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FINAL REPORT:

Proposed Residential Subdivision, Daleston, Black Forest Road, Mambourin, Victoria: Aboriginal Cultural Heritage Management Plan

Number: 11513

SPONSOR

Rudy Koh and Alfred Sung of Daleston Pty Ltd

22 November 2011

EHP Reference: 2521

CULTURAL HERITAGE ADVISOR:

Rick Bullers

Ecology and Heritage Partners Pty Ltd

REPORT AUTHORS:

Rick Bullers, Sylvana Szydzik and Mollie Harbour

Ecology and Heritage Partners Pty Ltd

Wadawurrung
ABN: 11 312 302 330

13th December 2011

Aboriginal Heritage Act 2006
Section 65

Cultural Heritage Management Plan – Notice of Approval

The Wathaurung Aboriginal Corporation trading as Wadawurrung, acting as the Registered Aboriginal Party hereby approve the cultural heritage management plan referred to below:

Proposed Residential Subdivision, Daleston, Black Forest Road, Mambourin

Cultural Heritage Management Plan number: 11513

Sponsor: Daleston Pty Ltd

Cultural Heritage Advisor: Rick Bullers

Author: Rick Bullers, Sylvana Szydzik and Mollie Harbour

Cover Date: 22nd November 2011

Pages: Cover Page, Title, ii-xvii, 1 – 172

Received for Approval: 24th November 2011

Pursuant to s.64(1) of the Act this cultural heritage management plan takes effect upon the granting of this approval and once a copy is lodged with the Secretary of DPCD.*

Bryon Powell
Chairperson
Wathaurung Aboriginal Corporation
trading as: Wadawurrung

*This notice of approval should be inserted after the title page and bound with the body of the management plan.

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FINAL REPORT:

Proposed Residential Subdivision, Daleston, Black Forest Road, Mambourin, Victoria: Aboriginal Cultural Heritage Management Plan

Number: 11513

ACTIVITY SIZE:	**Large**
ASSESSMENT:	**Complex**
SPONSOR:	**Rudy Koh and Alfred Sung of Daleston Pty Ltd**
CULTURAL HERITAGE ADVISOR:	**Rick Bullers**
AUTHORS:	**Rick Bullers, Sylvana Szydzik and Mollie Harbour**
DATE:	**22 November 2011**

EXECUTIVE SUMMARY

Introduction

This complex Cultural Heritage Management Plan (CHMP) has been prepared for a proposed residential subdivision, Daleston, Black Forest Road in Mambourin, Victoria (Wyndham City Council) (Map 1, Page 100). Rudy Koh and Alfred Sung of Daleston Pty Ltd (the Sponsor) are proposing to subdivide the activity area. The activity area is approximately 330 ha in size and is bounded by Argoona and Greens Roads to the north, Black Forest Road to the south east and private rural lands to the west, east and south (Map 2, Page 101).

Ecology and Heritage Partners Pty Ltd was commissioned by The Planning Group Australia (TPG), on behalf of Rudy Koh and Alfred Sung of Daleston Pty Ltd, to prepare this complex CHMP. This CHMP will be evaluated by the Registered Aboriginal Party (RAP) for the activity area, Wathaurung Aboriginal Corporation.

Methods

The methodology for the assessment included a preliminary desktop assessment to review the environmental and archaeological attributes of the region in general, and the activity area in particular. The desktop assessment included a search of relevant cultural heritage databases, including the Victorian Aboriginal Heritage Register (VAHR) and previous archaeological investigations in the region. This was used to for a predictive statement of Aboriginal site location, which was used to inform the subsequent field survey.

A standard assessment (field survey) was carried out over a total of five days (23 November 2010, and 8-10 February, 8 April and 21 April 2011) to identify Aboriginal cultural heritage or areas of Aboriginal cultural heritage likelihood. These areas were recommended for complex assessment. The survey period was conducted over several months due to access restrictions due to standing crops and long periods of inclement weather, which hampered ground surface visibility. The survey was conducted using transects in which 4-5 participants, walking in line-abreast, surveyed the entire activity area (Map 7, Page 106). During the standard assessment and at a meeting afterwards, the RAP representatives and the RAP Cultural Heritage Coordinator were asked to provide any cultural heritage information that they were aware of that may be relevant to the activity area and/or the proposed activity.

The complex assessment consisted of a program of subsurface testing in areas identified as either having Aboriginal cultural heritage or Aboriginal cultural heritage likelihood. The subsurface testing program involved the excavation of a 1 x 1 m stratigraphic test pit (STP) at each area of Aboriginal likelihood to determine the stratigraphic sequence of the soil profile, together with transects of 40 x 40 cm shovel test holes (STHs) at 50 or 100 m intervals along the transects (Map 9, Page 108). Where Aboriginal cultural heritage was identified in STPs or STHs, additional radial test holes (RTHs) were located around the Aboriginal cultural heritage to determine the spatial extent of the site.

Results

Desktop Assessment

The desktop assessment indicated that there have been 25 Aboriginal archaeological sites previously recorded within a 2 km radius of the activity area (Map 5, Page 104), comprising 21 artefact scatters, two scarred trees, one stone feature and one earth feature. No sites were located within the activity area itself. The desktop assessment concluded that stone artefact scatters and isolated artefacts were the types of Aboriginal sites most likely to occur within the activity area.

Standard Assessment

The standard assessment was undertaken on 23 November 2010, 8-10 February, 8 April and 21 April 2011 by Ecology and Heritage Partners Pty Ltd Archaeologists/Cultural Heritage Advisors Rick Bullers, Sylvana Szydzik and Mollie Harbour, with Jodie McRedmond, Peter Castriosis, Bert Fagan and Mick Castriosis representing the RAP for the activity area.

One Aboriginal site was identified during the field survey, a single isolated artefact found in the ephemeral drainage line near the western side of the activity area. The artefact consisted of a single quartzite proximal flake lying directly within the creek channel. Its location in the creek channel lends doubt as to whether the artefact is in situ, or was washed down from upstream, most likely from the neighbouring property. The standard assessment also identified seven areas of Aboriginal cultural heritage likelihood, all of which were low rises. Six of the rises overlook the ephemeral drainage line (Map 8, Page 107).

Complex Assessment

The complex assessment was conducted over a period of eight days between 24-27 May 2011, 31 May–3 June 2011 and 7-8 June 2011 by Ecology and Heritage Partners Pty Ltd Archaeologists/Cultural Heritage Advisors Josephine Verduci, Sylvana Szydzik, Mollie Harbour, Terence MacManus and Rick Bullers, with Kacie Mitchell and Mick Castriosis representing the RAP.

One additional Aboriginal site was identified during the subsurface testing, an isolated artefact found on a minor rise overlooking the central drainage line near the eastern boundary of the activity area (Map 10, Page 109). This artefact was salvaged during the complex assessment. The complex assessment also identified one additional surface artefact at the site identified during the standard assessment (Argoona Rd AS 1 [VAHR 7822-2969]), but did not identify a subsurface component to this site as part of the extent testing.

The complex assessment did not identify any further Aboriginal cultural heritage in any of the other areas of Aboriginal cultural heritage likelihood, or anywhere else within the activity area (Map 10, Page 109).

The recommendations and contingency plans in Part 2 of this CHMP must be adhered to at all times.

SUMMARY OF MANAGEMENT RECOMMENDATIONS

Argoona Road AS 1 (VAHR 7822-2969)

Argoona Rd AS 1 (VAHR 7822-2969) consists of two surface stone artefacts found within the drainage line near the western boundary of the activity area.

Recommendations to Avoid Harm to Argoona Road AS 1 (VAHR 7822-2969)

Harm to Argoona Road AS 1 (VAHR 7822-2969) may be caused by the activity following a program of salvage (Section 8.1.1).

Recommendations for the Salvage of Argoona Road AS 1 (VAHR 7822-2969)

The activity cannot avoid impacting upon the Aboriginal archaeological site Argoona Road AS 1 (VAHR 7822-2969), therefore the following salvage program is recommended:

- A program of surface salvage will be implemented to salvage the two surface artefacts at this site (Map 11, Page 110).
- Subsurface testing at the site did not identify a subsurface component to this site, therefore a salvage excavation is not considered to be warranted.

After completion of the salvage works the Cultural Heritage Advisor shall conduct analysis of the salvaged Aboriginal cultural heritage material and provide a report of the results of the salvage and analysis which shall be lodged at AAV.

Recommendations for the removal, curation, custody and management of Aboriginal cultural heritage (artefacts) from Argoona Road AS 1 (VAHR 7822-2969)

The custody of the Aboriginal cultural heritage from site Argoona Road AS 1 (VAHR 7822-2969) must comply with the *Aboriginal Heritage Act 2006* and be assigned to the RAP responsible for the activity area, namely the Wathaurung Aboriginal Corporation.

It should be noted that any Cultural Heritage Advisor engaged to investigate any Aboriginal cultural heritage should be able to retain initial custody of Aboriginal cultural heritage for a reasonable period of time for the purposes of analysis. In accordance with the *Aboriginal Heritage Act 2006*, during the period that the Cultural Heritage Advisor has custody of the Aboriginal cultural heritage, the Cultural Heritage Advisor must:

- Label and package collected artefactual material with reference to provenance; and

- Arrange storage of the material in a secure location together with copies of the catalogue, assessment documentation, management plan and results of the analysis.

Following the repatriation of Aboriginal cultural heritage held by the Cultural Heritage Advisor to the RAP, should the RAP wish to rebury the Aboriginal cultural heritage, the following must take place:

- The site record card must be updated, including an object collection component form;
- The reburial location must be known, relocatable and in an area which is protected from future development or disturbance;
- Where possible, the Aboriginal cultural heritage should be reburied within the boundaries of the Aboriginal archaeological site from which the Aboriginal cultural heritage was originally excavated.
- In this instance, it has been agreed between the Sponsor and the RAP that the Aboriginal cultural heritage from Argoona Road AS 1 (VAHR 7822-2969) shall be reburied in at the same location as Argoona Road IA 1 (VAHR 7822-2973) (Map 11, Page 110);
- Artefacts must be reburied in a durable container which may or may not be open bottomed to allow contact between the artefacts and the soil whilst allowing the reburied material to be readily identified as such; and
- An additional enclosed durable container must be buried next to the artefacts which contains copies of all documentation relating to the artefacts, including a copy of the relevant site card, artefact database, this CHMP and any salvage report.

Argoona Road IA 1 (VAHR 7822-2973)

Argoona Road IA 1 (VAHR 7822-2973) consists of a single stone artefact found in a subsurface context on a minor rise associated with the central drainage line, near the eastern boundary of the activity area. The artefact was salvaged as part of the complex assessment.

Recommendations to avoid harm to Argoona Road IA 1 (VAHR 7822-2973)

Due to the layout of the development shown in the master plan (Map 3, Page 101) it is not possible to avoid harm to Argoona Road IA 1 (VAHR 7822-2973). However within the master plan:

- The site will remain in situ within land designated as public open space.

Recommendations to minimise harm to Argoona Road IA 1 (VAHR 7822-2973)

The following recommendations are made to avoid harm to Argoona Road IA 1 (VAHR 7822-2973):

- The site will remain in situ within land designated as public open space (Map 11, Page 110).
- The site will be temporarily fenced off around its boundary, with a 2 m buffer, for the duration of the activity. Fencing will consist of cyclone mesh installed in above ground concrete (or other suitable material) pads supporting steel posts and cyclone mesh wire.
- No ground disturbance works will be conducted within the site boundary.
- Signage will be erected on all sides of the site boundary restricting access during the activity.

Recommendations for the removal, curation, custody and management of Aboriginal cultural heritage (artefacts) from Argoona Road IA 1 (VAHR 7822-2973)

The custody of the Aboriginal cultural heritage from site Argoona Road IA 1 (VAHR 7822-2973), including all material which has already been collected must comply with the *Aboriginal Heritage Act 2006* and be assigned to the RAP responsible for the activity area, namely the Wathaurung Aboriginal Corporation. Ecology and Heritage Partners Pty Ltd currently has custody of material excavated during the course of preparing this CHMP, and the Cultural Heritage Advisor selected by the Sponsor to undertake the salvage works will have initial custody of all material excavated or collected as part of salvage works.

It should be noted that any Cultural Heritage Advisor engaged to investigate any Aboriginal cultural heritage should be able to retain initial custody of Aboriginal cultural heritage for a reasonable period of time for the purposes of analysis. In accordance with the *Aboriginal Heritage Act 2006*, during the period that the Cultural Heritage Advisor has custody of the Aboriginal cultural heritage, the Cultural Heritage Advisor must:

- Label and package collected artefactual material with reference to provenance; and
- Arrange storage of the material in a secure location together with copies of the catalogue, assessment documentation, management plan and results of the analysis.

Following the repatriation of Aboriginal cultural heritage held by the Cultural Heritage Advisor to the RAP, should the RAP wish to rebury the Aboriginal cultural heritage, the following must take place:

- The site record card must be updated, including an object collection component form;
- The reburial location must be known, relocatable and in an area which is protected from future development or disturbance;

- Where possible, the Aboriginal cultural heritage should be reburied within the boundaries of the Aboriginal archaeological site from which the Aboriginal cultural heritage was originally excavated.

- In this instance, it has been agreed between the Sponsor and the RAP that the Aboriginal cultural heritage from Argoona Road IA 1 (VAHR 7822-2973) shall be reburied in situ along with the artefacts salvaged from Argoona Road AS 1 (VAHR 7822-2969)(Section 8.1.1, Page 85).

- Artefacts must be reburied in a durable container which may or may not be open bottomed to allow contact between the artefacts and the soil whilst allowing the reburied material to be readily identified as such; and

- An additional enclosed durable container must be buried next to the artefacts which contains copies of all documentation relating to the artefacts, including a copy of the relevant site card, artefact database, this CHMP and any salvage report.

Other Recommendations

Recommendations for cultural awareness training

It is recommended that a Cultural Heritage Induction Booklet containing Part 2 of this CHMP and all relevant maps is prepared and presented to all employees and contractors working within the activity area prior to the commencement of the activity. Costs of any such induction are to be borne by the Sponsor. A Cultural Heritage Advisor or a representative of the RAP can conduct this training.

Provisions for Aboriginal people to visit cultural heritage places within the activity area

Aboriginal people are permitted to visit cultural heritage places within the activity area which are located on public land.

SUMMARY OF CONTINGENCY PLANS

Contingency regarding the Discovery of Aboriginal Cultural Heritage - Unexpected Discovery of Isolated or Dispersed Scatters of Aboriginal Cultural Heritage

It is unlikely that previously unknown Aboriginal cultural heritage will be discovered within the activity area during the activity. This Aboriginal cultural heritage is likely to be isolated stone artefacts. However, if a person discovers or suspects that they have discovered Aboriginal cultural heritage during the activity, and the actual or suspected cultural heritage is an isolated or dispersed scatter of less than five stone artefacts, the following contingency plan must be followed:

- The person in charge or site manager of the activity within the activity area must be notified immediately;
- The person in charge or site manager must immediately suspend all activities and works at the location of the discovery and within five metres of the extent of the Aboriginal cultural heritage;
- Within a period of two business days, the person in charge or site manager must contact an appropriately qualified and experienced Cultural Heritage Advisor and inform them of the discovery;
- The Cultural Heritage Advisor must be engaged to consult with the RAP to assess the discovered Aboriginal cultural heritage, record the cultural heritage material and update or complete new site cards for the discovered Aboriginal cultural heritage;
- The Cultural Heritage Advisor must catalogue and analyse all discovered cultural heritage;
- The Cultural Heritage Advisor will then notify AAV of the discovery by lodging either a new or updated Victorian Aboriginal Heritage Register site record card within a timely manner.
- Work in the excluded area may recommence provided:
    - The discovered Aboriginal cultural heritage has been identified, inspected and recorded by a Cultural Heritage Advisor;
    - The Cultural Heritage Advisor has identified the discovered cultural heritage as being an isolated or dispersed scatter of less than five stone artefacts; and
    - New or updated Victorian Aboriginal Heritage Register site record cards have been completed and forwarded to AAV.

Failure of parties to reach an agreed course of action in this manner will be classed as a dispute under this agreement and the contingency plan in this CHMP regarding dispute resolution must be followed.

Contingency regarding the Discovery of Aboriginal Cultural Heritage - Unexpected Discovery of Other Aboriginal Cultural Heritage

It is unlikely that previously unknown Aboriginal cultural heritage other than isolated stone artefacts or dispersed artefacts will be discovered within the activity area during the activity. However, if a person discovers or suspects that they have discovered Aboriginal cultural heritage during the activity, and the actual or suspected cultural heritage is cultural heritage other than an isolated or dispersed scatter of less than five stone artefacts (including but not limited to a stratified deposit, more than five stone artefacts spread across the surface or

located sub surface, a shell midden, or a mound) the following contingency plan must be followed:

- The person in charge or site manager of the activity within the activity area must be notified immediately;
- The person in charge or site manager must immediately suspend all activities and works at the location of the discovery and within twenty metres of the extent of the Aboriginal cultural heritage;
- Within a period of two business days, the person in charge or site manager must contact an appropriately qualified and experienced Cultural Heritage Advisor and inform them of the discovery;
- The Cultural Heritage Advisor must be engaged to consult with the RAP to assess the discovered Aboriginal cultural heritage, record the cultural heritage material and update or complete new site cards for the discovered Aboriginal cultural heritage; and assess the significance of the cultural heritage in conjunction with the RAP;
- The Cultural Heritage Advisor must catalogue and analyse all discovered cultural heritage;
- The Cultural Heritage Advisor will then notify AAV of the discovery by lodging either a new or updated Victorian Aboriginal Heritage Register site record card within a timely manner;
- The Sponsor must make all reasonable attempts to avoid or minimise harm to the newly discovered Aboriginal cultural heritage;
- Where it is not possible to avoid harming the Aboriginal cultural heritage, mitigation in the form of salvage will be required;
- Where salvage of discovered Aboriginal cultural heritage is required, decisions about how to proceed with salvage excavation must be made on a case-by-case basis by the Cultural Heritage Advisor, in conjunction the RAP. Aboriginal Affairs Victoria may also be consulted. The methodology of any salvage excavation must be appropriate to the site type(s) discovered and the nature, extent and significance of the site(s). All salvage must abide by Regulation 61 of the *Aboriginal Heritage Regulations 2007* and be undertaken in accordance with proper archaeological practice and the results of the excavations must be reported to AAV; and
- Work in the excluded area may recommence provided:
    - The discovered Aboriginal cultural heritage has been identified, inspected and recorded by a Cultural Heritage Advisor;

- The Sponsor has taken appropriate measures to avoid harming the Aboriginal cultural heritage, including appropriate protection measures as agreed upon by the Sponsor and the RAP;

- If the Sponsor cannot avoid harming the Aboriginal cultural heritage, the Sponsor has taken appropriate measures to minimise harm to Aboriginal cultural heritage, including appropriate protection measures as agreed upon by the Sponsor and the RAP;

- The Cultural Heritage Advisor has undertaken the appropriate salvage excavations or collections; and

- New or updated Victorian Aboriginal Heritage Register site record cards have been completed and forwarded to AAV.

- Failure of parties to reach an agreed course of action in this manner will be classed as a dispute under this agreement and the contingency plan in this CHMP regarding dispute resolution must be followed.

Contingency regarding the Discovery of Aboriginal Cultural Heritage - Unexpected Discovery of Human Remains

Under Section 4 of the *Coroner's Act 2008*, if the body of a deceased person is found in Victoria (s.4 (1)(a)) and the identity of the deceased is unknown (s. 4(2)(g)) then the death is reportable and under Section 12 of the *Coroner's Act 2008* there is an obligation to report death. If any suspected human remains are found during any activity, works must cease. The State Coroner's Office on 1300 309 519 and Victoria Police on 03 9684 4387 should be notified immediately (s. 12 (1)). If there are reasonable grounds to believe that the remains are Aboriginal, the Department of Sustainability and Environment's Emergency Coordination Centre must be contacted immediately on 1300 888 544. This advice has been developed further and is described in Section 9.3.

Contingency for the Removal, Curation, Custody and Management of Aboriginal Cultural Heritage (Artefacts) Discovered during the Activity

Should any Aboriginal cultural heritage be discovered during the activity, the custody of the Aboriginal cultural heritage must comply with the *Aboriginal Heritage Act 2006* and be assigned in the following order of priority, as appropriate:

- Any relevant RAP for the land from which the Aboriginal cultural heritage has been salvaged;

- Any relevant registered native title holder for the land from which the Aboriginal cultural heritage has been salvaged;

- Any relevant native title party (as defined in the *Aboriginal Heritage Act 2006*) for the land from which the Aboriginal cultural heritage has been salvaged;
- Any relevant Aboriginal person or persons with traditional or familial links with the land from which the Aboriginal cultural heritage has been salvaged;
- Any relevant Aboriginal body or organisation which has historical or contemporary interests in Aboriginal heritage relating to the land from which the Aboriginal cultural heritage has been salvaged;
- The owner of the land from which the Aboriginal cultural heritage has been salvaged; and
- The Museum of Victoria.

It should be noted that any Cultural Heritage Advisor engaged to investigate any Aboriginal cultural heritage should be able to retain initial custody of Aboriginal cultural heritage for a reasonable period of time for the purposes of analysis. In accordance with the *Aboriginal Heritage Act 2006*, during the period that the Cultural Heritage Advisor has custody of the Aboriginal cultural heritage, the Cultural Heritage Advisor must:

- Label and package collected artefactual material with reference to provenance; and
- Arrange storage of the material in a secure location together with copies of the catalogue, assessment documentation, management plan and results of the analysis.

Following the repatriation of Aboriginal cultural heritage held by the Cultural Heritage Advisor to any of the above people or groups (except Museum Victoria), should any of the above people or groups wish to rebury the Aboriginal cultural heritage, the following must take place:

- The site record card must be updated, including an object collection component form;
- The reburial location must be known, relocatable and in an area which is protected from future development or disturbance;
- Where possible, the Aboriginal cultural heritage should be reburied within the boundaries of the Aboriginal archaeological site from which the Aboriginal cultural heritage was originally collected or excavated;
- Artefacts must be reburied in a durable container which may or may not be open bottomed to allow contact between the artefacts and the soil whilst allowing the reburied material to be readily identified as such; and

- An additional enclosed durable container must be buried next to the artefacts which contains copies of all documentation relating to the artefacts, including a copy of the relevant site card, artefact database and any other relevant documentation.

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Figures

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Acknowledgements

We thank the following organisations for their contribution to the project:

- The Planning Group Australia and Rudy Koh and Alfred Sung of Rudy Koh and Alfred Sung of Daleston Pty Ltd (the Sponsor) for project and site information.
- Wathaurung Aboriginal Corporation for assistance in the field, cultural heritage information and evaluation of the report.
- Aboriginal Affairs Victoria.

PROTOCOLS FOR HANDLING SENSITIVE INFORMATION

Some of the information contained within this Cultural Heritage Management Plan (CHMP) is culturally sensitive. Before releasing the contents of this CHMP to the public, permission should be sought from the relevant authorities and communities.

Cover Photos: Main Image: General view of activity area on northern side of drainage line looking eastwards; Top Right: working on a stratigraphic test pit; Middle Left: channel of drainage line at surface artefact site near western boundary; Bottom Right: Stratigraphic Test Pit (photo by Ecology and Heritage Partners Pty Ltd)

PART 1 - ASSESSMENT

1 INTRODUCTION

1.1 Background and Scope of Works

Ecology and Heritage Partners Pty Ltd was commissioned by The Planning Group Australia (TPG), on behalf of Rudy Koh and Alfred Sung of Daleston Pty Ltd (the Sponsor), to prepare a complex Cultural Heritage Management Plan (CHMP) for the proposed residential subdivision, Daleston, Black Forest Road in Mambourin, Victoria (Wyndham City Council) (Map 1, Page 100).

The project brief agreed upon by Ecology and Heritage Partners Pty Ltd and the Sponsor is as follows:

- Review the relevant heritage databases (e.g. Victorian Aboriginal Heritage Register [VAHR] at Aboriginal Affairs Victoria [AAV], Local Government Heritage Overlays, Heritage Victoria Inventory and Register, National Trust and other relevant available literature;
- Provide a brief review of land use for the activity area;
- Conduct a site assessment by a qualified Cultural Heritage Advisor to identify any Aboriginal cultural heritage within the activity area;
- Identify and provide a series of maps as required for a CHMP showing any Aboriginal archaeological heritage or areas likely to contain Aboriginal cultural heritage;
- Provide information in relation to any implications of Commonwealth and State environmental legislation and Government policy associated with the proposed development;
- Discuss any opportunities and constraints associated with the activity area;
- Liaise with the key stakeholders, the Registered Aboriginal Party (RAP), the Wathaurung Aboriginal Corporation, local government and AAV; and
- Produce a CHMP suitable for evaluation by the appropriate evaluation party (the RAP).

1.2 Location of Activity Area

The activity area is located in Mambourin, Victoria (Wyndham City Council). The activity area is approximately 330 ha in size and is bounded to the north by Argoona Road and Greens Road, to the south east by Black Forest Road and to the east, south and west by private rural land (Map 2, Page 101).

The cadastral details of the activity area are as follows:

- Lot 1, TP846432, Parish of Mambourin, County of Grant;
- Lot 3, TP846432, Parish of Mambourin, County of Grant;
- Lot 4, TP846432, Parish of Mambourin, County of Grant; and
- Lot 5, TP846432, Parish of Mambourin, County of Grant.

A more detailed description of the activity area is contained within Section 2, Page 8.

1.3 Reasons for Preparing the CHMP

This CHMP has been prepared in accordance with Part 4 of the Victorian *Aboriginal Heritage Act 2006* and is required by the Victorian *Aboriginal Heritage Regulations 2007* (s. 47). The specific Regulations which trigger the requirement for this plan are:

- Under Regulation 22, the activity area is located within an area of cultural heritage sensitivity as it is located within 50 metres of one registered cultural heritage place which is listed on the Victorian Aboriginal Heritage Register (VAHR):
    - Lollypop Creek/Ballan Road 6 (VAHR 7822-2792) (Map 2, Page 101)
- Under Regulation 23, the activity area is within an area of cultural heritage sensitivity as it is located within 200 metres of a waterway, an unnamed lake to the south west of the activity area (Map 2, Page 101);
- Under Regulation 45, the proposed activity is a high impact activity as it involves the construction of three or more dwellings on a lot or allotment;
- Under Regulation 46, the proposed activity is a high impact activity as it involves the subdivision of land; and
- Part or all of the activity area has not been subject to previous significant ground disturbance as defined by the *Aboriginal Heritage Regulations 2007* (r. 4).

This CHMP does not contain detailed information regarding non-Aboriginal historical heritage issues relating to the activity area. Non-Aboriginal historical heritage issues are dealt with in a separate report (Bullers, Szydzik and MacManus 2011) which has been lodged with the Sponsor and with Heritage Victoria. The report number is HV #3870.

1.4 Name of Sponsor

The Sponsor of this CHMP is Rudy Koh and Alfred Sung of Daleston Pty Ltd (ABN: 31 111 517 885).

1.5 Name of Cultural Heritage Advisors

The Cultural Heritage Advisor of this CHMP is Rick Bullers. The authors of this CHMP are Rick Bullers, Sylvana Szydzik and Mollie Harbour. The quality assurance review was undertaken by Ecology and Heritage Partners Pty Ltd Director/Principal Heritage Advisor Oona Nicolson. The field work was undertaken by Ecology and Heritage Partners Pty Ltd Archaeologists/Cultural Heritage Advisors Josephine Verduci, Rick Bullers, Sylvana Szydzik, Mollie Harbour and Terence MacManus. Mapping was provided by Ecology and Heritage Partners Pty Ltd GIS Officers, Amanda Feetham and Bill Fish.

Oona Nicolson

Oona Nicolson is a Director and the Principal Heritage Advisor at Ecology and Heritage Partners Pty Ltd She is a heritage specialist with over 14 years experience in the archaeological consulting sector, working in Victoria, South Australia, New South Wales, and Tasmania. Oona regularly appears before VCAT and independent panels as an Expert Witness in the areas of Aboriginal and historical heritage. Oona has extensive experience in over 500 projects with a wide variety of clients.

Oona's skills include project management, peer reviews, background research and due diligence assessments, archaeological survey, sub surface testing and salvage excavation, Aboriginal and non-Aboriginal site identification, recording and photography, site significance assessment, development of recommendations to mitigate the impact of development upon Aboriginal and non-Aboriginal historical heritage, flaked stone artefact and historical artefact recording and interpretation, communication and consultation with regulatory bodies (AAV and HV), clients, landowners, RAPs and community representatives, preparation of conservation management plans, expert witness statements, Permits and Consents to Disturb for Heritage Victoria, Historical Heritage Assessments and desktop, standard and complex Aboriginal CHMPs. Her formal qualifications and memberships include:

- Bachelor of Arts (Honours in Archaeology) – High Distinction (First Class), Flinders University of South Australia (1996).

- Bachelor of Arts (Australian Archaeology and Australian Studies), Flinders University of South Australia (1995).
- Maritime Archaeology Certificate: Part 1 (Part 2 pending), AIMA and NAS (U.K.).
- Australian Association of Consulting Archaeologists Inc. (Full Member and 2010 Chairperson of Victorian Chapter).
- Victorian Planning and Environmental Law Association.

Rick Bullers

Rick Bullers has worked as a heritage consultant since 2007, and has managed numerous Aboriginal and historic heritage projects for a variety of clients and developments within Victoria, NSW and SA. Projects include heritage assessments and/or excavations for linear construction projects such as pipelines, sewerage lines and transmission lines, large area heritage assessments for Greenfield developments (e.g. residential subdivision and mining operations), as well as cultural heritage assessments and cultural heritage management plans for large Department of Defence sites.

Rick has experience in a variety of tasks, including project management, peer reviews, background research and due diligence assessments, archaeological survey, sub-surface testing and salvage excavation, Aboriginal and non-Aboriginal site identification, recording and photography, site significance assessment, development of recommendations to mitigate the impact of development upon Aboriginal and non-Aboriginal historical heritage, flaked stone artefact and historical artefact recording and interpretation, communication and consultation with regulatory bodies (AAV and HV), clients, landowners, RAPs and community representatives, preparation of conservation management plans, Historical Heritage Assessments and desktop, standard and complex Aboriginal CHMPs. His formal qualifications include:

- Bachelor of Applied Science Conservation and Park Management), University of South Australia (1994).
- Graduate Diploma of Maritime Archaeology, Flinders University (2005).
- Master of Maritime Archaeology, Flinders University (2006).

Josephine Verduci

Josephine Verduci has experience in a variety of tasks, including project management, archaeological survey, subsurface testing and salvage excavation, Aboriginal and non-Aboriginal site identification, recording and photography, site significance assessment, flaked stone artefact recording, communication and consultation with clients, landowners, RAPs and community representatives, and preparation of desktop, standard and complex CHMPs.

In 2009, Josephine completed her Masters which examined issues of clothing, adornment and body modification in the Minoan Bronze Age, particularly in relation to gender issues and the use of the Minoan belt as a distinguishing feature in defining cultural boundaries. Her formal qualifications and memberships include:

- Master of Arts, H1 (First class honours, Archaeology), University of Melbourne, Melbourne, Australia (2009).
- Postgraduate Diploma (Archaeology), University of Melbourne, Melbourne, Australia (2004).
- Graduate Diploma (Archaeology), University of Melbourne, Melbourne, Australia (2002).
- Bachelor of Arts, RMIT, Melbourne, Australia (1988).

Mollie Harbour

Mollie is a qualified archaeologist with over 4 years of practical experience working in Victorian Aboriginal cultural heritage management. Her Honours thesis from Latrobe University involved the examination of Victorian Aboriginal massacre site information, and an update of these archives. Mollie was employed by AAV as part of an Indigenous Cadetship program from 2007 until 2010, and from the end of 2009 was a Heritage Project Officer in AAV's Barwon-Grampians Ballarat office until 2011.

Mollie has experience in a variety of tasks including: project management; archaeological surveying; recording; photography; Aboriginal and non-Aboriginal site identification; flaked stone artefact recording and interpretation; sub surface testing. She has conducted background research; communication and consultation with regulatory bodies (AAV), heritage consultants and their sponsors, landowners, RAPs and community representatives; and has evaluated numerous Aboriginal CHMPs. Her formal qualifications include:

- Honours in Archaeology, LaTrobe University, Victoria (2009).
- Bachelor of Arts in Archaeology and History, LaTrobe University, Victoria (2008).
- Bachelor of Arts in Archaeology, Anthropology and History, University of Melbourne, Carlton, VIC. (Transferred Bachelor of Arts degree to LaTrobe University), Victoria (2007).

Sylvana Szydzik

Sylvana Szydzik is an archaeologist and cultural heritage advisor at Ecology and Heritage Partners Pty Ltd She has worked in a variety of roles over several different projects, including developments such as housing estates, site surveys and large infrastructure projects.

Sylvana has working experience in all aspects of archaeological fieldwork, including the identification of Aboriginal and Historic Cultural Heritage through survey and subsurface testing, conducting background research, artefact cataloguing, analysis and interpretation and assisting in the preparation of standard and complex heritage assessments. Her formal qualifications include:

- Bachelor of Arts (Honours) (2A), La Trobe University, Vic (2009).
- Bachelor of Arts (Archaeology), La Trobe University, Vic (2008).

Terence MacManus

Terence MacManus is an archaeologist and cultural heritage advisor at Ecology and Heritage Partners Pty Ltd He has worked in a variety of roles for over 30 projects, including developments such as housing estates, pipeline alignments, site surveys and large infrastructure projects.

Terence is experienced in a range of tasks related to archaeological research and practice such as background research, archaeological survey, sub surface testing, salvage excavation, Aboriginal and non-Aboriginal site identification, report preparation, and stone artefact analysis and interpretation. His formal qualifications include:

- Bachelor of Archaeology (Honours) (Second Class A), La Trobe University, Melbourne, Australia (2008).
- Bachelor of Archaeology, La Trobe University, Melbourne, Australia (2007).

1.6 Name of Owner and Occupier of the Activity Area

The activity area is currently owned by the Sponsors, Rudy Koh and Alfred Sung of Daleston Pty Ltd. The activity area is not occupied.

