary school, roads, parks, a retail precinct and associated ancillary works. Yarra Valley Water propose to construct a water treatment plant within the area, to service the new precinct. Parkland is potentially proposed for the southern part of the study area, as remnant River Red Gums (*Eucalyptus camaldulensis*) are present. The full range of activities will be subject to a City of Whittlesea planning scheme amendment.

Assessment

A desktop based review was undertaken to provide background information on the activity study area. The review utilised a geographic region to obtain information on other archaeological studies, previously recorded Aboriginal places and the environment which was utilised to develop a predictive model for the study area.

Targeted ground surveys were also undertaken to ground truth the predictive model and inspect the previously recorded Aboriginal places.

Results

The background review identified that the study area is largely located within the stony rises landform. These are discrete rises formed from volcanic activity which intersperse the otherwise relatively flat plains. Stony rises and plains within proximity to watercourses have previously been identified as areas of Aboriginal occupation. This is evidenced by the presence of stone tools consisting of silcrete and quartz raw material. Scarred trees in proximity to Curly Sedge Creek and Merri Creek have also been recorded.

Survey for a pipeline that crosses the study area recorded to Aboriginal places within the study area. Other assessments in the region have been completed in association with residential development and this includes several Cultural Heritage Management Plans (CHMP) immediately north of the study area. These assessments show stratigraphy on the stony rises consisting of a deeper deposit of silty clay soils, whilst the plains are shallow and more clayey in nature.

The background review concluded that the study area has archaeological potential with the predictive model based on the wider patterns of Aboriginal occupation identified in the region extrapolated to the study area.

Due to the timing of the survey, the targeted survey focussed on the eastern section of the study area only. This introduced a survey bias so any results must be viewed within that context. Never the less, general patterns observed in the eastern section are applicable throughout the entire study area. The study area
comprised agricultural, residential and quarried land. Exempting the quarry, disturbance was associated with agricultural purposes therefore many of the stony rises were intact with little disturbance.

Ground surface visibility was overall poor and this restricted the efficacy of the survey however one new Aboriginal place was identified on a stony rise. The two previously recorded Aboriginal places were inspected but no Aboriginal cultural heritage was identified.

The targeted survey concluded there remains potential for additional Aboriginal cultural heritage to be identified within the study area.

**Legislative considerations**

A review of the requirements of the *Aboriginal Heritage Act 2006* and the *Aboriginal Heritage Regulations 2007* was undertaken. The results of the review, as it relates to cultural heritage approvals for the study area, is shown in Table 1.

Note: those properties that have been identified as requiring additional assessment before conclusions can be made as to whether a voluntary CHMP is recommended, are the ones mentioned above, which were not accessed during the field assessment. Without confirming assumptions made in in the desk based review with observations in the targeted survey, no conclusions can be made. However it is emphasised that a CHMP is the only cultural heritage approval that can be undertaken ahead of development, thereby acting as a risk management strategy ensuring no delays to development activities.

It should be noted that property boundaries may change over time, either as a result of subdivision or consolidation. If so, the statutory trigger for a CHMP based on the areas of cultural heritage sensitivity may also change. In this case a review of the legislative requirements for each property or proposed development should be undertaken.

**Table 1  Legislative considerations**

<table>
<thead>
<tr>
<th>Property ID</th>
<th>Address</th>
<th>Area of cultural heritage sensitivity</th>
<th>High impact activity</th>
<th>Archaeological potential</th>
<th>Mandatory CHMP required</th>
<th>Voluntary CHMP recommended</th>
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<td>Yes</td>
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</table>
Recommendations

The following recommendations have been developed after consultation with the RAP.

Recommendation 1

Areas of archaeological potential identified in the current assessment, namely stony rises, plains near waterways and remanent native vegetation should be included, where possible in public open spaces. This approach eliminates the likelihood that Aboriginal places will be harmed.

Management of these open space reserves should also be based on conserving and enhancing environmental and cultural heritage values. Construction of infrastructure and facilities within the reserves should be designed to minimise impacts and enhance public access and appreciation, through landscaping, indigenous revegetation, interpretation and development of cultural programs.

Recommendation 2

CHMPs should be prepared for the entire study area. This recommendation is based on areas of archaeological potential being identified in the current assessment and presents a methodology that ensures best cultural heritage practice is maintained, regardless of triggers to prepare a mandatory CHMP. This is also consistent with the results of the cultural heritage values assessment that concluded that the wider landscape has importance to Aboriginal people.

Where conservation of areas of Aboriginal cultural heritage is not possible due to conflict with future development, and disturbance has been approved through a CHMP, the process of disturbance should be managed through a program mitigation involving research, analysis and interpretation of the cultural heritage that is disturbed. A research design and methodology should aim to identify the character of Aboriginal occupation of the area, mitigate disturbance in the form of archaeological salvage, and interpret the heritage.
Abbreviations

CHMP      Cultural Heritage Management Plan
DGPS      Differential Global Positioning System
DPC       Department of Premier and Cabinet
GDA94     Geodetic Datum Australia 1994
LDAD      Low Density Artefact Distribution
MGA       Map Grid of Australia
RAP       Registered Aboriginal Party
VAHR      Victorian Aboriginal Heritage Register
Wurundjeri Council   Wurundjeri Tribe Land and Compensation Cultural Heritage Council Incorporated
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1 Introduction

Biosis Pty Ltd was commissioned by Whittlesea City Council on behalf of the Victorian Planning Authority (VPA) to undertake an Aboriginal cultural heritage impact assessment for the Shenstone Precinct Structure Plan (PSP). The aim of the assessment is to identify any Aboriginal cultural heritage constraints on future development of the study area.

1.1 Objectives

The objectives of the project are to undertake and prepare an Aboriginal cultural heritage impact assessment. The assessment will consist of but not be limited to the following items:

- Contextualisation of the proposed study area within the relevant regulatory framework ie. determining triggers under the Aboriginal Heritage Act 2006 for the preparation of a mandatory Cultural Heritage Management Plan (CHMP)
- Background research and review of the environmental and cultural heritage information pertaining to the study area
- Development of predictive modelling for the study area
- Targeted survey of the study area
- Consultation and liaison with the Registered Aboriginal Party (RAP) for the region and other stakeholders as appropriate
- Cultural values recording with the RAP
- Registration of any newly recorded Aboriginal places, if required
- Developments of recommendations to ensure cultural heritage approvals can be obtained for the study area.

Note this assessment is prepared under Section 34A of the Aboriginal Heritage Act 2006. It does not meet requirements for a Desktop and Standard Assessment CHMP. However the information presented in this report can be utilised in the preparation of a CHMP.

1.2 Location of the study area

The study area is located south of Donnybrook Road and east of Langley Park Drive, in Donnybrook (Map 1). The study area is situated in the Parish of Kalkallo and the local government area of the City of Whittlesea. Cadastral details for the study area are found in Table 2.

Table 2 Cadastral information for the Activity Area

<table>
<thead>
<tr>
<th>Lot on plan</th>
<th>Address</th>
</tr>
</thead>
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<tr>
<td>1\LP123641</td>
<td>910 Donnybrook Road Donnybrook</td>
</tr>
<tr>
<td>2\LP132357</td>
<td>870 Donnybrook Road Donnybrook</td>
</tr>
<tr>
<td>1\LP117710</td>
<td>840 Donnybrook Road Donnybrook</td>
</tr>
<tr>
<td>7\LP118142</td>
<td>40 Langley Park Drive Donnybrook</td>
</tr>
</tbody>
</table>
Lot on plan | Address
---|---
1\LP118142 | 75 Langley Park Drive Donnybrook
Lot 2 LP118142 | 95 Langley Park Drive Donnybrook
Lot 6 LP118142 | 90 Langley Park Drive Donnybrook
Lot 5 LP118142 | 110 Langley Park Drive Donnybrook
Lot 4 LP118142 | 130 Langley Park Drive Donnybrook
Lot 3 LP118142 | 105 & 125 Langley Park Drive Donnybrook
Lots 1 & 2 LP132357 | 870 Donnybrook Road Donnybrook
Lot 1 TP380512 | 1030 Donnybrook Road Donnybrook
Lot 1 TP371225 & Lot 1 TP374144 | 960 Donnybrook Road Donnybrook
Lot 1 LP38239 | 1100 Donnybrook Road Donnybrook
Lot 2 LP98632 | 1150 Donnybrook Road Donnybrook

1.3 Description of the study area

The study area comprises approximately 614 hectares of land east of the Merri Creek at Donnybrook. The Shenstone Park area is bound by Donnybrook Road to the north, the Wollert suburb boundary to the south, the Urban Growth Boundary to the east and the Sydney/Melbourne railway corridor to the west. The precinct lies immediately south of the Donnybrook/Woodstock PSP area and immediately east of the English Street PSP area.

Four lots lie along Langley Park Drive. In the north-west Lot 1 LP117710 contains a house and sheds, a dam and large trees are present. A sparsely vegetated paddock is south of the house yard. Lot 1 LP 118142 comprises a house yard with a tree plantation to the north. Few trees are present throughout the rest of the area, which contains paddocks. Two dams are located in the area. Avelin Road is located to the south of the lot. South of Avelin Road is Lot 2 LP 118142, which is a cleared block with a driveway, dams, sheds and a few mature trees. Lot 3 LP 118142 contains a house, garden, rows of planted trees, sheds, and large mature trees scattered throughout the outlying paddocks.

To the east of these four lots are two larger allotments (Lots 1 & 2 LP 132357) containing a quarry, car park and driveway leading north to Donnybrook Road. The quarry is within a low hill associated with the eruption points geomorphological unit (GMU 6.1.1) that extends east into Lot 2. The remainder of this lot is bare paddock containing dams and vehicle tracks. To the north and east of this is Lot 1 LP123641, which contains a house, sheds and planted trees. To the east of this is a large allotment (Lot 1 TP 371225) containing a driveway, sheds, stockyards and paddocks. Planted trees are located on some fence boundaries, and scattered trees are located in the south-east corner of the lot. Lot 1 TP 374144 is made up of paddocks, and contains a few scatters of trees. North of this is Lot 1 TP 380512, which also contains paddocks with planted vegetation along some of the fence lines. A house and sheds are located in the north-west corner of the allotment.

Lot 1 LP38239 is a long narrow parcel containing a house, sheds, dams and paddocks. Lot 2 LP98632, to the east, has similar features to the adjoining lot.

Dry stone walls can be seen throughout the study area in various locations. These are often along existing modern fence lines.
1.4 The activity

The overarching activity is development associated with the Shenstone Park Precinct Structure Plan in the Northern Urban Growth Corridor at Donnybrook. Activities likely to be undertaken include residential housing, utility installation, development of a local town centre, a community hub, a primary school, roads, parks, a retail precinct and associated ancillary works. Yarra Valley Water propose to construct a water treatment plant within the area, to service the new precinct. Parkland is potentially proposed for the southern part of the study area, as remnant River Red Gums (*Eucalyptus camaldulensis*) are present. The full range of activities will be subject to a City of Whittlesea planning scheme amendment.

1.5 Consultation

In accordance with Section 34A of the *Aboriginal Heritage Act 2006*, written notice of the survey was provided to the Secretary, Department of Premier and Cabinet on 21 November 2016. This report will be lodged with the Victorian Aboriginal Heritage Register (VAHR) at the conclusion of the assessment.

The Wurundjeri Tribe Land and Compensation Cultural Heritage Council (Wurundjeri Council) is the RAP for the region that includes the study area. As per Section 34A of the *Aboriginal Heritage Act 2006*, the RAP was notified about the project and invited to participate in the targeted survey.

A consultation meeting was also held with the RAP. The aim of the meeting was to introduce the project, discuss the predictive modelling and present the results of the background review and targeted survey.

Key points that were raised at the meeting by the RAP included the following:

- Preservation of Aboriginal places is a priority with the preference being that they are included in public open spaces
- Flexibility in design so that when developers prepare a CHMP, establishing the extent, nature and significance of Aboriginal places, that those places can be preserved
- A cultural values recording should occur once preliminary design has been developed but before detailed design, so that RAP Elders can provide feedback to the detailed design based on their interpretation of the landscape.