1.7 Registered Aboriginal Parties

The RAP for the activity area is the Wathaurung Aboriginal Corporation.

Details of all consultation undertaken with the RAP for the purposes of preparing this CHMP are contained in Section 4, Page 10.

There are currently no Native Title claims extending over the activity area and the activity area comprises privately owned land, therefore Native Title has been extinguished.

1.8 Notice of Intent to Prepare a Management Plan

Under s. 54 of the *Aboriginal Heritage Act 2006*, the Sponsor of a CHMP must give notice of their intention to prepare a CHMP.

In accordance with s. 54 (1) (a) of the *Aboriginal Heritage Act 2006*, the Sponsor submitted a Notice of Intent to prepare a CHMP to the RAP for the activity area, the Wathaurung Aboriginal Corporation, on 16 November 2010. A copy of this Notice is attached in Appendix 1. The RAP responded to this Notice on 24 November 2010 and indicated that they would evaluate this CHMP. A copy of this response is attached in Appendix 1.

In accordance with s. 54 (1) (b) of the *Aboriginal Heritage Act 2006*, the Sponsor submitted a Notice of Intent to prepare a Cultural Heritage Management Plan to the Secretary of the Department of Planning and Community Development (DPCD) on 16 November 2010. A copy of this Notice is attached in Appendix 1. A response to this Notice was submitted to the Sponsor on 19 November 2010. The AAV Management Plan Identifier number for this CHMP is 11513.

As the Sponsor is also the owner/occupier of the activity area a formal notification under s. 54 (1) (c) of the *Aboriginal Heritage Act 2006* was not required.

1.9 Report Review and Distribution

Copies of this CHMP will be lodged with the following organisations:

- The Planning Group Australia;
- Rudy Koh and Alfred Sung of Daleston Pty Ltd;
- Wathaurung Aboriginal Corporation; and
- Aboriginal Affairs Victoria.

1.10 Heritage Legislation

An overview of the *Aboriginal Heritage Act 2006*, the Commonwealth *Native Title Act 1993*, the Victorian *Planning and Environment Act 1987* and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* is included in Appendix 2, Page 117. This legislation is subordinate to the Victorian *Coroner's Act 2008* in relation to the discovery of human remains.

2 EXTENT OF ACTIVITY AREA

The activity area is located in Mambourin, Victoria (Wyndham City Council). The activity area is approximately 330 ha in size and is bounded to the north by Argoona Road and Greens Road, to the south east by Black Forest Road, to the east, south and west by private rural land (Map 2, Page 101).

The activity area is generally flat, although with a very gradual decline in elevation from west to east towards the valley of Lollypop Creek which passes approximately 0.5 to 1 km to the north and north east. Within the activity area itself, there is an indistinct unnamed drainage line that runs west to east before draining to Lollypop Creek approximately 2 km east of the activity area. A large dam has been constructed within this drainage line, located roughly centrally within the activity area. There are no prominent rises within the activity area.

Although not within the activity area, there is a relatively large ephemeral swamp located approximately 150 m from the south west corner of the activity area (Map 2, Page 101). This wetland is surrounded by an area of cultural heritage sensitivity, which crosses the boundary of the activity area. The geology on the eastern side of this wetland consists of swamp and lake deposits and is differentiated from the sheetflow basalt of the majority of the activity area.

The activity area is largely cleared of canopy vegetation except for two small linear stands, one along the northern boundary and one along the south eastern boundary.

There are no built structures within the activity area.

The cadastral details of the activity area are as follows:

- Lot 1, TP846432, Parish of Mambourin, County of Grant;
- Lot 3, TP846432, Parish of Mambourin, County of Grant;
- Lot 4, TP846432, Parish of Mambourin, County of Grant; and
- Lot 5, TP846432, Parish of Mambourin, County of Grant.

3 ACTIVITY DESCRIPTION

The Sponsor, Rudy Koh and Alfred Sung of Rudy Koh and Alfred Sung of Daleston Pty Ltd, plans to subdivide the activity area into residential allotments. The development will include the subdivision of land, excavation and clearing to prepare lots, construction of roads and installation of utilities.

The current master plan includes a series of local and feeder roads, including all associated works such as excavation, grading, filling and levelling. A total of approximately 52 ha is set aside as public open space, comprised of (Map 3, Page 102):

- District Open Space parcel 1 (approx 11 ha);
- Regional Open Space parcel 2 (approx 12 ha);
- Passive Open Space (approx 10 ha);
- Town Garden (approx 1.49 ha); and
- Creek reserve (approx 18 ha).

The master plan also allows for three Government schools (totalling approx 15.4 ha) and a town centre consisting of commercial premises (approx 2.5 ha). The remainder of the activity area (approx 250 ha) will comprise residential lots of varying size and density.

The activity will require subsurface works in the form of building footings, utilities and services, and drainage. It is expected that the entire activity area will be impacted by various levels of ground surface disturbance. Prior to any construction works the entire activity area will be scraped clean using machinery (grader or front-end loader or similar), creating an area of significant ground disturbance across the entire activity area. The depth of trenching for footings and utilities is not known at this stage, but will extend below the top soil clear into the clay subsoils. Landscaping will form a very small portion of the activity area, predominantly along the central drainage line, which will be remodelled. Landscaping will comprise grass cover and introduced shrubs in imported topsoil placed over the in situ fill.

The activity area is zoned by the Wyndham City Council as:

- Urban Growth Zone (UGZ), which covers the majority of the activity area;
- Urban Floodway (UFZ), which is a linear zone along the indistinct drainage line; and
- Rural Conservation Zone (RCZ), which covers a small portion of the south western corner of the activity area.

This zoning sets out requirements which must be met by any development within the activity area. The specific requirements which must be met by any development within the activity area are described in Appendix 8, Page 149.

4 DOCUMENTATION OF CONSULTATION

The RAP for the activity area is the Wathaurung Aboriginal Corporation.

4.1 Consultation in Relation to the Assessment

The following representatives of the Wathaurung Aboriginal Corporation participated in consultation in relation to the assessment:

- Ms Bonnie Fagan

The details of all consultation undertaken in relation to the assessment are presented below (Table 1).

Table 1: Consultation in Relation to the Assessment

Date	Participants	Details of Consultation
10.11.2010	Randah Jordan; TPG, on behalf of Rudy Koh and Alfred Sung of Daleston Pty Ltd Bonnie Fagan Wathaurung Aboriginal Corporation.	Meeting Preliminary Project Induction Meeting held. The CHA had not been appointed at this stage and was not present at the meeting.
16.11.2011	Rick Bullers Ecology and Heritage Partners Pty Ltd; Bonnie Fagan Wathaurung Aboriginal Corporation.	Email Notification of Intent to Prepare a CHMP. Request for representatives to attend survey.
23.11.2011	Rick Bullers Ecology and Heritage Partners Pty Ltd; Bert Fagan & Jodie McRedmond Wathaurung Aboriginal Corporation.	Fieldwork Arrived on site to find that the entire activity area was still under crop; reducing ground surface visibility to 0%. It was agreed that, given the size of the activity area, it would be pointless trying to survey until the crops had been harvested. This information was relayed to the Sponsor, who advised that harvesting was unlikely to occur until January of February 2011. Consequently, fieldwork was postponed until further notice.
27.01.2011	Rick Bullers Ecology and Heritage Partners Pty Ltd; Bonnie Fagan Wathaurung Aboriginal Corporation.	Email Notification that the rescheduled survey had been booked for 8-11 February and 15 February 2011 inclusive.
7.02.2011	Rick Bullers Ecology and Heritage Partners Pty Ltd; Bonnie Fagan Wathaurung Aboriginal Corporation.	Email Sent preliminary advice for the methodology to be used on the standard assessment. Bonnie replied that there was no problem with the proposed methodology; however, if ground surface visibility was poor the percentage was to be provided in the CHMP to clarify that the whole area was not sighted.

10.02.2011	Rick Bullers Ecology and Heritage Partners Pty Ltd; Bonnie Fagan Wathaurung Aboriginal Corporation.	Email Notification that the final two days of fieldwork scheduled for 11 Feb and 15 Feb 2011 would be postponed due to issues with ground surface visibility owing to the continued presence of standing crops in the southern half of the activity area. The fieldwork would be rescheduled pending notification from the client when the crops would be harvested.
29.03.2011	Rick Bullers Ecology and Heritage Partners Pty Ltd; Simone Werts Wathaurung Aboriginal Corporation.	Email Request for representatives to attend survey on 8 and 27 April 2011. Also a request for a meeting with Bonnie Fagan to discuss the results of the standard assessment.
29.03.2011	Rick Bullers Ecology and Heritage Partners Pty Ltd; Simone Werts Wathaurung Aboriginal Corporation.	Email Due to the long waiting period for the availability of representatives, a preliminary request for workers for 10 days of complex testing was submitted – tentative dates were 23 May – 3 June inclusive. Reiterated a request for a meeting with Bonnie Fagan to discuss the results of the standard assessment to take place sometime after 27 April 2011.
12.04.2011	Rick Bullers Ecology and Heritage Partners Pty Ltd; Simone Werts Wathaurung Aboriginal Corporation.	Email Request for representatives to attend survey on 21 and 27 April 2011.
21.04.2011	Rick Bullers Ecology and Heritage Partners Pty Ltd; Simone Werts Wathaurung Aboriginal Corporation.	Email Notification that the field team had completed the standard assessment and consequently representatives that were booked for the 27 April 2011 would no longer be required.
9.05.2011	Randah Jordan & Julie Katz TPG on behalf of Rudy Koh and Alfred Sung of Daleston Pty Ltd Rick Bullers Ecology and Heritage Partners Pty Ltd Bonnie Fagan Wathaurung Aboriginal Corporation.	Meeting Meeting to discuss the results of the standard assessment. Rick Bullers provided an overview of the activity area, the landforms, the survey approach taken and the results of the survey. Bonnie Fagen advised that, due to the poor visibility (in the southern half of the activity area), the presence of Aboriginal cultural heritage (one site identified) and the presence of areas of Aboriginal likelihood, complex testing would be required. A brief discussion was presented on the likely approach that this would take. There was also some discussion on whether an additional block of land would be added to the activity area and, if so, a modification to the NOI and standard assessment would be required prior to undertaking complex assessment (if required). TPG would liaise further with GAA as to whether this area would be added to the current activity area.
16.05.2011	Rick Bullers Ecology and Heritage Partners Pty Ltd; Simone Werts Wathaurung Aboriginal Corporation.	Email Amended worker request form for complex testing scheduled to commence 24 May 2011. Also an outline and map of the proposed subsurface testing program for the activity area. Bonnie responded that she would pass on the methodology to WAC Elders for comment. No comment was received prior to the commencement of the complex assessment on the 24 May 2011.

21.06.2011	Randah Jordan TPG on behalf of Rudy Koh and Alfred Sung of Daleston Pty Ltd Rick Bullers Ecology and Heritage Partners Pty Ltd Bonnie Fagan Wathaurung Aboriginal Corporation.	Meeting Meeting to discuss the results of the subsurface testing program. Rick Bullers provided an overview of the testing program including the extent of testing conducted, and a description of the sites identified. Randah Jordan provided a preliminary description of the development including a preliminary concept plan including proposed lot placement, roads and drainage requirements in relation to the central drainage line. The discussion included the potential for salvage of the artefacts at Argoona Road AS1 (VAHR 7822-2969) and relocation and burial within an area set aside at Argoona Road IA 1 (VAHR 7822-2973).

4.2 Participation in the Conduct of the Assessment

The following representatives of the Wathaurung Aboriginal Corporation participated in the fieldwork conducted as part of the assessment, including the survey conducted on 23 November 2010, 8-10 February 2011, 8 April 2011 and 27 April 2011, and the subsurface testing program, conducted from 24-27 May 2011 and 31 May-2 June 2011:

- Jodie McRedmond;
- Peter Castrisios;
- Kacie Mitchell;
- Brendan McRedmond;
- Bert Fagan;
- Mick Castrisios; and
- Tim Kennedy

4.3 Consultation in Relation to the Recommendations

The following representatives of the Wathaurung Aboriginal Corporation participated in consultation in relation to the recommendations:

- Bonnie Fagan.

Table 2: Consultation in Relation to the Recommendations

Date	Participants	Details of Consultation
9.05.2011	Randah Jordan & Julie Katz TPG on behalf of Rudy Koh and Alfred Sung of Daleston Pty Ltd Rick Bullers Ecology and Heritage Partners Pty Ltd Bonnie Fagan Wathaurung Aboriginal Corporation.	Meeting Meeting to discuss the results of the standard assessment. Rick Bullers provided an overview of the activity area, the landforms, the survey approach taken and the results of the survey. Bonnie Fagen advised that, due to the poor visibility (in the southern half of the activity area), the presence of Aboriginal cultural heritage (one site identified) and the presence of areas of Aboriginal likelihood, complex testing would be required. A brief discussion was presented on the likely approach that this would take. There was also some discussion on whether an additional block of land would be added to the activity area and, if so, a modification to the NOI and standard assessment would be required prior to undertaking complex assessment (if required). TPG would liaise further with GAA as to whether this area would be added to the current activity area.
21.06.2011	Randah Jordan TPG on behalf of Rudy Koh and Alfred Sung of Daleston Pty Ltd Rick Bullers Ecology and Heritage Partners Pty Ltd Bonnie Fagan Wathaurung Aboriginal Corporation.	Meeting Meeting to discuss the results of the subsurface testing program. Rick Bullers provided an overview of the testing program including the extent of testing conducted, and a description of the sites identified. Randah Jordan provided a preliminary description of the development including a preliminary concept plan including proposed lot placement, roads and drainage requirements in relation to the central drainage line. The discussion included the potential for salvage of the artefacts at Argoona Road AS1 (VAHR 7822-7969) and relocation and burial within an area set aside at Argoona Road IA 1 (VAHR 7822-2973).

4.4 Summary of Outcomes of Consultation

In November 2010, the Sponsor held an inception meeting to discuss the project with the RAP; a CHA had not been commissioned at that stage. Following commission of the CHA, a series of correspondence was held to organise fieldwork, which was postponed several times due to either the presence of standing crops or due to access problems caused by heavy late-summer rainfall. On two occasions, survey was commenced on site but, following discussions with the RAP representatives, survey was postponed for the reasons outlined above.

A methodology for the standard assessment, including a map of the proposed transects, was provided to the RAP on & February 2011.

At the conclusion of the standard assessment, the on-site RAP representatives agreed that the potential for Aboriginal cultural heritage to occur was limited; however the presence of several low rises, together with the generally low ground surface visibility, meant that there was some archaeological potential that could only be confirmed through subsurface testing. This approach was confirmed during a subsequent meeting with the RAP and the Sponsor on 9 May 2011.

A methodology statement including a map of the proposed subsurface testing program was provided to the RAP on 16 May 2011.

Following the subsurface testing program, a meeting was held between the Sponsor and the RAP to discuss the results and to formulate management recommendations. It was agreed that there needed to be further discussion in the CHMP regarding how and where utility and service connections would be provided to the activity area and that these areas needed to be incorporated into the activity area itself. It was also agreed that the recommendations in the CHMP would specify that the surface artefacts at site Argoona Road AS 1 (VAHR 7822-2969) would be salvaged and reburied at Argoona Road IA 1 (VAHR 7822-2973).

There was also discussion on the lands directly to the east of the activity area and whether they would be incorporated into this CHMP or be subject to a separate CHMP. Subsequent advice from the Sponsor precluded that area from the activity area.

5 ABORIGINAL CULTURAL HERITAGE ASSESSMENT

5.1 Desktop Assessment

The desktop assessment includes research into information relating to Aboriginal cultural heritage in or associated with the activity area.

5.1.1 Environmental context

Environmental factors influence how land may have been used in the past. This section reviews the environmental context of the activity area to gain an understanding of environmental factors relevant to Aboriginal cultural heritage.

5.1.1.1 Geographic region

The geographic region defined for this CHMP is the southern margins of the Werribee Plains region, specifically an area of the Werribee Plains defined on a 5 km radius of the activity area extending from just north of the intersection of Spring Plains Road and Ballan Road to a point near where the Princes Freeway Crosses Lollipop Creek to the south (Map 4, Page 103). The region takes in both the extensive flat plain country of the Victorian Volcanic Plain and the lower-lying country of the Otway Plain on the western outskirts of Werribee.

The Werribee Plains are notable for their extensive, flat, featureless spans, interspersed by occasional vertical features, such as the You Yangs, a series of granite ridges, and several small extinct volcanoes. The Werribee Plains (and the activity area itself) forms part of the vast Western District Volcanic Plains (Victorian Volcanic Plain Bioregion), which extends from Melbourne to the South Australian border (DPI 2011a) (Figure 1). This geographic region shows broadly similar environmental characteristics that may influence Aboriginal occupation. Therefore it is relevant to any Aboriginal cultural heritage that may be present within the activity area.

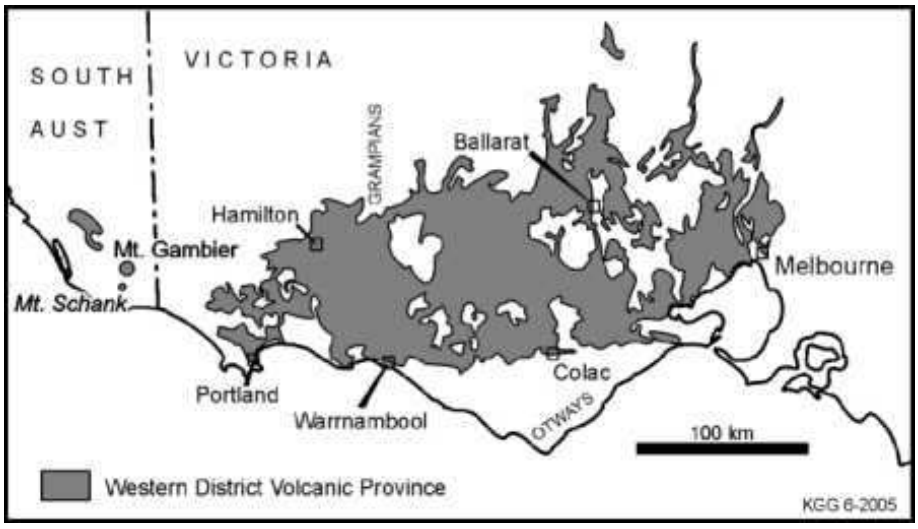


Figure 1: Extent of Victorian Volcanic Plain Bioregion.

5.1.1.2 Geomorphology and landforms

The activity area and surrounding region forms part of the Western Volcanic Plains geomorphological area (Figure 1, Page 15), and consists of low lying undulating plains formed on volcanic lithologies. Much of the plains were formed from lobes of lava which flowed from the eruption points, overlapping to form a veneer of basalt lava flows. The flow varies in thickness according to both the underlying topography and the present-day surface. The flows are interleaved in places with pyroclastic deposits (scoria and tuff) and discontinuous buried palaeosoils of variable thickness. Consequently, the activity area comprises volcanic landforms characterised by poorly developed drainage and shallow regolith (DPI 2011b).

The landforms in the activity area, confirmed during the standard assessment, include three principal landforms (Map 5, Page 104):

- Flats/undulating plain (accounting for approximately 78% of the activity area);
- The crests of low rises (8%); and
- Shallow drainage depression with associated floodplain (14%).

5.1.1.3 Geology and soils

Geology

The geology of the majority of the activity area comprises unnamed sheetflow basalt of the Newer Volcanic Group (Map 5, Page 104). This geology was laid down between the Miocene and Pleistocene periods and comprises tholeiitic to alkaline basalt, minor scoria and ash (Geological Society of Victoria 1997; DPI 2011b).

Raw Material for Stone Tool Manufacture

One of the main Aboriginal site types likely to be found in the activity area are stone artefact scatters (Section 5.1.3, Page 22). Lithic (stone) materials commonly found in areas of volcanic activity, which are known to have been used to make stone tools, are generally igneous rocks which are formed when hot silicate melts and crystallises. Common igneous rock types found in these areas are basalt, andesite, trachyte, phonolite, obsidian. (Holdaway & Stern 2004: 22-24). Two other common rock types – quartzite (quartz-rich sandstone) and hornfels (shale metamorphosed by high temperature) – are metamorphic in nature; these rocks, rather than the result of volcanic activity, are the result recrystallization or deformation under intense pressure. Basalt is the most common igneous rock. Surface stone materials within the general region of the activity area are limited to basalt (in the form of floaters) and quartz (Murphy and Owen 2011).

Soils

The soils of the basaltic areas are predominantly shallow red and yellow duplex with deeper red and grey loam along water courses/drainage lines and depressions (Ross *et al* 2003, cited in Murphy and Owen 2011: 11). Specifically, the Victorian Volcanic Plains typically have red clay soils which can be several metres deep, and are characterised by buckshot (pisolitic ironstone concretions). Expansion and contraction of these clay soils is known to form irregular surface depressions and rises within the plains known as "gilgai" (Birch 2003: 553, cited in Murphy and Owen 2011: 11).

Specifically to the activity area, the soils are dark brown and reddish brown texture contrast soils. "The surface soils (A-horizon) are generally shallow (100-200 mm or less) and are reasonably friable dark brown to greyish brown silty or fine sandy clay loams, to light clays. These soils are considered to be the most likely to contain cultural deposits as they are generally formed during the Holocene or, at the earliest, Late Pleistocene (Murphy and Owen 2011). Basalt stones and boulders may be present at the surface.

The subsoils (B Horizon) are generally dark brown, reddish brown or dark greyish brown medium to heavy clays that are sodic and moderately to strongly alkaline. With depth, the soils become paler in colour and often have pale yellowish grey and yellowish brown mottles. Soft calcium carbonate (lime) concentrations generally occur at about 500-800 mm depth. Small fragments of weathered basalt to stones of various size generally occur before 1 m depth. These soils are mainly classified as Red Sodosols using the *Australian Soil Classification"* (DPI 2011c; Murphy and Owen 2011). Red Sodosols "have red coloured upper subsoil horizons. The subsoils are usually coarsely structured, and prismatic and/or columnar peds are common. These soils have often previously been referred to as Red-Brown Earths. They usually have acidic surface soil and are often alkaline at depth, often including the presence of lime (DPI 2011d). Subsoils (B Horizons) are generally considered to be too old to contain cultural material (Murphy and Owen 2011).

DPI (2011c) provides the following soil profile description for Red Sodosols of the Werribee Plains:

Surface Soil (A Horizon)

A1	0-12 cm	Brown (7.5YR4/4); *fine sandy clay loam;* weak coarse subangular blocky structure; very firm consistence (dry); pH 5.8; clear change to:
A21	12-20 cm	Brown (7.5YR4/6); heavy *fine sandy clay loam;* strong consistence (dry); macropores present; pH 6.7; clear change to:
A22	20-30cm	Brown (7.5YR4/6); *heavy fine sandy clay loam;* massive; strong consistence (dry); pH 7.2; abrupt change to:

Subsoil (B Horizon)

B21	30-40 cm	Dark red (2.5YR4/8); *medium clay;* medium very coarse prismatic, parting to strong very coarse to coarse angular blocky structure; strong consistence (dry); few roots evident; pH 7.1; clear change to:
B22	40-60 cm	Dark red (2.5YR4/6); *medium clay;* medium very coarse prismatic, parting to strong coarse to medium angular, further parting to strong fine subangular blocky structure; few manganese flecks (5%); pH 7.5; abrupt change to:
2B	21 60-75 cm	Strong brown (7.5YR5/6 & 5/8); *light clay (fine sandy);* medium coarse blocky structure; pH 7.8:
2B22k	75-100 cm	Brown (7.5YR5/4); *light clay (fine sandy);* few (2-5%) coarse (6-20 mm) tubular calcareous segregations with some patches of fine earth carbonates; pH 8.3:
2B23	100-130 cm	Brown (7.5YR5/4); *light clay;* pH 8.2:
2B24	130-150 cm	Brown (7.5YR4/4); *light medium clay;* strong coarse blocky structure; pH 8.1.

Key Profile Features

- Strong texture contrast between surface (A) horizons and subsoil (B21) horizon;
- Buried soil horizons (of older soils) present.

Implications for the Presence of Aboriginal Sites

Murphy and Owen (2011: 12-13) provide the following summation of the geological, lithological and pedological nature of the region, which has direct correlation to the current activity area:

...based on this evidence of the Red Sodosols soil profile of the activity area and general nature of the basalt plains lava flows, it is reasonable to extrapolate that Aboriginal cultural material, if present, will be situated within the A-horizon (i.e. to around 30 cm depth) and above any basalt that is present. It is considered very unlikely that any Aboriginal material will exist within the B-horizon as these soils were likely formed prior to human occupation of the region (i.e. prior to basalt flows in the area). The implications for any complex assessment...are as follows:

- *The soil profile has developed primarily by the in situ weathering of lava flows resulting in potentially deep soil horizons over hundreds of thousands of years with shallower soil horizons developing on younger flows;*
- *Evidence of human occupation, if present, will be associated with the development of the soil profile over the last 50,000 years. Prior buried land surfaces are unlikely to be*

present because they have not been buried by alluvial or erosional processes. The development of soil profile over the last 50,000 years is most likely associated with the A-horizon. Stone artefacts can be found at any depth within this A-horizon which comprises brown sandy clay loam up to a maximum depth of 30 cm overlying the B-horizon comprising dark red medium clays. The A-horizon also correlates to the historic plough zone;

- *The B-horizons will be culturally sterile basal deposits that have formed prior to known occupation of Australia. In locations were the activity will impact the B-horizon, it is highly improbable that Aboriginal cultural heritage is present.*

5.1.1.4 Vegetation

Prior to European settlement, vegetation in the majority of the activity area, including the western and southern parts of the activity area, would have consisted of Heavier Soils Plains Grassland (Ecological Vegetation Class [EVC] 132_61) (DSE 2010). Heavier Soils Plains Grassland (EVC 132_61) consists of treeless vegetation generally under one metre in height, and includes herbs and graminoids. Species present would have included *Pimelea humilis* (Common Rice-flower), *Calocephalus citreus* (Lemon Beauty-heads), *Lobelia pratioides* (Poison Lobelia), *Themeda triandra* (Kangaroo Grass), *Austrodanthonia caespitosa* (Common Wallaby-grass), *Thelymitra pauciflora s.l.* (Slender Sun-orchid) and *Convolvulus erubescens* (Pink Bindweed) (DSE 2010).

These types of vegetation would have been utilised by Aboriginal people in the area for the creation of weapons and vessels, and would have supported a range of game that could be hunted for food.

5.1.1.5 Climate

The Werribee region is characterised by a temperate climate, with hot dry summers and cool wet winters. The highest mean maximum temperature of 25.6ºC occurs in January, and the highest mean minimum temperature of 13.5ºC occurs in February. The lowest mean maximum and minimum temperatures occur in July, at 13.4ºC and 4.5ºC respectively. Rainfall varies between a minimum of 37.5 mm in January and a maximum of 57.8 mm in October (BOM 2011).

5.1.1.6 Land use history

The Werribee area was probably first sighted by European people in 1802, when Matthew Flinders and his party made their way to the nearby You Yangs and looked down across the plains to Werribee. Explorers Hamilton Hume and William Hovell explored the area surrounding the Werribee River in 1824 during their exploration of the Port Phillip region. The favourable conditions provided by the grassy volcanic plains encouraged squatters and graziers to begin settling the Werribee area in the mid 1930s and early 1940s. The 8,000 acre area including and surrounding the activity area was at that time known as the Werribee Plains or Black Forest. This area was first settled in 1838 by James Austin, in 1847 by Dr Alexander Thomson and William Armstrong and was gazetted on 14 March 1848 before being settled in 1850 by John Armstrong (Spreadborough & Anderson 1983: 86, 268). The Werribee area was used for the running of dairy cattle and particularly for butter production, as well as the production of hay and the keeping of pigs. The activity area itself has been used for pastoral and residential purposes, and has been modified by the clearing of native vegetation, construction of dams, fences, a house, sheds and outbuildings.

5.1.2 Aboriginal context

The section reviews the Aboriginal context of the activity area and includes an examination of historical and ethnohistorical sources, previously recorded Aboriginal archaeological site types and locations in the geographic region of the activity area, and previous archaeological studies undertaken in the area. Together, these sources of information can be used to formulate a predictive site model concerning what types of sites are most likely to occur in the activity area, and where these are most likely to occur.

5.1.2.1 History and ethnohistory

Archaeological evidence suggests that Aboriginal peoples had occupied all of Australia's environmental zones by 40,000 years BP. The oldest dated archaeological site in Victoria occurs at Keilor in Melbourne. Charcoal from a hearth excavated in 1973 has been dated to 31,000 years BP (uncalibrated) (Flood 1995: 286). More recently, Richards *et. al.* (2007) obtained dates from the Box Gully site of 32,000 years BP (calibrated). However, as this date is calibrated, it should be noted that the uncalibrated age of the Box Gully site is approximately 27,000 years BP.

At the time of contact the activity area and surrounding region lay within the traditional lands of the *Wada wurrung* language group of people. The territory of the *Wada wurrung* extended from the Werribee River in the west, northwest to north of Ballarat and further west past Beaufort, across to Firey Creek and Mt Emu Creek in the east, from north of Darlington east across to Cressy, north up Ferrers Creek, south down Warrambine Creek, down the Barwon River and east across to Aireys Inlet, encompassing the Bellarine Peninsula and Geelong (Clark 1990: 311).

Linguistically, the *Wada wurrung* were most similar to the *Djadja wurrung* to the north and the *Woi wurrung*, *Bun wurrung* and *Daung wurrung* to the east (Clark 1990: 276). Collectively these five groups form the Kulin Nation, who shared similarities in language, customs, traditions, burial practices and initiation, and were distinguished by distinctive facial and body markings at corroborees. The *Wada wurrung* and their eastern and northern neighbours shared a patrilineal form of moiety system. The Kulin social world was divided into either one of two moieties; The *waa* (crow) or *bunjil* (eaglehawk) moieties (Clark 1990: 276). Marriage was always across the moieties, with a *waa* person having to marry a *bunjil* person, preferably from a distant clan group (Barwick 1984; 104-105). *Wada wurrung* clans intermarried with the matrilineal clans of the *Gulidjan*, *Djab wurrung*, and the *Djargurd wurrung*, although by the 1830s the *Wada wurrung* were at enmity with both the *Dgargurd wurrung* and the *Gulidjan* clans as a result of disputes related to marriage arrangements. This 'war' was the result of *Djargurd wurrung* and *Wada wurrung* men competing for *Gulidjan* women (Clark 1990: 275).

The *Wada wurrung* were divided into 26 clans, each of which was responsible for a specific area of land within the wider *Wada wurrung* territory. The clan recorded closest to Werribee is the *Worinyaloke balug*, who were located at Little River. Very little is known about the *Worinyaloke balug*, other than that by the early 1840s all clan members bar one, a boy named Meenmulger who was taken to England by Tom Walton, were believed dead. The clan was considered extinct by 1846 (Clark 1990: 334). The clan head and moiety of the *Worinyaloke balug* is unknown.

Contact between the *Wada wurrung* and European people first occurred in 1802, in 1802, when Matthew Flinders and his party made their way to the nearby You Yangs. By 1803 contact between European explorers and *Wada wurrung* people had turned violent on at least one occasion, whereby one or two *Wada wurrung* were killed and several others were injured (Clark 1990: 277). Following the arrival of European people the *Wada wurrung* population declined quickly due to disease, restricted access to resources, and violence between Aboriginal people and settlers.

5.1.2.2 Oral history

No oral history has been determined during the consultation with representatives of the Wathaurung Aboriginal Corporation.

5.1.3 Database searches

The following database searches were conducted:

5.1.3.1 Victorian Aboriginal Heritage Register

A search of the Victorian Aboriginal Heritage Register (VAHR) was conducted on 16 November 2010 for sites within a 2 km radius of the activity area. Searching an area with this radius ensured that a relevant and representative sample of information was obtained. Since that search, ongoing archaeological work being conducted by Tardis (Murphy and Owen 2011) in the lands to the north of the activity area for the Manor Lakes development, identified additional sites. Consequently, a second VAHR site search was conducted on 28 June 2011, which identified one additional site that had been registered after the first VAHR site search was conducted. This site, Lollipop Creek/Ballan Road 6 (VAHR 7822-2792), consists of a single isolated artefact located approximately 15 m north of Greens Road, creating an area of cultural heritage sensitivity that encroaches onto the current activity area (Section 1.3, Page 2). Subsequent subsurface site extent testing at this site did not identify any further artefacts showing that the site was an isolated artefact.

No previously recorded sites are located within the activity area. There are 26 previously recorded sites within a 2 km radius of the activity area (Map 5, Page 104). Table 3 (below) shows that artefact scatters (including isolated finds) are by far the most common site type found in the region, with scarred trees being the next highest.

Table 3: Summary of Registered Sites within 2 km of the Activity Area

Site Type	Number of Sites	Percentage of Sites (%)
Artefact Scatter	22	84
Earth Feature/Artefact Scatter	1	4
Scarred Tree	2	8
Stone Feature	1	4
Total	**26**	**100**

A list of the relevant Aboriginal archaeological sites in the region appears below (Table 4).