It was recognised that the results of this assessment are a 'snapshot in time' and that once CHMPs are developed for properties within the study area that those results will alter the predictive model presented in this assessment and may also result in additional CHMP triggers.
2 Background

2.1 Geographic region

The geographic region for this assessment includes the stony rises and eruption points geomorphic units situated between Merri Creek in the east, and Darebin Creek in the west. The northern boundary includes a bend of the Merri Creek within Beveridge, stretching east to the source of the Darebin Creek. The southern extent is located within the Wollert locality south of the study area, including the northern extent of Curly Sedge Creek.

The geographic region includes resources that are characteristic of the study area, and therefore is representative of the types of environmental landscapes that were available for Aboriginal people to utilise. The Aboriginal place types in this region should be representative of the places likely to be found in the study area.

The geographic region in relation to the study area is shown in Map 2.

2.2 Aboriginal places in the geographic region

A search of the VAHR was undertaken by Bridget Grinter, Biosis Pty Ltd on 30 November 2016.

There are 187 Aboriginal place components in the geographic region. Low density artefact distributions are the dominant place type, followed by smaller numbers of artefact scatters, earth features and scarred trees (Table 3). The majority of Aboriginal places are located along Merri Creek and Darebin Creek. Some artefact scatters and low density artefact distributions (LDAD) are also found at some distance, up to 2 kilometres, from a natural water source. These are often considered to be background archaeology and representative of Aboriginal exploration of the landscape. Aboriginal places within the geographic region are shown in Map 2.

Within the study area, two artefact scatters and two LDAD components (single artefacts of a larger registered place) are located. These are Donnybrook IA 1 (VAHR 7822-1440), Donnybrook IA 2 (VAHR 7822-1441), Wollert Low Density Artefact Distribution 7822 (VAHR 7822-3647-4 and -5). All these artefacts were discovered within the low-lying landscape surrounding rises, rather than on the stony rises themselves.

Donnybrook IA 1 (VAHR 7822-1440) comprises 1 quartz core and 1 crystal quartz broken flake, located 360 metres north of Curly Sedge Creek. Donnybrook IA 2 (VAHR 7822-1441) comprises 1 quartz flake and 1 silcrete core, 450 metres north of Curly Sedge Creek. Whilst recorded as artefact scatters in 2002, under VAHR guidelines introduced in 2014 these would be considered LDADs. The landform identified within the area was undulating volcanic plain. These two Aboriginal places were discovered as a result of an archaeological survey for an emergency response simulation centre (see 2.3 below).

Wollert Low Density Artefact Distribution 7822 (VAHR 7822-3647) is a scatter of quartz, silcrete, hornfels, crystal quartz and quartzite flaked artefacts spread over 300 metres. All the artefacts were found between 50 and 400 millimetres depth within grey brown silty clay. The two artefacts within the study area were found 230 metres east of Curly Sedge Creek. The landform identified was volcanic plain. These were discovered during a Complex Assessment for CHMP 12259 (see 2.3 below).

The most frequently occurring Aboriginal place type within the geographic region, which also occurs within the study area itself, are LDADs. The place distribution within the geographic region suggests
Aboriginal places are generally more likely to be situated close to waterways. Landforms which have been identified as likely to contain Aboriginal heritage are the volcanic plain, stony rises and elevated land within 200 metres of Merri Creek.

Table 3  Types of Aboriginal places in the geographic region

<table>
<thead>
<tr>
<th>Aboriginal place type</th>
<th>Frequency (n)</th>
<th>Relative frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low density artefact distribution (LDAD)</td>
<td>144</td>
<td>77.0</td>
</tr>
<tr>
<td>Artefact scatter</td>
<td>30</td>
<td>16.0</td>
</tr>
<tr>
<td>Earth feature</td>
<td>7</td>
<td>3.7</td>
</tr>
<tr>
<td>Scarred tree</td>
<td>6</td>
<td>3.3</td>
</tr>
<tr>
<td>Total</td>
<td>187</td>
<td>100.0</td>
</tr>
</tbody>
</table>

2.3  Previous work in the geographic region

Based on information provided on the VAHR, sections of the study area have been subject to archaeological investigation in the past.

An archaeological survey for an emergency response simulation centre was undertaken on Lot 1 TP 374144 of 960 Donnybrook Road (59 hectares in size) within the current study area (Patterson, Paynter, & Bell, 2003). Two surface artefact scatters, Donnybrook IA 1 (VAHR 7822-1440) and Donnybrook IA 2 were recorded (see 2.2 above). The area surrounding the artefacts and areas containing basalt outcrops (stony rises) were considered to have potential to contain further Aboriginal cultural heritage. Several 'conservation zones' identified by the Metropolitan Fire and Emergency Services Board were considered to have archaeological potential due to basalt outcrops and native grass cover. These covered much of the 59 hectare study area. The majority of the areas to be impacted by the works were recommended to be monitored during construction. Therefore virtually the entire Patterson et al. (2003) study area considered to have archaeological potential for unrecorded Aboriginal heritage.

A CHMP was undertaken for the Victorian Northern Interconnect gas pipeline (Wollert to Wandong) (Murphy & Morris, 2013). The gas alignment ran north-south within the entire length of 1100 Donnybrook Road, (Lot 1 LP 38239), measuring almost 5 hectares within the current Activity Area. During the survey a stony rise within the current study area was found to have the potential to contain Aboriginal cultural heritage. Subsurface testing was undertaken in two areas within the current study area, with 19 test pits measuring 3 x 3 metres, 4 test pits 3 x 2 metres, 7 test pits of 3 x 1 metres, four test pits 2 x 2 metres, 4 test pits 1 x1 metres and 142 test pits 0.5 x0.5 metres in size. Of these, 1 test pit and 6 shovel test pits were excavated east of Curly Sedge Creek, and a further test pit 280 metres south of this. One LDAD was recorded, Wollert Low Density Artefact Distribution 7822 (VAHR 7822-3647; see 2.2 above). Recommendations for this place included salvage, as the area could not be avoided by the works.

Murphy and Rymer (2014) prepared a CHMP for a residential subdivision for a property almost 40 hectares in size, on Donnybrook Road north of the current study area. The Activity area was characterised by a low-lying plain (black cracking clays) and an elevated landform containing stony rises (brown silty clay). One silcrete flake (registered as an LDAD) was discovered during the survey on top of a stony rise. The Complex Assessment comprised 4 2x2 metre test pits and a total of 173 40x40 centimetre test pits. A further 9 artefacts were registered as an LDAD along with the single artefact
previously discovered, though these were found 400 metres north of the original artefact. Two artefact scatters were found in a subsurface context. These were discovered on the elevated plain at the edge of the low-lying plain, up to depths of 250 millimetres. The authors concluded that more intensive Aboriginal places would be found closer to Merri Creek due to greater resource density, with the Activity Area itself a less favourable location. Salvage was recommended for the two artefact scatters, however not for the LDAD due to the low scientific significance assigned to it.

Orr (2013) conducted a heritage assessment for the Donnybrook Precinct Structure Plan for 1039 hectares of land, north of the current study area. The desktop assessment found that 7 artefact scatters and 5 scarred trees were located within their study area. LDADs were identified as likely to occur on all landforms, whilst higher densities of artefacts were thought to occur within 200 metres of the Merri Creek, on stony rises and within 50 metres of tributaries and associated wetlands. The survey recorded 1 LDAD and 3 artefact scatters, whilst a previously recorded scarred tree was relocated. Low relief stony rises were deemed to be associated with artefact scatters in that study area and considered to have archaeological potential. Recommendations within the report included undertaking a CHMP or CHMPs for each property (except property 39, which was a heavily disturbed residential block), burning off the surface vegetation to aid discovery of Aboriginal heritage, retaining any Aboriginal places found during the current and future investigations, and retaining stony rises that contain Aboriginal heritage.

A Complex Assessment CHMP was undertaken for the Donnybrook PSP, north of the study area (Burrow, Foley, Kennedy, & Wheeler, 2014). During the desktop assessment 6 Aboriginal places were located, 2 scarred trees, 1 earth feature, 2 artefact scatters and 1 LDAD. These were located over a range of landforms, including stony rises, and were found within close proximity to Merri Creek. Two artefact scatters were recorded on stony rises within 130 metres and 566 metres of Merri Creek and 2 LDADs, one on the Merri Creek bank and one on a stony rise during the standard assessment. A total of 132 manual (1 x 1 metre) and mechanical (2 x 1 metres) test pits were excavated. During the complex testing the artefact scatters yielded further artefacts, and another 9 artefact scatters were also discovered. All but one of the newly discovered Aboriginal places were located on stony rises, and largely within 500 metres of Merri Creek. A combination of surface and subsurface salvage and protection and retention of Aboriginal places were recommended for the places.

Investigations undertaken previously within the geographic region, including the study area, demonstrate that artefact scatters, particularly those of low density, are the place types most likely to be discovered in the study area. These have been found in close proximity to Curly Sedge Creek, however it is likely given the distribution of places within the geographic region, that Aboriginal heritage will be found on stony rises.

2.4 Historical and ethno-historical accounts in the geographic region

For the purposes of this assessment, information about Aboriginal Victorian pre and post contact history has been sourced from nineteenth and twentieth century primary and secondary ethnographic/historical records.

2.4.1 Ethno-historical accounts of Aboriginal people

Linguistic boundaries and social organisation

Prior to European colonisation, the Victorian landscape was delineated by socio-dialectical groups who shared a common language and who as a group identified as owning particular areas of land,
with individually owned tracts of country. This was a system of spatial organisation based on land tenure (Clark I., 1990).

Aboriginal groups mapped natural features as boundaries for their ranges, estates and economic territories. The *Woi wurrung* held land north of Melbourne, east of the Werribee River, including the Yarra and Maribyrnong watersheds (Clark I., 1990). Their lands were bordered by the Great Dividing Range to the north and extended from Mount Baw Baw in the east, to Mount Macedon and Mount William in the West.

The *Woi wurrung* have been identified as sharing a cultural and linguistic affinity with the *Ngurai-Willam-wurrung*, *Daung wurrung*, *Djadja wurrung*, *Wada wurrung*, and *Bunurong* language groups. They are commonly described as the Kulin Nation, and the Kulin groups shared similarities in speech, initiation, burial practices, kinship, marriage ties, and religious beliefs (Barwick, 1984; Clark I., 1990).

Land ownership and access rights or responsibilities centred on the smaller named groups that formed the broader language grouping. These groups are often called ‘clans’ or ‘local descent groups’, however as (Wesson, 2000, p. 8) reasons, they are better described as ‘named groups’, as the membership structure of these groups, and their degree of division from other groups, could vary. In most instances, primary allegiance was owed to this named group, although this could vary according to context and location. Commonly, named groups were led by senior elders who exercised internal political and religious authority, as well as being recognised as their spokesperson when dealing with other groups (Atkinson & Berryman, 1983). Particularly influential group leaders could also assume authority over the leaders of other culturally affiliated groups (Wesson, 2000). The named group who occupied the Activity Area were the *Woi wurrung*-speaking *Wurundjeri balug* group occupied the region containing the study area (Clark I., 1990, pp. 384-5). This named group appears to have been divided into two smaller land-owning units, the *Bulug willam* and the *Wurundjeri willam* (meaning white gum dwellers) (Clark I., 1990).

Social activity involving neighbouring named or socio-dialectical groups was usually held in warmer periods, held at the intersection of group boundary's and arranged by a person assigned of the responsibility of travelling between groups to organise the time, place, and events of the meeting. This person could speak a number of different dialects and acted as intermediaries in negotiations between the groups. Activities would include sports and dancing, with up to 500 men, women and children attending (Atkinson & Berryman, 1983).

The succession or inheritance of lands and named-group estates could occur in a number of ways. Individuals and groups could inherit lands from their father, their mother, through their birthplace, conception place, the burial place of their ancestors, and through totemic connections (Wesson, 2000). Access rights also crossed generations and marriage partners. Marriage was one way that peaceful alliances were created between clans, thus the clans could gain access to food and resources, otherwise unavailable to them. Howitt (1904, p. 311) wrote that:

> The right to hunt and to procure food in any particular tract of country belonged to the group of people born there, and could not be infringed by others without permission. But there were places which such a group of people claimed for some special reason, and in which the whole of the tribe had interest. Such a place was the stone quarry at Mt. William near Lancefield, from which the material for making tomahawks was procured. The family proprietorship in the quarry had wide ramifications... when neighbouring groups wished for some stone they sent a messenger to *Bill-billeri* saying that they would send goods in exchange for it, for instance, skin-rugs.

People would often travel or reside in the territory of another named-group so that they could fulfil religious or family obligations, or exercise the privilege, granted to them by family or moiety...
associations, of exploiting the resources of another estate (Barwick, 1984). For daily activities and the exploitation of local estates, people are thought to have travelled in small residential units or extended family groups - often termed bands (Wesson, 2000).

Within the clans, the older members were responsible for the handing down of information and traditional knowledge to the younger generations. Female Elders taught the younger girls about gathering and weaving by asking the young women to imitate the actions displayed to them. The male Elders of the clan were tasked with teaching the young men hunting techniques (Ellender & Christiansen, 2001).

**Post European contact histories in the Merri Creek region**

Following concerns of the violence exacted on the Indigenous people in the new colony of Van Dieman's land, the British Parliament prompted the Port Philip Association into action to ensure the violence would not be repeated in the new mainland colony, John Batman was sent by the Association to seek the Indigenous inhabitants of Port Philip and negotiate a treaty. On June 8, 1835, Batman and his party reached a district to the north of present day Melbourne, where they were met by a number of senior *Woi wurrung* men (Ellender & Christiansen, 2001). After lengthy discussions with the clansmen, of which *Bil-bileri* was one present, Batman presented goods such as blankets, knives and handkerchiefs as a means of initial payment for the land he sought to buy from the *Woi wurrung*. The *Woi wurrung* responded in kind with their own goods of woven baskets, weapons and possum skin cloaks. Batman then claimed to complete the treaty documents, being title deeds to the land, and had three of the head clansmen and five other *Woi wurrung* men sign the document (Ellender & Christiansen, 2001).

By the end of 1837, the British Government attempted to again remedy the interaction between the Indigenous people and the new settlers by establishing an Aboriginal Protectorate, under George Augustus Robinson. Four assistant protectors were appointed to travel with the clans of the region and gain knowledge of the local people (Ellender & Christiansen, 2001). William Thomas was appointed Assistant Protector for the Melbourne area and would set out to meet and stay with the people by the Yarra River, the *Wurundjeri willam*. Thomas was able to draw up a census of those local inhabitants which number 124 men, women and children (Ellender & Christiansen, 2001). Thomas is credited for his extensive written records of the customs and lifestyles of the local Kulin people in south central Victoria.

As the new colony and settlers expanded in and around Melbourne, the need for a police force within the region grew. In 1837 it was suggested by Captain William Lonsdale to draw up a mounted corps of Aboriginal men (Ellender & Christiansen, 2001). This was eventually achieved in 1842, when the Native Police Corps was established at the Narre Narre Warren Protectorate station. The Corps headquarters later moved to the banks of the Merri Merri Creek. The Corps instilled self confidence to the young Aboriginal men who would be set out on patrol to various parts of the colony. Another need for the fledgling colony was improved education, and so European schooling was introduced to the local people. The best supported effort to educate the *Wurundjeri willam* came by the establishment of the Merri Creek Aboriginal School in 1845 (Ellender & Christiansen, 2001).

**Moietiy affiliation**

A further level of social organisation was moietiy affiliation. The *Wurundjeri willam* group belonged to the *waa* moiety.

Membership to a named group is variably defined by a localised matrilineal or patrilineal descent group, with female member of the group partnering with men outside of their group (exogamous)
and across moiety lines; however they maintained an identity of belonging to their father’s group. Men then had to adhere to certain duties such as providing food to their father-in-law. Social engagement could be influenced by appropriate conduct between family members, for example men had avoidance behaviours they had to adhere to in the presence of their mother-in-law, and there were other speech or special duties which were expected in family relationships (Atkinson & Berryman, 1983).

Religion

Knowledge of Aboriginal religion was recorded and maintained through visual and oral tradition which ensured the maintenance of social structures through generations. Such knowledge was not always readily shared with non-Indigenous social observers and as such limited written versions from early settlers, explorers or government employees exist for Victoria. Ceremonies were occasionally performed to entertain Europeans however the meaning behind these performances was never fully explained (Robinson, 1840). Private ceremonies and locations, such as age initiations were actively kept secret (Presland, 1994).

Economy and resource utilisation

Certain individuals within Aboriginal groups had responsibilities assigned to them for the management of natural resources. Anthropogenic manipulation of the environment was observed by the first Europeans within northern Victoria, for example fire regimes which cleared tracks also aided in hunting and dissuaded settlers for entering Aboriginal territory (Atkinson & Berryman, 1983).

As part of the utilisation of the area, the Wurundjeri people gathered numerous food resources from Merri Creek and the tributaries that run from it. The trapping of eels and species fish with weaved baskets or the hunting of them with barbed spears was common practice. The hunting of various species of waterfowl and birdlife as a food resource was also practiced (Ellender & Christiansen, 2001). Hooped nets made from fibre were also used to catch crayfish, yabbies and fish, while cross-line nets were strung below the water to catch schools of fish (Gott & Conran, 1991). Line nets were also used to catch emus and kangaroos; a strategically placed group of people drove the animals towards the nets. Reed spears with hafted bone, carved barbs, stone pieces or hardened wooden points set into the head were used for catching larger marsupials.

Canoes were created to better travel and hunt for fish and waterfowl along the creek. Bark of river red-gums and box trees were cut with stone axe heads in spring to early summer, shaped over a fire, seasoned in the sun, then the end blocked with clay (Edwards, 1975). Oven mounds (cooking pits), were constructed to bake the fish, game or large volumes of vegetables (Atkinson & Berryman, 1983).

The collection of large ants and various species of grubs from around the area was another form of resource utilisation. The women of the Wurundjeri tribe would also dig for Murnong (Yam Daisy) with their Kannan (digging sticks). The Murnong was commonly found along the Merri Creek, the root of the plant was highly sought as a food source and was a staple of the Aboriginal people of Victoria (Ellender & Christiansen, 2001; Wurundjeri Tribe Land and Compensation Cultural Heritage Council Inc., 2012).

Various plant species from around the area provided the Wurundjeri people with food resources and medicines. The gum from the Eucalyptus tree was collected and dissolved in water as a treatment for dysentery, whereas the sap of the wattle tree provided both food and medicines for the clan (Ellender & Christiansen, 2001).
2.4.2 Information on cultural values from the RAP

The Wurundjeri people hold many cultural values that are closely tied to the natural landscape. This is especially true of the areas along Merri Creek that contain unique ecological habitats, landforms and the provision of continuing cultural practices that are essential to the identity and wellbeing of the Wurundjeri people. The ability for the community to provide effective means of passing on cultural information and remaining active in Traditional Country is therefore intimately attuned to their responsibility in caring for and engaging with Traditional natural Estates.

Water and waterways form an important part of Indigenous culture, used as a source of creation stories and as traditional resources used by Aboriginal people in the past inhabiting the landscape. Many creation stories are linked to major watercourses throughout the greater Melbourne area such as the Yarra, Port Philip Bay and Darebin and Merri Creeks. The health of these waterways is therefore closely bound to the health and wellbeing of the people, whereby the people can use these sources for recreation, teaching culture and the continued transmission of cultural practices for future generations within a directly relatable, 'experienced' natural environment.

A general statement of Aboriginal Cultural Heritage Significance has also been prepared by the RAP (Wurundjeri Tribe Land and Compensation Cultural Heritage Council Inc., 2012, p. 25) for Merri Creek and is as follows:

For Aboriginal people, there are many different kinds of cultural values associated with the landscapes that were once lived in by their ancestors. These include the tangible values normally recorded during archaeological investigation, such as artefact scatters and scarred trees. These places are physical reminders of the cultural lives of the Wurunjuri ancestors and a special connection, therefore, exists between those places and contemporary Wurunjuri people. This special connection underpins the high significance of these places. Once they are destroyed, the connection is largely destroyed.

There are other values that the Wurunjuri people connect to in the landscapes such as the remaining flora & fauna (e.g. Holden Reserve and Galada Tamboore). In such instances, the natural values, including a waterway and remnant vegetation, are all integral to the cultural landscape in which the Wurunjuri ancestors once hunted and gathered and in which they lived their lives for many thousands of years. Characteristics of these landscapes are therefore significant in accordance with Aboriginal tradition. Best practice heritage management, in terms of harm to cultural heritage and where harm cannot be avoided, proper management of the disturbance of those values, is integral in the management of these significant cultural places.

The statement highlights other various forms of cultural values are manifest, including the management of cultural heritage places, such as lithic artefact scatters and scarred trees, recorded during scientific assessment of landscapes. The practises of ecological and heritage assessments within the region today provides a platform for direct community engagement in the maintenance of recorded Aboriginal cultural places and history. They also involve the identification of cultural values in the aforementioned forms of material culture, natural elements, and landforms as well as from other oral and historic material. It is by these means that the memory of important cultural places such as Merri Creek are retained and shared for future generations, while being an integral part of the community's identity as Traditional Owners and their relationship with Country. Some of these memories have been expressed by members of the community.

Like other waterways around Melbourne, the land around Merri Creek was used by Wurunjuri people as a university, chemist and supermarket and remains a valuable resource for the future generations. Merri Creek is in an area where kids are growing up, it should be a place for everyone to enjoy. Granny Jemima, at Coranderrk, wouldn't pick flowers along Merri Creek but would leave them for everyone. Merri Creek has ochre, scarred trees, artefact scatter sites. Cultural heritage audits should take place as part of the management of the Merri Creek.


We know Merri Creek to be a place of significance of the highest order in terms of gathering of supplies such as materials for stone tools to make spear tips, scrapers and blade...Since the arrival of the Europeans to our shores, life has changed dramatically for the Wurunjuri people. What still exists today in the way of our culture are our sites in the landscape – these sites remind us of our ancestors’ long and sustained presence here, and an ongoing cultural heritage rich in history and content...It's great that a responsible community organisation is taking care of Country over the last 20 year it's a huge contribution to Country with the growing awareness and recognition of Traditional Owners and their relationship with Country it's welcoming sign to Wurunjuri people.

2.5 Landforms and/or geomorphology of the study area

The study area is situated across two geomorphic units, the stony rises (GMU 6.1.2) covering the majority of the study area, with a small discrete pocket of eruption points unit (GMU 6.1.1) in the southern section.

The study area is situated within the central lowlands that cover most of north and western metropolitan Melbourne (Land Conservation Council, 1973). It is characterised by mainly flat, gently undulating volcanic plain.

The main watercourse in the region is the Merri Creek located on the south-west corner of the study area. Curly Sedge Creek has its source in the south-central part of the area.

The geographic region would have provided Aboriginal people with an ample supply of raw stone material suitable for stone tool production. Exposures of basalt occur along the Merri Creek Valley (Hall, 1989). Basalt, especially fine-grained non-vesicular varieties, was used as grinding implements. Silcrete can be found directly beneath basalt in some areas. A form of silcrete, often used in the manufacture of Aboriginal stone artefacts, is associated with the weathering of basalt (Webb, 1995, p. 11).

The volcanic plains are also covered with grey and black clays, sodic duplex soils and shallow gradational soils (Land Conservation Council, 1973). Previous archaeological subsurface testing (see 2.3) surrounding the study area shows that the stony rises are associated with shallow silty clay soils, whilst the low-lying plains are more clayey in nature. The landform associated with the study area is a plain above flood level, with deposits characterised as stony earths, dark clays and yellow duplex soils (State of Victoria Department of Economic Development, Jobs, Transport and Resources, 2016).

Whilst shallower soil deposits associated with stony rises are characteristic of the study area, these have the potential to contain artefact scatters, as shown in the broader geographic region. Scarred trees and earth features are found closer to the creeks in the region, which may also be associated with deeper alluvial deposits.
2.6 Land use history of the study area

The Kalkallo parish, which includes the study area, was surveyed by Hoddle in 1839. John Hunter Patterson purchased most of the allotments east of the Merri Creek, including part of the study area (Blake, 2013). The closest settlement to the study area, Rocky Water Holes (later renamed Donnybrook), included small acreage farmers, dairy farmers, pastoralists, blacksmiths, carpenters, brick makers, shoemakers, two inns, a post office, police watch house and a flour mill (Blake, 2013). A number of historical plans were obtained which show the ownership history and/or features of the study area.