Table 4: Previously Identified Sites within 2 km of the Activity Area

VAHR Site Number	Site Name	Site Type	Within Activity Area?
7822-0285	Lollypop Creek 1	Scarred Tree	No
7822-0286	Lollypop Creek 2	Scarred Tree	No
7822-0292	Lollypop Creek 4	Stone Feature	No
7822-0293	Lollypop Creek 5	Artefact Scatter	No
7822-0455	Manor Park 1	Artefact Scatter	No
7822-0456	Manor Park 2	Artefact Scatter	No

VAHR Site Number	Site Name	Site Type	Within Activity Area?
7822-0457	Manor Park 3	Artefact Scatter	No
7822-0458	Manor Park 4	Earth Feature/Artefact Scatter	No
7822-1124	Greens Road 5	Artefact Scatter	No
7822-1125	Greens Road 6	Artefact Scatter	No
7822-1850	Lollypop Ck 1	Artefact Scatter	No
7822-1851	Lollypop Ck 2	Artefact Scatter	No
7822-2067	Lakeside Combined	Artefact Scatter	No
7822-2068	Lakeside 4	Artefact Scatter	No
7822-2362	Lakeside 8	Artefact Scatter	No
7822-2070	Lakeside 10	Artefact Scatter	No
7822-2362	Lollipop Creek 1	Artefact Scatter	No
7822-2372	Lollypop Valley 1	Artefact Scatter	No
7822-2385	Lollipop Creek Isolated Artefact	Artefact Scatter	No
7822-2500	Lollipop Creek Plain 1	Artefact Scatter	No
7822-2526	Manor Lakes IA1	Artefact Scatter	No
7822-2583	Lollypop Creek/Ballan Road 1	Artefact Scatter	No
7822-2584	Lollypop Creek/Ballan Road 2	Artefact Scatter	No
7822-2585	Lollypop Creek/Ballan Road 3	Artefact Scatter	No
7822-2621	Black Forest Road IA1	Artefact Scatter	No
7822-2792	Lollypop Creek/Ballan Road 6	Artefact Scatter	No

5.1.3.2 Local Council

The activity area is located within the Wyndham City Council and is governed by the Wyndham City Council Planning Scheme. Planning schemes set out policies and provisions for the use, development and protection of land.

The Heritage Overlay of the Wyndham City Council Planning Scheme was examined. No Aboriginal heritage places listed on the Heritage Overlay are present within the activity area.

5.1.4 Previous archaeological investigations

Regional and localised archaeological investigations have established the general character of Aboriginal sites located within the same geographic region as the activity area. This information, together with environmental context, histories of land use and historical and ethnohistorical, can be used to form the basis for a site prediction statement.

The two most relevant archaeological investigations relating to the current activity area were investigations for the Manor Lakes residential development immediately north of the activity area and for a residential subdivision on Black Forest Road, immediately south east of the activity area.

During 2010-2011 Murphy and Own (2011) prepared a complex CHMP for the Manor Lakes development in lands immediately north of the current activity area. As a result of their survey and subsurface testing, a total of 21 artefacts from seven separate sites, all of which

were artefact scatters. Of those, the majority of artefacts were in one site; the higher density sites were in deeper soils in close proximity to Lollipop Creek, whilst two sites – including VAHR 7822-2792 – were located in a disturbed context more than 1.2 km from the creek. Murphy and Owen (2011: 57) concluded that these sites did not demonstrate ongoing occupation; rather, they suggested ephemeral Aboriginal presence.

Hobbs and Burch (2010) prepared a complex CHMP for a residential development on Black Forest Road, opposite the south east corner of the current activity area. The assessment identified two areas of Aboriginal likelihood, both areas of higher ground associated with a central drainage line. No subsurface Aboriginal cultural heritage was identified during the complex assessment, but one isolated artefact, a silcrete flake, was found on the surface on raised ground overlooking the dry drainage line.

A summary of archaeological reports relevant to the geographical region of the activity area appears below (Table 5).

Table 5: *Archaeological Reports Relevant to the Activity Area*

Author	Date	Description and Location	Results
H. du Cros	1990a	An archaeological survey and sub surface testing program was undertaken at land north of Greens Road, Wyndham Vale, 5 km east of the current activity area.	No Aboriginal archaeological sites were identified.
H. du Cros	1990b	An archaeological survey was undertaken at Manor Park, immediately north of the current activity area.	Four Aboriginal archaeological sites, including two isolated artefacts and two artefact scatters, were identified.
H. du Cros	1991	An archaeological survey of land within the Werribee corridor.	Numerous Aboriginal archaeological sites were recorded throughout the region. The study predicted that sites would be most likely to be located within 100 m of creeks and rivers.
N. Clark	1999	An archaeological survey was undertaken at Lot A Greens Road, Wyndham Vale, 1 km east of the current activity area.	Eight Aboriginal archaeological sites, all isolated artefacts, were identified, all located within 2 km of the current activity.
J. Tulloch	2003	An archaeological survey was undertaken of land between Black Forest Road and Greens Road, Wyndham Vale, approximately 1.5 km east of the current activity area.	No Aboriginal archaeological sites or areas of sensitivity were identified.
A. Ford, A. Matic, J. Fiddian and H. Cekalovic	2007	A desktop assessment of the roadsides in the metropolitan north west region.	The report identified seven previously recorded Aboriginal archaeological sites on roadsides in the City of Wyndham, and recommended that further works should be undertaken.

Author	Date	Description and Location	esults
Burch, J. Parmington, A. and Freedman, D.	2009	An archaeological survey and sub surface testing program was undertaken as part of a CHMP for the Manor Lakes Residential Development, approximately 2.5 km north of the current activity area.	Two Aboriginal sites were identified consisting of a total of five subsurface and one surface artefacts. A program of surface salvage was subsequently completed at these two sites (Burch and Macmanus (2010).
Burch, J. and MacManus, T.	2010	Archaeological salvage of two Aboriginal sites in the Manor Lakes residential development at Wyndham Vale, approximately 1.5 km north of the current activity area.	The salvage program collected a total of 375 surface artefacts from Lakeside 10 (VAHR 7822-2070) consisting of silcrete, quartz, quartzite and bottle glass. The isolated artefact from Lollipop Creek Isolated Artefact (VAHR 7822-2385) was not collected as it could not be re-located.
Hobbs, J. and Burch, J.	2010	Archaeological survey and subsurface testing for a CHMP on a property immediately south east of the current activity area.	Desktop assessment concluded isolated artefacts and artefact scatters were the most likely site type to occur. No aboriginal Archaeological sites were identified during the survey, however, two areas of archaeological sensitivity were. These were investigated during the complex phase, and one isolated artefact (Black Forest Road IA [VAHR 7822-2621]) was identified, comprising one grey silcrete flake.
Murphy, A. and Owen, D.	2010	An archaeological survey and sub surface testing program was undertaken as part of a CHMP on an extension to the Manor Lakes Residential Development, 800 m north of the current activity area.	Two previously recorded sites were identified within the activity area during the desktop assessment; however, no new Aboriginal archaeological sites were identified during the standard or complex assessments.
Murphy, A. and Owen, D.	2011	Archaeological survey and subsurface testing for a CHMP on a property immediately north of the current activity area.	Seven Aboriginal sites were located during standard and complex assessment. These sites were all low density artefact scatters with the majority of artefacts recovered being in one site. The higher density sites were in deeper soils in close proximity to Lollipop Creek, but sites were also found more than 1.2 km from the creek. The authors concluded that these sites did not demonstrate ongoing occupation; rather, they suggested ephemeral Aboriginal presence.

5.1.5 Aboriginal archaeological site prediction statement

The review of the previously recorded Aboriginal archaeological sites and previous archaeological investigations indicates that artefact scatters are the most likely Aboriginal site type to occur within the activity area. The following site prediction statement has been formulated on the review of the findings of these previous assessments. The statement presented is based on a site type approach.

Stone Artefact Scatters

Stone artefact scatters are considered likely to occur in the activity area.

Stone tools were made by hitting one piece of stone, called a core, with another called a 'hammerstone', often a pebble. This would remove a sharp fragment of stone called a flake. Both cores and flakes could be used as tools. New flakes were very sharp, but quickly became blunt during use and had to be sharpened again by further flaking, a process called 'retouch'. A tool that was retouched has a row of small flake scars along one or more edges. Retouch was also used to shape a tool.

Not all types of stone could be used for making tools. The best types of stone are rich in silica, hard and brittle. These include quartzite, chert, flint, silcrete and quartz. Aboriginal people quarried such stone from outcrops of bedrock, or collected it as pebbles from stream beds and beaches. Many flaked stone artefacts found on Aboriginal sites are made from stone types that do not occur naturally in the area. This means they must have been carried over long distances.

Stone tools are the most common evidence of past Aboriginal activities in Australia. They occur in many places and are often found with other remains from Aboriginal occupation, such as shell middens and cooking hearths. They are most common near rivers and creeks. It is easier to find them where there is limited vegetation or where the ground surface has been disturbed, for example by erosion.

Artefact scatters are the material remains of past Aboriginal people's activities. Scatter sites usually contain stone artefacts, but other material such as charcoal, animal bone, shell and ochre may also be present. No two scatters are exactly the same.

Artefact scatters can be found wherever Aboriginal occupation has occurred in the past. Aboriginal campsites were most frequently located near a reliable source of fresh water, so surface scatters are often found near rivers or streams where erosion or disturbance has exposed an older land surface.

Isolated Artefacts

Isolated artefacts are considered likely to occur in the activity area.

Isolated artefacts are stone tools which occur singly and may occur anywhere in the landscape. Surface isolated artefacts may be indicative of further sub surface archaeological deposits. This site type can be found anywhere within the landscape, however, they are more likely to occur within contexts with the same favourable characteristics for stone artefact scatter sites.

Scarred Trees

It is possible that this site type will occur however this is dependent on remnant mature native vegetation being present within the activity area.

Aboriginal people caused scars on trees by removing bark for various purposes. The scars, which vary in size, expose the sapwood on the trunk or branch of a tree. Scarred trees are found all over Victoria, wherever there are mature native trees, especially box and red gum. They often occur along major rivers, around lakes and on flood plains.

Mounds

It is possible that this site type will occur within the activity area as mounds are known to occur in the surrounding region.

Aboriginal mounds are places where Aboriginal people lived over long periods of time. Mounds often contain charcoal, burnt clay or stone heat retainers from cooking ovens, animal bones, shells, stone tools and, sometimes, Aboriginal burials.

Mounds usually occur near rivers, lakes or swamps but occasionally some distance from water. They are also found on dunes and sometimes among rock outcrops on higher ground.

Quarries

Quarries are considered unlikely to occur in the activity area.

Aboriginal quarries are the sites where Aboriginal people took stone from rocky outcrops to make chipped or ground stone tools for many different purposes. Not all types of stone were suitable for making tools, so an outcrop of good stone that could be easily quarried was a valuable resource. Aboriginal people quarried different types of stone, each with its own special value and use. Stone tools were made from greenstone, silcrete, quartz, quartzite, basalt and chert. Pigments were made from quarried ochre, and grinding tools were made from sandstone.

Some quarries are small, consisting of just a single protruding boulder. Other quarries incorporate many outcrops and areas of broken stone that can cover thousands of square metres.

Stone Arrangements

Stone arrangements are considered unlikely to occur in the activity area.

Aboriginal stone arrangements are places where Aboriginal people have positioned stones deliberately to form shapes or patterns. The purpose of these arrangements is unknown because their traditional use ceased when European settlement disrupted Aboriginal society. They were probably related to ceremonial activities.

Stone arrangements occur where there are plenty of boulders, such as volcanic areas, and where the land could support large bands of people. Surviving stone arrangements are rare in Victoria, and most are in the western part of the State.

Aboriginal Burials

It is possible that burials will occur within the activity area. However it is considered unlikely due to the shallow rocky nature of sediments which are not conducive to burials.

Aboriginal burials are normally found as clusters of human bones eroding from the ground, or exposed during ground disturbance. Aboriginal customs for honouring and disposing of the dead varied greatly across Victoria, but burial was common. Aboriginal burial sites normally contain the remains of one or two people, although cemeteries that contain the remains of hundreds of people buried over thousands of years have been found. Sometimes the dead person was buried with personal ornaments and artefacts. Charcoal and ochre are also often found in burial sites.

Although Aboriginal burials are quite rare in Victoria, they have been found in almost every kind of landscape, from coastal dunes to mountain valleys. They tend to be near water courses or in dunes surrounding old lake beds. Many burials have been found on high points, such as dune ridges, within surrounding flat plains. They are often near or within Aboriginal occupation sites such as oven mounds, shell middens or artefact scatters.

5.1.6 Desktop assessment - conclusions

The desktop assessment indicates that it is likely that Aboriginal cultural heritage, particularly artefact scatters and isolated artefacts, will occur within the activity area. Therefore, it is concluded that a standard assessment of the activity area is required.

5.2 Standard Assessment

The standard assessment includes a ground survey of the activity area to detect the presence of Aboriginal cultural heritage in or associated with the activity area.

An initial survey of the activity area was scheduled for November 2010 by Ecology and Heritage Partners Pty Ltd Archaeologists/Cultural Heritage Advisors Rick Bullers, Sylvana Szyzik and Mollie Harbour, with Jodie McRedmond and Bert Fagan representing the RAP for the activity area, the Wathaurung Aboriginal Corporation. However, due to the presence of standing crops throughout the activity area, making ground surface visibility negligible and the OH&S risks uncertain, it was agreed that survey would be postponed until the crops had been harvested, probably sometime in January or February.

The activity area was subsequently surveyed on 8-10 February, 8 April and 27 April 2011 by Ecology and Heritage Partners Pty Ltd Archaeologists/Cultural Heritage Advisors Rick Bullers, Sylvana Szyzik and Mollie Harbour, with Jodie McRedmond, Peter Castrisios, Bert Fagan and Mick Castrisios representing the RAP for the activity area, the Wathaurung Aboriginal Corporation.

5.2.1 Methodology of the standard assessment

The survey took the form of a pedestrian survey in which 4-5 participants walked 5-10 metres apart across the entire activity area (Map 7, Page 106). All mature native trees within the activity area were examined for evidence of cultural scarring. No caves, cave entrances or rock shelters are present within the activity area. A summary of the archaeological survey attributes appears in Appendix 3, Page 123).

5.2.2 Limitations of the standard assessment

5.2.2.1 Ground surface visibility

The conditions during the survey were variable ranging from warm and dry to windy and moderately overcast. Ground surface visibility (GSV) was also variable, ranging from 10-50% in the northern half of the activity area (Plate 1, Page 32) where the crops had been harvested (leaving remnant crop stubble), to less than 10% in the southern half where crops were left in situ and/or slashed (Plate 2, Page 32), however isolated areas with higher GSV (70-80%) were located intermittently throughout the activity area (Plate 3, Page 33). These occur particularly along the boundary fences (particularly in ploughed/slashed fire breaks (Plate 4, Page 33), along vehicle tracks (Plate 5, Page 33), in an ill-defined dam area along the drainage line in the centre of the activity area (Plate 6, Page 33), and in small, isolated exposures scattered intermittently across the activity area. The area of higher GSV covered an area of approximately 2.9 ha across the entire activity area.

5.2.2.2 Effective survey coverage

Effective survey coverage calculations are based on the level of ground surface exposure that allows the 'detectability' of artefacts and the level of survey sampling effort within each landform in the activity area. The calculation assesses the level of average GSV across the activity area in each landform, the extent of isolated exposures with higher or lower GSV than the average, and a calculation of the area within each landform that was surveyed.

An overview of the effective survey coverage in each landform within the activity area is provided below (Table 6). It shows that an average of 20.3% of the activity area was effectively surveyed allowing for different levels of ground surface exposure. Despite the generally poor ground surface visibility, the effective cover was relatively high because 100% of the activity area was physically surveyed (Map 7, Page 106).

The landform "Disturbed areas", whilst not in itself a landform element (it actually forms part of the flats/undulating plains landform) is shown separately since it is an area that has been significantly disturbed and consequently affects the likely presence or detectability of artefacts.

Table 6: Effective Survey Cover Calculations within the Activity Area

Landform	Total Area (Ha)	Average Landform GSV (%)	Average Landform GSV (Ha)	Isolated Exposure Area (Ha)	Isolated Exposure GSV (%)	Detection Area (ha)	Detection Area (%)	Area of Activity Area Surveyed (ha)	Percentage of Activity Area Surveyed (%)	Effective Survey Coverage (%)
Shallow Drainage Depression with Associated Floodplain	44	20	8.8	0.5	80	9.2	20.9	44	100.0	20.9
Low Rise Crests	26	10	2.6	0.4	80	2.9	11.2	26	100.0	11.2
Flats/Undulating Plains	258	20	51.6	2	80	53.2	20.6	258	100.0	20.6
Disturbed Areas	2	90	1.8	0	80	1.8	90.0	2	100.0	90
Total	**330**		**64.8**	**2.9**		**67.1**	**20.3**	**330**	**100.0**	**20.3**

5.2.3 Results of the standard assessment

The activity area is generally flat to low undulating, but with marginal rises scattered across the activity area (Map 7, Page 106; Plate 7, Page 33). The rises are very low with only marginal elevation above the surrounding landscape and with long very gentle slopes rising to a wide crest (Plate 8, Page 33). Bisecting the activity area from west to east is a low order drainage line (Plate 9 and Plate 10, Page 34), which drains to a large dam just outside the eastern border of the activity area (Plate 11, Page 34). The drainage line does not have a defined channel; rather it is generally a wide, dish-shaped depression between very low rises. It has a flood plain that ranges in width for about 20 m in some areas to over 200 m in others.

There are no buildings on the activity area, which appears to have been used solely for cropping purposes. The ground surface displays ample evidence of ploughing history.

One Aboriginal site was located in the activity area during the survey:

- Argoona Road AS 1 (VAHR 7822-2969). This consisted of a silcrete stone artefact lying directly in the stream of the drainage line (Plate 12, Page 34). It was not clear whether the artefact was in situ (or relatively so) or had washed in from upstream (i.e. beyond the western boundary of the activity area. No other artefactual evidence was identified adjacent to this site or anywhere else in the activity area. *Note*: during the standard assessment only one artefact was discovered (isolated artefact); the site was not designated an artefact scatter until a second surface artefact was discovered during the complex assessment).

Eight areas of Aboriginal cultural heritage likelihood were identified in the survey. These consisted of the drainage line itself (due to the presence of a stone artefact) and seven low rises. The majority of the rises overlook the drainage line (Map 8, Page 107).

Very few examples of any lithic material were identified during the survey, with the exception of occasional ironstone gravel, cobbles of a scoria- or pumice-like volcanic material and isolated occurrences of the same material as floaters occasional protruding from the surface (Plate 1, Page 32). There are four extensive piles of basalt cobbles and boulders at points around the boundary of the activity area, which had been removed from the paddocks during ploughing operations. This suggests that the soil depths are very shallow with the basaltic basal rocks occurring at or close to the current ground surface. Apart from the stone artefact itself, no examples of any lithic material suitable for stone tool manufacture were identified during the survey.

Due to the presence of one Aboriginal site and several areas of Aboriginal cultural heritage likelihood it is considered that there is potential for further Aboriginal cultural heritage to occur in the vicinity within the activity area. Consequently a program of subsurface testing (complex assessment) is required.

5.2.4 Standard assessment - conclusions

As a result of the standard assessment a program of subsurface testing is required based on the following survey results:

- The presence of an artefact along the first order drainage line near the western boundary of the activity area;
- The presence of seven isolated rises throughout the activity area that are considered to have Aboriginal cultural heritage likelihood;
- The presence of an area of cultural heritage sensitivity (under the *Aboriginal Heritage Act 2006*) in the south west corner of the activity area; and
- The generally poor ground surface visibility throughout much of the activity area during the survey, particularly in the southern half.

Plate 1: Ground surface visibility in northern section of the activity area, showing occasional basalt floater.

Plate 2: Ground surface visibility in the southern half of the activity area showing extremely poor artefact detectability.

Plate 3: General view in the southern half of the activity area, facing north east, showing isolated exposures of greater ground surface visibility.

Plate 4: a graded firebreak down the south eastern boundary of the activity area showing a 100% ground surface visibility, but also significant ground disturbance.

Plate 5: An ephemeral vehicle track in the northern half of the activity area, showing isolated exposure in the tyre tracks.

Plate 6: The "dam" in the centre of the activity area, facing west.

Plate 7: View of the ephemeral drainage line near the eastern boundary, facing south west. Note the low rises either side.

Plate 8: General view of the activity area, facing west from the central drainage line, showing the long very gentle slope to a very low rise on the horizon.

Plate 9: View of the ephemeral drainage line near the eastern boundary, facing south west. Note the low rises either side.

Plate 10: View of the central section of the Activity Area, overlooking the ephemeral drainage line, facing east.

Plate 11: View of the dam outside the eastern boundary, forming a catchment for the central drainage line, facing east.

Plate 12: Location of surface artefact found in the drainage channel near the western boundary of the activity area amongst surface gravel.

Plate 13: Silcrete artefact found on the surface of the drainage line during the standard assessment.

5.3 Complex Assessment

The complex assessment includes the excavation of the activity area to uncover or discover Aboriginal cultural heritage in the activity area.

The subsurface testing program was conducted from 24-27 May 2011, 31 May-3June 2011 and 7-8 June 2011 by Ecology and Heritage Partners Pty Ltd Archaeologists/Cultural Heritage Advisors Josephine Verduci, Sylvana Szydzik, Mollie Harbour, Terence MacManus and Rick Bullers, with Kacie Mitchell and Mick Castriosis representing the RAP for the activity area, the Wathaurung Aboriginal Corporation. Ecology and Heritage Partners Pty Ltd Archaeologist/Cultural Heritage Advisor Jo Verduci supervised the excavations.

5.3.1 Aims of the complex assessment

The aims of the complex assessment were:

- To detect the possible presence of Aboriginal cultural heritage in areas of Aboriginal archaeological likelihood within the activity area; and
- To determine the nature, extent and significance of the Aboriginal archaeological site identified within the activity area during the standard assessment.

5.3.2 Methodology of the complex assessment

5.3.2.1 Establishing stratigraphy

The stratigraphy and general subsurface nature of the activity area was established through controlled hand excavation prior to any other subsurface testing being carried out.

A total of four 1 x 1 m stratigraphic test pits (STPs) were excavated in locations representative of the general landform of the area, in areas identified as having Aboriginal cultural heritage likelihood and at the surface artefact site identified during the standard assessment (Map 9, Page 108). STPs were located as follows:

- STP01 was located on Rise #4 (between Transects C and D);
- STP02 was located in the drainage line near Transect E at the surface artefact site identified during the standard assessment (Argoona AS 1 [VAHR 7822-2969]);
- STP03 was located on Rise #5 (between Transects J and K); and
- STP04 was located on Rise #2 (adjacent to Transect AA).

The STPs were excavated in accordance with proper archaeological guidelines set out by AAV (DPCD 2010), and Burke and Smith (2004). This involved the removal of the excavated soil by hand (trowel) and in arbitrary units of 100 mm depth, stopping after each spit for photographs and recording of the units except where features were uncovered, in which case excavation paused until the feature was identified and recorded appropriately. The base clay was excavated a further 300 mm to confirm archaeologically sterile soil.

The stratigraphy of the shovel test holes (see below) was also recorded to assess landform variation across the activity area as a whole.

A summary of the archaeological survey attributes appears in Appendix 3, Page 123.

5.3.2.2 Subsurface testing

Given the size of the activity area, a stratified random sampling methodology was used, with randomly placed transects across the entire activity area, but with greater sampling emphasis placed on those areas considered more likely to have in situ Aboriginal cultural heritage (i.e. the areas of Aboriginal cultural heritage likelihood. The methodology adopted is described below (Map 9, Page 108).

Shovel Testing

A total of 323 shovel test holes (STHs), measuring 40 x 40 cm, were excavated across the activity area in the following manner:

- Two 200 m long transects were established on five of the seven identified rises (# 2, 3, 4, 6 & 7), with each transect spaced 50 m apart. STHs were placed along each of the transects at 25 m intervals, giving a total of 92 STHs (transects C, D, N, M, R, S, U, V, Z and AA).
- Rise # 1 had one 200 m long transect, with STHs as above, giving a total of nine STHs (Transect CC).
- Rise # 5 had four transects of 200-400 m length with STHs as above (total of 63 STHs).
- The drainage line had three 400 m transects with STHs at 25 m intervals, giving a total of 51 STHs (Transects E, X and Y).
- The area of identified cultural heritage sensitivity (SW corner) also had two 200 m transects with STHs at 25 m intervals, giving a total 18 STHs (Transects G and H).
- The remainder of the landscape was tested by ten randomly placed 400 m long transects with STHs placed at 50 m intervals giving a total of 90 STHs Transects A, B, F, O, P, Q, T, W, BB and DD).

Site Extent Testing

- The spatial extent of the identified Aboriginal site in the ephemeral drainage line (Argoona AS 1 [VAHR 7822-2969]) was tested by placing three 40 x 40 cm radial test holes (RTHs) around the location the artefact was found. These were positioned 5 m N,

NE and E from the artefact location (which is in the creek channel). In addition STHs E-14 and E-15 and STP02 were also used to test the site extent to the south.

- Three additional RTHs were placed around STP04 where a subsurface artefact was identified (Argoona IA 1 [VAHR 7822-2973]). These RTHs were placed 5 m NE, SSE and SW of STP04. In addition STH AA-6 was also used to identify the site extent.

Using this approach, a total of four STPs, 323 STHs and six RTHs were excavated. The soil from all test pits (STPs, STHs and RTHs) were manually sieved using 5 mm mesh. The stratigraphy of all test pits was recorded. The stratigraphy of all STPs was also drawn and photographed.

A summary of the archaeological subsurface testing attributes appears in Appendix 3, Page 123.

5.3.3 Limitations of the complex assessment

Due to the size of the activity area, subsurface testing of the entire 330 ha was impractical; therefore testing used a sampling approach, concentrating on areas of higher Aboriginal cultural heritage likelihood or known sites, with a less intensive sample of the areas assessed as having lower or nil Aboriginal cultural heritage likelihood. The sampling approach adopted was based on an assessment of the landscape and its potential for containing in situ Aboriginal cultural heritage. Large areas of the activity area were not tested and there is always potential that these areas may contain archaeological evidence.

All soil was sieved through 5 mm mesh but the topsoils throughout the activity had a high clay content, which was further complicated by recent rainfall, making them very sticky and difficult to sieve. In many cases, the sieving involved rolling and pressing of soil peds to determine whether there was any lithic material.

5.3.4 Results of the complex assessment

5.3.4.1 Results of stratigraphic testing

A total of four 1 x 1 m stratigraphic test pits were excavated within the activity area (Table 7, Page 40 and Map 9, Page 108).

The stratigraphy of the activity area is remarkably consistent throughout. The topsoils (A horizon) in the activity area are very shallow with the depths of STPs and STHs ranging between 70 mm and 240 mm. The topsoils uniformly consist of red-dark brown fine-grained, moist silty clays, often with basaltic rock inclusions, overlying a dense subsoil (B horizon) consisting of dark brown sticky clay.

One silcrete artefact was found in one of the STPs (STP04) at a depth of approximately 60 mm in the silty clay topsoil. In this STP the topsoils overlay a band of very large basaltic cobbles/boulders, which occurs in the rise overlooking the central drainage line.

The coordinates of all stratigraphic test pits excavated within the activity area appear in Table 7, Page 40 and Appendix 4, Page 124.

5.3.4.2 Results of subsurface testing

As discussed above, a total of 323 STHs, measuring 400 x 400 mm, were excavated in 30 transects. In addition a total of six RTHs were also excavated to test the site extent of two sites identified during the standard and complex assessments (Table 8, Page 44; Table 9, Page 75 and Map 9, Page 108).

The extent of the Aboriginal subsurface site located within STP04 was tested by excavating RTHs around the site. In addition to excavating three RTHs to the west, east and south of STP04, STH AA-6 served as the northern RTH.

The extent of the Aboriginal surface artefact scatter located within the drainage line was tested by excavating RTHs around the site. Three RTHs were excavated to the north, east and south of the site. In addition, STP02 was excavated approximately 10 m south of the artefact scatter.

One additional silcrete artefact was found next to the artefact previously identified in the ephemeral drainage line during the standard assessment. This artefact was identified during a follow-up inspection of the previously identified artefact.

The excavation located one artefact from one stratigraphic test pit. This artefact is discussed in detail in Section 6, Page 76.

The coordinates of each transect start and end points appear in Table 8, Page 44 while the coordinates of all shovel test pits excavated within the activity area appear in Appendix 4, Page 124.

5.3.5 Complex assessment - conclusions

The complex assessment showed a remarkably consistent soil profile throughout the activity area with a shallow silty clay topsoil overlying a stick clay subsoil. The topsoil did not extent below 140 mm depth, with many areas as shallow as 70 mm, suggesting a long history of topsoil depletion from the activity area probably as a result of wide scale sheet erosion.

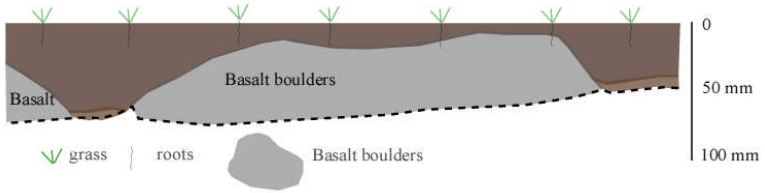
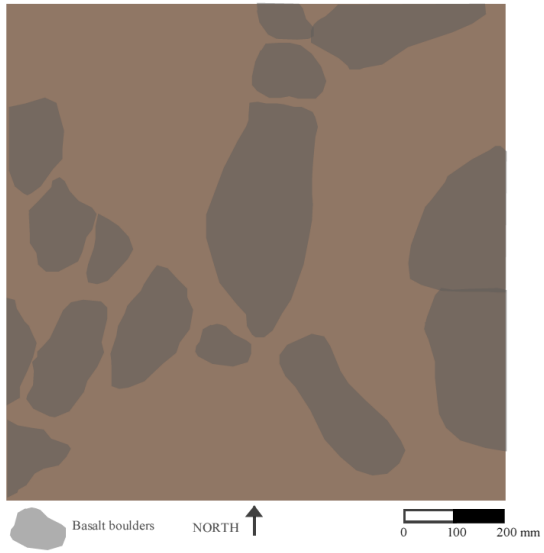
The complex assessment identified one additional Aboriginal site, a subsurface isolated artefact located on a rise near the eastern boundary of the activity area. The complex assessment also identified on additional surface artefact within the same site identified in the standard assessment near the western boundary.

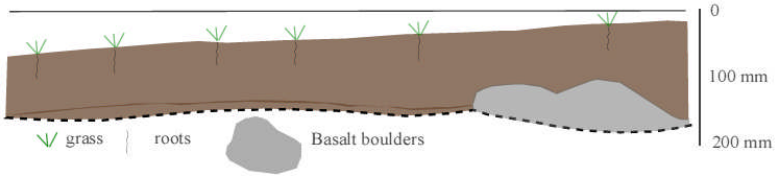
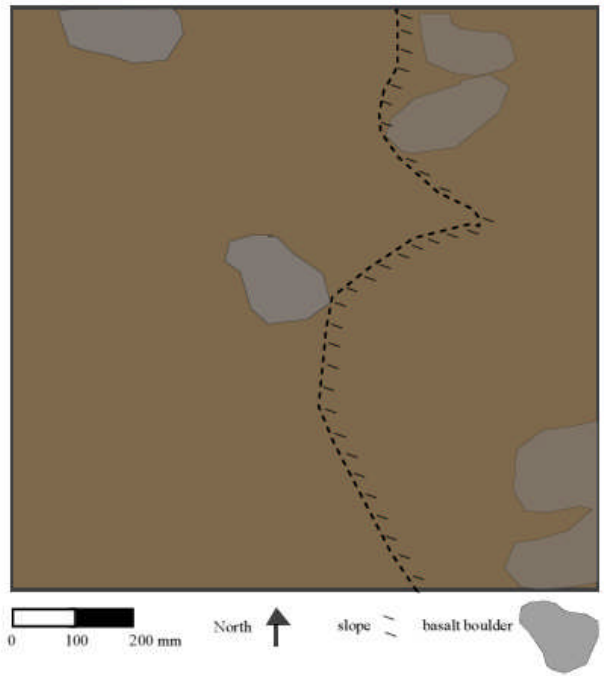
Both these sites are located in close proximity to the central drainage line. However, both sites are very low density artefact scatters (or isolated artefacts) suggesting that, although close to the water course, were probably the result of either ephemeral occupation during a time or times of heavier rainfall which allows some water in the drainage line, or through

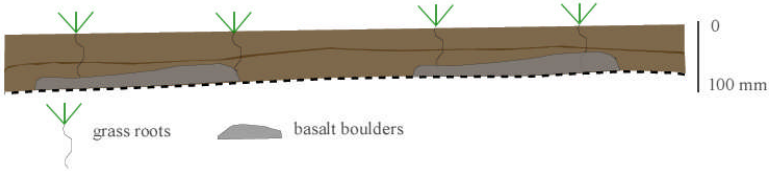
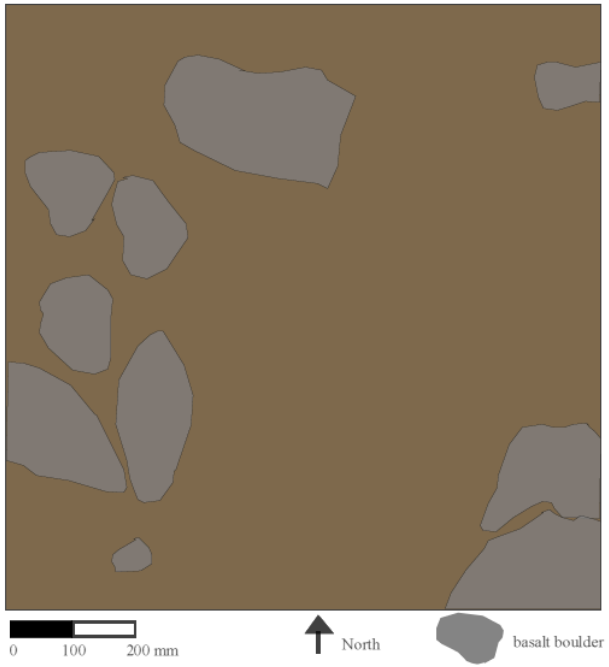
deliberate or accidental discard, possibly whilst traversing the landscape. In the case of the surface artefacts near the western boundary (Argoona AS 1 [VAHR 7822-2969]), which were found in the middle of the drainage channel, it is not clear whether these are in situ artefacts or the result of being washed into the activity area from further upstream during high rainfall events.

The full details of all Aboriginal cultural heritage present within the activity area are presented in Section 6, Page 76.