A newspaper article from 1860 advertises the sale of land at Sydney Road, Donnybrook, on behalf of William Patterson for his estate at 'Woody Hill' near Donnybrook. The article details the state of the land near Woody Hill and what it is currently being used for at the time, with an anecdotal account of the wider landscape. The description can help to understand the importance and use of this part of the current Activity Area prior to European settlement. The Argus (1860) describes the estate as such:

These grounds contain 50 acres, 40 of which are under cultivation (and bearing at present moment one of the best crop in the district); the other portion is well timbered, and will afford a permanent supply of firewood. The improvements consist of a four-roomed house, splendid dairy, fowl and numerous other outhouses, garden containing half an acre, paled in; a large cistern supplying plenty of good water at all seasons. The fencing is of the best description...The view from Woody Hill surpasses description, the eye can stretch over a circle of 20 miles. It is near, and in many ways resembles, Summer Hill, the residence of Dr Wilson.

The description of the view from the Woody Hill estate makes it clear that this elevated area provides panoramic views around the surrounding countryside. The presence of nearby woodland as well as the estate's proximity to Merri Creek indicates the area would have had an abundance of natural resources and wildlife before the clearing of land for agricultural purposes— which is also mentioned within the article. It is likely the position of Woody Hill would have been a significant focal point for Aboriginal people in the past prior to European settlement, offering a means of viewing the surrounding landscape, possibly as a camping spot, with many nearby resources available for the use in hunting and gathering activities.

Parish plan of Kalkallo 185?

The study area is located within three allotments owned by John James Hawkey (Lot 14) and John Hunter Patterson (Lots 15 and 16) (Figure 1) (State Government of Victoria).
Figure 1  1850s Kalkallo parish plan showing study area in red
**Sketch map of Wallan and Donnybrook districts 1913**

The study area is located in an area which is noted as 'chiefly grazing' land with 'scattered timber' present. Woody Hill, at 940 feet (286.5 metres) above sea level, is within the western portion of the study area (Figure 2). This likely corresponds with the current quarry. The study area is generally shown to be rocky, as indicated by small circles (though these symbols are not noted in the legend) (State Government of Victoria).

![Sketch map of Wallan and Donnybrook districts 1913](image)

**Figure 2  1913 sketch map of the district showing study area in red**

**Mid to late 20th century**

A search of the historical Melbourne mosaic photo map series did not return any results for the study area.

An aerial photograph taken by the Department of Lands and Survey shows the Donnybrook region in 1970, and most of the western portion of the Activity Area (Plate 1). The land inside of the Activity Area exists as open pastoral fields with sparse trees and shrubs on the southern side of Woody Hill. Woody Hill is shown before the establishment of the present-day hard rock quarry, and the light 'sandy' appearance of the hill's slopes is the resulting directional lava flows (Plate 2).

The study area has most recently been used as residential and agricultural land, with fencing, sheds, stock yards, stone walls and dams present. A gas pipeline traverses Lot 1 LP38239 (1100 Donnybrook Road) in a north-south direction. A quarry is located within Lots 1 & 2 LP 132357 (870 Donnybrook Road). Woody Hill located within the activity area, is an extinct volcanic tube which is part of the Dargile Formation dating to the Silurian period. The scoria associated with Woody Hill is now being quarried, by Mountain View Quarries.

A detailed discussion of the features located within the study area is found in Section 1.3 and shown Map 1.
Plate 1  1975 aerial photograph of Donnybrook region showing Donnybrook Road, Merri Creek and Woody Hill (Department of Crown Lands and Survey)

Plate 2  1984 aerial photograph of Donnybrook region showing Donnybrook Road and Woody Hill (State Government of Victoria)
Summary
The study area has been used for stock grazing and possibly dairy farming from the early 19th century. Vegetation removal was likely a feature of farming practices in this area, as recent imagery shows only very sparse tree cover, and rows of planted trees along fence lines. Historical documentation suggests the area of Woody Hill which lies within the Activity Area may have been an important elevated landmark prior to European settlement, as well as a prestigious area for early landholders which offered wide views across the surrounding landscape.

Whilst parts of the study area, such as the gas pipeline alignment, farm dams and the quarry, have undergone significant ground disturbance, much of the area has been subject to lesser degrees of disturbance. Land clearing, stock grazing, fencing and smaller structures are likely to have caused disturbance to the upper soil layers within the study area. The presence of dry stone walls along modern fence lines suggests stone removal has occurred within the study area. Depending on the age of the walls and method of removal, this practice is also likely to have caused ground disturbance to the topsoil.

These disturbances may impact the potential for in situ Aboriginal cultural heritage to be identified.

2.7 Conclusions
The study area is found on the stony rises (GMU 6.1.2) eruption points (GMU 6.1.1) geomorphic units north of Melbourne. The study area is located to the east of the Merri Creek, which borders the study area at its south-west corner.

2.7.1 Predictive model
Based on the above review of the geographic region, including its environment, recorded Aboriginal places, previous archaeological assessments and information on the activities of Aboriginal people, a place predictive model has been developed. The place predictive model utilises the existing regional information in order to identify landforms which might have archaeological potential. Therefore the following Aboriginal place types likely to be found within the study area are:

- **Artefact distributions** consisting of one or more stone artefacts are associated with tool production, domestic activities and resource procurement. Scatters and isolated finds are most likely to occur on stony rises within the volcanic plain, as well as elevated land within 200 metres of Merri Creek.

- **Quarries** consist of negative flaking scars on rocky outcrops where Aboriginal people procured their lithic resources. Quarries have not been discovered in the geographic region to date, however they may be found on stony rises within the study area, as these are potential sources of raw material such as basalt and silcrete.

- **Scarred trees** represent cultural modifications of trees to obtain the bark for use as shelters, canoes and shields. Despite widespread removal of native forest which has resulted in little remnant vegetation; scarred trees may occur where remnant vegetation exists. Within the geographic region scarred trees are most commonly found within proximity to Merri Creek and Darebin Creek. Patches of mature native vegetation appear to occur in the southern section of the study area, and so have the potential to contain scarred trees although it is noted that these are not in proximity to a waterway.

- **Burials** of human remains can occur where the subsurface deposit is suitable for digging, with soft soil and sand being the most probable. No burials occur within the geographic region and they are unlikely to be found in the shallow soils associated with much of the
volcanic plain, however deeper alluvial deposits close to the Merri Creek have the potential to contain burials.

- **Earth features and mounds** can include evidence of occupation such as charcoal, burnt clay, lithic material, animal bones and shells. They are usually identified in preserved landscapes where the material has been covered by successive deposits of alluvium and elevated ridges or rises, or within proximity to water sources. Earth features have been recorded within the Merri Creek corridor, and so may be found within the study area close to Merri Creek and Curly Sedge Creek.

- **Rock art** includes stencils, prints and drawings in rock shelters and engravings in limestone caves. It is unlikely that rock art will be found in the study area, as the geology and geomorphology of the region does not suggest caves or rock shelters are present.

- **Shell middens** contain the remains of consumed shellfish are located in coastal areas or associated with inland waterways. No shell middens were discovered in the geographic region. Due to the lack of suitable water sources for shellfish species, there is a low probability that this place type will be located in the study area.

- **Stone arrangements** are places where Aboriginal people have positioned stones deliberately to form shapes or patterns. The purpose of these arrangements is often unknown. One stone arrangement has been recorded in the geographic region. These places are relatively rare, but are more likely to occur where stone resources are present, such as on the volcanic plain of the study area which contains outcropping basalt.

### 2.7.2 Spatial predictive model

Further to the place predictive model, spatial modelling for Aboriginal heritage in the study area is shown in Map 3. To assess the potential of environmental features and landforms for Aboriginal cultural heritage, this spatial predictive modelling was undertaken in ArcGIS using Spatial Analyst tools to compare, analyse and overlay numerous environmental and topographic datasets. Four main datasets were considered during the modelling process. These include:

1. Proximity to natural water sources
2. Existence of remnant vegetation
3. Slope classes
4. Local high points

All of these layers are weighted and ranked according to an equivalent but arbitrary scale of 0-3, with ‘3’ being areas most likely to support Aboriginal places and ‘0’ being very unlikely to support Aboriginal places. Once all of the four component layers are added together into a single layer, zones of high, moderate and low archaeological potential were developed. Areas of high potential scored between 6-10 (red), moderate potential scores between 3-6 (yellow) and low potential scored between 0-3 (green). In Map 3, areas with a low cumulative score have a lower likelihood of containing Aboriginal places, green being the lowest and red being the highest level of archaeological potential.

It is important to note that the purpose of this model is to make some broad predictions about the study area based on generalisations in order to inform the targeted survey. It cannot account for more specific phenomena which might actively contribute or detract from the areas suitability for Aboriginal places, such as areas which had ceremonial significance.

1. **Natural water sources**

The model uses the VicMap Hydro 1:25,000 vector watercourse lines and waterbody polygons
datasets and applied the following processes:

- Watercourses and waterbodies are filtered to remove any man-made waterways as designated by the 'Origin' field of the VicMap data
- Watercourses and waterbodies are buffered by 200 metres
- Watercourses and waterbodies are merged into a single dataset
- Water dataset is converted to a raster of 25 x 25 metre cell size
- Raster cells are reclassified to an overall 'hydro score' by assigning a score of 5 to rivers, swamps, lakes and sections of streams mapped as an area rather than a centre line; a score of 4 to streams, 3 to pondages and 0 to all other areas.

2. Modelled remnant vegetation

The model uses the Department of Environment, Land, Water and Planning modelled Ecological Vegetation Classes polygon dataset from 2005 as displayed on the Biodiversity interactive mapper. The following processes are applied:

- The polygons are converted to a raster of 25 x 25 metre cell size
- The raster cells are reclassified to a 'Veg score' value by assigning a score 3 to all areas containing remnant vegetation and 0 to all other areas.

3. Unsuitable slopes

- A slope model was created using a 1 arc second (~30 x 30 metre cell size) Digital Elevation Model (DEM) acquired from Geoscience Australia
- The slope model is reclassified into slope categories according to Speight's (2009) slope classes
- Any slopes classified as being very steep or greater are assigned a negative value as these slopes are likely to be too steep to support Aboriginal places.

4. Local high points

- The DEM is converted into a flow accumulation model, showing the total catchment area for water flow at each point in the landscape
- Areas of 0 flow are extracted into a separate layer. As they have no other land flowing into them, this means they stand above all other land in the immediate area
- The 0 flow areas model is filtered so only a significant amount of connected land is considered to represent hills and ridgelines.

The predictive model acts as a guideline for designing further research strategies and identifies key points for consideration during the targeted inspection.

The results of the review have indicated there is a potential for unidentified Aboriginal cultural heritage material within the study area. Higher potential is attributed to flatter areas of higher relative elevation, compared to the surrounding landscape, such as hills, rises and ridgelines. Areas close to
water sources (Merri Creek and Curly Sedge Creek) will have a greater potential than those more distant from these. The presence of remnant vegetation, such as in the southern portion of the study area, will also have the potential for undisturbed deposits, as well as potential for scarred trees to exist. Areas with more of these attributes will be considered to have a higher level of potential than those with fewer.
3 Targeted survey

3.1 Aims

A targeted survey of the study area was completed. The aims of the survey are to:

- Relocate the previously recorded Aboriginal places
- Examine areas of high, moderate and low archaeological potential
- Examine all landforms within the study area.

It is noted that the entire study area could not be accessed as several landowners were unavailable to grant access. While the assessment did provide an opportunity to test the predictive model, there is a sample bias in that none of the western properties were able to be included in the targeted survey.

3.2 Methods

The study area that was surveyed was traversed by vehicle, and a pedestrian survey was undertaken in areas with potential to contain Aboriginal heritage (stony rises, stands of mature native vegetation), areas of ground disturbance, areas of good ground visibility and other salient features. Information on the surveyed features was documented and provenanced using a Topcon GRS-1 DGPS which was later post-processed to sub one metre accuracy. Photographs were taken to illustrate and document the findings.

3.3 Results

3.3.1 Targeted survey consultation

The targeted survey was undertaken on 5 and 6 December 2016 (Table 4). It built on information from the background review and tested the predictive modelling.