Table 7: Stratigraphic Test Pits Excavated within the Activity Area (Map 9, Page 108)

STP Number Coordinates (GDA 94, Zone ##)	Stratigraphic Photograph	Stratigraphic Profile	Description of soil profile	VAHR Site Name
STP01 E: 286965 N: 5804191	 **Plate 14**: Base Plan of STP01, facing north  **Plate 15**: Stratigraphy of STP01, north section	 **Figure 2**: Stratigraphic Profile of STP01  **Figure 2**: Base Plan of STP01	0-60mm very dark brown (7.5YR 2.5/3) fine grained moist silty clay with frequent small to medium sized basalt inclusions. 60+mm dark brown (7.5YR3/4) fine grained moist clay with large basalt boulders throughout base.	

STP Number Coordinates (GDA 94, Zone ##)	Stratigraphic Photograph	Stratigraphic Profile	Description of soil profile	VAHR Site Name
STP02 E: 286694 N: 5803882	 **Plate 16:** Base Plan of STP02, facing north  **Plate 17:** Stratigraphy of STP02, north section	 **Figure 3**: Stratigraphic Profile of STP02  **Figure 4**: Base Plan of STP02	0-140mm dark brown (7.5YR3/4) fine grained moist silty clay with infrequent small sized basalt inclusions. 140+mm dark brown (7.5YR2.5/3) mottled with reddish brown (5YR 4/4) and strong brown (YR 4/6) fine grained sticky clay with charcoal flecks and large basalt boulders throughout base.	Argoona Road AS 1 (VAHR 7822-2969) 2 x stone artefacts (these artefacts were found on the surface approx. 10 m north of the STP)

STP Number Coordinates (GDA 94, Zone ##)	Stratigraphic Photograph	Stratigraphic Profile	Description of soil profile	VAHR Site Name
STP03 E: 286752 N: 5804191	 **Plate 18:** Base Plan of STP03, facing north  **Plate 19:** Stratigraphy of STP03, north section	 **Figure 5**: Stratigraphic Profile of STP03  **Figure 6**: Base Plan of STP03	0-70mm dark brown (7.5YR3/3) fine grained moist silty clay with infrequent medium to small sized basalt inclusions. 70+mm dark brown (7.5YR3/3) fine grained sticky clay with charcoal flecks and large basalt boulders throughout base.	

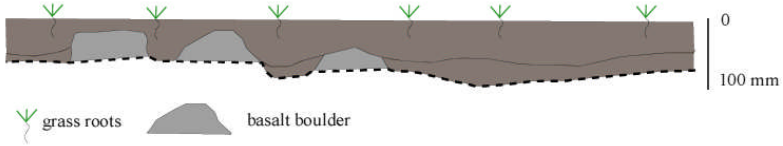
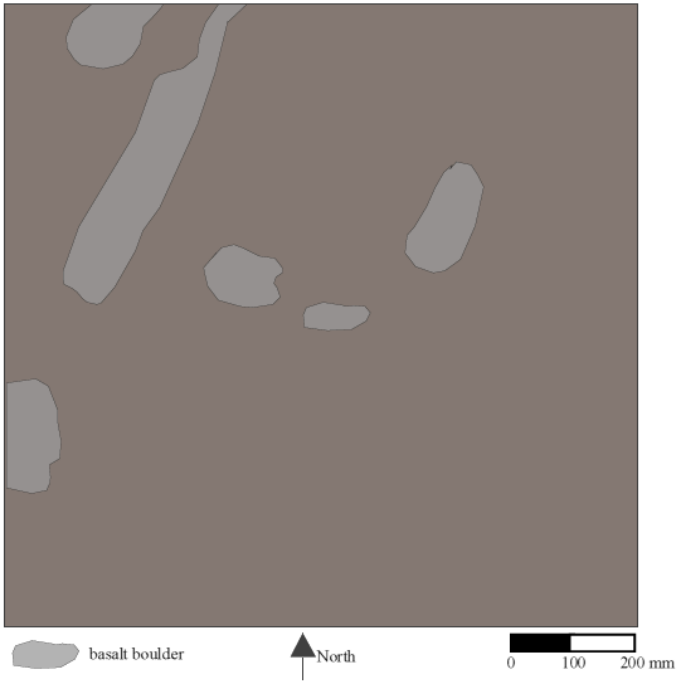
STP Number Coordinates (GDA 94, Zone ##)	Stratigraphic Photograph	Stratigraphic Profile	Description of soil profile	VAHR Site Name
STP04 E: 288391 N: 5803906	 **Plate 20**: Base Plan of STP04, facing north  **Plate 21**: Base Plan of STP04, facing north	 **Figure 7**: Stratigraphic Profile of STP04  **Figure 8**: Stratigraphic Profile of STP04	0-75mm dark brown (7.5YR 3/2) fine grained moist silty clay with frequent small to moderate sized basalt inclusions. 75mm+ dark brown (7.5YR 3/2) fine grained sticky clay with frequent large basalt inclusions.	Argoona Road IA 1 (VAHR 7822-2973) Isolated silcrete artefact Approx. 60 mm depth

Table 8: Transects, Shovel Test Holes and Radial Test Holes Excavated within the Activity Area (Map 9, Page 108)

Transect No.	Transect Description	No. of Test Holes with Artefacts	VAHR Site Name	Hole No. and Description of Stratigraphy				
Transect A 400 m 9 test holes Start E: 286562 N: 5804548 End E: 286525 N: 5804148	40 x 40 cm test holes excavated every 50 m.	Nil		1: 0-140mm dark brown (7.5YR 3/2) friable fine grained clayey silt. 140+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.	2: 0-80mm mid brown (7.5YR 4/3) friable fine grained clayey silt, containing infrequent small ironstone inclusions. 80-200mm mid brown (7.5YR 4/3) friable fine grained silty clay. 200+mm mid brown (7.5YR 4/3) compacted fine grained clay.	3: 0-70mm mid brown (7.5YR 4/3) friable fine grained clayey silt, containing infrequent small ironstone inclusions. 70-180mm mid brown (7.5YR 4/3) friable fine grained silty clay. 180+mm mid brown (7.5YR 4/3) compacted fine grained sticky clay.	4: 0-60mm dark brown (7.5YR 3/2) friable fine grained clayey silt. 60-190mm mid brown (7.5YR 4/3) friable fine grained silty clay. 190+mm mid brown (7.5YR 4/3) compacted fine grained sticky clay.	5: 0-120mm dark brown (7.5YR 3/2) friable fine grained clayey silt, containing grass roots. 120+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.
				6: 0-100mm dark brown (7.5YR 3/2) friable fine grained moist clayey silt containing grass roots. 100-180mm mid brown (7.5YR 4/3) friable fine grained dry clayey silt. 180-300mm dark brown 7.5YR 3/2) friable fine grained moist silty clay. 300+mm dark brown (7.5YR 3/2) compact fine grained sticky clay.	7: 0-130mm mid brown (7.5YR 4/3) friable fine grained clayey silt. 130+mm mid brown (7.5YR 4/3) compacted fine grained sticky clay.	8: 0-240mm dark greyish brown (10YR 3/2) friable fine grained clayey silt with moderate small ironstone inclusions. 240+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.	9: 0-180mm dark reddish brown (5YR 3/2) friable fine grained silty clay with infrequent small ironstone inclusions. 180+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.	

Transect No.	Transect Description	No. of Test Holes with Artefacts	VAHR Site Name	Hole No. and Description of Stratigraphy				
Transect B 400 m 9 test holes Start E: 286745 N: 5804141 End E: 286780 N: 5804537	40 x 40 cm test holes excavated every 50 m.	Nil		1: 0-50mm dark brown (7.5YR 3/2) friable fine grained moist clayey silt, containing grass roots. 50-250mm mid reddish brown (5YR 4/4) compacted dry fine grained silty clay. 250+mm mid reddish brown (5YR 4/4) compacted fine grained clay containing large basalt floaters across base.	2: 0-100mm dark brown (7.5YR 3/2) friable fine grained clayey silt. 100-120mm mid brownish orange (7.5YR 4/4) friable dry fine grained silty clay. 120+mm mid brown (7.5YR 4/3) compacted fine grained clay.	3: 0-120mm mid brown (7.5YR 4/3) friable fine grained clayey silt with moderate small charcoal and basalt inclusions. 120-250mm mid brown (7.5YR 4/3) friable fine grained silty clay. 250+mm mid brown (7.5YR 4/3) compacted fine grained clay with large basalt boulder in base.	4: 0-160mm mid brown (7.5YR 4/3) friable fine grained clayey silt with infrequent charcoal flecks. 160-210mm mid brownish red (5YR 4/4) friable fine grained silty clay. 210+mm mid brown (7.5YR 4/3) compacted fine grained clay.	5: 0-60mm mid brown (7.5YR 4/3) friable fine grained clayey silt. 60-80mm mid brownish red (5YR 4/4) friable fine grained silty clay. 80+mm mid reddish brown (5YR 4/4) compacted fine grained clay.
				6: 0-100mm dark reddish brown (5YR 3/2) friable fine grained silty clay containing grass roots. 100+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay.	7: 0-130mm mid reddish brown (5YR 4/4) friable fine grained moist silty clay containing grass roots. 130+mm mid reddish brown (5YR 4/4) compacted fine grained sticky clay.	8: 0-140mm dark brown (7.5YR 3/2) friable fine grained silty clay containing grass roots. 140+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.	9: 0-70mm dark reddish brown (5YR 3/2) friable fine grained silty clay containing grass roots. 70+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay.	

Transect No.	Transect Description	No. of Test Holes with Artefacts	VAHR Site Name	Hole No. and Description of Stratigraphy				
Transect C 200 m 9 test holes Start E: 286877 N: 5804195 End E: 287061 N: 5804111	40 x 40 cm test holes excavated every 25 m.	Nil		1: 0-130mm dark brown (7.5YR 3/2) friable fine grained moist silty clay, containing infrequent small ironstone inclusions and grass roots. 130mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.	2: 0-220mm mid reddish brown (5YR 4/4) friable fine grained silty clay. 220+mm mid reddish brown (5YR 4/4) compacted fine grained sticky clay.	3: 0-200mm dark brown (7.5YR 3/2) friable fine grained silty clay with frequent large basalt inclusions. 200+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.	4: 0-110mm dark reddish brown (5YR 3/2) friable fine grained silty clay with moderate medium basalt inclusions. 110+mm dark reddish brown (5YR 3/2) compacted fine grained clay.	5: 0-160mm dark brown (7.5YR 3/2) friable fine grained silty clay with frequent small basalt inclusions. 160+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.
				6: 0-140mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 140+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay.	7: 0-200mm dark reddish brown (5YR 3/2) friable fine grained moist silty clay with frequent large basalt blocks. 200+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay, with large basalt floaters at base.	8: 0-140mm dark brown (7.5YR 3/2) friable fine grained silty clay. 140+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.	9: 0-150mm dark reddish brown (5YR 3/2) friable fine grained silty clay with infrequent small to large basalt inclusions. 150+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay with a large basalt floater at base.	

Transect No.	Transect Description	No. of Test Holes with Artefacts	VAHR Site Name	Hole No. and Description of Stratigraphy				
Transect D 200 m 9 test holes Start E: 287075 N: 5804160 End E: 286890 N: 5804241	40 x 40 cm test holes excavated every 25 m.	Nil		1: 0-240mm dark reddish brown (5YR 3/2) friable fine grained silty clay, with moderate medium basalt inclusions. 240+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay with large basalt floater interrupting base.	2: 0-220mm dark brown (7.5YR 3/2) friable fine grained silty clay with grass roots. 220+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.	3: 0-150mm dark reddish brown (5YR 3/2) firm fine grained silty clay with infrequent small basalt inclusions. 150+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay with large basalt boulder at base.	4: 0-160mm dark reddish brown (5YR 3/2) friable fine grained silty clay with moderate large basalt inclusions. 160+mm dark reddish brown (5YR 3/2) compacted fine grained clay with large basalt boulder at base.	5: 0-130mm dark brown (7.5YR 3/2) friable fine grained silty clay with frequent large basalt inclusions. 130+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay with large basalt boulder at base.
				6: 0-180mm dark reddish brown (5YR 3/2) friable fine grained silty clay with frequent large basalt floaters. 180+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay with large basalt boulder at base.	7: 0-100mm dark reddish brown (5YR 3/2) friable fine grained silty clay with frequent large basalt inclusions. 100+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay, with large basalt floater at base.	8: 0-200mm dark brown (7.5YR 3/2) friable fine grained silty clay with frequent large basalt inclusions. 200+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.	9: 0-220mm dark reddish brown (5YR 3/2) friable fine grained silty clay, with infrequent medium basalt inclusions. 220+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.	

Transect No.	Transect Description	No. of Test Holes with Artefacts	VAHR Site Name	Hole No. and Description of Stratigraphy				
Transect E 400 m 17 test holes Start E: 286371 N: 5803985 End E: 286745 N: 5803845	40 x 40 cm test holes excavated every 25 m.	Nil		1: 0-80mm dark brown (7.5YR 3/2) friable fine grained clayey silt. 80-180mm dark brown (7.5YR 3/2) friable fine grained silty clay. 180+mm dark brown (7.5YR 3/2) compacted sticky clay.	2: 0-120mm dark reddish brown (5YR 3/2) friable fine grained silty clay with grass roots. 120+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay.	3: 0-100mm dark brown (7.5YR 3/2) friable fine grained clayey silt. 100-260mm dark brown (7.5YR 3/2) friable fine grained silty clay. 260+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.	4: 0-40mm dark greyish brown (10YR 3/2) friable fine grained clayey silt. 40-180mm dark greyish brown (10YR 3/2) friable fine grained silty clay. 180+mm dark greyish brown (10YR 3/2) compacted fine grained sticky clay.	5: 0-140mm dark greyish brown (10YR 3/2) friable fine grained silty clay. 140+mm dark greyish brown (10YR 3/2) compacted fine grained sticky clay.
				6: 0-100mm dark greyish brown (10YR 3/2) friable fine grained silty clay with grass roots. 100+mm dark brown (7.5YR 3/2) compacted sticky clay.	7: 0-120mm dark brown (7.5YR 3/2) friable fine grained silty clay. 120+mm dark brown (7.5YR 3/2) compacted sticky clay.	8: 0-120mm dark brown (7.5YR 3/2) friable fine grained silty clay. 120+mm dark brown (7.5YR 3/2) compacted sticky clay.	9: 0-200mm dark reddish brown (5YR 3/2) friable fine grained clayey silt. 200+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay with large basalt boulder at base.	10: 0-180mm dark brown (7.5YR 3/2) friable fine grained silty clay. 180+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.

Transect No.	Transect Description	No. of Test Holes with Artefacts	VAHR Site Name	Hole No. and Description of Stratigraphy				
Transect E continued				11: 0-120mm dark reddish brown (5YR 3/2) friable fine grained silty clay, with frequent medium basalt inclusions. 210+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay.	12: 0-180mm dark reddish brown (5YR 3/2) friable fine grained silty clay with frequent medium basalt inclusions. 180+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay.	13: 0-120mm dark reddish brown (5YR 3/2) friable fine grained silty clay with frequent medium basalt inclusions. 120+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay.	14: 0-200mm dark reddish brown (5YR 3/2) friable fine grained silty clay with frequent small basalt inclusions. 200+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay.	15: 0-80mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 80+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay with large basalt boulder at base.
				16: 0-150mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 150+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay with large basalt boulder at base.	17: 0-100mm dark brown (7.5YR 3/2) friable fine grained silty clayey silt. 100-260mm dark brown (7.5YR 3/2) friable fine grained silty clay. 260+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay.			

Transect No.	Transect Description	No. of Test Holes with Artefacts	VAHR Site Name	Hole No. and Description of Stratigraphy				
Transect F 400 m 9 test holes Start E: 286508 N: 5803744 End E: 286472 N: 5803343	40 x 40 cm test holes excavated every 50 m.	Nil		1: 0-150mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 150+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay.	2: 0-120mm mid reddish brown (5YR 3/2) friable fine grained silty clay. 120+mm mid reddish brown (5YR 3/2) compacted fine grained sticky clay.	3: 0-100mm mid brown (7.5YR 4/3) friable fine grained clayey silt. 100-220mm mid brown (7.5YR 4/3) friable fine grained silty clay with infrequent large basalt inclusions. 220+mm mid brown (7.5YR 4/3) compacted fine grained sticky clay.	4: 0-100mm mid brown (7.5YR 4/3) friable fine grained clayey silt. 100-260mm mid brown (7.5YR 4/3) firm fine grained silty clay. 260+mm mid brown (7.5YR 4/3) compacted fine grained clay.	5: 0-200mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 200+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay with large basalt boulder at base.
				6: 0-80mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 80+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay.	7: 0-50mm dark reddish brown (5YR 3/2) friable fine grained silty clay with frequent large basalt boulders. 50+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay, with large basalt floater at base.	8: 0-150mm dark brown (7.5YR 3/2) friable fine grained silty clay. 150+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.	9: 0-150mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 150+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay.	

Transect No.	Transect Description	No. of Test Holes with Artefacts	VAHR Site Name	Hole No. and Description of Stratigraphy				
Transect G 200 m 9 test holes Start E: 286306 N: 5803310 End E: 286275 N: 5803112	40 x 40 cm test holes excavated every 25 m.	Nil		1: 0-100mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 100+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay.	2: 0-100mm dark brown (7.5YR 3/2) friable fine grained silty clay. 100+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.	3: 0-180mm dark reddish brown (5YR 3/2) friable fine grained silty clay with infrequent large basalt floaters. 180+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay.	4: 0-130mm dark brown (7.5YR 3/2) friable fine grained silty clay. 130+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.	5: 0-180mm dark reddish brown (5YR 3/2) friable fine grained silty clay with frequent medium basalt inclusions. 180+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay with large basalt boulder at base.
				6: 0-120mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 120+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay.	7: 0-90mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 90+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay.	8: 0-130mm dark reddish brown (5YR 3/2friable fine grained silty clay. 130+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay with infrequent small basalt inclusions.	9: 0-100mm dark reddish brown (5YR 3/2) friable fine grained silty clay with moderate small basalt inclusions. 150+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay.	

Transect No.	Transect Description	No. of Test Holes with Artefacts	VAHR Site Name	Hole No. and Description of Stratigraphy				
Transect H 200 m 9 test holes Start E: 286325 N: 5803112 End E: 286356 N: 5803310	40 x 40 cm test holes excavated every 25 m.	Nil		1: 0-100mm dark reddish brown (5YR 3/2) firm fine grained silty clay with frequent small basalt inclusions. 100+mm dark reddish brown (10YR 3/3) compacted fine grained sticky clay.	2: 0-120mm dark brown (7.5YR 3/2) friable fine grained silty clay with moderate medium basalt inclusions. mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.	3: 0-140mm dark greyish brown (10YR 3/2) friable fine grained silty clay. 140+mm dark greyish brown (10YR 3/2) compacted fine grained sticky clay.	4: 0-120mm dark brown (7.5YR 3/2) friable fine grained silty clay. 120+mm dark black (GLEY1 2.5/N) compacted fine grained sticky cly.	5: 0-120mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 120+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay.
				6: 0-200mm dark brown (7.5YR 3/2) friable fine grained silty clay. 200+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.	7: 0-140mm dark brown (7.5YR 3/2) friable fine grained silty clay with grass roots. 140+mm dark brown (7.5YR 3/2) compacted fine grained clay.	8: 0-180mm dark brown (7.5YR 3/2) friable fine grained silty clay with grass roots. 180+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay	9: 0-100mm dark reddish brown (5YR 3/2) friable fine grained silty clay with moderate small basalt inclusions. 100+mm dark reddish brown (10YR 3/3) compacted fine grained sticky clay.	

Transect No.	Transect Description	No. of Test Holes with Artefacts	VAHR Site Name	Hole No. and Description of Stratigraphy				
Transect I 425 m 18 test holes Start E: 286713 N: 5803272 End E: 286594 N: 5803682	40 x 40 cm test holes excavated every 25 m.	Nil		1: 0-70mm dark brown (7.5YR 3/2) firm fine grained silty clay with infrequent small charcoal flecks. 70-150mm mid reddish brown (2.5YR 3/4) compacted fine grained sticky clay.	2: 0-50mm dark brown (7.5YR 3/2) firm fine grained silty clay 50-80mm mid reddish brown (2.5YR 3/4) compacted fine grained sticky clay.	3: 0-100mm dark brown (7.5YR 3/2) firm fine grained clay. 100-110mm mid brownish grey () compacted fine grained sticky clay.	4: 0-110mm dark greyish brown (10YR 3/2) firm fine grained silty clay with moderate small sized basalt inclusions. 110+mm dark brown (10YR 3/2) compacted fine grained sticky clay.	5: 0-70mm dark brown (7.5YR 3/2) friable fine grained silty clay. 70-130mm dark reddish brown (10YR 3/3) compacted fine grained sticky clay.
				6: 0-90mm dark brown (7.5YR 3/2) firm fine grained silty clay. 90-120mm dark reddish brown (10YR 3/3) compacted fine grained sticky clay with large basalt boulder at base.	7: 0-130mm dark brown (7.5YR 3/2) friable fine grained silty clay with two large basalt boulders. 130-150mm dark brown (7.5YR 3/2) compacted fine grained clay.	8: 0-190mm dark brown (7.5YR 3/2) friable fine grained silty clay. 190-200mm mid brownish orange (7.5YR 4/4) compacted fine grained sticky clay.	9: 0-200mm dark reddish brown (10YR 3/3) friable fine grained silty clay with moderate medium sized basalt inclusions. 200-210mm dark reddish brown (10YR 3/3) compacted fine grained sticky clay with large basalt boulder at base.	10: 0-210mm mid reddish brown (2.5YR 3/4) friable fine grained silty clay with infrequent small basalt inclusions. 210+mm mid reddish brown (2.5YR 3/4) firm fine grained sticky clay.

Transect No.	Transect Description	No. of Test Holes with Artefacts	VAHR Site Name	Hole No. and Description of Stratigraphy				
Transect I Cont.				11: 0-100mm dark reddish brown (10YR 3/3) firm fine grained silty clay with infrequent small basalt pebbles. 100-120mm dark reddish brown (10YR 3/3) compacted fine grained clay.	12: 0-150mm mid reddish brown (2.5YR 3/4) firm fine grained silty clay. 150-160mm mid reddish brown (2.5YR 3/4) compact fine grained clay.	13: 0-90mm dark reddish brown (10YR 3/3) firm fine grained silty clay. 90+mm dark reddish brown (7.5YR 4/4) compacted fine grained blocky clay.	14: 0-140mm dark brown (7.5YR 3/2) firm fine grained silty clay. 140-160mm mid yellowish orange mottled brown (2.5YR 3/4 & 7.5YR 4/4) compacted fine grained clay.	15: 0-100mm dark reddish brown (10YR 3/3) firm fine grained silty clay. 100-110mm mid reddish brown (2.5YR 3/4) compacted fine grained clay.
				16: 0-50mm dark reddish brown (10YR 3/3) firm fine grained silty clay with infrequent small basalt inclusions. 50-60mm mid reddish brown (2.5YR 3/4) compact fine grained clay.	17: 0-110mm dark reddish brown (10YR 3/3) compacted silty clay. 110+mm mid reddish brown (2.5YR 3/4) compact fine grained clay.	18: 0-130mm dark reddish brown (10YR 3/3) firm fine grained silty clay. 130+mm dark reddish brown (10YR 3/3) compacted fine grained sticky clay.		

Transect No.	Transect Description	No. of Test Holes with Artefacts	VAHR Site Name	Hole No. and Description of Stratigraphy				
Transect J 375 m 16 test holes Start E: 286657 N: 5803637 End E: 286761 N: 5803277	40 x 40 cm test holes excavated every 25 m.	Nil		1: 0-240mm dark reddish brown (10YR 3/3) firm fine grained silty clay with infrequent medium sized basalt inclusions. 240-250mm dark reddish brown (10YR 3/3) firm fine grained clay.	2: 0-160 dark reddish brown (10YR 3/3) compacted fine grained silty clay with infrequent small basalt inclusions. 160+mm dark reddish brown (10YR 3/3) compacted fine grained clay.	3: 0-190 dark reddish brown (10YR 3/3) compacted fine grained silty clay. 190-200mm dark reddish brown (10YR 3/3) compacted fine grained clay.	4: 0-120 dark reddish brown (10YR 3/3) firm fine grained moist silty clay. 120+mm dark reddish brown (10YR 3/3) firm fine grained moist clay.	5: 0-60 dark reddish brown (10YR 3/3) firm fine grained moist silty clay. 60+mm dark reddish brown (10YR 3/3) compacted fine grained sticky clay.
				6: 0-70 dark reddish brown (10YR 3/3) firm fine grained silty clay with infrequent small basalt inclusions. 70-90mm dark reddish brown (10YR 3/3) compacted fine grained clay.	7: 0-90 dark reddish brown (10YR 3/3) firm fine grained silty clay. 90-100mm dark reddish brown (10YR 3/3) compacted fine grained sticky clay.	8: 0-100 dark reddish brown (10YR 3/3) firm fine grained silty clay. 100+mm dark reddish brown (10YR 3/3) compacted fine grained sticky clay.	9: 0-130 dark reddish brown (10YR 3/3) firm fine grained silty clay with infrequent small basalt inclusions and a large basalt boulder at base preventing further excavation.	10: 0-110 dark reddish brown (10YR 3/3) firm fine grained silty clay with moderate small basalt inclusions. 110+mm dark reddish brown (10YR 3/3) firm fine grained sticky clay with three basalt boulders at the base.

Transect No.	Transect Description	No. of Test Holes with Artefacts	VAHR Site Name	Hole No. and Description of Stratigraphy				
Transect J Cont.				11: 0-260 dark reddish brown (10YR 3/3) firm fine grained silty clay with moderate medium sized basalt inclusions. 260-290mm dark reddish brown (10YR 3/3) firm fine grained sticky clay.	12: 0-120 dark reddish brown (10YR 3/3) firm fine grained silty clay with infrequent small basalt inclusions. 120-130mm dark reddish brown (10YR 3/3) compacted fine grained clay.	13: 0-70 dark reddish brown (10YR 3/3) firm fine grained silty clay with moderate medium sized basalt inclusions. 70+mm dark reddish brown (10YR 3/3) compacted fine grained blocky clay.	14: 0-60 dark reddish brown (10YR 3/3) firm fine grained silty clay. 60-70mm dark brownish black (7.5YR 3/1) compacted fine grained blocky clay.	15: 0-110 dark reddish brown (10YR 3/3) firm fine grained silty clay.. 110-120mm dark reddish brown (10YR 3/3) compacted fine grained sticky clay with moderate medium sized basalt inclusions.
				16: 0-60 mid reddish brown (7.5YR 4/2) firm fine grained silty clay. 60+mm mid reddish brown (7.5YR 4/2) compacted clay.				

Transect No.	Transect Description	No. of Test Holes with Artefacts	VAHR Site Name	Hole No. and Description of Stratigraphy				
Transect K 350 m 15 test holes Start E: 286814 N: 5803265 End E: 286717 N: 5803601	40 x 40 cm test holes excavated every 25 m.	Nil		1: 0-70mm dark reddish brown (5YR 3/3) compacted fine grained dry silty clay. 70-80mm dark reddish brown (5YR 3/3) compacted fine grained blocky clay.	2: 0-130mm dark reddish brown (5YR 3/3) firm fine grained silty clay with grass roots. 130+mm dark reddish brown (5YR 3/3) compacted fine grained clay.	3: 0-200mm dark reddish brown (5YR 3/3) compacted fine grained dry silty clay with two animal bones. 200-210mm dark reddish brown (5YR 3/3) compacted fine grained blocky clay.	4: 0-100mm dark reddish brown (5YR 3/3) compacted fine grained dry silty clay. 100-120mm dark reddish brown (5YR 3/3) firm fine grained clay.	5: 0-110mm dark reddish brown (5YR 3/3) compacted fine grained dry silty clay. 110+mm dark reddish brown (5YR 3/3) compacted fine grained blocky clay.
				6: 0-200mm dark reddish brown (5YR 3/3) compacted fine grained silty clay with moderate medium sized basalt inclusions. 60-90mm dark reddish brown (5YR 3/3) compacted fine grained blocky clay.	7: 0-60mm dark reddish brown (5YR 3/3) firm fine grained silty clay with moderate small basalt inclusions. 60-70mm dark reddish brown (5YR 3/3) compacted fine grained blocky clay.	8: 0-60mm dark reddish brown (5YR 3/3) compacted fine grained silty clay. 60-90mm dark reddish brown (5YR 3/3) compacted fine grained blocky clay.	9: 0-80mm dark brown (7.5YR 2.5/2) firm fine grained silty clay. 80+mm dark brown (7.5YR 2.5/2) compacted fine grained blocky clay.	10: 0-130mm dark brown (7.5YR 2.5/2) firm fine grained silty clay. 130+mm dark brownish orange mottled (7.5YR 2.5/2 & 4/4) compacted fine grained sticky clay.
				11: 0-110mm dark brown (7.5YR 2.5/2) firm fine grained silty clay. 110+mm dark brownish orange mottled (7.5YR 2.5/2 & 4/4) compacted fine grained sticky clay.	12: 0-120mm dark reddish brown (5YR 3/3) firm fine grained silty clay with moderate medium sized basalt inclusions. 120+mm dark reddish brown (5YR 3/3) compacted fine grained sticky clay with basalt boulders at base.	13: 0-200mm dark reddish brown (5YR 3/3) firm fine grained silty clay with moderate medium basalt inclusions. 200-250mm dark reddish brown (5YR 3/3) compacted fine grained sticky clay.	14: 0-130mm dark reddish brown (5YR 3/3) firm fine grained silty clay with moderate small basalt inclusions. 130-150mm dark reddish brown (5YR 3/3) compacted fine grained blocky clay.	15: 0-140mm dark reddish brown (5YR 3/3) firm fine grained silty clay.. 140-180mm dark reddish brown (5YR 3/3) compacted fine grained blocky clay with basalt boulders at base.

Transect No.	Transect Description	No. of Test Holes with Artefacts	VAHR Site Name	Hole No. and Description of Stratigraphy				
Transect L 325 m 14 test holes Start E: 286775 N: 5803575 End E: 286865 N: 5803262	40 x 40 cm test holes excavated every 25 m.	Nil		1: 0-110mm dark reddish brown (5YR 3/3) firm fine grained silty clay with infrequent small basalt inclusions. 110-140mm dark reddish brown (5YR 3/3) compacted fine grained sticky clay.	2: 0-100mm dark reddish brown (5YR 3/3) firm fine grained silty clay with basalt boulders at base preventing further excavation.	3: 0-150mm dark reddish brown (5YR 3/3) firm fine grained silty clay with infrequent small basalt inclusions. 150-200mm dark reddish brown (5YR 3/3) firm fine grained sticky clay.	4: 0-70mm dark reddish brown (5YR 3/3) firm fine grained silty clay. 70-80mm dark greyish bluish (GLEY1 3/N) compacted fine grained sticky clay.	5: 0-140mm dark reddish brown (5YR 3/3) firm fine grained silty clay. 140-150mm dark reddish brown (5YR 3/3) compacted fine grained blocky clay with charcoal flecks.
				6: 0-30mm dark reddish brown (5YR 3/3) firm fine grained silty clay with basalt boulder at base preventing further excavation.	7: 0-200mm dark reddish brown (5YR 3/3) firm fine grained silty clay with moderate medium sized basalt inclusions. 200-220mm dark reddish brown (5YR 3/3) compacted fine grained sticky clay with large basalt boulder at base	8: 0-180mm dark reddish brown (5YR 3/3) firm fine grained silty clay. 180+mm dark reddish brown (5YR 3/3) compacted fine grained sticky clay.	9: 0-170mm dark brown (7.5YR 3/2) firm fine grained silty clay. 170-180mm dark brown (7.5YR 3/2) compacted fine grained clay with large basalt boulders at base.	10: 0-100mm dark reddish brown (5YR 3/3) firm fine grained silty clay. 180+mm dark reddish brown (5YR 3/3) compacted fine grained sticky clay.
				11: 0-150mm dark reddish brown (5YR 3/3) firm fine grained silty clay. 150-160mm dark reddish brown (5YR 3/3) compacted fine grained sticky clay.	12: 0-140mm dark reddish brown (5YR 3/3) firm fine grained silty clay with infrequent medium sized basalt inclusions. 140+mm dark reddish brown (5YR 3/3) compacted fine grained sticky clay.	13: 0-200mm dark reddish brown (5YR 3/3) firm fine grained silty clay. 200-280mm dark reddish brown (5YR 3/3) compacted fine grained clay.	14: 0-280mm dark reddish brown (5YR 3/3) firm fine grained silty clay. 280+mm dark reddish brown (5YR 3/3) compacted fine grained clay.	

Transect No.	Transect Description	No. of Test Holes with Artefacts	VAHR Site Name	Hole No. and Description of Stratigraphy				
Transect M 275 m 12 test holes Start E: 287245 N: 5802986 End E: 287519 N: 5802953	40 x 40 cm test holes excavated every 25 m.	Nil		1: 0-100mm dark reddish brown (5YR 3/3) firm fine grained silty clay. 100-110mm dark reddish brown (5YR 3/3) compacted fine grained blocky clay.	2: 0-100mm dark reddish brown (5YR 3/3) firm fine grained silty clay. 100+mm dark reddish brown (2.5YR3/4) compacted fine grained sticky clay.	3: 0-90mm dark reddish brown (5YR 3/3) firm fine grained silty clay. 90+mm dark reddish brown (5YR 3/3) compacted fine grained sticky clay.	4: 0-110mm dark reddish brown (5YR 3/3) firm fine grained silty clay with moderate medium sized basalt inclusions. 110+ dark reddish brown (5YR 3/3) compacted fine grained sticky clay with basalt boulders at base.	5: 0-110mm dark reddish brown (5YR 3/3) firm fine grained silty clay. 110-130mm dark reddish brown (5YR 3/3) compacted fine grained blocky clay with large basalt boulder at base.
				6: 0-140mm dark reddish brown (5YR 3/3) firm fine grained silty clay. 140+mm dark reddish brown (5YR 3/3) compacted fine grained blocky clay.	7: 0-90mm dark reddish brown (5YR 3/3) firm fine grained silty clay. 90+mm dark reddish brown (5YR 3/3) compacted fine grained blocky clay.	8: 0-180mm dark brown (7.5YR 3/2) firm fine grained silty clay. 180+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.	9: 0-140mm dark brownish black (7.5YR 3/1) firm fine grained silty clay. 140+mm dark brownish black (7.5YR 3/1) compacted fine grained clay.	10: 0-200mm dark brown (7.5YR 3/2) friable fine grained clayey silt. 200-300mm dark brown (7.5YR 3/2) friable fine grained silty clay. 300+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.
				11: 0-120mm dark brown (7.5YR 3/2) firm fine grained silty clay. 120+mm dark greyish brown (10YR 3/2) compacted fine grained sticky clay.	12: 0-120mm dark brown (7.5YR 3/2) firm fine grained silty clay. 120+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.			

Transect No.	Transect Description	No. of Test Holes with Artefacts	VAHR Site Name	Hole No. and Description of Stratigraphy				
Transect N 175 m 8 test holes Start E: 287452 N: 5803011 End E: 287278 N: 5803032	40 x 40 cm test holes excavated every 25 m.	Nil		1: 0-80mm dark brown (7.5YR 3/2) friable fine grained silty clay. 80+mm dark brown (7.5YR 3/2) compacted fine grained blocky clay.	2: 0-200mm dark brown (7.5YR 3/2) friable fine grained silty clay with frequent medium basalt inclusions. 200+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay with large basalt floater in base.	3: 0-130mm dark brown (7.5YR 3/2) firm fine grained silty clay with infrequent small basalt inclusions. 130+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.	4: 0-150mm dark reddish brown (5YR 3/3) friable fine grained silty clay. 150+ dark reddish brown (5YR 3/3) compacted fine grained sticky clay.	5: 0-150mm dark reddish brown (5YR 3/3) friable fine grained silty clay with frequent large basalt inclusions. 150+mm dark reddish brown (5YR 3/3) compacted fine grained blocky clay with large basalt boulder at base.
				6: 0-200mm dark reddish brown (5YR 3/3) friable fine grained clayey silt. 200-260mm dark reddish brown (5YR 3/3) friable fine grained silty clay. 260+mm dark reddish brown (5YR 3/3) compacted fine grained sticky clay.	7: 0-220mm dark brown (7.5YR 3/2) friable fine grained silty clay with frequent medium sized basalt inclusions. 220+mm dark brown (7.5YR 3/2) compacted fine grained blocky clay with large basalt boulder at base.	8: 0-240mm dark brown (7.5YR 3/2) friable fine grained silty clay with moderate large basalt inclusions. 240+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay with large basalt boulder interrupting base.		

Transect No.	Transect Description	No. of Test Holes with Artefacts	VAHR Site Name	Hole No. and Description of Stratigraphy				
Transect O 400 m 9 test holes Start E: 287213 N: 5803225 End E: 287250 N: 5803624	40 x 40 cm test holes excavated every 50 m.	Nil		1: 0-60mm dark brown (7.5YR 3/2) friable fine grained silty clay. 60+mm dark brown (7.5YR 3/2) compacted fine grained clay.	2: 0-80mm dark reddish brown (5YR 3/3) friable fine grained silty clay. 80+mm dark reddish brown (5YR 3/3) compacted fine grained clay.	3: 0-180mm dark brown (7.5YR 3/2) firm fine grained silty clay. 180+mm dark brown (7.5YR 3/2) compacted fine grained clay.	4: 0-120mm dark brown (7.5YR 3/2) friable fine grained silty clay. 120+mm dark brown (7.5YR 3/2) compacted fine grained clay.	5: 0-80mm dark reddish brown (5YR 3/3) friable fine grained silty clay. 80+mm dark reddish brown (5YR 3/3) compacted fine grained clay with basalt boulders at base.
				6: 0-190mm dark reddish brown (5YR 3/3) friable fine grained silty clay with frequent large basalt inclusions. 190+mm dark reddish brown (5YR 3/3) compacted fine grained clay with large basalt floaters at base.	7: 0-80mm dark reddish brown (5YR 3/3) friable fine grained silty clay. 80+mm dark reddish brown (5YR 3/3) compacted fine grained sticky clay.	8: 0-100mm dark reddish brown (5YR 3/3) friable fine grained silty clay with moderate medium sized basalt inclusions. 100+mm dark reddish brown (5YR 3/3) compacted fine grained clay.	9: 0-100mm dark reddish brown (5YR 3/3) friable fine grained silty clay. 100+mm dark reddish brown (5YR 3/3) compacted fine grained clay.	
Transect P 400 m 9 test holes Start E: 287625 N: 5803054 End E: 287661 N: 5803452	40 x 40 cm test holes excavated every 50 m.	None		1: 0-80mm dark reddish brown (5YR 3/3) friable fine grained silty clay. 80+mm dark reddish brown (5YR 3/3) compacted fine grained clay.	2: 0-80mm dark brown (7.5YR 3/2) friable fine grained silty clay with infrequent small basalt inclusions. 80+mm dark brown (7.5YR 3/2) compacted fine grained clay.	3: 0-230mm dark brown (7.5YR 3/2) friable fine grained silty clay with moderate small basalt inclusions. 230+mm dark brown (7.5YR 3/2) compacted fine grained clay with large basalt boulder interrupting base.	4: 0-130mm dark brown (7.5YR 3/2) friable fine grained silty clay. 130+mm dark brown (7.5YR 3/2) compacted fine grained clay with large basalt boulder interrupting base.	5: 0-130mm dark brown (7.5YR 3/2) friable fine grained silty clay. 130+mm dark brown (7.5YR 3/2) compacted fine grained clay.

Transect No.	Transect Description	No. of Test Holes with Artefacts	VAHR Site Name	Hole No. and Description of Stratigraphy				
Transect P Cont.				6: [illegible] k brown (7.5YR 3/2) friable fine grained silty clay with infrequent large basalt inclusions. 260+mm dark brown (7.5YR 3/2) compacted fine grained clay with infrequent large basalt inclusions.	7: 0-120mm dark brown (7.5YR 3/2) friable fine grained silty clay. 120+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.	8: 0-160mm dark reddish brown (5YR 3/3) friable fine grained silty clay. 160+mm dark reddish brown (5YR 3/3) compacted fine grained sticky clay.	9: 0-130mm dark reddish brown (5YR 3/3) friable fine grained silty clay with moderate medium sized basalt inclusions. 130+mm dark reddish brown (5YR 3/3) compacted fine grained clay.	
Transect Q 400 m 9 test holes Start E: 287916 N: 5803399 End E: 287881 N: 5803001	40 x 40 cm test holes excavated every 50 m.	Nil		1: 0-180mm dark reddish brown (5YR 3/3) friable fine grained silty clay with moderate medium sized basalt inclusions. 180+mm dark reddish brown (5YR 3/3) compacted fine grained clay with large basalt boulder at base.	2: 0-220mm dark reddish brown (5YR 3/3) friable fine grained silty clay. 220+mm dark reddish brown (5YR 3/3) compacted fine grained clay.	3: 0-200mm dark reddish brown (5YR 3/3) friable fine grained silty clay with moderate medium sized basalt inclusions. 200+mm dark reddish brown (5YR 3/3) compacted fine grained clay.	4: 0-80mm dark brown (7.5YR 3/2) friable fine grained silty clay. 80+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.	5: 0-180mm dark reddish brown (5YR 3/3) friable fine grained silty clay.. 180+mm dark reddish brown (5YR 3/3) compacted fine grained clay.
				6: 0-220mm dark reddish brown (5YR 3/3) friable fine grained silty clay. 220+mm dark reddish brown (5YR 3/3) compacted fine grained clay with large basalt boulder at base.	7: 0-130mm dark reddish brown (5YR 3/3) friable fine grained silty clay. 130+mm dark reddish brown (5YR 3/3) compacted fine grained clay with large basalt boulder at base.	8: 0-100mm dark reddish brown (5YR 3/3) friable fine grained silty clay. 100+mm dark reddish brown (5YR 3/3) compacted fine grained clay.	9: 0-100mm dark reddish brown (5YR 3/3) friable fine grained silty clay. 100+mm dark reddish brown (5YR 3/3) compacted fine grained clay.	

Transect No.	Transect Description	No. of Test Holes with Artefacts	VAHR Site Name	Hole No. and Description of Stratigraphy				
Transect R 200 m 9 test holes Start E: 287528 N: 5803438 End E: 287563 N: 5803636	40 x 40 cm test holes excavated every 25 m.	Nil		1: 0-160mm dark brown (7.5YR 3/2) friable fine grained clayey silt. 160+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay with a large basalt boulder interrupting base.	2: 0-120mm dark brown (7.5YR 3/2) friable fine grained silty clay. 120+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.	3: 0-120mm dark brown (7.5YR 3/2) friable fine grained silty clay with infrequent large basalt floaters. 120+mm dark brown (7.5YR 3/2) compacted fine grained clay.	4: 0-60mm dark reddish brown (5YR 3/3) friable fine grained silty clay. 60+mm dark reddish brown (5YR 3/3) compacted fine grained clay with large basalt boulder at base.	5: 0-130mm dark brown (7.5YR 3/2) friable fine grained silty clay. 130+mm dark brown (7.5YR 3/2) compacted fine grained clay.
				6: 0-100mm dark reddish brown (5YR 3/3) friable fine grained silty clay with moderate medium sized basalt. 100+mm dark reddish brown (5YR 3/3) compacted fine grained sticky clay.	7: 0-160mm dark reddish brown (5YR 3/3) friable fine grained silty clay with moderate medium sized basalt inclusions. 160+mm dark reddish brown (5YR 3/3) compacted fine grained clay with large basalt boulder at base.	8: 0-60mm dark reddish brown (5YR 3/3) friable fine grained silty clay with moderate medium basalt inclusions. 60+mm dark reddish brown (5YR 3/3) compacted fine grained clay with large basalt floaters interrupting base.	9: 0-120mm dark reddish brown (5YR 3/3) friable fine grained silty clay with frequent medium basalt inclusions. 120+mm dark reddish brown (5YR 3/3) compacted fine grained clay with large basalt floaters interrupting base.	

Transect No.	Transect Description	No. of Test Holes with Artefacts	VAHR Site Name	Hole No. and Description of Stratigraphy				
Transect S 200 m 9 test holes Start E: 287511 N: 5803633 End E: 287479 N: 5803439	40 x 40 cm test holes excavated every 25 m.	Nil		1: 0-100mm dark reddish brown (5YR 3/3) friable fine grained silty clay. 100+mm dark reddish brown (5YR 3/3) compacted fine grained clay with large basalt boulder at base.	2: 0-100mm dark reddish brown (5YR 3/3) friable fine grained silty clay. 100+mm dark reddish brown (5YR 3/3) compacted fine grained sticky clay.	3: 0-110mm dark reddish brown (5YR 3/3) friable fine grained silty clay. 110+mm dark reddish brown (5YR 3/3) compacted fine grained sticky clay with large basalt boulder at base.	4: 0-60mm dark reddish brown (5YR 3/3) friable fine grained silty clay. 60+mm dark reddish brown (5YR 3/3) compacted fine grained sticky clay.	5: 0-120mm dark reddish brown (5YR 3/3) friable fine grained silty clay. 120+mm dark reddish brown (5YR 3/3) compacted fine grained sticky clay.
				6: 0-90mm dark reddish brown (5YR 3/3) friable fine grained silty clay. 90+mm dark reddish brown (5YR 3/3) compacted fine grained sticky clay with large basalt boulder at base.	7: 0-300mm dark reddish brown (5YR 3/3) friable fine grained silty clay with moderate small basalt inclusions. 300+mm dark reddish brown (5YR 3/3) compacted fine grained clay with large basalt boulder at base.	8: 0-160mm dark brown (7.5YR 3/2) friable fine grained silty clay. 120+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.	9: 0-150mm dark brown (7.5YR 3/2) friable fine grained silty clay. 150+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.	

Transect No.	Transect Description	No. of Test Holes with Artefacts	VAHR Site Name	Hole No. and Description of Stratigraphy				
Transect T 400 m 9 test holes Start E: 287339 N: 5803694 End E: 287373 N: 5804088	40 x 40 cm test holes excavated every 50 m.	Nil		1: 0-100mm dark reddish brown (5YR 3/3) friable fine grained silty clay. 100+mm dark reddish brown (5YR 3/3) compacted fine grained clay with large basalt boulder at base.	2: 0-120mm dark reddish brown (5YR 3/3) friable fine grained silty clay. 120+mm dark reddish brown (5YR 3/3) compacted fine grained sticky clay with large basalt boulder interrupting base.	3: 0-80mm dark reddish brown (5YR 3/3) friable fine grained silty clay with infrequent small basalt inclusions. 80+mm dark reddish brown (5YR 3/3) compacted fine grained clay.	4: 0-180mm dark reddish brown (5YR 3/3) friable fine grained silty clay. 180+mm dark reddish brown (5YR 3/3) compacted fine grained sticky clay with large basalt boulder interrupting base.	5: 0-140mm dark reddish brown (5YR 3/3) friable fine grained silty clay with moderate medium basalt inclusions. 140+mm dark reddish brown (5YR 3/3) compacted fine grained sticky clay.
				6: 0-130mm dark reddish brown (5YR 3/3) friable fine grained silty clay with infrequent small basalt inclusions. 130+mm dark reddish brown (5YR 3/3) compacted fine grained sticky clay.	7: 0-120mm dark reddish brown (5YR 3/3) friable fine grained silty clay. 120+mm dark reddish brown (5YR 3/3) compacted fine grained clay.	8: 0-280mm dark reddish brown (5YR 3/3) friable fine grained silty clay with moderate medium basalt inclusions. 280+mm dark reddish brown (5YR 3/3) compacted fine grained clay.	9: 0-120mm dark brown (7.5YR 3/2) friable fine grained silty clay. 120+mm dark brown (7.5YR 3/2) compacted fine grained clay.	

Transect No.	Transect Description	No. of Test Holes with Artefacts	VAHR Site Name	Hole No. and Description of Stratigraphy				
Transect U 200 m 9 test holes Start E: 287469 N: 5803722 End E: 287506 N: 5803923	40 x 40 cm test holes excavated every 25 m.	Nil		1: 0-120mm dark brown (7.5YR 3/2) friable fine grained silty clay with moderate medium sized basalt inclusions. 120+mm dark brown (7.5YR 3/2) compacted fine grained clay.	2: 0-160mm dark greyish brown (10YR 3/2) friable fine grained silty clay. 160+mm dark greyish brown (10YR 3/2) compacted fine grained clay.	3: 0-80mm dark greyish brown (10YR 3/2) friable fine grained silty clay. 80+mm dark greyish brown (10YR 3/2) compacted fine grained sticky clay.	4: 0-180mm dark brown (7.5YR 3/2) friable fine grained silty clay. 180+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.	5: 0-80mm dark reddish brown (5YR 3/3) friable fine grained silty clay with moderate medium basalt inclusions. 80+mm dark reddish brown (5YR 3/3) compacted fine grained clay.
				6: 0-160mm dark brown (7.5YR 3/2) friable fine grained silty clay. 160+mm dark brown (7.5YR 3/2) compacted fine grained clay.	7: 0-80mm dark reddish brown (5YR 3/3) friable fine grained silty clay. 80+mm dark reddish brown (5YR 3/3) compacted fine grained clay.	8: 0-100mm dark brown (7.5YR 3/2) friable fine grained silty clay. 100+mm dark brown (7.5YR 3/2) compacted fine grained clay with large basalt boulder interrupting base.	9: 0-140mm dark reddish brown (5YR 3/3) friable fine grained silty clay. 140+mm dark reddish brown (5YR 3/3) compacted fine grained clay with large basalt boulder interrupting base.	

Transect No.	Transect Description	No. of Test Holes with Artefacts	VAHR Site Name	Hole No. and Description of Stratigraphy				
Transect V 200 m 9 test holes Start E: 287579 N: 5803930 End E: 287519 N: 5803721	40 x 40 cm test holes excavated every 25 m.	Nil		1: 0-130mm dark brown (7.5YR 3/2) friable fine grained silty clay. 130+mm dark brown (7.5YR 3/2) compacted fine grained clay.	2: 0-180mm dark brown (7.5YR 3/2) friable fine grained silty clay. 180+mm dark brown (7.5YR 3/2) compacted fine grained clay	3: 0-130mm dark greyish brown (10YR 3/2) friable fine grained silty clay. 130+mm dark greyish brown (10YR 3/2) compacted fine grained sticky clay.	4: 0-100mm dark brown (7.5YR 3/2) friable fine grained silty clay. 100+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.	5: 0-80mm dark brown (7.5YR 3/2) friable fine grained silty clay. 100+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.
				6: 0-170mm dark brown (7.5YR 3/2) friable fine grained silty clay. 170+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.	7: 0-70mm dark brown (7.5YR 3/2) friable fine grained silty clay. 70+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.	8: 0-100mm dark brown (7.5YR 3/2) friable fine grained silty clay. 100+mm dark brown (7.5YR 3/2) compacted fine grained clay.	9: 0-130mm dark greyish brown (10YR 3/2) friable fine grained silty clay. 130+mm dark greyish brown (10YR 3/2) compacted fine grained sticky clay.	
Transect W 200 m 9 test holes Start E: 287743 N: 5803699	40 x 40 cm test holes excavated every 25 m.	Nil		1: 0-130mm dark brown (7.5YR 3/2) friable fine grained silty clay. 130+mm dark brown (7.5YR 3/2) compacted fine grained clay.	2: 0-100mm dark brown (7.5YR 3/2) friable fine grained silty clay. 100+mm dark brown (7.5YR 3/2) compacted fine grained clay	3: 0-100mm dark brown (7.5YR 3/2) friable fine grained silty clay. 100+mm dark brown (7.5YR 3/2) compacted fine grained clay	4: 0-70mm dark reddish brown (5YR 3/3) friable fine grained silty clay with infrequent small basalt inclusions. 70+mm dark reddish brown (5YR 3/3) compacted fine grained clay.	5: 0-120mm dark brown (7.5YR 3/2) friable fine grained silty clay. 120+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.

Transect No.	Transect Description	No. of Test Holes with Artefacts	VAHR Site Name	Hole No. and Description of Stratigraphy				
Transect W Cont. End E: 287780 N: 5804102				6: 0-100mm dark brown (7.5YR 3/2) friable fine grained silty clay. 100+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.	7: 0-130mm dark reddish brown (5YR 3/3) friable fine grained silty clay. 130+mm dark reddish brown (5YR 3/3) compacted fine grained clay.	8: 0-90mm dark reddish brown (5YR 3/3) friable fine grained silty clay. 90+mm dark reddish brown (5YR 3/3) compacted fine grained clay.	9: 0-270mm dark reddish brown (5YR 3/3) friable fine grained silty clay with moderate medium sized basalt inclusions. 270+mm dark reddish brown (5YR 3/3) compacted fine grained clay.	
Transect X 25 m 17 test holes Start E: 287514 N: 5804211	40 x 40 cm test holes excavated every 25 m.	Nil		1: 0-140mm dark reddish brown (5YR 3/2) firm fine grained silty clay. 140+mm dark reddish brown (5YR 3/2) firm fine grained clay.	2: 0-170mm dark reddish brown (5YR 3/2) firm fine grained silty clay with moderate small basalt inclusions. 170+mm dark reddish brown (5YR 3/2) firm fine grained clay.	3: 0-40mm dark brown (5YR 3/2) friable fine grained silty clay with large basalt boulder preventing further excavation.	4: 0-30mm dark brown (5YR 3/2) friable fine grained silty clay with large basalt boulder preventing further excavation.	5: 0-170mm dark reddish brown (5YR 3/2) firm fine grained silty clay with moderate small basalt inclusions. 170+mm dark reddish brown (5YR 3/2) firm fine grained clay with large basalt boulder at base.

Transect No.	Transect Description	No. of Test Holes with Artefacts	VAHR Site Name	Hole No. and Description of Stratigraphy				
Transect X Cont. End E: 287171 N: 5804008				6: 0-150mm dark reddish brown (5YR 3/2) firm fine grained silty clay. 150-160mm dark reddish brown (5YR 3/2) firm fine grained clay with large basalt boulder at base.	7: 0-120mm dark reddish brown (5YR 3/3) friable fine grained silty clay with infrequent small basalt inclusions. 120+mm dark reddish brown (5YR 3/3) compacted fine grained clay.	8: 0-110mm dark reddish brown (5YR 3/3) friable fine grained silty clay. 110-130mm dark reddish brown (5YR 3/3) compacted fine grained clay.	9: 0-80mm dark reddish brown (5YR 3/3) friable fine grained silty clay. 80+mm dark reddish brown (5YR 3/3) firm fine grained clay.	10: 0-90mm dark reddish brown (5YR 3/3) friable fine grained silty clay. 90-100mm dark reddish brown (5YR 3/3) firm fine grained moist blocky clay.
				11: 0-150mm dark brown (7.5YR 3/2) friable fine grained silty clay. 150-190mm dark brown (7.5YR 3/2) compacted fine grained clay.	12: 0-80mm dark brown (7.5YR 3/2) friable fine grained silty clay. 80+mm dark brown (7.5YR 3/2) compacted fine grained clay.	13: 0-150mm dark brown (7.5YR 3/2) friable fine grained silty clay with infrequent small basalt inclusions. 150-160mm dark brown (7.5YR 3/2) compacted fine grained clay.	14: 0-70mm dark reddish brown (5YR 3/3) friable fine grained silty clay with infrequent small basalt inclusions. 70-150mm dark reddish brown (5YR 3/3) compacted fine grained clay.	15: 0-90mm mid greyish brown (10YR 5/2) friable fine grained clay.
				16: 0-150mm mid greyish brown (10YR 5/2) friable fine grained clay.	17: 0-90mm mid greyish brown (10YR 5/2) friable fine grained clay.			

Transect No.	Transect Description	No. of Test Holes with Artefacts	VAHR Site Name	Hole No. and Description of Stratigraphy				
Transect Y 400 m 17 test holes Start E: 287629 N: 5804161 End E: 288029 N: 5804115	40 x 40 cm test holes excavated every 25 m.	Nil		1: 0-160mm dark reddish brown (5YR 3/2) firm fine grained silty clay. 160+mm dark reddish brown (5YR 3/2) firm fine grained clay.	2: 0-150mm dark reddish brown (5YR 3/2) firm fine grained silty clay with infrequent small basalt inclusions. 150-170mm dark reddish brown (5YR 3/2) firm fine grained clay.	3: 0-50mm dark brown (5YR 3/2) friable fine grained clay with large basalt boulder preventing further excavation.	4: 0-150mm dark brown (5YR 3/2) friable fine grained silty clay. 150-160mm dark brown (5YR 3/2) firm fine grained clay with frequent large basalt inclusions.	5: 0-130mm dark reddish brown (5YR 3/2) firm fine grained silty clay. 130+mm dark reddish brown (5YR 3/2) firm fine grained clay.
				6: 0-90mm dark reddish brown (5YR 3/2) firm fine grained silty clay. 90-100mm dark reddish brown (5YR 3/2) firm fine grained clay.	7: 0-150mm mid reddish brown (5YR 4/4) firm fine grained silty clay. 150+mm mid reddish brown (5YR 4/4) compacted fine grained clay.	8: 0-40mm mid reddish brown (5YR 4/4) firm fine grained silty clay with infrequent small basalt inclusions. 40+mm mid reddish brown (5YR 4/4) firm fine grained clay.	9: 0-130mm dark reddish brown (5YR 3/3) firm fine grained silty clay. 130+mm dark reddish brown (5YR 3/3) firm fine grained clay.	10: 0-80mm dark reddish brown (5YR 3/3) firm fine grained clay.
				11: 0-60mm mid reddish brown (5YR 4/4) friable fine grained silty clay. 60-70mm mid reddish brown (5YR 4/4) compacted fine grained clay.	12: 0-120mm mid reddish brown (5YR 4/4) firm fine grained silty clay. 120-130mm mid reddish brown (5YR 4/4) compacted fine grained clay.	13: 0-130mm mid reddish brown (5YR 4/4) firm fine grained silty clay with infrequent small basalt inclusions. 130mm mid reddish brown (5YR 4/4) firm fine grained clay with basalt boulder at base.	14: 0-130mm dark reddish brown (5YR 3/3) firm fine grained silty clay with infrequent small basalt inclusions. 130+mm dark reddish brown (5YR 3/3) firm fine grained clay with large basalt boulder at base.	15: 0-120mm dark reddish brown (5YR 3/3) firm fine grained silty clay. 120-130mm dark reddish brown (5YR 3/3) firm fine grained clay.

Transect No.	Transect Description	No. of Test Holes with Artefacts	VAHR Site Name	Hole No. and Description of Stratigraphy				
Transect Y Cont.				16: 0-140mm dark reddish brown (5YR 3/3) firm fine grained silty clay. 140+mm dark reddish brown (5YR 3/3) firm fine grained clay.	17: 0-150mm dark reddish brown (5YR 3/3) firm fine grained silty clay. 0-150mm dark reddish brown (5YR 3/3) firm fine grained clay.			
Transect Z 200 m 9 test holes Start E: 288371 N: 5803988 End E: 288293 N: 5803806	40 x 40 cm test holes excavated every 25 m.	None		1: 0-120mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 120+mm dark reddish brown (5YR 3/2) compacted fine grained clay.	2: 0-100mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 100+mm dark reddish brown (5YR 3/2) compacted fine grained clay with large basalt boulder at base.	3: 0-50mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 50+mm dark reddish brown (5YR 3/2) friable fine grained clay with large basalt floater at base.	4: 0-100mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 100+mm dark reddish brown (5YR 3/2) compacted fine grained clay.	5: 0-100mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 100+mm dark reddish brown (5YR 3/2) firm fine grained sticky clay.
				6: 0-150mm dark reddish brown (5YR 3/2) firm fine grained silty clay. 150+mm dark reddish brown (5YR 3/2) firm fine grained clay.	7: 0-120mm mid reddish brown (5YR 4/4) firm fine grained silty clay. 120+mm mid reddish brown (5YR 4/4) compacted fine grained clay.	8: 0-100mm mid reddish brown (5YR 4/4) firm fine grained clayey silt. 100+mm mid reddish brown (5YR 4/4) firm fine grained clay.	9: 0-90mm dark reddish brown (5YR 3/3) firm fine grained silty clay. 90+mm dark reddish brown (5YR 3/3) firm fine grained clay.	

Transect No.	Transect Description	No. of Test Holes with Artefacts	VAHR Site Name	Hole No. and Description of Stratigraphy				
Transect AA 200 m 9 test holes Start E: 288342 N: 5803794 End E: 288419 N: 5803978	40 x 40 cm test holes excavated every 25 m.	Nil		1: 0-100mm mid reddish brown (5YR 4/4) friable fine grained silty clay. 100+mm mid reddish brown (5YR 4/4) compacted fine grained clay.	2: 0-90mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 90+mm dark reddish brown (5YR 3/2) compacted fine grained clay.	3: 0-100mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 50+mm dark reddish brown (5YR 3/2) friable fine grained clay with large basalt floater at base.	4: 0-120mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 120+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay.	5: 0-80mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 80+mm dark reddish brown (5YR 3/2) firm fine grained sticky clay.
				6: 0-90mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 90+mm dark reddish brown (5YR 3/2) compacted fine grained clay.	7: 0-80mm dark reddish brown (5YR 3/2) friable fine grained silty clay with moderate small basalt inclusions. 90+mm dark reddish brown (5YR 3/2) compacted fine grained clay with large basalt boulder at base.	8: 0-100mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 90+mm dark reddish brown (5YR 3/2) compacted fine grained clay with large basalt boulder at base.	9: 0-160mm dark reddish brown (5YR 3/3) firm fine grained silty clay. 160+mm dark reddish brown (5YR 3/3) compacted fine grained clay with large basalt boulder at base.	
Transect BB 400 m 9 test holes Start E: 288318 N: 5804092	40 x 40 cm test holes excavated every 50 m.	Nil		1: 0-80mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 80+mm dark reddish brown (5YR 3/2) compacted fine grained clay.	2: 0-120mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 120+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay.	3: 0-150mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 150+mm dark reddish brown (5YR 3/2) friable fine grained clay.	4: 0-80mm mid reddish brown (5YR 4/4) firm fine grained silty clay. 80+mm mid reddish brown (5YR 4/4) compacted fine grained clay.	5: 0-100mm dark brown (5YR 3/2) friable fine grained silty clay with infrequent small basalt inclusions. 100+mm dark brown (5YR 3/2) firm fine grained sticky clay.

Transect No.	Transect Description	No. of Test Holes with Artefacts	VAHR Site Name	Hole No. and Description of Stratigraphy				
Transect BB Cont. End E: 288354 N: 5804490				6: 0-140mm dark brown (5YR 3/2) friable fine grained silty clay. 140+mm dark brown (5YR 3/2) compacted fine grained clay.	7: 0-170mm dark reddish brown (5YR 3/2) friable fine grained silty clay with moderate small basalt inclusions. 170+mm dark reddish brown (5YR 3/2) compacted fine grained clay with large basalt boulder at base.	8: 0-150mm dark brown (5YR 3/2) friable fine grained silty clay. 150+mm dark brown (5YR 3/2) compacted fine grained clay with large basalt boulder at base.	9: 0-140mm dark reddish brown (5YR 3/3) friable fine grained silty clay with frequent medium sized basalt inclusions. 140+mm dark reddish brown (5YR 3/3) compacted fine grained clay with large basalt boulder at base.	
Transect CC 200 m 9 test holes Start E: 288046 N: 5804531 End E: 288012 N: 5804334	40 x 40 cm test holes excavated every 25 m.	Nil		1: 0-80mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 80+mm dark reddish brown (5YR 3/2) compacted fine grained clay.	2: 0-120mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 120+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay.	3: 0-80mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 80-90mm dark reddish brown (5YR 3/2) friable fine grained clay.	4: 0-150mm dark reddish brown (5YR 3/2) firm fine grained silty clay. 150+mm dark reddish brown (5YR 3/2) compacted fine grained clay.	5: 0-60mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 60-100+mm dark reddish brown (5YR 3/2) firm fine grained sticky clay.
				6: 0-50mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 50+mm dark reddish brown (5YR 3/2) compacted fine grained clay.	7: 0-140mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 140+mm dark reddish brown (5YR 3/2) compacted fine grained clay.	8: 0-80mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 80-90mm dark reddish brown (5YR 3/2) compacted fine grained clay.	9: 0-80mm dark reddish brown (5YR2.5/2) friable fine grained silty clay. 140+mm dark reddish brown (5YR2.5/2) compacted fine grained clay.	

Transect No.	Transect Description	No. of Test Holes with Artefacts	VAHR Site Name	Hole No. and Description of Stratigraphy				
Transect DD 400 m 9 test holes Start E: 287349 N: 5804575 End E: 287312 N: 5804176	40 x 40 cm test holes excavated every 50 m.	Nil		1: 0-190mm dark reddish brown (5YR 3/2) firm fine grained silty clay. 190+mm dark reddish brown (5YR 3/2) compacted fine grained clay.	2: 0-150mm dark reddish brown (5YR 3/2) friable fine grained silty clay with infrequent small sized basalt inclusions. 150+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay with large basalt boulder at base preventing further excavation.	3: 0-90mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 90+mm dark reddish brown (5YR 3/2) friable fine grained clay.	4: 0-70mm dark reddish brown (5YR 3/2) firm fine grained silty clay. 70-80mm dark reddish brown (5YR 3/2) compacted fine grained clay.	5: 0-80mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 80-90mm dark reddish brown (5YR 3/2) firm fine grained sticky clay.
				6: 0-60mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 60-70mm dark reddish brown (5YR 3/2) compacted fine grained clay.	7: 0-80mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 80-90mm dark reddish brown (5YR 3/2) compacted fine grained clay.	8: 0-100mm dark reddish brown (5YR 3/2) friable fine grained silty clay. 100-110mm dark reddish brown (5YR 3/2) compacted fine grained clay.	9: 0-150mm dark reddish brown (5YR2.5/2) friable fine grained silty clay. 150+mm dark reddish brown (5YR2.5/2) compacted fine grained clay.	

Table 9: *Radial Test Holes Excavated within the Activity Area (Map 9, Page 108)*

Radial Location	No. of STHs with Artefacts	Hole No. and Description of Stratigraphy		
Argoona Road AS 1 **(7822-2969) [VAHR])** (Around surface artefacts) N1: E 286698 N 5803893 E1: E 286706 N 5803888 S1: E 286703 N 5803884 Note: Extent testing also included STP02	Nil	North 1: 0-90mm dark greyish brown (10YR 3/2) friable fine grained silty clay. 90+mm dark greyish brown (10YR 3/2) firm fine grained sticky clay.	East 1: 0-110mm dark brown (7.5YR 3/2) friable fine grained silty clay with frequent small basalt inclusions. 110+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay with large basalt floater interrupting base.	South 1: 0-50mm dark brown (7.5YR 3/2) friable fine grained silty clay, containing frequent small sized basalt inclusions. 50+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay with frequent large basalt inclusions and large basalt boulder at base.
Argoona Road IA 1 **(7822-2969) [VAHR])** (Around STP04) E1: E 288395 N 5803907 W1: E 288386 N 5803903 S1: E 288392 N 5803900 Note: Extent testing also included STH AA-6	Nil	East 1: 0-120mm dark brown (7.5YR 3/2) friable fine grained silty clay. 120+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay with large basalt boulder interrupting base.	West 1: 0-70mm dark brown (7.5YR 3/2) friable fine grained silty clay with grass roots. 70+mm dark brown (7.5YR 3/2) compacted fine grained sticky clay.	South 1: 0-80mm dark reddish brown (5YR 3/2) friable fine grained silty clay, containing moderate small sized basalt inclusions. 80+mm dark reddish brown (5YR 3/2) compacted fine grained sticky clay.

6 DETAILS OF ABORIGINAL CULTURAL HERITAGE IN THE ACTIVITY AREA

6.1 Aboriginal Cultural Heritage in the Activity Area

Two Aboriginal archaeological sites are present within the activity area (Map 10, Page 109):

- Argoona Road AS 1 (VAHR 7822-2969); and
- Argoone Road IA 1 (VAHR 7822-2973).