<table>
<thead>
<tr>
<th>Date</th>
<th>Name</th>
<th>Organisation</th>
<th>Nature of participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 Dec 2016</td>
<td>Mark Gardiner</td>
<td>Wurundjeri Council</td>
<td>Targeted survey</td>
</tr>
<tr>
<td></td>
<td>Bridget Grinter</td>
<td>Biosis Pty Ltd</td>
<td></td>
</tr>
<tr>
<td>6 Dec 2016</td>
<td>Mark Gardiner</td>
<td>Wurundjeri Council</td>
<td>Targeted survey</td>
</tr>
<tr>
<td></td>
<td>Jayson O'Halloran</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bridget Grinter</td>
<td>Biosis Pty Ltd</td>
<td></td>
</tr>
</tbody>
</table>

3.3.2 Survey units

The study area was surveyed in units due to its large size, with each property constituting a single unit. The survey units are listed in Table 5.
Table 5  Survey units for the site inspection

<table>
<thead>
<tr>
<th>Survey unit</th>
<th>Total area of unit (hectares)</th>
<th>Address</th>
<th>Lot numbers</th>
<th>Date surveyed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>89.12</td>
<td>870 Donnybrook Road</td>
<td>Lots 1 and 2 LP 132357</td>
<td>6 December 2016</td>
</tr>
<tr>
<td>2</td>
<td>208.26</td>
<td>960 Donnybrook Road</td>
<td>Lot 1 TP 374144</td>
<td>6 December 2016</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lot 1 TP 371225</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>66.22</td>
<td>1030 Donnybrook Road</td>
<td>Lot 1 TP 380512</td>
<td>5 December 2016</td>
</tr>
<tr>
<td>4</td>
<td>67.34</td>
<td>1100 Donnybrook Road</td>
<td>Lot 1 LP 38239</td>
<td>5 December 2016</td>
</tr>
<tr>
<td>5</td>
<td>0.29</td>
<td>1140 Donnybrook Road</td>
<td>Lot 1 LP 98632</td>
<td>5 December 2016</td>
</tr>
<tr>
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<td>67.37</td>
<td>1150 Donnybrook Road</td>
<td>Lot 2 LP 98632</td>
<td>5 December 2016</td>
</tr>
</tbody>
</table>

### 3.3.3 Features

#### Unit 1

This unit comprised the Mountain View Quarries and Pronto Mixed Concrete plant and surrounding land. The property comprises two allotments. The quarry and concrete plant areas were not inspected due to safety requirements, and aerial mapping also shows that they have been subject to significant ground disturbance. The quarry was located on a low hill (Woody Hill) at the southern end of the property (Plate 3). Access within the unit was further restricted as the access road was partially closed due to wet weather. An area in the south-east part of the property was accessed, and one low relief stony rise was surveyed. Visibility on the rise was relatively high, at around 80%. No cultural material was discovered on the rise, which was covered in brown silty soil. Outcropping basalt, weeds and pasture grass were observed on the rise, along with a pile of rocks that did not appear to originate from that rise (Plate 4). A conversation with Neil Daye, a supervisor at the quarry, revealed that much of the rock was removed and placed along fence lines in the past to clear the paddocks (Neil Daye, 2016). An area containing drooping cassinia (*Cassinia arcuata*) and a vehicle track exhibiting high visibility were also inspected. The soils in this area were disturbed and clayey in nature.

No Aboriginal cultural heritage was located in Unit 1.
Plate 3  Extraction area of quarry, facing 10°

Plate 4  Pile of basalt on rise, facing 85°

**Unit 2**

This unit was comprised of an area of land divided into several paddocks. A stony rise near the centre of the property was surveyed on foot. Visibility was approximately 30%, and two artefacts were discovered. This was a small core made of silcrete which was subsequently registered as VAHR 7822-4036 (Plate 5). The second was a silcrete medial flake which was subsequently registered as VAHR 7822-4111.
Several other rises in the unit were surveyed, however no further Aboriginal cultural heritage was recorded.

An area of red gum trees (*Eucalyptus camaldulensis*) was located in the south of the unit, both on and below the stony rises (Plate 6). Several of these were inspected for evidence of cultural scarring, however no evidence was identified.

The sites of the previously recorded artefact scatters, Donnybrook IA 1 (VAHR 7822-1440; Plate 8) and Donnybrook IA 2 (VAHR 7822-1441; Plate 9), were relocated. At both sites long grass hampered the efforts of the field team to relocate the surface artefacts, which searched within a 20 metre radius of the primary grid co-ordinates, however neither place could be found.

Several dams, with areas of good ground surface visibility, were also inspected for evidence of Aboriginal cultural heritage, however none was identified. Dry stone walls were located throughout the area, including along Donnybrook Road.

Plate 5  Silcrete artefact in Unit 2, VAHR 7822-4036
Plate 6  Stand of Red Gum trees in Unit 2, facing 305°

Plate 7  Dry stone wall on Donnybrook Road, facing 5°
Unit 3

This unit was a cattle farm with many small paddocks. Eucalyptus and pine trees were planted along fence boundaries. A rise in the western portion of the unit was surveyed. The rise was moderately high, and exhibited low surface visibility (1%). A concrete tank was located on the rise. Weeds and pasture grass was located over the rise. To the east a small rise was inspected, however this was actually a planted clump of native trees with rocks piled around.

No Aboriginal cultural heritage was located in Unit 3.
Unit 4

The next unit was a rectangular-shaped land parcel. Several stony rises were surveyed. Ground surface visibility was low throughout the area. Rose bushes were found to be growing wild over the study area, especially on the stony rises (Plate 11). This included the more southern inaccessible areas, suggesting they were not planted in these locations but instead propagated by self-seeding.

A gas mains pipeline and control station is located in the north of this unit (Plate 12). The LDAD located within the unit, Wollert Low Density Artefact Distribution 7822 (VAHR 7822-3647-4 and -5), was found at the southern end of the property in the mains alignment. This area was searched for evidence of further artefacts, however none were detected (Plate 13).

No Aboriginal cultural heritage was located in Unit 4.
Plate 11  Stony rise in south of Unit 4, facing 170°

Plate 12  Gas mains control station, facing 320°
Unit 5

Unit 5 was a residential block fronting Donnybrook Road. The front yard was lawn with pines and other exotic species planted. The rear yard contained sheds, a bird aviary, and gravel throughout much of the area (Plate 14). Much of the ground surface had been gravelled, in between areas of outcropping basalt. A fire pit was located at the southern extent of the property.

No Aboriginal cultural heritage was located in Unit 5.
Unit 6

Unit 6 was an almost rectangular block of land, with a one acre square excised in the north-east corner (survey unit 5). The area is primarily used for grazing stock. Ground surface visibility was generally poor (close to 0%) throughout the area (Plate 15). Areas of disturbance included dams (Plate 16), fences and a vehicle track, though this was present in the northern section of the study area only. Weeds and grass were located on the stony rises limiting visibility (Plate 17).

No Aboriginal cultural heritage was located in Unit 6.
Plate 15  Ground surface visibility in Unit 6

Plate 16  Stony rise toward dam, facing 100°
3.3.4 Aboriginal heritage

Three low density artefact scatters previously discovered in the study area could not be relocated during the site inspection however one new Aboriginal place was recorded.

VAHR 7822-1440
A Place Inspection Form for VAHR 7822-1440 has been submitted to the VAHR. Long grass hampered the efforts of the field team to relocate the surface artefacts, which searched within a 20 metre radius of the primary grid co-ordinates, however the place could not be found (Plate 18).

VAHR 7822-1441
A Place Inspection Form for VAHR 7822-1441 has been submitted to the VAHR. Long grass hampered the efforts of the field team to relocate the surface artefacts, which searched within a 20 metre radius of the primary grid co-ordinates, however the place could not be found (Plate 19).

VAHR 7822-3647 -4 and -5
A Place Inspection Form for VAHR 7822-3647 has been submitted to the VAHR. This area was searched for evidence of further artefacts, however none were detected (Plate 20).

VAHR 7822-4036
One artefact, comprising a low density artefact distribution, was located within the study area in Lot 1 TP 371225 (see Plate 5). The artefact was a silcrete core, found on a stony rise. The artefact was located 850 metres west of VAHR 7822-1440, and over 1 kilometre from Curly Sedge Creek.
One artefact, comprising a low density artefact distribution, was located within the study area in Lot 1 TP 371225 (see Plate 21). The artefact was a medial flake, found on a stony rise. The artefact was located X metres west of VAHR 7822-4036, and over 1 kilometre from Curly Sedge Creek.

Plate 18    VAHR 7822-1440, facing 275°

Plate 19    VAHR 7822-1441, facing 10°
3.4 Conclusions

The study area that was available to be surveyed comprised agricultural, residential and industrial land. The majority of the area was being used as grazing land. Areas of disturbance included dams, fences, a gas main, quarry, buildings, tanks and other farming infrastructure.
Whilst only two artefacts were discovered, the ground surface visibility within the study area was generally poor due to grass and weed coverage. This is a common finding of heritage assessments. Ground surface visibility can be affected by the time of year, sedimentation and land use practices. Additionally, none of the properties on the western border of the study area, closest to Merri Creek, were able to be accessed, which has biased the survey strategy toward the areas most distant from a major waterway.

There is also potential for Aboriginal heritage to be located in a subsurface context within the study area, based on previous investigations in the gas mains alignment and in the broader geographic region. Mature Eucalyptus trees are located in the southern part of the study area; therefore there is a possibility that intact archaeological deposits will be located within this section of the study area.

3.4.1 Predictive model

Due to the limited cultural heritage discovered during the site inspection, and the sample bias due to none of the western-most properties being inspected, it is difficult to refine the predictive model for the study area. The significant ground disturbance caused by the quarrying of Woody Hill hindered efforts for discovering cultural heritage in this location. The lack of ground surface visibility was another factor limiting the ability of the field team to identify Aboriginal heritage.

The location of one artefact on a stony rise does not fully support the predictive model, as isolated artefacts are more likely to occur on the low-lying landscapes surrounding stony rises. However it is recognised that poor ground surface visibility was a limitation to the survey and there remains potential for additional Aboriginal cultural heritage to be identified within the study area when ground surface conditions are more conducive to archaeological investigation.

Based on the results of the targeted survey the place predictive model has been updated (Map 5). It shows areas of ground disturbance has having low archaeological potential.

It is important to note that while poor ground surface visibility meant that effective survey coverage was poor, the results of the survey did support the larger pattern identified in the predictive model which showed that Aboriginal places can be identified on stony rises away from waterways. Before this assessment, there was no evidence of Aboriginal cultural heritage within 960 Donnybrook Road and it did not fit in to the high level modelling utilised to develop the CHMP triggers under the Aboriginal Heritage Act 2006.
4 Cultural heritage values assessment

A cultural heritage values assessment complements background research (Section 2) and identification of tangible heritage (Section 3) by identifying Aboriginal cultural heritage values for the study area, both tangible and intangible. Consultation with Aboriginal stakeholders in this assessment is critical as:

Indigenous involvement in identification processes may be the only way to establish the location of ‘Dreamings’, totemic obligations, traditional food, medicine and material culture resources particularly as there may be no obvious physical evidence for past or present Indigenous use at these places. It is also the only way in which the value of a place for Indigenous people can be established (Australian Heritage Commission, 2002, p. 13).

The cultural heritage values assessment included a site visit of the study area and workshop with Wurundjeri Elders, following completion of the targeted survey. Follow-up correspondence was also undertaken with the RAP in order for them to review the information provided in this report.

4.1 Aims

A cultural heritage values assessment of the study area was completed. The aims of the assessment are to:

- Give Wurundjeri Council Elders an opportunity to visit and view the study area
- Record oral information and values of the study area
- Establish the cultural heritage values of the study area.

4.2 Methods

4.2.1 Cultural heritage values assessment consultation

The cultural heritage values assessment included a site visit of the study area on 1 and 2 June 2017 with a workshop on 2 June 2017. Building on information gathered from the background research and the targeted survey, the cultural heritage values assessment collected information onsite during the site visit, questionnaires and workshop. Follow up discussions of the information gathered has also been undertaken.

Table 6 Cultural heritage values assessment participation

<table>
<thead>
<tr>
<th>Date</th>
<th>Name</th>
<th>Organisation</th>
<th>Nature of participation</th>
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<tr>
<td>1 June 2017</td>
<td>Ron Jones, Allan Wandin, Jacqui Wandin, Bobbie Mullins, Alice Kolasa, Alex Parmington</td>
<td>Wurundjeri Council</td>
<td>Site visit of study area</td>
</tr>
<tr>
<td></td>
<td>Asher Ford</td>
<td>Biosis Pty Ltd</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kara Mahoney</td>
<td>City of Whittlesea</td>
<td></td>
</tr>
</tbody>
</table>
### Cultural heritage values assessment approach

The process for establishing cultural heritage significance is outlined in the Australia ICOMOS Charter for the Conservation of Places of Cultural Significance, otherwise known as 'The Burra Charter' (Australia ICOMOS, 2013). The Burra Charter is based on preceding international charters formulated by ICOMOS (the International Council on Monuments and Sites).

The recently revised Burra Charter defines cultural heritage significance as the aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Social value embraces the qualities for which an Aboriginal place has become a focus of spiritual, political, national or other cultural sentiment to a majority or minority group (Australia ICOMOS, 1988, p. 11). This cultural sentiment therefore comes from Aboriginal people themselves in relation to the Aboriginal place(s) that are being assessed. These principles are also reflected in the Aboriginal Heritage Act 2006, which in Section 4 states that the definition of cultural heritage significance includes archaeological, anthropological, contemporary, historical, scientific, social or spiritual significance and significance in accordance with Aboriginal tradition.

Therefore a cultural heritage values assessment must incorporate the aesthetic, historic, social and/or spiritual value of a place in order to arrive at an overall statement of significance. When considering the overall Aboriginal cultural heritage significance of Aboriginal places in Victoria a more holistic approach, which includes all of the above categories, would be more appropriate to determine cultural heritage significance. As stated in the Guidelines to the Burra Charter regarding Cultural Significance (Australia ICOMOS, 1988, p. 13), “whatever may be considered the principal significance of a place, all other aspects of significance should be given consideration.” Intangible values have rarely been incorporated in to the significance assessment of Aboriginal places in Victoria; however, this is common practice in other parts of Australia.

This cultural heritage values assessment has been undertaken on the basis that the cultural heritage values and significance of the study area can only be made by the Aboriginal community. In order to gather information to undertake a cultural heritage values assessment, male and female Wurundjeri Elders were invited on site to survey the study area. Wurundjeri Elders were provided with a questionnaire based on the Merri Creek Aboriginal cultural values assessment (Wurundjeri Tribe Land and Compensation Cultural Heritage Council Inc., 2012) to fill out during the survey. Following the conclusion of the survey a workshop was held to discuss the study area and the cultural values present.

The information gathered from the survey, questionnaires and workshop has then be collated and discussed in the context of aesthetic, historic, scientific, social (or spiritual) values. From this information a statement of significance has been generated, describing what are the important
cultural heritage values of the study area. This information has been presented to the Wurundjeri in draft format for comment.

4.3 Results

Comment on the cultural heritage values and significance of these places can only be made by the Aboriginal community. Specific details about cultural significance should be dealt with on a case-by-case basis with the Aboriginal community. The statement below is a broad general statement of cultural significance that the Wurundjeri Council has provided for the study area:

For Aboriginal people, there are many different kinds of cultural values associated with the landscapes that were once lived in by their ancestors. These include the tangible values normally recorded during archaeological investigations, such as artefact scatters and scarred trees. These places are physical reminders of the cultural lives of the Wurundjeri ancestors and a special connection therefore exists between those places and contemporary Wurundjeri people. This special connection underpins the high significance of these places. Once they are destroyed, the connection is largely destroyed.

There are other values that the Wurundjeri people connect to in landscapes such as the landscape of the study area. In this instance, the natural values, including waterways and remnant vegetation, are all integral to the cultural landscape in which Wurundjeri society developed over many thousands of years. These landscape characteristics are therefore significant in accordance with Aboriginal tradition.

It should be noted that Aboriginal tradition is not static and unchanging from a distant “authentic” past. Tradition is also the handing down of beliefs and stories from one generation to the next, but does not mean that “significance in accordance with Aboriginal tradition” requires an immutable value from “time immemorial.” For example, a scatter of discarded waste flakes from a one-off utilitarian task may acquire “significance in accordance with Aboriginal tradition” with the passage of time and change. The act of handling stone artefacts through the archaeological excavation and sieving process by Aboriginal peoples reconnects those peoples with their past and therefore creates a new cultural significance with those artefacts.

For the Wurundjeri community the natural world is a cultural world; therefore the Wurundjeri people have a special interest in preserving not just their cultural objects, but the natural landscapes of cultural importance. The acknowledgement of broader attributes of the landscape as cultural values that require protection (encompassing, among other things, a variety of landforms, ecological niches and habitats as well as reviving cultural practices) is essential to the identity and wellbeing of the Wurundjeri people. Best practice heritage management, in terms of avoidance of harm to cultural heritage and where harm cannot be avoided, proper management of the disturbance of those values, is integral in the management of these significant cultural places in the study area.

More specific cultural values are associated with the landscape, historical associations, spiritual associations and scientific values of the study area, are discussed below.

4.3.1 Landscape values

As stated above, the entire landscape is of importance to the Wurundjeri people in that it is part of a larger cultural landscape. Specific landscape elements identified as being culturally significant during the site visit and workshop include Merri Creek (Plate 22) and raised basalt stony rises (Plate 21) close to natural drainage lines. These areas would have been likely camping areas for Wurundjeri people.

Remnant native vegetation was also identified as culturally significant and would have been a direct source of resources as well as providing habitat for large and small fauna (Plate 22). Larger hollow baring trees in particular are important habitat for possums and birds, which would have provided
meat, fur, feathers and eggs to Wurundjeri people. Prior to European settlement, the study area would have been wooded and the country is well suited to cultural burns.

Plate 22  Merri Creek in the southwest of the study area

4.3.2 Historic values

While there are no historic references specific to the study area, Merri Creek is strongly associated with Bebejan (unknown – 1836), a Ngurungaeta and a clan head of the Wurundjeri willam (white gum tree dwellers) at the time of European contact. Bebejan was brother to Billibillary (c. 1799-1846), also a Ngurungaeta and a clan head as well as being one of the most powerful leaders in the wider Kulin Nation. Bebejan's traditional estate, with which he had a custodial relationship, is associated with Merri Creek north of the Yarra River. Bebejan was present at the signing of Batman's Treaty in 1835, but died shortly afterwards in 1836.

Bebejan's heir was his son William Barak (1824-1903), who received a traditional but interrupted childhood, due to European settlement, on his father's estate. William attended the Yarra Mission School from 1837 to 1839 and joined the Native Mounted Police in 1844. He was heavily involved in the move of Wurundjeri people to Coranderrk Station and on the death of his cousin Wonga in 1874 became the sole Ngurungaeta of the Wurundjeri willam. Until his death, William was a passionate and respected spokesman for Aboriginal rights. While most of William's life was spent away from Merri Creek, as his father's estate and a location of important spiritual and ceremonial activities, it would have been a formative location in his early years.

4.3.3 Scientific values

Archaeological survey of the study area has identified Aboriginal cultural heritage material, flaked stone artefacts, and the potential for archaeological deposits in proximity to Merri Creek and on stony rises. Tangible cultural heritage material and the potential for research of this material is important to the wider Wurundjeri community, in that it helps inform community understandings of past land use on Wurundjeri country. In particular, intensity of past land use is hard to estimate based on current knowledge and archaeological research provides potential for a richer understanding of the study
area as a cultural landscape. Such research also allows Wurundjeri people to reconnect to the landscape in a meaningful way.

4.3.4 Social values

Within the wider landscape, Merri Creek is mentioned in creation stories associated with prominent Melbourne waterways as told by Billibillary (Massola, 1968, pp. 115-116):

According to Billi-billeri of the Kulin... Once the water of the Yarra was locked in the mountains. This great expanse of water was called Moo-rool, or Great Water. It was so large that the Woiwurung people had very little hunting ground, although the tribes to the south had excellent hunting grounds on the lovely flat which is now Port Phillip Bay, Mo-yarra, the head of the Woiwurung, decided to free the country of the water and cut a channel through the hills in a southerly direction to Western Port. However only a little water followed him, the path gradually closed up. Water again covered the land of the Woiwurung.

Sometime later, the headman of the tribe was Bar-wool. He remembered Mo-yarra's attempt to free the land and knew the Mo-yarra still lived on the swamps beside Western port (Koowerup). Each winter saw the hilltops covered with feather down which Mo-yarra plucked from the water birds sheltering on the swamps.

Bar-wool decided to drain the land. He cut a channel up the valley with his stone axe, but was stopped by Baw-baw, the mountain. He decided to go northwards, but was stopped by Donna Buang and his brother. Then he went westward and cut through the hills of Warr-an-dye. There he met Yan-yan, another Woiwurung, who was busily engaged in cutting a channel for the Plenty River in order to drain Morang, the place where he lived. They joined forces, and the waters of Morrol and Marang became Moo-rool-bark, 'the place where wide waters were'. They continued their work, and reached the Heidelberg-Templestown Flats, or Warringal, Dingo-jump-up, and there they rested while the waters formed another Moorool.

Bar-wool and Yan-yan again set to work but this time they had to go much slower, because the ground was much harder and they were using up too many stone axes. Between Darebin and the Merri Creeks they cut a narrow, twisting track looking for softer ground. At last they reached Port Phillip. The waters of Moorool and Morang rushed out. The country of the Woiwurung was freed from water, but the flats for Port Philip were inundated and Port Philip Bay was formed.

Merri Creek has also traditionally supported important fauna that are highly significant as totem species to the Wurundjeri people. While they are not recorded as occurring within the study area, ceremonial activities (men's business and initiation ceremonies) are known to have occurred along Merri Creek. In the Merri Creek Aboriginal cultural values recording, Wurundjeri Elder Colin Hunter makes the following comments:

Merri Creek catchment was very important to Wurundjeri people as it has ceremonial areas at both ends; specifically, at Yarra Bend and at the head waters in Wallan. Prominent hills (eruption points) aligning north-south used to line-up, these would have been visual markers in the landscape including Mount Ridley. They would have been good places for viewing the country. Merri Creek and its tributaries would have been used as travel routes, and the grasslands in between the three hills, would have been good for hunting and for the collection of seed and grasses. My Father and Grandfather used the Merri Creek like a road to follow to get around but so did other non-Indigenous peoples (Wurundjeri Tribe Land and Compensation Cultural Heritage Council Inc., 2012, p. 66).

4.4 Statement of significance

The study area is located within a wider cultural landscape that is important to the Wurundjeri people as part of their links to country. Merri Creek is a culturally significant waterway due to its place in Wurundjeri cosmology, its importance as a travel route and its historical association with important
Ngurungaetas, particularly Bebejan. Prominent stony rises and areas of remnant native vegetation are also of special interest to the Wurundjeri people, in that they provide important habitat for native flora and fauna and are links to pre European landscapes. There is also potential that archaeological research of the study area can provide a richer story of Wurundjeri peoples' interaction with the landscape.
5 Legislative considerations

5.1 Aboriginal Heritage Act 2006 and Aboriginal Heritage Regulations 2007

**Mandatory CHMP**

Under Section 46 of the *Aboriginal Heritage Act 2006*, it is an offence to commence an activity for which a CHMP is required. Under Regulation 6 of the *Aboriginal Heritage Regulations 2007* a CHMP is required if all or part of the activity is located within an area of cultural heritage sensitivity, and all or part of the activity is a high impact activity.

To determine whether a CHMP is required, relevant sections of the *Aboriginal Heritage Regulations 2007* as they relate to the study area are reproduced below for reference.

4 Definitions

In these Regulations –

... Significant ground disturbance means disturbance of-

(a) the topsoil or surface rock layer of the ground; or
(b) a waterway-

by machinery in the course of grading, excavating, digging, dredging or deep ripping, but does not include ploughing other than deep ripping.

...

22 Registered cultural heritage places

(1) A registered cultural heritage place is an area of cultural heritage sensitivity.

(2) Subject to subregulation (3), land within 50 metres of a registered cultural heritage place is an area of cultural heritage sensitivity.

(3) If part of the land within 50 metres of a registered cultural heritage place has been subject to significant ground disturbance, that part is not an area of cultural heritage sensitivity.

23 Waterways

(1) Subject to subregulation (2), a waterway or within 200 metres of a waterway is an area of cultural heritage sensitivity.

(2) If part of a waterway or part of the land within 200 metres of a waterway has been subject to significant ground disturbance, that part is not an area of cultural heritage sensitivity.

...