The site gazetteer in Appendix 5, Page 142 presents a summary of the sites, and the artefact analysis is presented in Appendix 6, Page 143.

6.1.1 Assessment of the Aboriginal cultural heritage

6.1.1.1 Site formation processes

Site formation processes were assessed through a study of the landform, soil types, stratigraphy and taphonomic processes.

As discussed in Section 5.3.4.1, Page 37, the soil stratigraphy of the entire activity is remarkably consistent with a texture contrast (duplex) soil profile consisting of red to dark brown silty clay top soil overlying a red to dark brown sticky clay subsoil. The soil profile also contains commonly occurring inclusions of basaltic gravel, cobbles and boulders throughout the profile. The larger rocks tend to occur at or below the interphase between the two soil horizons. However, the presence of at least four very large piles of large basaltic rocks at various points around the boundary of the activity area suggests that these large boulders also occurred within the topsoil in relatively recent history but had been removed from the soil to allow unimpeded ploughing. On that premise it appears likely that the A horizon (topsoil) was once deeper than at present, but has largely disappeared as a result of erosion (sheet erosion).

The presence of two silcrete artefacts within the drainage line, upon the surface, but without any additional subsurface artefacts present (as shown by the subsurface testing program) indicates that these artefacts are probably not in situ but have been carried into the activity area from further upstream by periodic heavy rainfall and waterflow within the drainage line. The isolated silcrete artefact in shallow topsoils on the low rise near the eastern side is considered likely to be the result of an isolated occupation event, possibly when heavy rainfall provided ephemeral water within the drainage line.

6.1.1.2 Artefact analysis

The artefact analysis focused on determining patterns of raw material use, technology and typology. Attributes recorded for each artefact include:

- Raw material, type and colour;
- Tool type (where applicable);
- Flake scars (where applicable);
- Fracture type;
- Platform quantity, type, width and thickness (where applicable);
- Termination type (where applicable);
- Retouch type (where applicable);
- Retouch location (where applicable); and
- Dimensions and mass.

6.1.1.3 Radiometric dating

Radiometric dating was not undertaken, due to the lack of datable materials.

6.1.2 RAP information regarding the Aboriginal cultural heritage

The Wathaurung Aboriginal Corporation did not have any oral histories relating to the activity area for inclusion in this report.

6.1.3 Results of the Assessment of the Aboriginal cultural heritage

Two Aboriginal archaeological sites are present within the activity area (Map 10, Page 109):

- Argoona Road AS 1 (VAHR 7822-2969); and
- Argoona Road IA 1 (VAHR 7822-2973).

The desktop assessment determined that previously recorded Aboriginal sites were located near the activity area. The most likely types of sites to occur within the activity area are artefact scatters and isolated artefacts, followed by earth features and scarred trees. Murphy and Owen (2011: 12-13) provided a site prediction model for the basalt plains bioregion, based on the soil profile of the region. They state that the shallow surface soils are the most likely to contain cultural deposits as they are generally formed during the Holocene or Late Pleistocene. It was therefore considered likely that Aboriginal cultural heritage would be located within the activity area, and this proved to be the case.

6.2 Argoona Road AS 1 (VAHR 7822-2969)

6.2.1 Location of Argoona Road AS 1 (VAHR 7822-2969)

Primary Grid Coordinate: GDA 94, Zone 55, E 286699.530, N 5803887.270.

- Lot 3 TP846432, Parish of Mambourin, County of Grant.

Argoona Road AS 1 (VAHR 7822-2969) is located within the base of an ephemeral drainage line approximately 390 m east of the western boundary of the activity area.

6.2.2 Extent of Argoona Road AS 1 (VAHR 7822-2969)

Argoona Road AS 1 (VAHR 7822-2969) comprises two stone artefacts made from silcrete and located on the surface within the drainage line.

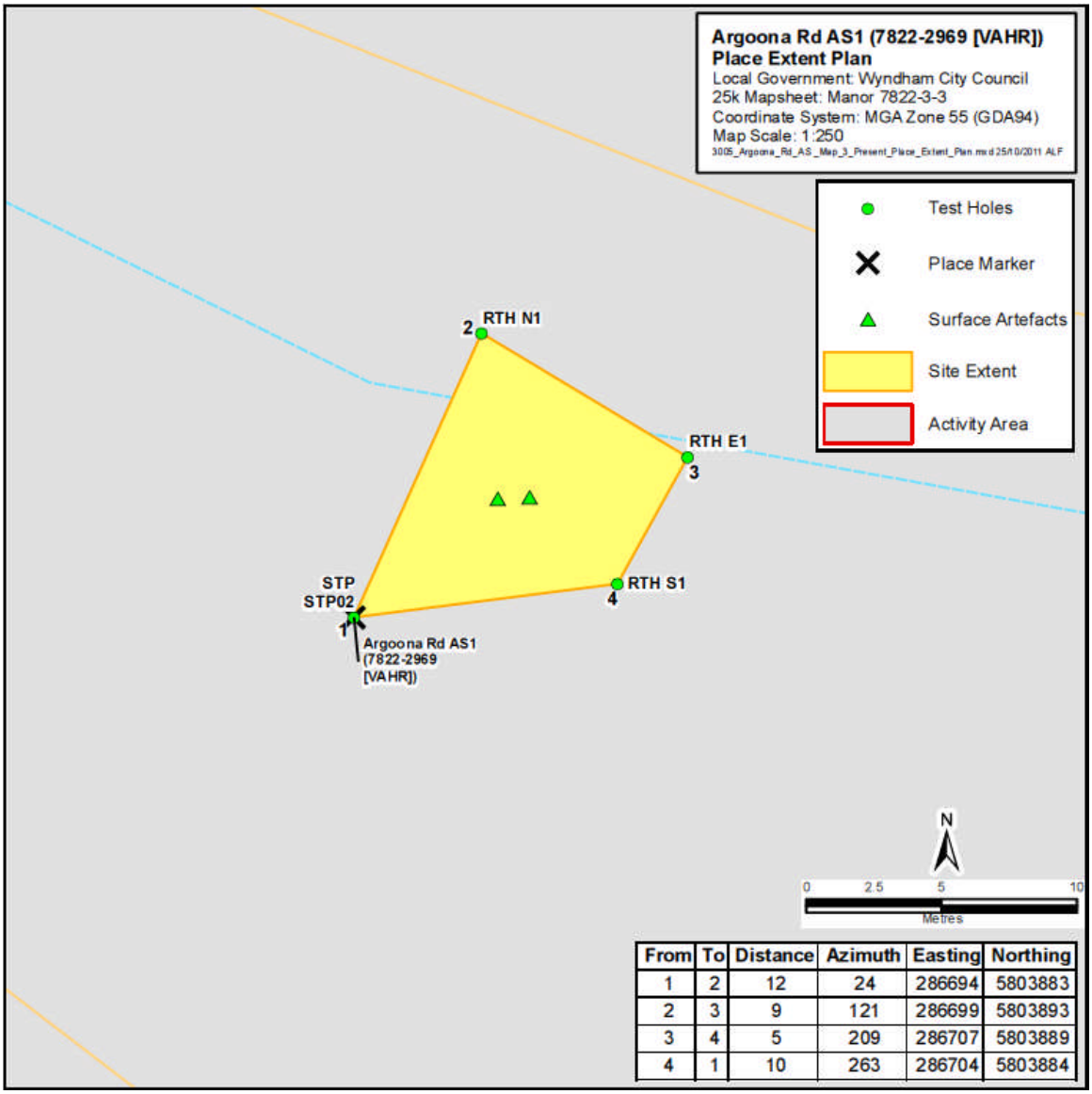
Site extent testing was conducted at locations 5 m distant from the recorded location. Since it could not be determined conclusively that additional Aboriginal cultural heritage did not occur between the recorded location of the surface artefacts and the RTHs, the site extent is considered to include the land bounded by the radials. In addition STP02 was also used to define the extent of the site in lieu of a radial (Map 10, Page 109; Plan 1, Page 79 and Plates 22 and 23).

6.2.3 Nature of Argoona Road AS 1 (VAHR 7822-2969)

Argoona Rd AS 1 (VAHR 7822-2969) comprises two silcrete stone artefacts, both located on the surface within the drainage line. Both artefacts were flaked from coarse beige silcrete. Artefact 1 is a whole flake, while artefact 2 is believed to be the base of a unidirectional core, which has been flaked off. The presence of two silcrete artefacts within the drainage line, upon the surface, but without any additional subsurface artefacts present (as shown by the subsurface testing program) indicates that these artefacts are probably not in situ but have been carried into the activity area from further upstream by periodic heavy rainfall and waterflow within the drainage line.

6.2.4 Significance of Argoona Road AS 1 (VAHR 7822-2969)

Argoona Rd AS 1 (VAHR 7822-2969) comprises two silcrete stone artefacts, which were identified on two separate days following heavy rain that are considered likely to have washed the artefacts down the drainage channel from an unknown location. Culturally, all Aboriginal sites are significant to the Wathaurung Aboriginal Corporation. The site consists of a very low density artefact scatter within a disturbed context. The site entails no scientific significance, and both the material and artefact type are common occurrences throughout Victoria. The site is therefore considered to be of low significance.



From	To	Distance	Azimuth	Easting	Northing
1	2	12	24	286694	5803883
2	3	9	121	286699	5803893
3	4	5	209	286707	5803889
4	1	10	263	286704	5803884

Plan 1: Extent of Argoona Road AS 1 (VAHR 7822-2969)

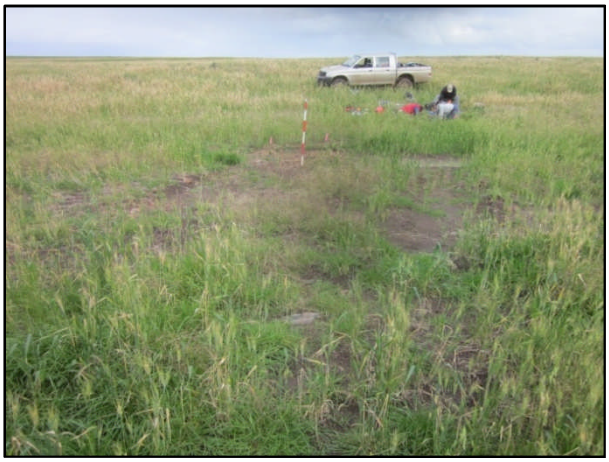


Plate 22: View of Argoona Road AS 1 (VAHR 7822-2969) in a shallow drainage line, facing south.

Plate 23: Artefact from Argoona Road AS 1 (VAHR 7822-2969)

6.3 Argoona Road IA 1 (VAHR 7822-2973)

6.3.1 Location of Argoona Road IA1 (VAHR 7822-2973)

Primary Grid Coordinate: GDA 94, Zone 55, E 288391.199, N 5803906.079.

- Lot 3 TP846432, Parish of Mambourin, County of Grant.

Argoona Road IA 1 (VAHR 7822-2973) was located within STP04, at a depth of approximately 60 mm. STP04 was excavated on a rise overlooking the central drainage line.

6.3.2 Extent of Argoona Road IA 1 (VAHR 7822-2973)

Argoona Road IA 1 (VAHR 7822-2973) comprises a single silcrete artefact within a subsurface context. The stone artefact was located within STP04 on a rise overlooking the central drainage line.

As an isolated artefact, its extent is limited to single coordinate point. However as site extent testing was conducted at locations 5 m distant from the recorded location and it could not be determined conclusively that additional Aboriginal cultural heritage did not occur between the STP and the radials, the site extent is considered to include the land bounded by the radials (Map 10, Page 109; Plan 2, Page 82 and Plate 24).

6.3.3 Nature of Argoona Road IA 1 (VAHR 7822-2973)

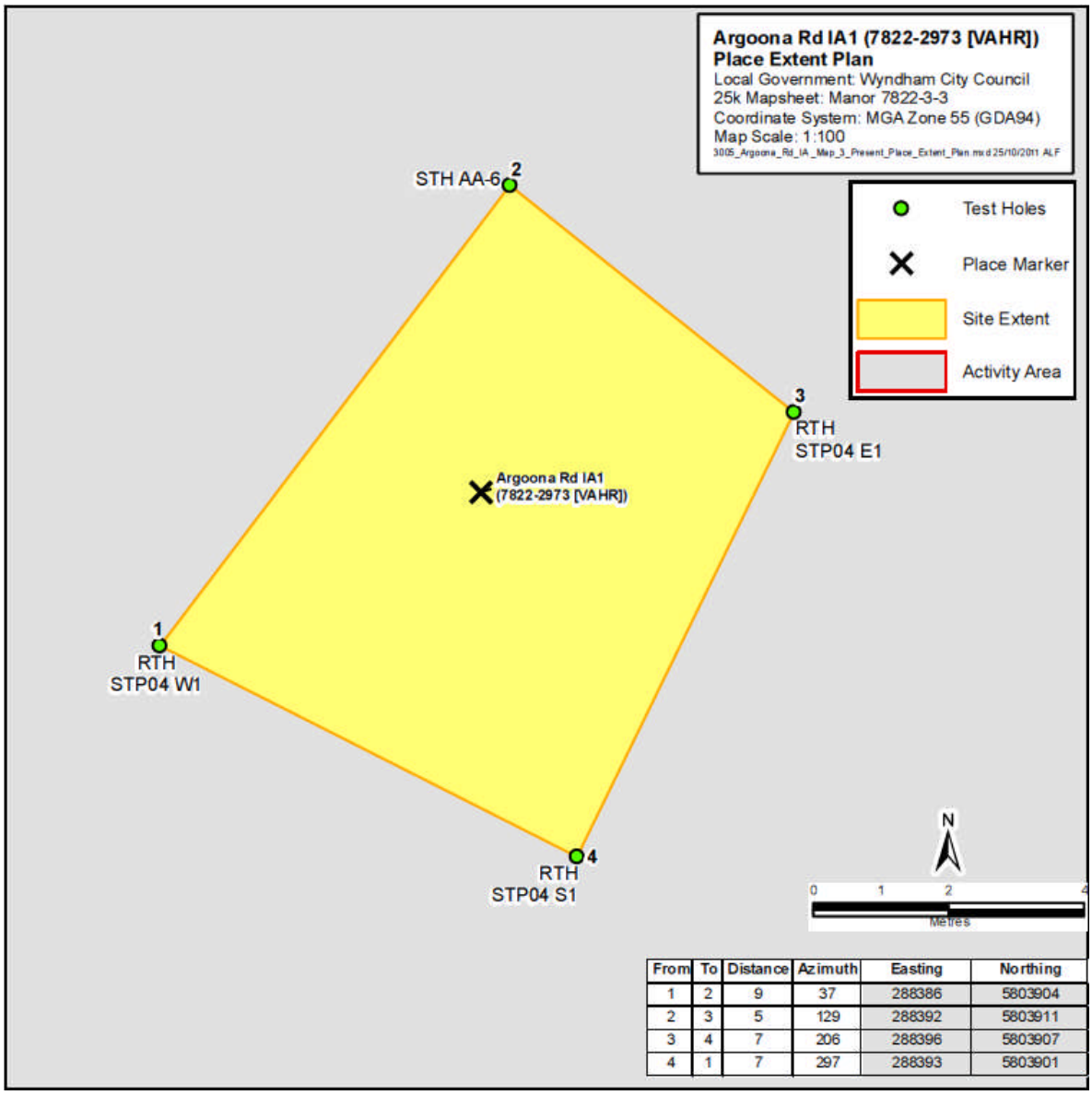
Argoona Road IA 1 (VAHR 7822-2973) comprises a single silcrete artefact within a subsurface context. Argoona Road IA 1 (VAHR 7822-2973) was located within STP04, at a depth of approximately 60 mm in the silty clay topsoil. The isolated artefact consisted of a fine beige silcrete whole flake. The site is considered likely to be the result of an isolated occupation event, possibly when heavy rainfall provided ephemeral water within the drainage line.

STP04 was excavated on a rise overlooking the central drainage line. In this STP the topsoils overlay a band of very large basaltic cobbles/boulders, which occurs in the rise overlooking the central drainage line. The larger rocks tend to occur at or below the interphase between the two soil horizons.

The presence of at least four very large piles of large basaltic rocks at various points around the boundary of the activity area suggests that these large boulders also occurred within the topsoil in relatively recent history but had been removed from the soil to allow unimpeded ploughing. On that premise it appears likely that the A horizon (topsoil) was once deeper than at present, but has largely disappeared as a result of erosion (sheet erosion).

6.3.4 Significance of Argoona Road IA 1 (VAHR 7822-2973)

Argoona Rd IA 1 (VAHR 7822-2973) comprises a single silcrete artefact within a subsurface context. Culturally, all Aboriginal sites are significant to the Wathaurung Aboriginal Corporation. The site consists of a single artefact, in what appears to be an in situ context. The site entails no scientific significance, and both the material and artefact type are common occurrences throughout Victoria. The site is therefore considered to be of low significance.



From	To	Distance	Azimuth	Easting	Northing
1	2	9	37	288386	5803904
2	3	5	129	288392	5803911
3	4	7	206	288396	5803907
4	1	7	297	288393	5803901

Plan 2: Extent of Argoona Road IA 1 (VAHR 7822-2973)

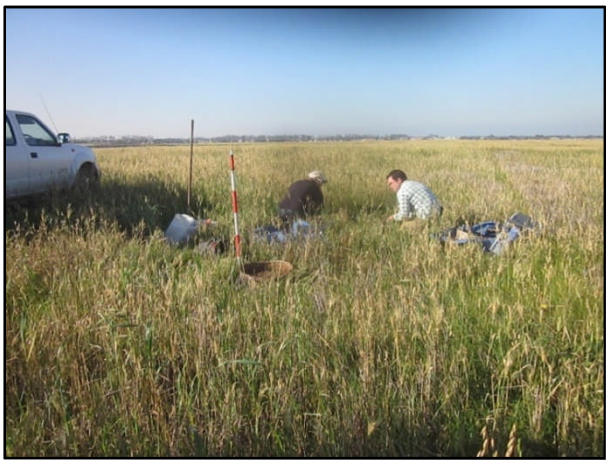


Plate 24: View of Argoona Road IA 1 (VAHR 7822-2973) facing east

7 CONSIDERATION OF SECTION 61 MATTERS – IMPACT ASSESSMENT

7.1 Section 61 Matters in relation to Argoona Road AS 1 (VAHR 7822-2969)

7.1.1 Avoidance of harm

Harm cannot be avoided to site Argoona Road AS 1 (VAHR 7822-2969). Engineering earth works causing significant ground disturbance are planned for the drainage channel.

7.1.2 Minimisation of harm

Harm cannot be avoided to site Argoona Road AS 1 (VAHR 7822-2969). Engineering earth works causing significant ground disturbance are planned for the drainage channel. As the site is considered to be of low significance, minimisation of harm will not be undertaken.

7.1.3 Management measures

Argoona Road AS 1 (VAHR 7822-2969) will be salvaged by the WAC, and reburied at the location of Argoona Road IA 1 (VAHR 7822-2969). A section of land within the vicinity of Argoona Road IA 1 (VAHR 7822-2969) will be retained (Map 11, Page 110).

7.2 Section 61 Matters in relation to Argoona Road IA 1 (VAHR 7822-2973)

7.2.1 Avoidance of harm

Harm to site Argoona Road IA 1 (VAHR 7822-2973) will be avoided. A section of land within the vicinity of Argoona Road IA 1 (VAHR 7822-2973) will be retained (Map 11, Page 110).

7.2.2 Minimisation of harm

Harm to site Argoona Road IA 1 (VAHR 7822-2973) will be avoided, therefore minimisation measures are not required. A section of land within the vicinity of Argoona Road IA 1 (VAHR 7822-2973) will be retained (Map 11, Page 110).

7.2.3 Management measures

Harm to site Argoona Road IA 1 (VAHR 7822-2973) will not occur. A section of land within the vicinity of Argoona Road IA 1 (VAHR 7822-2973) will be retained (Map 11, Page 110).

7.3 General Requirements

7.3.1 Requirement for contingency plans

In accordance with Clause 13(1) Schedule 2 of the *Aboriginal Heritage Regulations 2007*, the CHMP must contain contingency plans for:

- The matters referred to in Section 61 of the *Aboriginal Heritage Act 2006*;
- The resolution of any disputes between the Sponsor and relevant Registered Aboriginal Party in relation to the implementation of the CHMP or the conduct of the activity;
- The discovery of Aboriginal cultural heritage during the activity;
- The notification of the discovery of Aboriginal cultural heritage during the carrying out of the activity;
- The management of Aboriginal cultural heritage found during the activity; and
- Reviewing compliance with the CHMP and mechanisms for remedying non-compliance.

7.3.2 Requirement for arrangements for the custody and management of Aboriginal cultural heritage (artefacts)

As Aboriginal artefacts were recovered from two Aboriginal archaeological sites within the activity area, there is a requirement for arrangements for the custody and management of Aboriginal cultural heritage.

PART 2 – CULTURAL HERITAGE MANAGEMENT RECOMMENDATIONS

Note: These recommendations become compliance requirements once this Cultural Heritage Management Plan is approved.

8 SPECIFIC CULTURAL HERITAGE MANAGEMENT REQUIREMENTS

8.1 Argoona Road AS 1 (VAHR 7822-2969)

Harm to Argoona Road AS 1 (VAHR 7822-2969) may be caused by the activity following a program of salvage (Section 8.1.1).

8.1.1 Recommendations for the salvage of Argoona Road AS 1 (VAHR 7822-2969)

The activity cannot avoid impacting upon the Aboriginal archaeological site Argoona Road AS 1 (VAHR 7822-2969), therefore the following salvage program is recommended:

- A program of surface salvage will be implemented to salvage the two surface artefacts at this site (Map 11, Page 110).
- Subsurface testing at the site did not identify a subsurface component to this site, therefore a salvage excavation is not considered to be warranted.

After completion of the salvage works the Cultural Heritage Advisor shall conduct analysis of the salvaged Aboriginal cultural heritage material and provide a report of the results of the salvage and analysis which shall be lodged at AAV.

8.1.2 Recommendations for the removal, curation, custody and management of Aboriginal cultural heritage (artefacts) from Argoona Road AS 1 (VAHR 7822-2969)

The custody of the Aboriginal cultural heritage from site Argoona Road AS 1 (VAHR 7822-2969) must comply with the *Aboriginal Heritage Act 2006* and be assigned to the RAP responsible for the activity area, namely the Wathaurung Aboriginal Corporation.

It should be noted that any Cultural Heritage Advisor engaged to investigate any Aboriginal cultural heritage should be able to retain initial custody of Aboriginal cultural heritage for a reasonable period of time for the purposes of analysis. In accordance with the *Aboriginal Heritage Act 2006,* during the period that the Cultural Heritage Advisor has custody of the Aboriginal cultural heritage, the Cultural Heritage Advisor must:

- Label and package collected artefactual material with reference to provenance; and

- Arrange storage of the material in a secure location together with copies of the catalogue, assessment documentation, management plan and results of the analysis.

Following the repatriation of Aboriginal cultural heritage held by the Cultural Heritage Advisor to the RAP, should the RAP wish to rebury the Aboriginal cultural heritage, the following must take place:

- The site record card must be updated, including an object collection component form;
- The reburial location must be known, relocatable and in an area which is protected from future development or disturbance;
- Where possible, the Aboriginal cultural heritage should be reburied within the boundaries of the Aboriginal archaeological site from which the Aboriginal cultural heritage was originally excavated.
- In this instance, it has been agreed between the Sponsor and the RAP that the Aboriginal cultural heritage from Argoona Road AS 1 (VAHR 7822-2969) shall be reburied in at the same location as Argoona Road IA 1 (VAHR 7822-2973) (Map 11, Page 110);
- Artefacts must be reburied in a durable container which may or may not be open bottomed to allow contact between the artefacts and the soil whilst allowing the reburied material to be readily identified as such; and
- An additional enclosed durable container must be buried next to the artefacts which contains copies of all documentation relating to the artefacts, including a copy of the relevant site card, artefact database, this CHMP and any salvage report.

8.2 Argoona Road IA 1 (VAHR 7822-2973)

Argoona Road IA 1 (VAHR 7822-2973) is comprised of a single silcrete artefact within a subsurface context. The stone artefact was located within STP04 on a rise overlooking the central drainage line.

8.2.1 Recommendations to avoid harm to Argoona Road IA 1 (VAHR 7822-2973)

Due to the layout of the development shown in the master plan (Map 3, Page 101) it is not possible to avoid harm to Argoona Road IA 1 (VAHR 7822-2973). However within the master plan:

- The site will remain in situ within land designated as public open space.

8.2.2 Recommendations to minimise harm to Argoona Road IA 1 (VAHR 7822-2973)

The following recommendations are made to avoid harm to Argoona Road IA 1 (VAHR 7822-2973):

- The site will remain in situ within land designated as public open space (Map 11, Page 110).
- The site will be temporarily fenced off around its boundary, with a 2 m buffer, for the duration of the activity. Fencing will consist of cyclone mesh installed in above ground concrete (or other suitable material) pads supporting steel posts and cyclone mesh wire.
- No ground disturbance works will be conducted within the site boundary.
- Signage will be erected on all sides of the site boundary restricting access during the activity.

8.2.3 Recommendations for the removal, curation, custody and management of Aboriginal cultural heritage (artefacts) from Argoona Road IA 1 (VAHR 7822-2973)

The custody of the Aboriginal cultural heritage from site Argoona Road IA 1 (VAHR 7822-2973), including all material which has already been collected must comply with the *Aboriginal Heritage Act 2006* and be assigned to the RAP responsible for the activity area, namely the Wathaurung Aboriginal Corporation. Ecology and Heritage Partners Pty Ltd currently has custody of material excavated during the course of preparing this CHMP, and the Cultural Heritage Advisor selected by the Sponsor to undertake the salvage works will have initial custody of all material excavated or collected as part of salvage works.

It should be noted that any Cultural Heritage Advisor engaged to investigate any Aboriginal cultural heritage should be able to retain initial custody of Aboriginal cultural heritage for a reasonable period of time for the purposes of analysis. In accordance with the *Aboriginal Heritage Act 2006,* during the period that the Cultural Heritage Advisor has custody of the Aboriginal cultural heritage, the Cultural Heritage Advisor must:

- Label and package collected artefactual material with reference to provenance; and
- Arrange storage of the material in a secure location together with copies of the catalogue, assessment documentation, management plan and results of the analysis.

Following the repatriation of Aboriginal cultural heritage held by the Cultural Heritage Advisor to the RAP, should the RAP wish to rebury the Aboriginal cultural heritage, the following must take place:

- The site record card must be updated, including an object collection component form;

- The reburial location must be known, relocatable and in an area which is protected from future development or disturbance;

- Where possible, the Aboriginal cultural heritage should be reburied within the boundaries of the Aboriginal archaeological site from which the Aboriginal cultural heritage was originally excavated.

- In this instance, it has been agreed between the Sponsor and the RAP that the Aboriginal cultural heritage from Argoona Road IA 1 (VAHR 7822-2973) shall be reburied in situ along with the artefacts salvaged from Argoona Road AS 1 (VAHR 7822-2969)(Section 8.1.1, Page 85).

- Artefacts must be reburied in a durable container which may or may not be open bottomed to allow contact between the artefacts and the soil whilst allowing the reburied material to be readily identified as such; and

- An additional enclosed durable container must be buried next to the artefacts which contains copies of all documentation relating to the artefacts, including a copy of the relevant site card, artefact database, this CHMP and any salvage report.

8.3 Other Recommendations

8.3.1 Recommendations for cultural awareness training

It is recommended that a Cultural Heritage Induction Booklet containing Part 2 of this CHMP and all relevant maps is produced by a Cultural Heritage Advisor and presented to all employees and contractors working within the activity area prior to the commencement of the activity. Costs of any such induction are to be borne by the Sponsor.

8.3.2 Provisions for Aboriginal people to visit cultural heritage places within the activity area

Provision must be made for representatives of the Wathaurung Aboriginal Corporation (the RAP) to visit Aboriginal cultural heritage places within the activity area, both during and after the activity. If Aboriginal people wish to visit the activity area during the construction activities they must:

- Give 24 hours notice to the Sponsor and/or the contractor; and

- Comply with normal site safety requirements of the Sponsor, owner and/or occupier.

9 CONTINGENCY PLANS

9.1 Contingency regarding Section 61 Matters

Under the *Aboriginal Heritage Regulations 2007* (Schedule 2 [13]), a CHMP must contain contingency plans for the matters referred to in Section 61 of the *Aboriginal Heritage Act 2006*. This CHMP contains contingency plans which are specific to the activity and activity area described within this CHMP. If changes to the activity or the activity area which require statutory authorisation occur following the approval of this CHMP, it is likely that the Sponsor will have to prepare and submit a new CHMP which contains new recommendations and contingency plans appropriate for the changed activity, activity area and results of the archaeological investigations.

9.2 Contingency regarding Dispute Resolution

The following strategy should be employed to resolve any disputes arising during the course of the proposed activity:

- Only issues directly related to the Aboriginal cultural heritage will be handled through this dispute resolution process.
- All disputes will be jointly investigated.
- Where a breach of the CHMP recommendations or contingency plans has been found to have occurred, the RAP and the Sponsor will agree to the best method of correction or remediation.
- Any correction or remedial activities required will be overseen by a representative of the RAP and will take place in accordance with the instructions given by the RAP.
- The Sponsor and its site contractors will not undertake any such operations without receiving the consent of the RAP.
- The RAP will use their best endeavours to minimise delays to work schedules while not compromising cultural places or values.
- Authorised Project Delegates (APD) from each party (the RAP and the Sponsor) will attempt to negotiate a resolution to any dispute related to the cultural heritage management of the activity area.
- Such resolution will be attempted within 48 hours of a notice being received that a dispute between the parties is deemed to exist.
- If the APDs cannot reach an agreement, then other authorised representatives of both parties will meet to negotiate a resolution to an agreed schedule.

- These arrangements do not preclude any legal recourse open to the parties being taken but the parties agree the above avenues will be exhausted before such recourse is made.

- For the purposes of dispute resolution for this activity, the following people will act as APDs for each party:

    - *The RAP*: Ms Bonnie Fagan, Wathaurung Aboriginal Corporation, PO Box 734, Ballarat Vic 3353, tel. (03) 4308 0420, mob. 0407 175 463.

    - *The Sponsor*: Mr Alfred Sung, Phileo Australia Limited, Level 14, 303 Collins Street, Melbourne Vic 3000, telephone (03) 9663 8018.

- Any change in personnel appointed as the APDs in one party will be promptly notified to all other parties.

9.3 Contingency regarding the Discovery of Aboriginal Cultural Heritage

9.3.1 Unexpected discovery of isolated or dispersed scatters of Aboriginal cultural heritage

It is unlikely that previously unknown Aboriginal cultural heritage will be discovered within the activity area during the activity. This Aboriginal cultural heritage is likely to be isolated stone artefacts. However, if a person discovers or suspects that they have discovered Aboriginal cultural heritage during the activity, and the actual or suspected cultural heritage is an isolated or dispersed scatter of less than five stone artefacts, the following contingency plan must be followed:

- The person in charge or site manager of the activity within the activity area must be notified immediately;

- The person in charge or site manager must immediately suspend all activities and works at the location of the discovery and within 5 m of the extent of the Aboriginal cultural heritage;

- Within a period of two business days, the person in charge or site manager must engage an appropriately qualified and experienced Cultural Heritage Advisor and inform them of the discovery;

- The Cultural Heritage Advisor must be engaged to assess the discovered Aboriginal cultural heritage in consultation with the RAP, record the cultural heritage material and update or complete new site cards for the discovered Aboriginal cultural heritage;

- The Cultural Heritage Advisor must be engaged to catalogue and analyse all discovered cultural heritage;

- The Cultural Heritage Advisor must notify AAV of the discovery by lodging either a new or updated VAHR site record card within a timely manner.
- Work in the excluded area may recommence provided:
    - The discovered Aboriginal cultural heritage has been identified, inspected and recorded by a Cultural Heritage Advisor;
    - The Cultural Heritage Advisor has identified the discovered cultural heritage as being an isolated or dispersed scatter of less than five stone artefacts; and
    - New or updated VAHR site record cards have been completed and forwarded to AAV.
- Failure of parties to reach an agreed course of action in this manner will be classed as a dispute under this agreement and the contingency plan in this CHMP regarding dispute resolution must be followed.

9.3.2 Unexpected discovery of other Aboriginal cultural heritage

It is unlikely that previously unknown Aboriginal cultural heritage will be discovered within the activity area during the activity. However, if a person discovers or suspects that they have discovered Aboriginal cultural heritage during the activity, and the actual or suspected cultural heritage is cultural heritage other than an isolated or dispersed scatter of less than five stone artefacts (including but not limited to a stratified deposit, more than five stone artefacts spread across the surface or located sub surface, a shell midden, or a mound) the following contingency plan must be followed:

- The person in charge or site manager of the activity within the activity area must be notified immediately;
- The person in charge or site manager must immediately suspend all activities and works at the location of the discovery and within 20 m of the extent of the Aboriginal cultural heritage;
- Within a period of two business days, the person in charge or site manager must engage an appropriately qualified and experienced Cultural Heritage Advisor and inform them of the discovery;
- The Cultural Heritage Advisor must be engaged to assess the discovered Aboriginal cultural heritage in consultation with the RAP, record the cultural heritage material and update or complete new site cards for the discovered Aboriginal cultural heritage;
- The Cultural Heritage Advisor must be engaged to catalogue and analyse all discovered cultural heritage;

- The Cultural Heritage Advisor must notify AAV of the discovery by lodging either a new or updated VAHR site record card within a timely manner;

- The Sponsor must make all reasonable attempts to avoid or minimise harm to the newly discovered Aboriginal cultural heritage;

- Where it is not possible to avoid harming the Aboriginal cultural heritage, mitigation in the form of salvage must be undertaken;

- Where salvage of discovered Aboriginal cultural heritage is required, decisions about how to proceed with salvage excavation must be made on a case-by-case basis by the Cultural Heritage Advisor, in consultation with AAV. The salvage excavation must be undertaken to the satisfaction of AAV. The methodology of any salvage excavation must be appropriate to the site type(s) discovered and the nature, extent and significance of the site(s). All salvage must abide by Regulation 61 of the *Aboriginal Heritage Regulations 2007* and be undertaken in accordance with proper archaeological practice and the results of the excavations must be provided to AAV within 120 days of the salvage excavation, and a salvage excavation report completed to the relevant standards identified by AAV.

- Work in the excluded area may recommence provided:

    - The discovered Aboriginal cultural heritage has been identified, inspected and recorded by a Cultural Heritage Advisor;

    - The Sponsor has taken appropriate measures to avoid harming the Aboriginal cultural heritage, including appropriate protection measures as agreed upon by the Sponsor and the RAP;

    - If the Sponsor cannot avoid harming the Aboriginal cultural heritage, the Sponsor has taken appropriate measures to minimise harm to Aboriginal cultural heritage, including appropriate protection measures as agreed upon by the Sponsor and the RAP;

    - The Cultural Heritage Advisor has undertaken the appropriate salvage excavations or collections; and

    - New or updated Victorian Aboriginal Heritage Register site record cards have been completed and forwarded to AAV.

- Failure of parties to reach an agreed course of action in this manner will be classed as a dispute under this agreement and the contingency plan in this CHMP regarding dispute resolution must be followed.

9.3.3 Unexpected discovery of human remains

Under Section 4 of the *Coroner's Act 2008*, if the body of a deceased person is found in Victoria (s.4 (1)(a)) and the identity of the deceased is unknown (s. 4(2)(g)) then the death is reportable and under Section 12 of the *Coroner's Act 2008* there is an obligation to report death. If any suspected human remains are found during any activity, works must cease. The media must not be contacted under any circumstances. The State Coroner's Office on 1300 309 519 and Victoria Police on 03 9684 4387 should be notified immediately (s. 12 (1)). If there are reasonable grounds to believe that the remains are Aboriginal, the Department of Sustainability and Environment's (DSE) Emergency Coordination Centre must be contacted immediately on 1300 888 544. This advice has been developed further and is described in the following 5 step contingency plan. Any such discovery within the activity area must follow these steps.

1. Discovery:

- If suspected human remains are discovered, all activity in the vicinity must ***stop***; and
- The remains must be left in place, and protected from harm or damage.

2. Notification:

- Once suspected human skeletal remains have been found, the State Coroner's Office on 1300 309 519 and Victoria Police on 03 9684 4387 must be notified immediately;
- If there is reasonable grounds to believe that the remains could be Aboriginal, the DSE Emergency Co-ordination Centre must be immediately notified on 1300 888 544;
- The media must not be contacted under any circumstances;
- All details of the location and nature of the human remains must be provided to the relevant authorities; and
- If it is confirmed by these authorities that the discovered remains are Aboriginal skeletal remains, the person responsible for the activity must report the existence of the human remains to the Secretary, DPCD, in accordance with s.17 of the *Aboriginal Heritage Act 2006*.
- The person responsible for the activity must ensure that the media is not notified of the discovery of any Aboriginal skeletal remains.

3. Impact Mitigation or Salvage:

- The Secretary, after taking reasonable steps to consult with any Aboriginal person or body with an interest in the Aboriginal human remains, will determine the appropriate course of action as required by s.18(2)(b) of the *Aboriginal Heritage Act 2006*;

- An appropriate impact mitigation or salvage strategy as determined by the Secretary must be implemented by the Sponsor.

4. Curation and further analysis:

- The treatment of salvaged Aboriginal human remains must be in accordance with the direction of the Secretary.

5. Reburial:

- Any reburial site(s) must be fully documented by an experienced and qualified archaeologist, clearly marked and all details provided to AAV; and

- Appropriate management measures must be implemented to ensure that the remains are not disturbed in the future.

9.4 Reporting the Discovery of Aboriginal Cultural Heritage during the Activity

Where Aboriginal cultural heritage is identified during an activity, the Sponsor is responsible for notifying and engaging an appropriately qualified and experienced Cultural Heritage Advisor of the discovery (Sections 9.3.1 and 9.3.2). The Cultural Heritage Advisor is responsible for investigating, reporting, and facilitating an appropriate outcome in accordance with the above contingency plans. The Cultural Heritage Advisor must notify AAV of the discovery by lodging either a new or updated VAHR site record card within a timely manner.

9.5 Contingency for the Removal, Curation, Custody and Management of Aboriginal Cultural Heritage (Artefacts) Discovered during the Activity

Should any Aboriginal cultural heritage be discovered during the activity, the custody of the Aboriginal cultural heritage must comply with the *Aboriginal Heritage Act 2006* and be assigned in the following order of priority, as appropriate:

- Any relevant RAP for the land from which the Aboriginal cultural heritage has been salvaged;

- Any relevant registered native title holder for the land from which the Aboriginal cultural heritage has been salvaged;

- Any relevant native title party (as defined in the *Aboriginal Heritage Act 2006*) for the land from which the Aboriginal cultural heritage has been salvaged;

- Any relevant Aboriginal person or persons with traditional or familial links with the land from which the Aboriginal cultural heritage has been salvaged;

- Any relevant Aboriginal body or organisation which has historical or contemporary interests in Aboriginal heritage relating to the land from which the Aboriginal cultural heritage has been salvaged;
- The owner of the land from which the Aboriginal cultural heritage has been salvaged; and
- The Museum of Victoria.

It should be noted that any Cultural Heritage Advisor engaged to investigate any Aboriginal cultural heritage should be able to retain initial custody of Aboriginal cultural heritage for a reasonable period of time for the purposes of analysis. In accordance with the *Aboriginal Heritage Act 2006*, during the period that the Cultural Heritage Advisor has custody of the Aboriginal cultural heritage, the Cultural Heritage Advisor must:

- Label and package collected artefactual material with reference to provenance; and
- Arrange storage of the material in a secure location together with copies of the catalogue, assessment documentation, management plan and results of the analysis.

Following the repatriation of Aboriginal cultural heritage held by the Cultural Heritage Advisor to any of the above people or groups (except Museum Victoria), should any of the above people or groups wish to rebury the Aboriginal cultural heritage, the following must take place:

- The site record card must be updated, including an object collection component form;
- The reburial location must be known, relocatable and in an area which is protected from future development or disturbance;
- Where possible, the Aboriginal cultural heritage should be reburied within the boundaries of the Aboriginal archaeological site from which the Aboriginal cultural heritage was originally collected or excavated;
- Artefacts must be reburied in a durable container which may or may not be open bottomed to allow contact between the artefacts and the soil whilst allowing the reburied material to be readily identified as such; and
- An additional enclosed durable container must be buried next to the artefacts, which contains copies of all documentation relating to the artefacts, including a copy of the relevant site card, artefact database and any other relevant documentation.

9.6 Compliance with the Cultural Heritage Management Plan

9.6.1 Reviewing compliance with the Cultural Heritage Management Plan

The *Aboriginal Heritage Act 2006* requires that the recommendations and contingency plans contained within an approved CHMP are complied with. Any action carried out contrary to the recommendations and contingency plans contained within an approved CHMP which harms Aboriginal cultural heritage is an offence.

If it is suspected that the recommendations or contingency plans of the approved CHMP have been contravened, under Section 80 of the *Aboriginal Heritage Act 2006*, the Minister for Aboriginal Affairs may order a Cultural Heritage Audit. Once a Cultural Heritage Audit has been ordered, the Sponsor will be issued with a Stop Order which requires the activity to immediately cease (s. 88). A Stop Order can also be issued in any instance where an activity is harming, is likely to harm, or may harm Aboriginal cultural heritage, regardless of whether the Minister has ordered a Cultural Heritage Audit (s. 87).

The following checklist has been developed to assist the Sponsor in reviewing compliance with the CHMP. If, at any point prior to or during the proposed activity, any of the questions below cannot be answered positively, it is possible that the CHMP is not being complied with. Should this occur, any and all parties are advised to seek the advice of a Cultural Heritage Advisor.

Prior to the commencement of the activity:

- Has the CHMP been approved?
- Have any and all parties been inducted or trained in regards to Part 2 of the approved CHMP?

If any changes have been made to the activity or activity area:

- Has the Sponsor obtained a new approved CHMP?
- Have all required statutory authorisations been obtained?

If Aboriginal cultural heritage is discovered during the activity:

- If the Aboriginal cultural heritage is an isolated or dispersed scatter of less than five stone artefacts have all works ceased within 5 m of the Aboriginal cultural heritage?
- If the Aboriginal cultural heritage is other than an isolated or dispersed scatter of less than five stone artefacts (including but not limited to a stratified deposit, more than five stone artefacts spread across the surface or located sub surface, a shell midden, or a mound), have all works ceased within 20 m of the Aboriginal cultural heritage?

- Has the discovered Aboriginal cultural heritage been identified, inspected and recorded by a Cultural Heritage Advisor?
- Has the Cultural Heritage Advisor completed new or updated VAHR site record cards and forwarded these to AAV?
- Has the Sponsor has taken appropriate measures to avoid harming the Aboriginal cultural heritage, including appropriate protection measures as agreed upon by the Sponsor and the RAP?
- If the Sponsor cannot avoid harming the Aboriginal cultural heritage, has the Sponsor taken appropriate measures to minimise harm to Aboriginal cultural heritage, including appropriate protection measures as agreed upon by the Sponsor and the RAP?
- If appropriate salvage excavations are required, have these been undertaken and reported upon within 120 days?
- Has the removal, curation, custody and management of the Aboriginal cultural heritage been undertaken in accordance with the contingency plan outlined in this CHMP?

If human remains have been discovered during the activity:

- Has all activity in the vicinity of the discovery ceased immediately?
- Have the remains been left in place and protected from harm?
- Have Victoria Police and the Coroner's Office been notified?
- If there are reasonable grounds to believe that the remains may be Aboriginal, has the DSE Emergency Co-ordination Centre been notified?
- If it is confirmed by these authorities that the remains are Aboriginal skeletal remains, has the Secretary of DPCD been notified?
- Has the appropriate impact mitigation or salvage strategy (as determined by the Secretary of DPCD) been implemented?
- Have the salvaged Aboriginal human remains been treated in accordance with the direction of the Secretary of DPCD?
- Has a suitable experienced and qualified Archaeologist been engaged to document any reburial site(s) and have all details of the reburial been provided to AAV?
- Is the reburial site(s) clearly marked?
- Have appropriate management recommendations been implemented to ensure that the remains are not disturbed in the future?

If non-compliance with this CHMP is suspected by any and all parties, it is recommended that AAV and an appropriately qualified and experienced Cultural Heritage Advisor are contacted immediately.

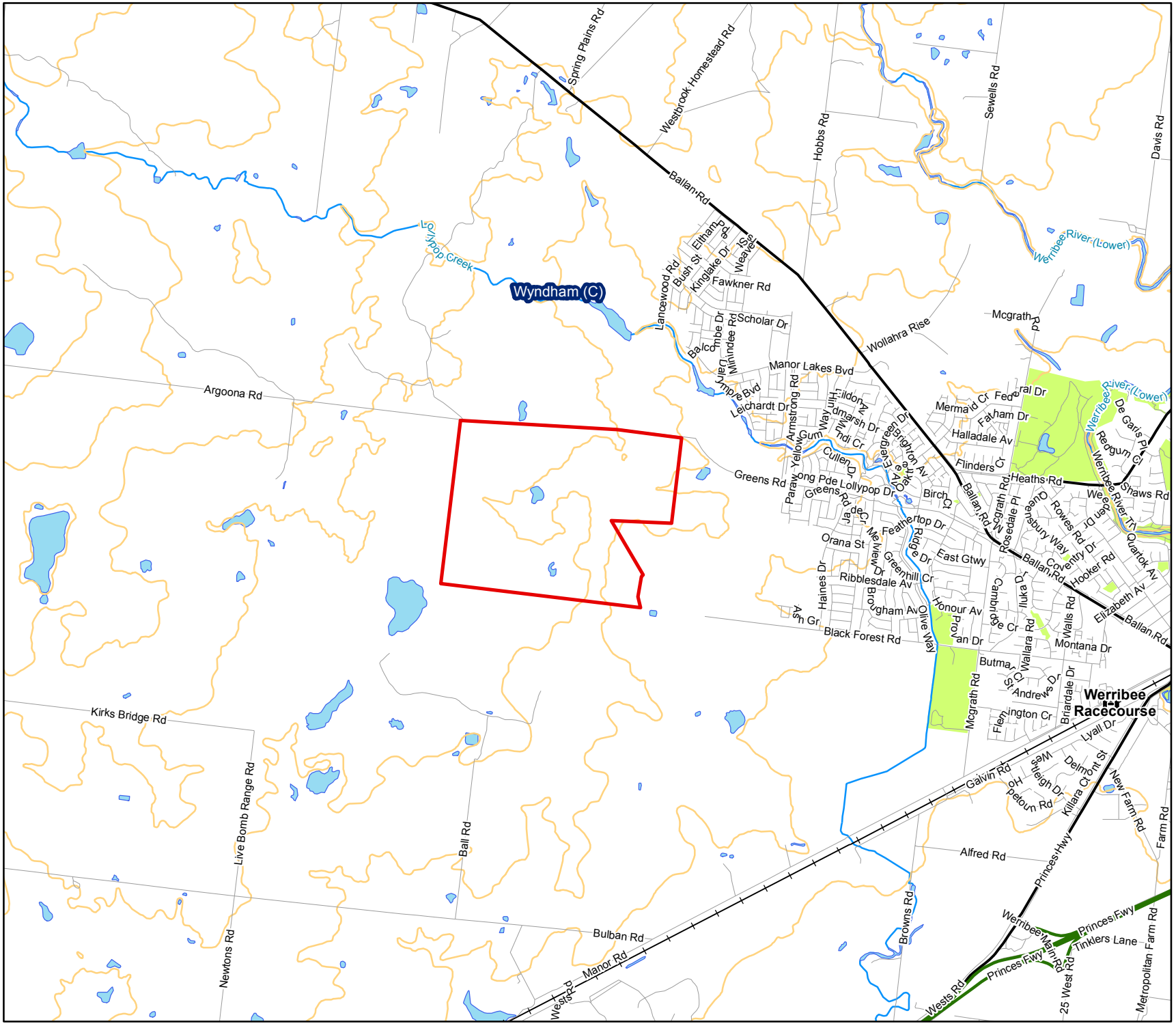
Under Sections 27 and 28 of the *Aboriginal Heritage Act 2006*, harming Aboriginal cultural and doing an act likely to harm Aboriginal cultural heritage, knowingly or unknowingly, is unlawful.

9.6.2 Remedying non-compliance with the Cultural Heritage Management Plan

Under Section 81 of the *Aboriginal Heritage Act 2006*, a Cultural Heritage Audit can be ordered by the Minister if non-compliance with an approved CHMP is suspected. If the Secretary of DPCD directs a Sponsor to engage a Cultural Heritage Advisor to conduct a Cultural Heritage Audit, the Sponsor must comply with the direction. The report of a Cultural Heritage Audit may:

- identify non-compliance with an approved CHMP;
- recommend amendments to the recommendations in the approved CHMP;
- recommend arrangements for the access of inspectors to the location at which the activity is being carried out; and
- recommend other measures in relation to the conduct of the activity to avoid or minimise harm to Aboriginal cultural heritage.

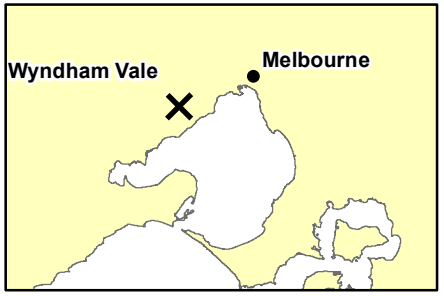
MAPS


Activity Area
Roads
Freeway/Highway
Major Road
Minor Road
Railway
Railway Station
Contours
Waterways
Waterbodies
Parks and Recreation
Wyndham Vale
Melbourne
Local Government: Wyndham City Council
25k Mapsheet: Manor 7822-3-3
Coordinate System: MGA Zone 55 (GDA94)
Map Scale: 1:50000
0
625
1,250
Metres
Map 1
Location of Activity Area
Black Forest Road, Wyndham Vale
ecologypartners
2521_Map_1_Location_of_Activity_Area.mxd
17/11/2010 ALF
100
Wyndham (C)
Werribee Racecourse
Argoona Rd
Kirks Bridge Rd
Bulban Rd
Manor Rd
Alfred Rd
Galvin Rd
Black Forest Rd
Greens Rd
Ballan Rd
Spring Plains Rd
Westbrook Homestead Rd
Hobbs Rd
Sewells Rd
Davis Rd
Mcgrath Rd
Wollahra Rise
Manor Lakes Bvd
Fawkner Rd
Scholar Dr
Heaths Rd
Shaws Rd
Hooker Rd
Elizabeth Av
Montana Dr
Princes Hwy
Princes Fwy
Tinklers Lane
Werribee Main Rd
Wests Rd
Live Bomb Range Rd
Ball Rd
Newtons Rd
Browns Rd
Metropolitan Farm Rd
Werribee River (Lower)
Lollypop Creek

Activity Area

Roads

- Freeway/Highway
- Major Road
- Minor Road
- Contours
- Waterways



Local Government: Wyndham City Council
25k Mapsheet: Manor 7822-3-3
Coordinate System: MGA Zone 55 (GDA94)
Map Scale: 1:15000

N

0 190 380
Metres

Map 2

Extent of Activity Area

Black Forest Road, Wyndham Vale

ecologypartners

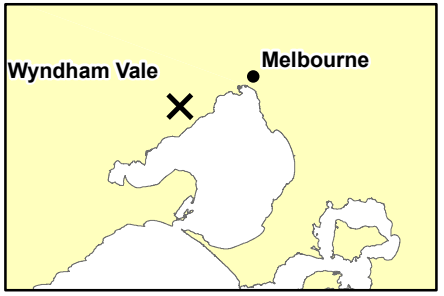
2521_Map_1_Location_of_Activity_Area.mxd
17/11/2010 ALF

PEDDLE THORP ARCHITECTS

DALESTONE MASTERPLAN
WYNDHAMVALE
31-0031

PSP prelim plan
SEP 11 | R5 | 1:5000 @ A1

Activity Area



Local Government: Wyndham City Council
25k Mapsheet: Manor 7822-3-3
Coordinate System: MGA Zone 55 (GDA94)
Map Scale: 1:15000

N

0 190 380
Metres

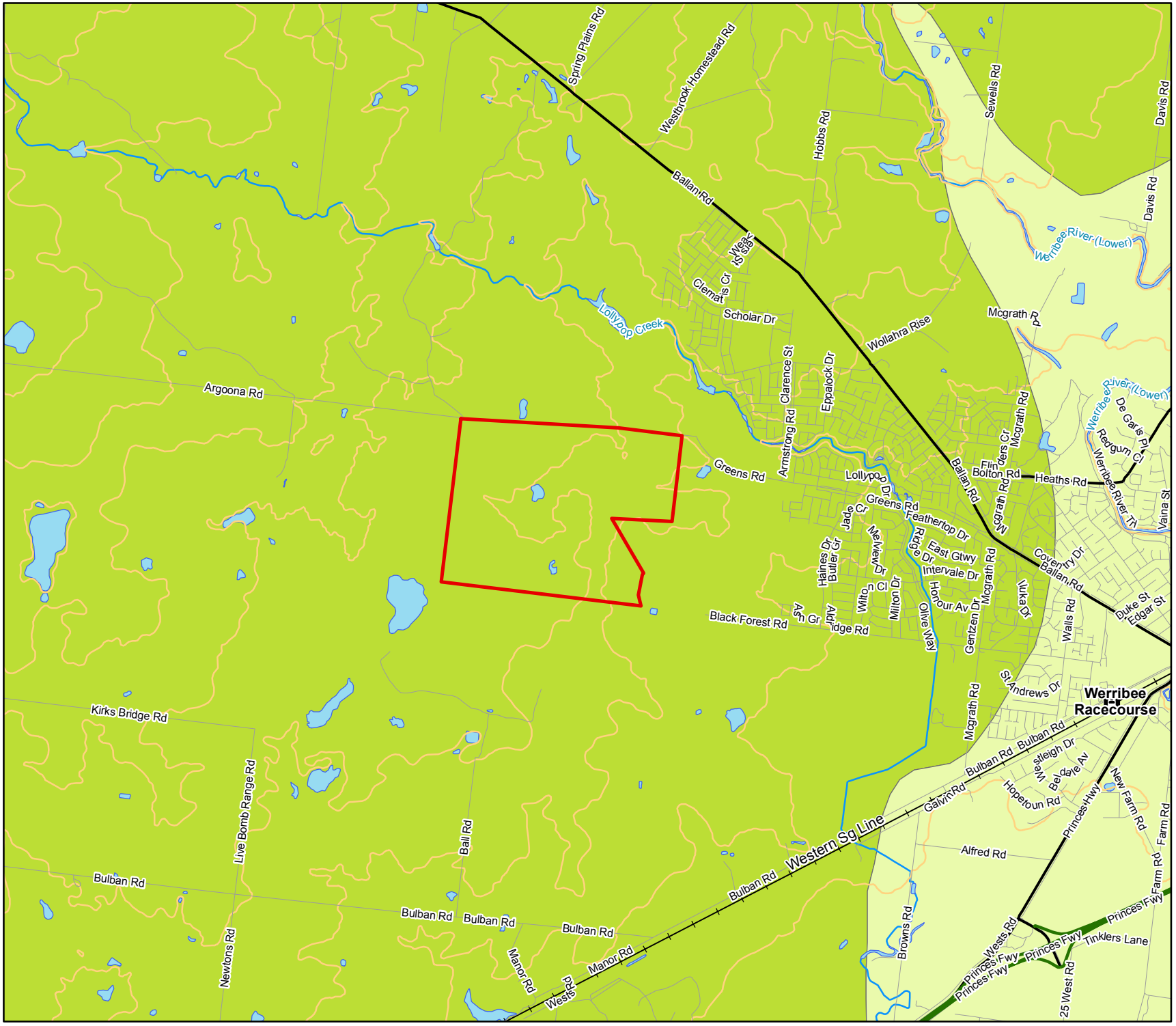
Map 3

Proposed Development Plan

Black Forest Road, Wyndham Vale

ecologypartners

2521_Map_3_Development_Plan.mxd
25/10/2011 ALF

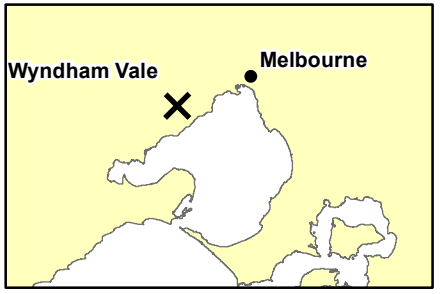


Legend

- Activity Area
- Victorian Volcanic Plain
- Otway Plain

Roads

- Freeway/Highway
- Major Road
- Minor Road
- Railway
- Contours
- Waterways
- Waterbodies



Local Government: Wyndham City Council
25k Mapsheet: Manor 7822-3-3
Coordinate System: MGA Zone 55 (GDA94)
Map Scale: 1:50000

N

0 0.5 1
Kilometers

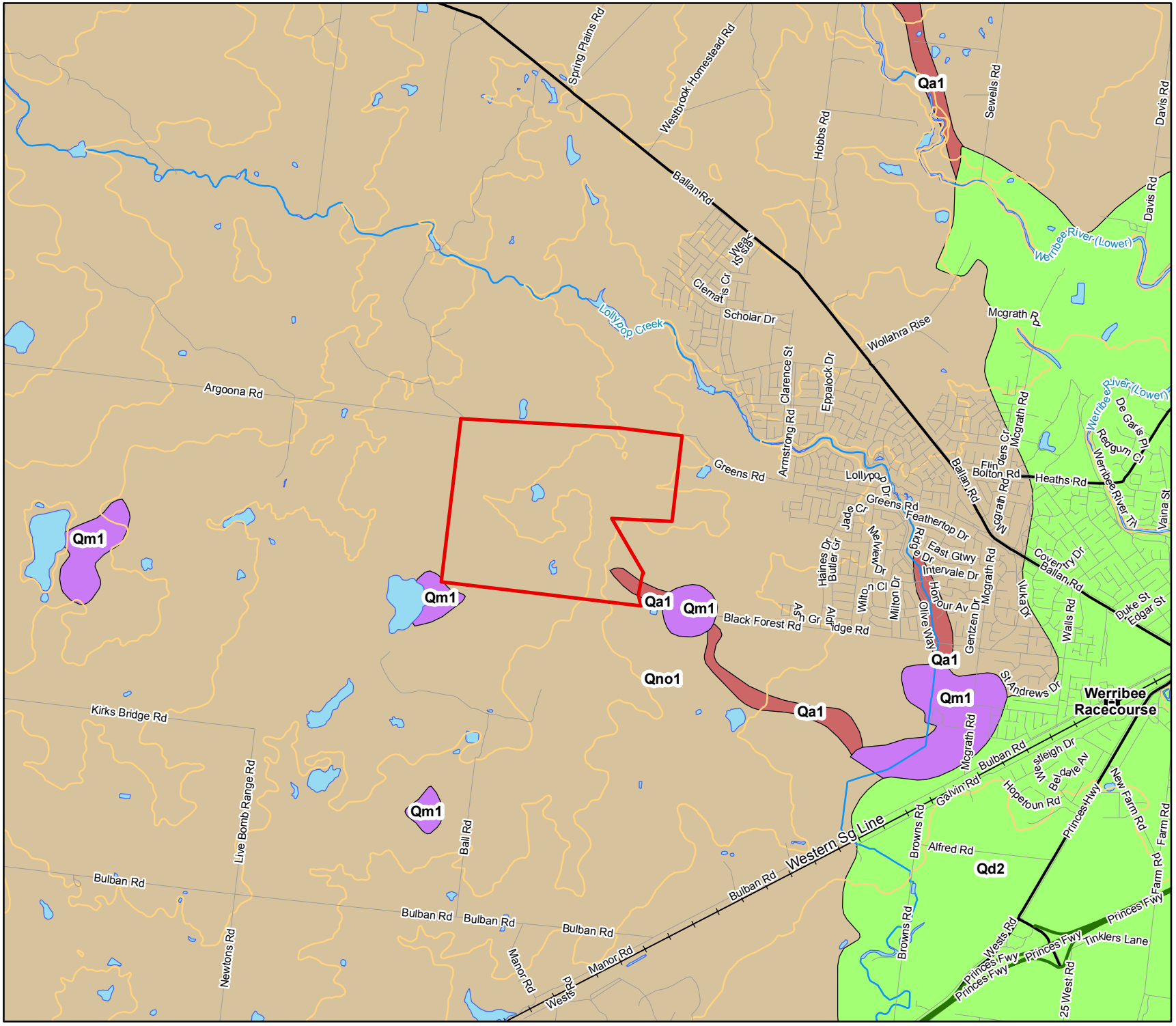
Map 4

Relevant Bioregions

Black Forest Road, Wyndham Vale

ecologypartners

2521_Map_4_Relevant_Bioregion.mxd
17/11/2010 ALF



Legend

- Activity Area
- Qa1 - Unnamed alluvium
- Qd2 - Unnamed dune deposits
- Qm1 - Unnamed swamp and lake deposits
- Qno1 - Unnamed sheetflow basalt

Roads

- Freeway/Highway
- Major Road
- Minor Road
- Railway
- Contours
- Waterways
- Waterbodies

Local Government: Wyndham City Council
25k Mapsheet: Manor 7822-3-3
Coordinate System: MGA Zone 55 (GDA94)
Map Scale: 1:50000

N

0 0.5 1
Kilometers

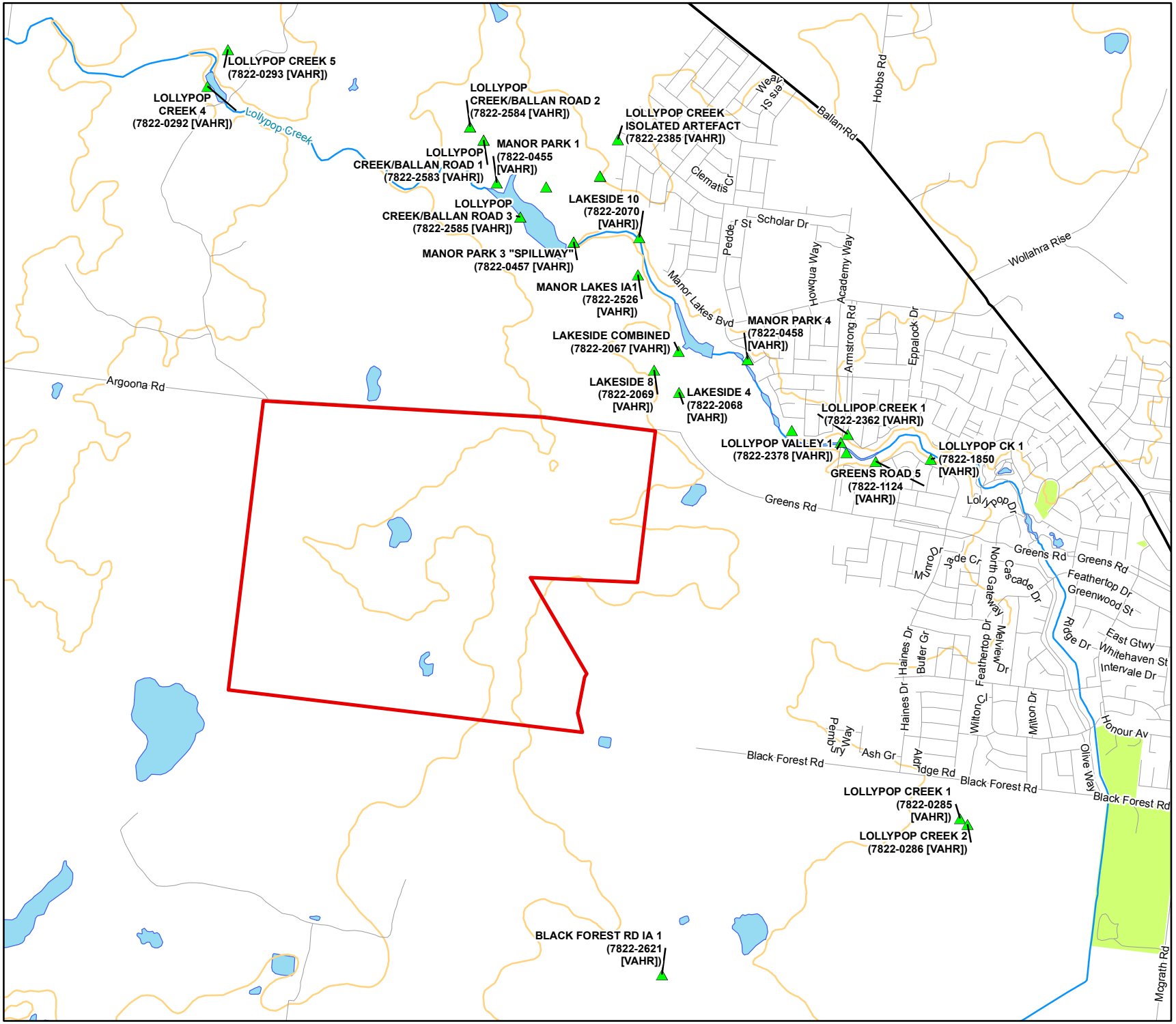
Map 5

Geology within the vicinity of the Activity Area

Black Forest Road, Wyndham Vale

ecologypartners

2521_Map_5_Geology_within_Activity_Area.mxd
17/11/2010 ALF

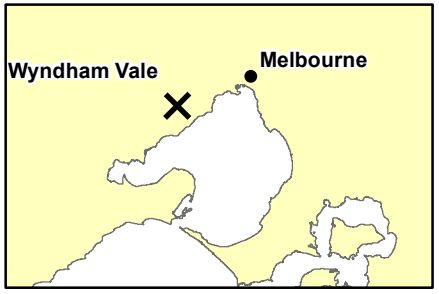


Legend

- Activity Area
- Previously Recorded Aboriginal Archaeological Sites

Roads

- Freeway/Highway
- Major Road
- Minor Road
- Railway
- Contours
- Waterways
- Waterbodies



Local Government: Wyndham City Council
25k Mapsheet: Manor 7822-3-3
Coordinate System: MGA Zone 55 (GDA94)
Map Scale: 1:50000

N

0 0.3 0.6
Kilometers

Map 6

Previously Recorded Sites of Aboriginal Archaeological Sensitivity in and around the Activity Area

Black Forest Road, Wyndham Vale

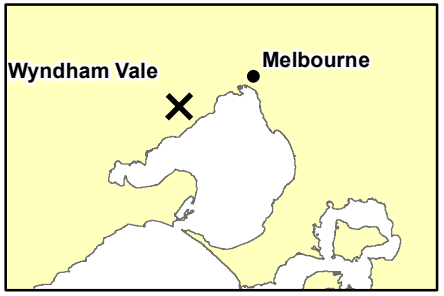
ecologypartners

2521_Map_6_Previously_Recorded_Sites.mxd
17/11/2010 ALF

Survey Transects

Surveyed Area

Activity Area



Local Government: Wyndham City Council
25k Mapsheet: Manor 7822-3-3
Coordinate System: MGA Zone 55 (GDA94)
Map Scale: 1:15000