43 Buildings and works for specified uses

(1) The construction of a building or the construction or carrying out of works on land is a high impact activity if the construction of the building or the construction or carrying out of the works—

(a) would result in significant ground disturbance; and
(b) is for or associated with the use of the land for any one or more of the following purposes—

(i)  aquaculture;
(ii) a camping and caravan park;
(iii) a car park;
(iv) a cemetery;
(v)  a child care centre;
(vi) a corrective institution;
(vii) a crematorium;
(viii) an education centre;
(ix)  an emergency services facility;
(x) a freeway service centre;
(xi)  a hospital;
(xii) an industry;
(xiii) intensive animal husbandry;
(xiv) a major sports and recreation facility;
(xv) a minor sports and recreation facility;
(xvi) a motor racing track;
(xvia) an office;
(xvii) a place of assembly;
(xviii) a pleasure boat facility;
(xix) a research centre;
(xx) a retail premises;
(xxa) a retirement village;
(xxi) a service station;
(xxii) a transport terminal;
(xxiii) a utility installation, other than a telecommunications facility, if—

(A) the works are a linear project that is the construction of an overhead power line with a length exceeding one kilometre or for which more than 10 power poles are erected; or

(B) the works are a linear project that is the construction of a pipeline with a length exceeding 500 metres; or

(C) the works are a linear project with a length exceeding 100 metres (other than the construction of an overhead power line or a pipeline with a pipe diameter not exceeding 150 millimetres); or
(D) the works affect an area exceeding 25 square metres.

(xxiv) a veterinary centre;

(xxv) a warehouse;

(xxvi) land used to generate electricity, including a wind energy facility.

(2) The terms used in subregulation (1)(b) have the same meanings as they have in the Victorian Planning Provisions.

(3) Despite subregulation (1), the construction of a building or the construction or carrying out of works on land is not a high impact activity if it is for or associated with a purpose listed under subregulation (1)(b) for which the land was being lawfully used immediately before the commencement day.

(4) In this regulation, *linear project* has the same meaning as in regulation 68.

### Constructing specified items of infrastructure

(1) The construction of any one or more of the following is a high impact activity if the construction would result in significant ground disturbance—

(a) an airfield;

(b) a bicycle track with a length exceeding 100 metres;

(c) a helipad;

(d) rail infrastructure, other than—

(i) a railway track with a length of less than 100 metres; or

(ii) a railway track siding with a length of less than 100 metres; or

(iii) a cutting with a length of less than 100 metres; or

(iv) a tunnel with a length of less than 100 metres; or

(v) a bridge with a span of less than 100 metres; or

(vi) a platform with a length of less than 100 metres; or

(vii) a service road with a length of less than 100 metres;

(e) a roadway with a length exceeding 100 metres;

(f) a walking track with a length exceeding 100 metres;

(g) a telecommunications line consisting of an underground cable or duct with a length exceeding 500 metres.

(2) In this regulation, *telecommunications line* has the same meaning as in the Victorian Planning Provisions.

### Dwellings

(1) The construction of three or more dwellings on a lot or allotment is a high impact activity.

(2) The carrying out of works for three or more dwellings on a lot or allotment is a high impact activity.
(3) This regulation does not apply to the construction of or the carrying out of works for a retirement village within the meaning of the Victorian Planning Provisions.

46 Subdivision of land

(1) The subdivision of land into three or more lots is a high impact activity if—

(a) the planning scheme that applies to the activity area in which the land to be subdivided is located provides that at least three of the lots may be used for a dwelling or may be used for a dwelling subject to the grant of a permit; and

(b) the area of each of at least three of the lots is less than eight hectares.

(2) The subdivision of land into two or more lots in an industrial zone is a high impact activity.

(3) In this regulation, industrial zone has the same meaning as in the Victorian Planning Provisions.

Sections of the study area include areas of cultural heritage sensitivity (Map 6), specifically 130 Langley Park Drive (Regulation 23), 960 Donnybrook Road (Regulations 22 and 23) and 1100 Donnybrook Road (Regulations 22 and 23).

The study area is likely to include high impact activities such as construction of three or more dwellings (Regulation 45), subdivision of land into 3 or more allotments (Regulation 46), retail premises, education centres (Regulation 44), utility installations, roads and footpaths (Regulation 44), among others.

The two trigger threshold to prepare a mandatory CHMP has been met for sections of the study area. To be exempt from preparing a mandatory CHMP, all of the area of cultural heritage sensitivity must have been subjected to significant ground disturbance (Regulation 6). While the targeted survey noted areas of disturbance within the wider study area, the threshold for significant ground disturbance was not met.

Therefore the following properties require a mandatory CHMP:

- 130 Langley Park Drive
- 960 Donnybrook Road
- 1100 Donnybrook Road

Voluntary CHMP

It is noted that under Section 27 of the Aboriginal Heritage Act 2006, harming Aboriginal cultural heritage is unlawful. Severe penalties apply for unpermitted harm.

This assessment has concluded that there is potential for Aboriginal cultural heritage to be identified outside of the areas of cultural heritage sensitivity, particularly on stony rises. This is supported by regional information discussed in the background review and the identification of a new Aboriginal place in the targeted survey. VAHR 7822-4036 was recorded on a stony rise outside the 200 metre buffer applied to waterways and the 50 metre buffer applied to previously recorded Aboriginal places. VAHR 7822-4036 conforms to regional patterning of Aboriginal occupation and suggests additional artefacts may be identified on the remainder of the stony rises within the study area.

Under Section 29 of the Aboriginal Heritage Act 2006, harm to Aboriginal cultural heritage is permitted if the person is acting in accordance with a cultural heritage permit or approved CHMP that applies to
the Aboriginal cultural heritage. The only way to provide surety to the development and Aboriginal cultural heritage approval for the development is to undertake a voluntary CHMP under Section 45 of the *Aboriginal Heritage Act 2006*.

Therefore the following properties are recommended to prepare a voluntary CHMP:

- 40 Langley Park Drive
- 75 Langley Park Drive
- 90 Langley Park Drive
- 95 Langley Park Drive
- 105 & 125 Langley Park Drive
- 110 Langley Park Drive
- 840 Donnybrook Road
- 870 Donnybrook Road
- 910 Donnybrook Road
- 1030 Donnybrook Road
- 1140 Donnybrook Road
- 1150 Donnybrook Road

### 5.2 Conclusions

A review of the *Aboriginal Heritage Act 2006* and the *Aboriginal Heritage Regulations 2007* has shown that sections of the study area meet the two trigger threshold to prepare a mandatory CHMP while the remainder of the study area is considered to have archaeological potential and therefore a voluntary CHMP should be considered. These conclusions are summarised in Table 7 and Map 7. It is recognised that the conclusions are current for this assessment only and that the results of CHMPs may change the triggers for those neighbouring properties not currently required preparing a mandatory CHMP.

Note those properties that have been identified as requiring additional assessment before conclusions can be made as to whether a voluntary CHMP is recommended, are the ones that were not accessed during the field assessment. Without confirming assumptions made in in the desk based review with observations in the targeted survey, no conclusions can be made. However it is emphasised that a CHMP is the only cultural heritage approval that can be undertaken ahead of development, thereby acting as a risk management strategy ensuring no delays to development activities.
<table>
<thead>
<tr>
<th>Address</th>
<th>Area of cultural heritage sensitivity</th>
<th>High impact activity</th>
<th>Archaeological potential</th>
<th>Mandatory CHMP required</th>
<th>Voluntary CHMP recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 Langley Park Drive</td>
<td>No</td>
<td>Yes Regulation 43 – buildings and works for specified uses Regulation 44 – constructing specified items of infrastructure Regulation 45 – dwellings Regulation 46 – subdivision of land</td>
<td>Unknown Predictive model was not able to be ground truthed</td>
<td>No</td>
<td>Additional investigation required</td>
</tr>
<tr>
<td>75 Langley Park Drive</td>
<td>No</td>
<td>Yes Regulation 43 – buildings and works for specified uses Regulation 44 – constructing specified items of infrastructure Regulation 45 – dwellings Regulation 46 – subdivision of land</td>
<td>Yes Stony rises</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>90 Langley Park Drive</td>
<td>No</td>
<td>Yes Regulation 43 – buildings and works for specified uses Regulation 44 – constructing specified items of infrastructure</td>
<td>Unknown Predictive model was not able to be ground truthed</td>
<td>No</td>
<td>Additional investigation required</td>
</tr>
<tr>
<td>Address</td>
<td>Area of cultural heritage sensitivity</td>
<td>High impact activity</td>
<td>Archaeological potential</td>
<td>Mandatory CHMP required</td>
<td>Voluntary CHMP recommended</td>
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</tr>
<tr>
<td>95 Langley Park Drive</td>
<td>No</td>
<td>Yes Regulation 43 – buildings and works for specified uses Regulation 44 – constructing specified items of infrastructure Regulation 45 – dwellings Regulation 46 – subdivision of land</td>
<td>Yes Drainage channel</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>105 &amp; 125 Langley Park Drive</td>
<td>No</td>
<td>Yes Regulation 43 – buildings and works for specified uses Regulation 44 – constructing specified items of infrastructure Regulation 45 – dwellings Regulation 46 – subdivision of land</td>
<td>Yes Drainage channel and remnant native vegetation</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>110 Langley Park Drive</td>
<td>No</td>
<td>Yes Regulation 43 – buildings and works for specified uses Regulation 44 – constructing specified</td>
<td>Unknown Predictive model was not able to be ground truthed</td>
<td>No</td>
<td>Additional investigation required</td>
</tr>
<tr>
<td>Address</td>
<td>Area of cultural heritage sensitivity</td>
<td>High impact activity</td>
<td>Archaeological potential</td>
<td>Mandatory CHMP required</td>
<td>Voluntary CHMP recommended</td>
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</tr>
<tr>
<td>130 Langley Park Drive</td>
<td>Yes</td>
<td>Yes regulation 43 – buildings and works for specified uses</td>
<td>Yes</td>
<td>Yes</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes regulation 44 – constructing specified items of infrastructure</td>
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<td></td>
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<td></td>
<td>Yes regulation 45 – dwellings</td>
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<td></td>
<td></td>
<td>Yes regulation 46 – subdivision of land</td>
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<tr>
<td></td>
<td></td>
<td>Merri Creek and drainage channel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>840 Donnybrook Road</td>
<td>No</td>
<td>Yes regulation 43 – buildings and works for specified uses</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes regulation 44 – constructing specified items of infrastructure</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Yes regulation 45 – dwellings</td>
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<td></td>
<td></td>
<td>Yes regulation 46 – subdivision of land</td>
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<tr>
<td></td>
<td></td>
<td>Stony rises and remnant native vegetation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>870 Donnybrook Road</td>
<td>No</td>
<td>Yes regulation 43 – buildings and works for specified uses</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes regulation 44 – constructing specified items of infrastructure</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Yes regulation 45 – dwellings</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Yes regulation 46 – subdivision of land</td>
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<tr>
<td></td>
<td></td>
<td>Stony rises</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Address</td>
<td>Area of cultural heritage sensitivity</td>
<td>High impact activity</td>
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<td>Mandatory CHMP required</td>
<td>Voluntary CHMP recommended</td>
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</tr>
<tr>
<td>910 Donnybrook Road</td>
<td>No</td>
<td>constructing specified items of infrastructure Regulation 45 – dwellings Regulation 46 – subdivision of land</td>
<td>Yes Stony rises</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>960 Donnybrook Road</td>
<td>Yes Regulation 22- proximity to VAHR 7822-1440, VAHR 7822-1441 and VAHR 7822-4036 Regulation 23 – proximity to Curly Sedge Creek</td>
<td>Yes Regulation 43 – buildings and works for specified uses Regulation 44 – constructing specified items of infrastructure Regulation 45 – dwellings Regulation 46 – subdivision of land</td>
<td>Yes Stony rises, remnant native vegetation and Curly Sedge Creek</td>
<td>Yes</td>
<td>n/a</td>
</tr>
<tr>
<td>1030 Donnybrook Road</td>
<td>No</td>
<td>Yes Regulation 43 – buildings and works for specified uses</td>
<td>Yes Stony rises</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Address</td>
<td>Area of cultural heritage sensitivity</td>
<td>High impact activity</td>
<td>Archaeological potential</td>
<td>Mandatory CHMP required</td>
<td>Voluntary CHMP recommended</td>
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</tr>
<tr>
<td>1100 Donnybrook Road</td>
<td>Yes Regulation 22 - proximity to VAHR 7822-3647 Regulation 23 - proximity to Curly Sedge Creek</td>
<td>Yes Regulation 43 - buildings and works for specified uses Regulation 44 - constructing specified items of infrastructure Regulation 45 - dwellings Regulation 46 - subdivision of land</td>
<td>Yes Stony rises and Curly Sedge Creek</td>
<td>Yes</td>
<td>n/a</td>
</tr>
<tr>
<td>1140 Donnybrook Road</td>
<td>No</td>
<td>Yes Regulation 43 - buildings and works for specified uses Regulation 44 - constructing specified items of infrastructure Regulation 45 - dwellings Regulation 46 - subdivision of land</td>
<td>Yes Stony rises</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>1150 Donnybrook Road</td>
<td>No</td>
<td>Yes Regulation 43 - buildings and works for specified uses</td>
<td>Yes Stony rises</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Address</td>
<td>Area of cultural heritage sensitivity</td>
<td>High impact activity</td>
<td>Archaeological potential</td>
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<td></td>
<td>uses Regulation 44 – constructing specified items of infrastructure Regulation 45 – dwellings Regulation 46 – subdivision of land</td>
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</tr>
</tbody>
</table>
6 Discussion

6.1 Summary

This assessment has shown that the study area contains Aboriginal cultural heritage, and has archaeological potential for additional Aboriginal places to be identified. The study area contains landforms such as stony rises and low-lying plains surrounding watercourses, that have been found to retain cultural heritage both within the study area and in the surrounding geographic region. Based on previous archaeological investigations in the geographic region, and the results of this assessment, the Aboriginal place types likely to be recorded in the study area are artefact scatters and scarred trees.

Artefact scatters are more likely to be found on stony rises within the study area. The stony rises would have acted as a strategic resource providing people in the area with a dry vantage point to observe long distances. The taphonomic processes that take place on these stony rises are conducive to artefacts being located close to their probable discard location. The large cracks and fissures in the basalt create areas in which sediment moves taking artefacts with it. The sediment and artefacts become trapped within the cracks and are better protected from the wind and rain erosion. Scarred trees are often found on the deeper soils of the low-lying plain that supports woodland growth, and where mature Eucalypts still exist. These areas of archaeological potential are shown as yellow, orange and red on Map 5 and should be incorporated, where possible in public open spaces.

Whilst the study area has been subject to various levels of disturbance due to past land practises, these have not been extensive. Quarrying has the potential to destroy traces of Aboriginal cultural heritage within the footprint of the quarry itself, and roads, and other infrastructure will cause damage. Farming and residential activities have been undertaken throughout the remainder of the study area, and these activities have resulted in only small, localised areas of disturbance. Therefore the majority of the study area has the potential to retain surface and subsurface Aboriginal cultural heritage.

The best practice conservation and management of cultural heritage values is where they can be combined with other values. For example Aboriginal archaeological sites in the region are most often located on elevated stoney rises. These areas are also often where remnant native vegetation occurs, and where the landscape and topographic character provides greatest aesthetic values. Creation of conservation reserves or unstructured open space in these areas can take advantage of the cultural and natural heritage values of the place to benefit planning outcomes. These areas can then be enhanced through landscaping, revegetation, environmental and cultural heritage interpretation.

6.2 Recommendations

The following recommendations have been developed after consultation with the RAP.

Recommendation 1

Areas of archaeological potential identified in the current assessment, namely stony rises, plains near waterways and remnant native vegetation should be included, where possible in public open spaces. This approach eliminates the likelihood that Aboriginal places will be harmed.

Management of these open space reserves should also be based on conserving and enhancing environmental and cultural heritage values. Construction of infrastructure and facilities within the reserves
should be designed to minimise impacts and enhance public access and appreciation, through landscaping, indigenous revegetation, interpretation and development of cultural programs.

**Recommendation 2**

CHMPs should be prepared for the entire study area. This recommendation is based on areas of archaeological potential being identified in the current assessment and presents a methodology that ensures best cultural heritage practice is maintained, regardless of triggers to prepare a mandatory CHMP. This is also consistent with the results of the cultural heritage values assessment that concluded that the wider landscape has importance to Aboriginal people.

Where conservation of areas of Aboriginal cultural heritage is not possible due to conflict with future development, and disturbance has been approved through a CHMP, the process of disturbance should be managed through a program mitigation involving research, analysis and interpretation of the cultural heritage that is disturbed. A research design and methodology should aim to identify the character of Aboriginal occupation of the area, mitigate disturbance in the form of archaeological salvage, and interpret the heritage.
7 Bibliography


Murphy, A., & Rymer, T. (2014). *Subdivision of Land (Residential) 875 Donnybrook Road, Donnybrook*. Beaconsfield: Archaeology at Tardis.


Appendix 1- Notification to undertake a survey
Notice of Intent to carry out a survey for Aboriginal cultural heritage for the purposes of the Aboriginal Heritage Act 2006

This form has been prepared for use by a person intending to carry out a survey for Aboriginal cultural heritage (‘Survey’) to complete the notification provisions pursuant to s.34A of the Aboriginal Heritage Act 2006 (the ‘Act’).

For clarification on any of the following please contact Victorian Aboriginal Heritage Register (VAHR) enquiries on 1800-762-003.

**SECTION 1 – Person intending to carry out survey (applicant)**

<table>
<thead>
<tr>
<th>Applicant (natural person or body corporate seeking to carry out survey):</th>
<th>City of Whittlesea</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABN/ACN:</td>
<td>72 431 091 058</td>
</tr>
<tr>
<td>Contact name:</td>
<td>Scott Spargo</td>
</tr>
<tr>
<td>Postal Address:</td>
<td>Locked Bag 1, Bundoora MDC VIC 3083</td>
</tr>
<tr>
<td>Telephone Number:</td>
<td>03 9217 2101</td>
</tr>
<tr>
<td>Mobile:</td>
<td></td>
</tr>
<tr>
<td>Email Address:</td>
<td><a href="mailto:scott.spargo@whittlesea.vic.gov.au">scott.spargo@whittlesea.vic.gov.au</a></td>
</tr>
</tbody>
</table>

**SECTION 2 – Survey supervisor**

<table>
<thead>
<tr>
<th>Name:</th>
<th>Kasey Robb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide a description of the supervisor’s qualifications and experience relevant to surveys for Aboriginal cultural heritage:</td>
<td></td>
</tr>
<tr>
<td>BSc, BA(Hons), MSc</td>
<td>MACCAI</td>
</tr>
<tr>
<td>Registered heritage advisor</td>
<td></td>
</tr>
</tbody>
</table>

**SECTION 3 – Description of proposed activity and Survey location**

<table>
<thead>
<tr>
<th>Project Name:</th>
<th>Shenstone PSP</th>
</tr>
</thead>
<tbody>
<tr>
<td>List the relevant municipal district/s (ie, Local Council or Shire):</td>
<td>Whittlesea</td>
</tr>
<tr>
<td>Clearly identify the proposed activity for which the survey relates (ie, cultural heritage or due diligence assessment, preliminary Aboriginal heritage test, research):</td>
<td></td>
</tr>
<tr>
<td>Cultural heritage due diligence assessment</td>
<td></td>
</tr>
</tbody>
</table>

Clearly identify the location (such as listing cadastral information, attaching a copy of a title search, or indicating the street address):
24 properties, for address see attached

Attach a map (to scale, with a north arrow and indicating the municipal district - if any) that clearly identifies the survey area.
- Please ensure the map refers to existing roads and features, rather than proposed roads and features, and includes their names.
- Please ensure the map has the survey area outlined on it.
- The map should have a legend; at least three readily identifiable geographical locations (such as road intersections, parcel boundaries, or road/river crossings) and should state the map’s projection.
SECTION 4 – Expected start and finish date for the survey

Start date  21 / 11 / 16  Finish date  20 / 11 / 17

SECTION 5 – List any relevant registered Aboriginal party (if any)

This section is to be completed only where there is a registered Aboriginal party in relation to the survey area

Wurundjeri Tribe Land and Compensation Cultural Heritage Council Incorporated

SECTION 6 – Signature of applicant

I certify that to the best of my knowledge and belief that the information supplied is correct and complete.

Signed: ___________________________  Date:  21 / 11 / 16

[on behalf of applicant]

SECTION 7 – Notification checklist

☐ Ensure appropriate attachment/s are completed and attached to this notification (see section 3 of this form).

Please ensure this notice and all attached items are sent to the:

Director Heritage Services
Aboriginal Victoria
Department of Premier and Cabinet
GPO Box 2392
MELBOURNE VIC 3001

OR Email: vahr@dpc.vic.gov.au

Notes:

- Ensure that any relevant registered Aboriginal party is also notified. A copy of this notice may be used for this purpose. (A registered Aboriginal party is allowed up to 14 days to provide a written response to a notification specifying whether or not it intends to participate in the survey).

- In addition to notifying the Director Heritage Services and any relevant registered Aboriginal party, a Sponsor must also notify any owner and/or occupier of any land within the survey area. A copy of this notice may be used for this purpose.

- A copy of any documentation relevant to the survey must be given to the Secretary for recording on the Victorian Aboriginal Heritage Register within 30 days of producing the final report relating to the survey, or within 12 months of submitting this application, whichever is earlier.

- Relevant documentation means any site records, photographs, maps and plans relating to the survey and a copy of any final report.

- The applicant must notify the Secretary if the survey did not occur within 12 months of submitting this application.
Survey location

840 DONNYBROOK RD, DONNYBROOK 3064
870 DONNYBROOK RD, DONNYBROOK 3064
910 DONNYBROOK RD, DONNYBROOK 3064
1030 DONNYBROOK RD, DONNYBROOK 3064
1100 DONNYBROOK RD, DONNYBROOK 3064
1140 DONNYBROOK RD, DONNYBROOK 3064
1150 DONNYBROOK RD, DONNYBROOK 3064
75 LANGLEY PARK DR, DONNYBROOK 3064
95 LANGLEY PARK DR, DONNYBROOK 3064
90 LANGLEY PARK DR, DONNYBROOK 3064
125 LANGLEY PARK DR, DONNYBROOK 3064
40 LANGLEY PARK DR, DONNYBROOK 3064
130 LANGLEY PARK DR, DONNYBROOK 3064
105 LANGLEY PARK DR, DONNYBROOK 3064
110 LANGLEY PARK DR, DONNYBROOK 3064
960 DONNYBROOK RD, DONNYBROOK 3064
1200 DONNYBROOK RD, DONNYBROOK 3064
825 EPPING RD, WOODSTOCK 3751
430 SUMMERHILL RD, WOLLERT 3750
430 SUMMERHILL RD, WOLLERT 3750
274 SUMMERHILL RD, WOLLERT 3750
570 SUMMERHILL RD, WOLLERT 3750
1190 DONNYBROOK RD, DONNYBROOK 3064
620 SUMMERHILL RD, WOLLERT 3750
### Appendix 2 - Aboriginal place gazetteer

**Table 8  Aboriginal place gazetteer**

<table>
<thead>
<tr>
<th>Aboriginal place</th>
<th>Location*</th>
<th>Type</th>
<th>Landform</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAHR 7822-1440</td>
<td>note - grid references redacted</td>
<td>Isolated artefact</td>
<td>Plain in proximity to a waterway</td>
</tr>
<tr>
<td>VAHR 7822-1441</td>
<td></td>
<td>Isolated artefact</td>
<td>Plain in proximity to a waterway</td>
</tr>
<tr>
<td>VAHR 7822-3647 -4</td>
<td></td>
<td>LDAD</td>
<td>Plain in proximity to a waterway</td>
</tr>
<tr>
<td>VAHR 7822-3647 -5</td>
<td></td>
<td>LDAD</td>
<td>Plain in proximity to a waterway</td>
</tr>
<tr>
<td>VAHR 7822-4036</td>
<td></td>
<td>LDAD</td>
<td>Stony rise</td>
</tr>
<tr>
<td>VAHR 7822-4111</td>
<td></td>
<td>LDAD</td>
<td>Stony rise</td>
</tr>
</tbody>
</table>

*All geographic coordinates are referenced to the Victorian Government Standard GDA94 MGA.*
Appendix 3 - Maps
Map 3 Place prediction model

Legend
- Study area
- Study area 250m buffer
- Parcel boundary
- Local government area
- Stony rises - high archaeological potential

Predicted archaeological potential
- Low
- Medium
- High

Acknowledgements: State Government of Victoria - VicMap

Metro: 23287, Date: 14 August 2017, Checked by: BG, Drawn by: AC, Last edited by: acurtis

Location: P:\23200s\23287\Mapping\23287_M3_PredictiveModel.mxd

Scale: 1:15,000 @ A3

Coordinate System: GDA 1994 MGA Zone 55