N

0 185 370

Metres

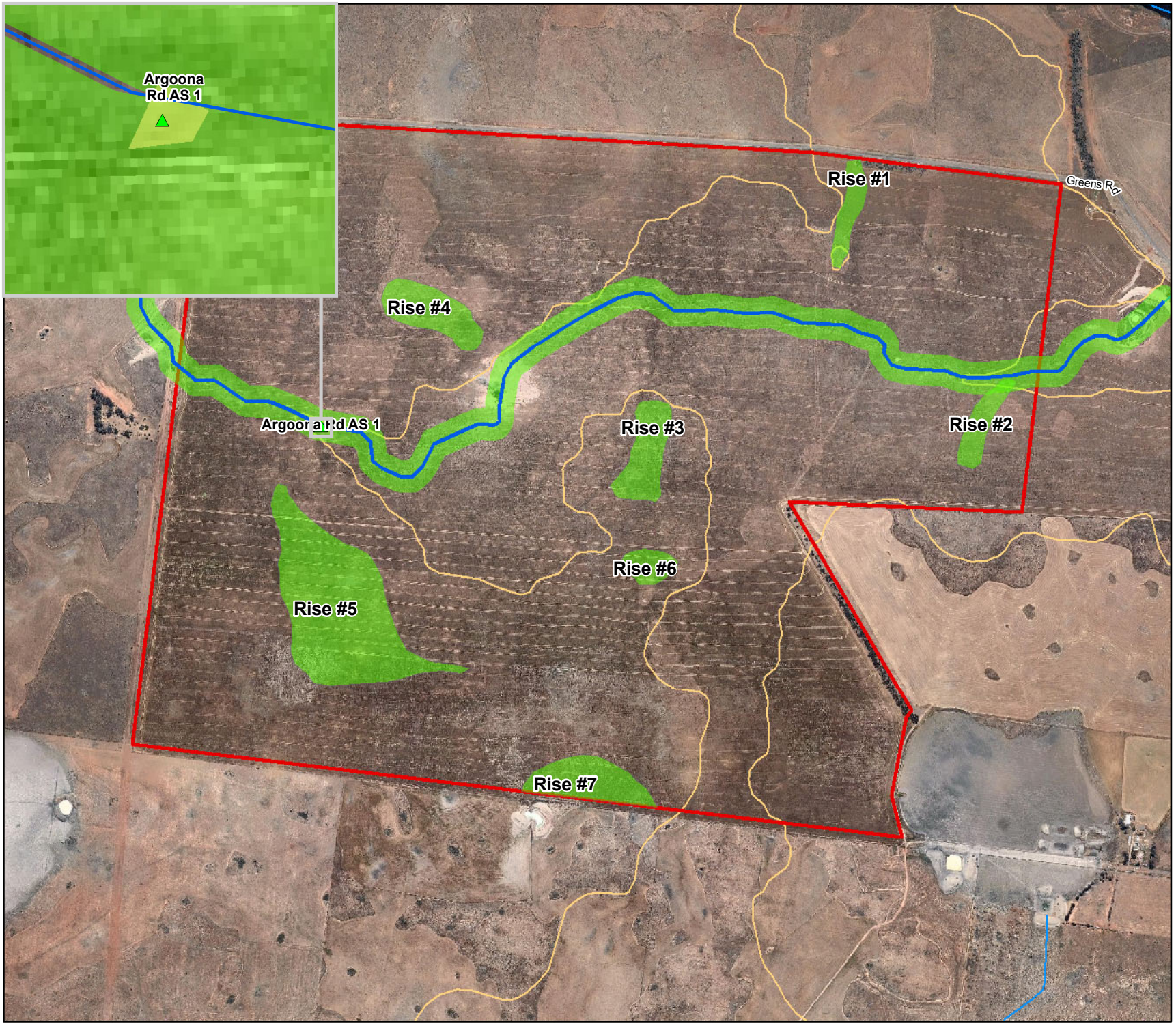
Map 7

Survey Transects

Black Forest Road, Wyndham Vale

ecology & heritage partners

2521_Map_7_Survey_Transects.mxd 1/08/2011 BF



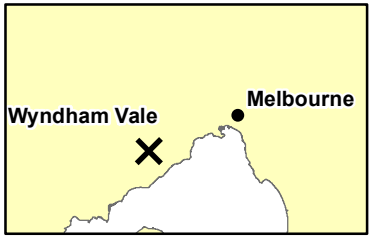
Surface Artefact

Drainage Line

Areas of Aboriginal Cultural Likelihood

Site Extent

Activity Area



Local Government: Wyndham City Council
25k Mapsheet: Manor 7822-3-3
Coordinate System: MGA Zone 55 (GDA94)
Map Scale: 1:12000

N

0 162.5 325
Metres

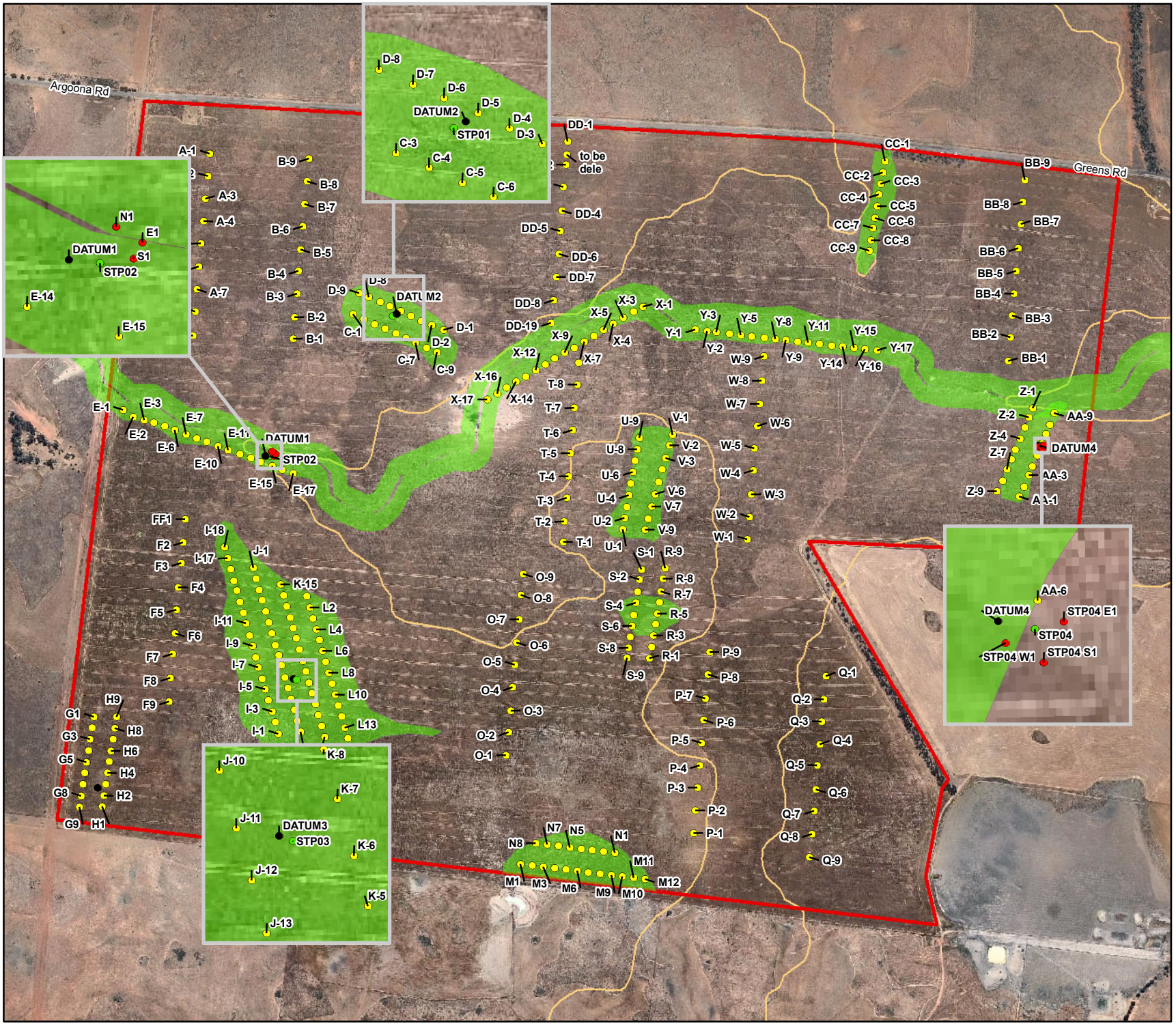
Map 8

Areas of Aboriginal Archaeological Likelihood and Location and Extent of Aboriginal Archaeological Sites Identified During Standard Assessment.

Black Forest Road, Wyndham Vale

ecology & heritage partners

2521_Map_8_Location_and_Extent_of_Testing.mxd 1/08/2011 BF



Backsight/Datum

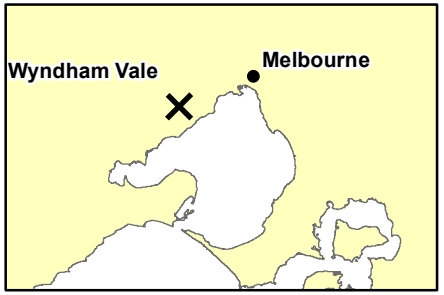
Stratigraphic Test Pit

Shovel Test Hole

Radial Test Hole

Areas of Aboriginal Cultural Likelihood

Activity Area



Local Government: Wyndham City Council
25k Mapsheet: Manor 7822-3-3
Coordinate System: MGA Zone 55 (GDA94)
Map Scale: 1:12000

N

0 145 290

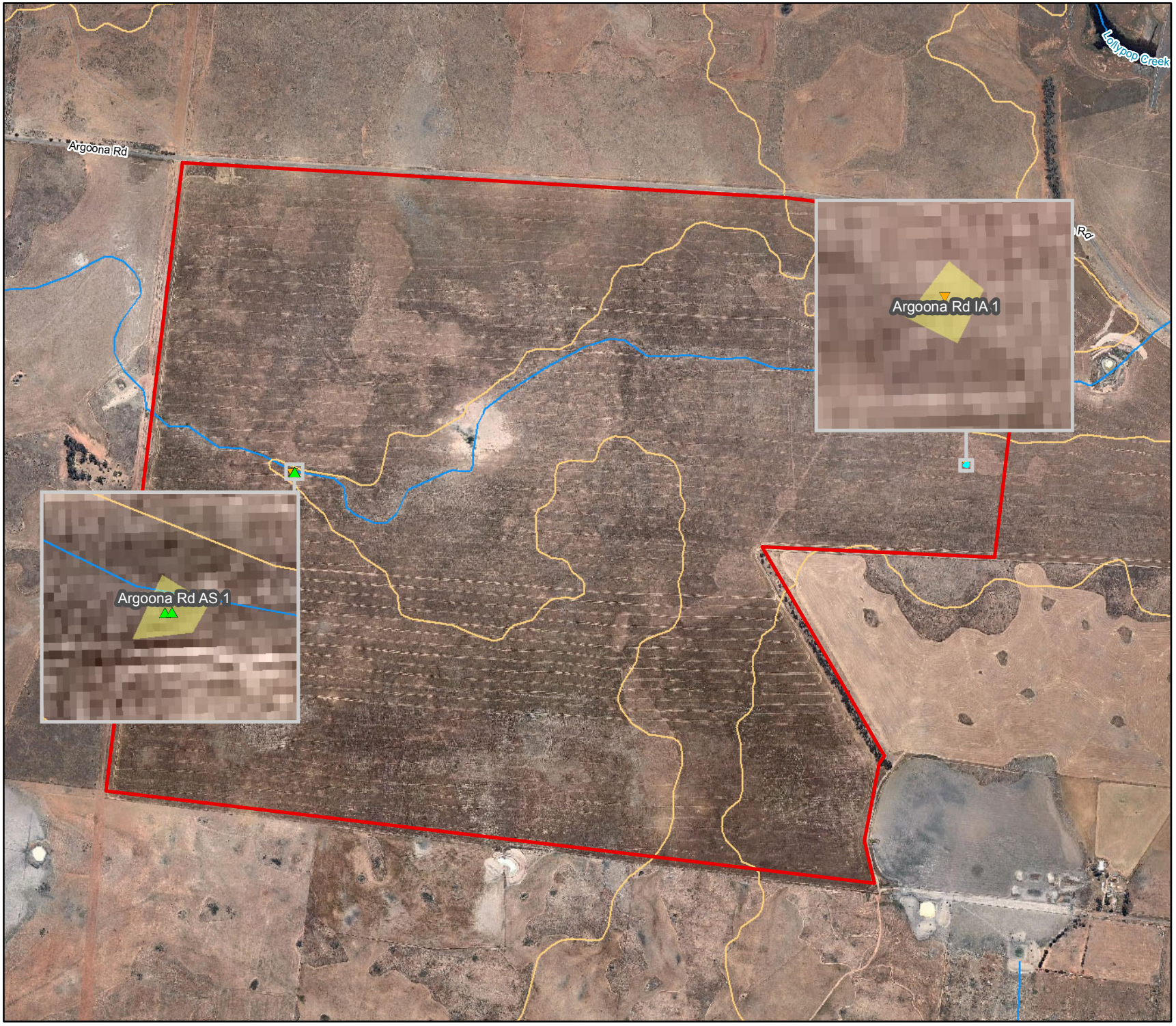
Metres

Map 9

Location of Subsurface Testing

Black Forest Road, Wyndham Vale

2521_Map_9_Location_of_Testing.mxd 1/08/2011 BF

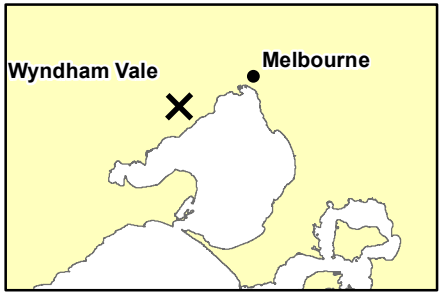


Activity Area

Site Extent

Surface Artefacts

Subsurface Artefacts



Local Government: Wyndham City Council
25k Mapsheet: Manor 7822-3-3
Coordinate System: MGA Zone 55 (GDA94)
Map Scale: 1:13000

N

0 162.5 325
Metres

Map 10

Location and Extent of Aboriginal Archaeological Sites within the Activity Area Identified During the Standard and Complex Assessments

Black Forest Road, Wyndham Vale

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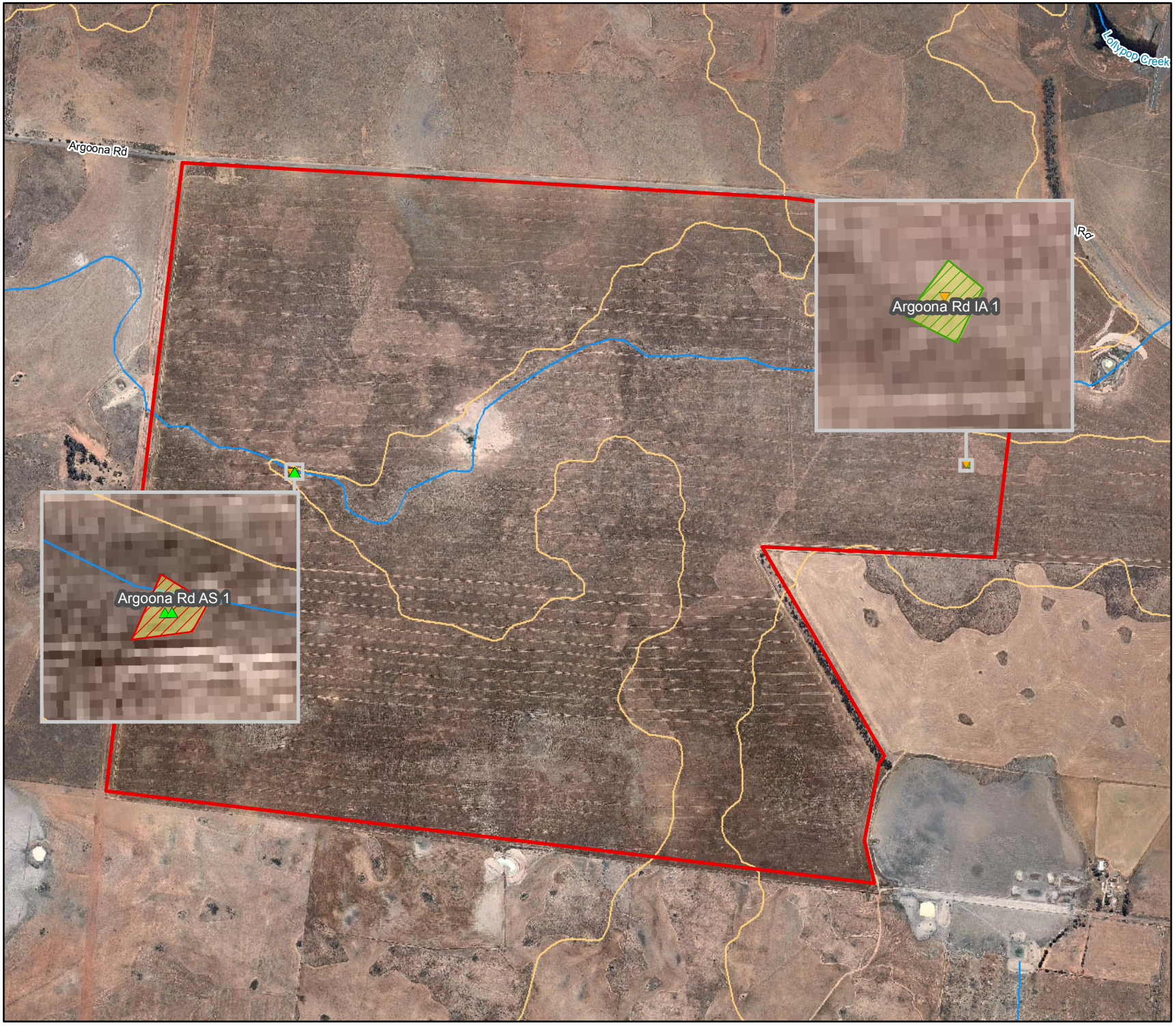
2521_Map_10_Sensitivity.mxd 1/08/2011 BF



Activity Area

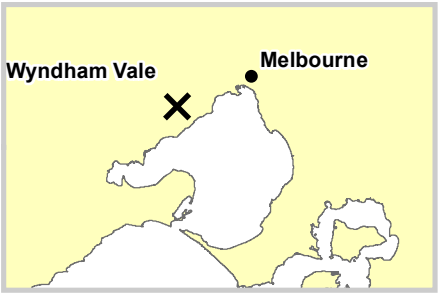
Site Extent

Area Subject to Surface Collection and Reburied at Argoona Rd IA

Area to be left in Situ and Retained within Public Open Space

Surface Artefacts

Subsurface Artefacts



Local Government: Wyndham City Council
25k Mapsheet: Manor 7822-3-3
Coordinate System: MGA Zone 55 (GDA94)
Map Scale: 1:13000

N

0 162.5 325

Metres

Map 11

Location of Specific Management Requirements

Black Forest Road, Wyndham Vale

ecology & heritage partners

2521_Map_11_Management.mxd 1/08/2011 BF

APPENDICES

Appendix 1 - Notice of Intent to prepare a Cultural Heritage Management Plan

NOI Form

Notice of Intent to prepare a Cultural Heritage Management Plan for the purposes of the *Aboriginal Heritage Act* 2006

This form can be used by the Sponsor of a Cultural Heritage Management Plan to complete the notification provisions pursuant to s.54 of the *Aboriginal Heritage Act* 2006 (the "Act").

SECTION 1 – Sponsor Information

Name of Sponsor: Rudy Koh and Alfred Sung

Business Name: Daleston Pty Ltd

Postal Address: Phileo House, Level 8, 278 Collins Street, Melbourne Vic 3000

Telephone Number: 03 9663 8018 Fax number: 03 9663 8038

Mobile:

Email Address: alfred@palitd.com.au

SECTION 2 – Description of proposed activity and location

- Provide a project name: Black Forest Road, Mambourin CHMP
- List the relevant municipal district/s (ie. Local Council or Shire): Wyndham City Council
- Clearly identify the proposed activity for which the cultural heritage management plan is to be prepared (ie. mining, road construction, housing subdivision):
  Proposed housing subdivision
- Clearly identify the area (such as listing cadastral information, attaching a copy of a title search, or indicating the street address):
  Lots 1, 3, 4 & 5 TP846432N. See attached zone map for activity area. See also attached Title Search and LASSI property search sheets
- **Attach a map** (to scale, with a north arrow and indicating the municipal district - if any) that clearly identifies the area and boundaries in respect of which the cultural heritage management plan is to be prepared.
  - Please ensure the map refers to existing roads and features, rather than proposed roads and features.
  - Please ensure the map has the activity area outlined on it.
  - The map should have a legend, north arrow, scale, at least 3 readily identifiable geographical locations (such as road intersections, parcel boundaries, or road/river crossings), and should state the map's projection.

SECTION 3 – Cultural Heritage Advisor

If you would like a Cultural Heritage Advisor (a person who has the qualifications or experience [or both] required under section 189 of the Act) notified of the status of this Cultural Heritage Management Plan, please provide the following details for that person:

Rick Bullers	Ecology Partners Pty Ltd	rick.bullers@ecologypartners.com.au
Name	*Company (if any)*	*Email address*

SECTION 4 – Expected start and finish date for the cultural heritage management plan

Start date: 16 / 11 / 2010 Finish date: 16 /11 / 2011

SECTION 5 – Why are you preparing this Cultural Heritage Management Plan?

[X] A Cultural Heritage Management Plan is required by the Aboriginal Heritage Regulations 2007

What is the High Impact Activity listed in the regulations? **Subdivision of Land (R.46)**

Is any part of the activity in an area of cultural heritage sensitivity, as listed in the regulations? **YES** / **NO**

Please Circle

[ ] Other reasons (Voluntary)

[ ] An Environmental Effects Statement is required

[ ] A Cultural Heritage Management Plan is required by the Minister for Aboriginal Affairs

SECTION 6 – List the relevant registered Aboriginal parties (if any)

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

Wathaurung Aboriginal Corporation

SECTION 7 – Signature of Sponsor

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

Signed: _____ Date: **16 / 11 /2010**

[Sponsor]

SECTION 8 – Notification Checklist

[X] Ensure appropriate attachment/s are completed and attached to this notification (see section 2 of this form).

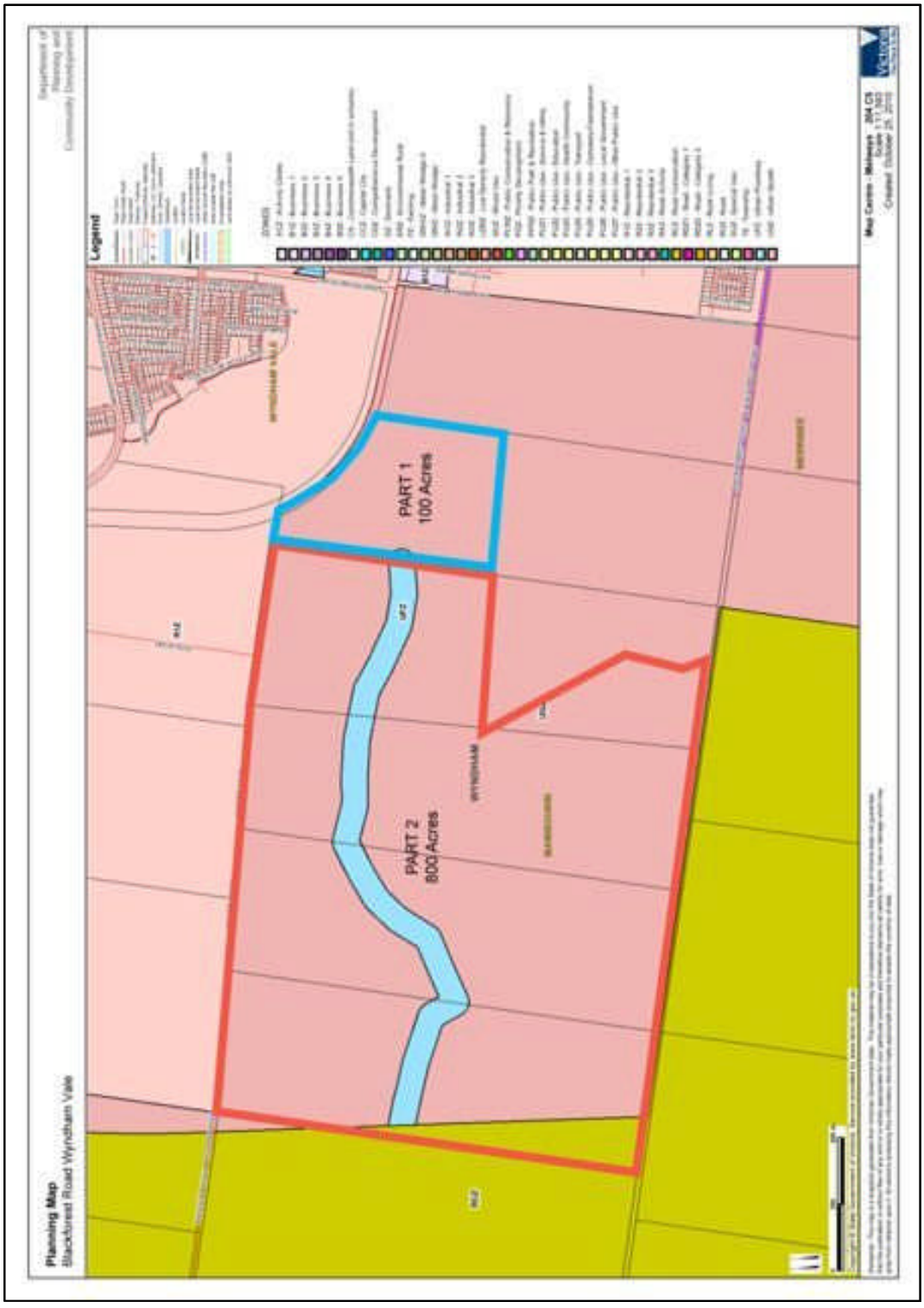
Please ensure this notice and all attached items are sent to the:

Deputy Director
Aboriginal Affairs Victoria
Department of Planning and Community Development
GPO Box 2392
MELBOURNE VIC 3001

Email: vahr@dpcd.vic.gov.au

Notes:

- **Ensure that any relevant registered Aboriginal party/s 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 evaluate the management plan)**
- **In addition to notifying the Deputy Director and any relevant registered Aboriginal party/s, a sponsor must also notify any owner and/or occupier of any land within the area to which the management plan relates. A copy of this notice may be used for this purpose.**


Legend
PART 1
100 Acres
PART 2
800 Acres
WYNDHAM
Planning Map
Blackforest Road Wyndham Vale

AAV Response

Rick Bullers

From: Paul.Brownrigg@dpcd.vic.gov.au
Sent: Friday, 19 November 2010 12:47 PM
To: alfred@palltd.com.au; Rick Bullers; bpowell6@optusnet.com.au; bonnie@wathcorp.com.au; richard@wathcorp.com.au
Cc: Liz.Kilpatrick@dpcd.vic.gov.au; Boheme.Rawoteea@dpcd.vic.gov.au
Subject: Notice of Intent to Prepare CHMP 11513

To whom it may concern,

This email is the formal response. This is an automated response indicating that, on 19-Nov-2010, the Secretary, Department of Planning and Community Development received a Notice of Intent to Prepare a Cultural Heritage Management Plan (CHMP) for:

Rudy Koh and Alfred Sung - Subdivision - Black Forest Road, Mambourin

The notification has been allocated the AAV Project Number:

CHMP Plan ID. 11513

Please quote this number when making any future enquires to AAV regarding this project.

If your activity lies within the boundaries of a registered Aboriginal party you must also notify this organisation of your intention to prepare the CHMP (if you have not already done so). Further information about registered Aboriginal parties can be found at:

http://www1.dpcd.vic.gov.au/aav/heritage/registered

Please do not reply to this email.

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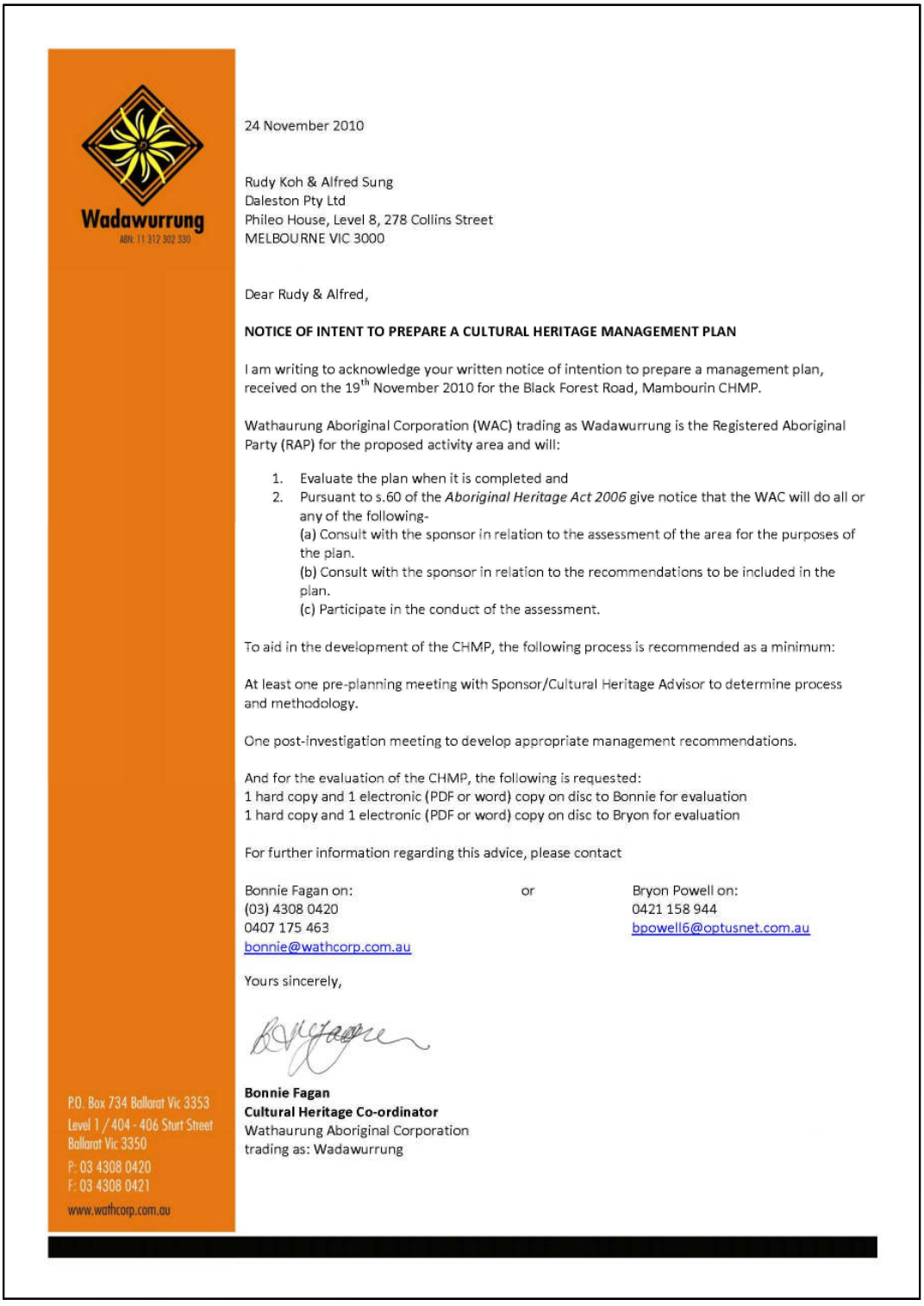
RAP Response



Wadawurrung
ABN: 11 312 302 330

24 November 2010

Rudy Koh & Alfred Sung
Daleston Pty Ltd
Phileo House, Level 8, 278 Collins Street
MELBOURNE VIC 3000

Dear Rudy & Alfred,

NOTICE OF INTENT TO PREPARE A CULTURAL HERITAGE MANAGEMENT PLAN

I am writing to acknowledge your written notice of intention to prepare a management plan, received on the 19th November 2010 for the Black Forest Road, Mambourin CHMP.

Wathaurung Aboriginal Corporation (WAC) trading as Wadawurrung is the Registered Aboriginal Party (RAP) for the proposed activity area and will:

1. Evaluate the plan when it is completed and
2. Pursuant to s.60 of the *Aboriginal Heritage Act 2006* give notice that the WAC will do all or any of the following-
   (a) Consult with the sponsor in relation to the assessment of the area for the purposes of the plan.
   (b) Consult with the sponsor in relation to the recommendations to be included in the plan.
   (c) Participate in the conduct of the assessment.

To aid in the development of the CHMP, the following process is recommended as a minimum:

At least one pre-planning meeting with Sponsor/Cultural Heritage Advisor to determine process and methodology.

One post-investigation meeting to develop appropriate management recommendations.

And for the evaluation of the CHMP, the following is requested:
1 hard copy and 1 electronic (PDF or word) copy on disc to Bonnie for evaluation
1 hard copy and 1 electronic (PDF or word) copy on disc to Bryon for evaluation

For further information regarding this advice, please contact

Bonnie Fagan on:
(03) 4308 0420
0407 175 463
bonnie@wathcorp.com.au

or

Bryon Powell on:
0421 158 944
bpowell6@optusnet.com.au

Yours sincerely,

Bonnie Fagan
Cultural Heritage Co-ordinator
Wathaurung Aboriginal Corporation
trading as: Wadawurrung

P.O. Box 734 Ballarat Vic 3353
Level 1 / 404 - 406 Sturt Street
Ballarat Vic 3350
P: 03 4308 0420
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www.wathcorp.com.au

Appendix 2 - Heritage Legislation

A2.1 Victorian *Aboriginal Heritage Act 2006*

The *Aboriginal Heritage Act 2006* protects Aboriginal cultural heritage in Victoria. A key part of the legislation is that Cultural Heritage Management Plans (CHMPs) are required to be prepared by Sponsors (the developer) and qualified Cultural Heritage Advisors in accordance with the *Aboriginal Heritage Act 2006* and the accompanying *Aboriginal Heritage Regulations 2007*. A CHMP is the assessment of an area (known as an 'activity area') for Aboriginal cultural heritage values, the results of which form a report (the CHMP) which details the methodology of the assessment and sets out management recommendations and contingency measures to be undertaken before, during and after an activity (development) to manage and protect any Aboriginal cultural heritage present within the area examined.

The preparation of a CHMP is mandatory under the following circumstances:

- If the *Aboriginal Heritage Regulations 2007* require a CHMP to be prepared (s. 47);
- If the Minister of Aboriginal Affairs Victoria requires a CHMP to be prepared (s. 48); or
- If an Environmental Effects Statement is required by the Environmental Effects Act 1978 (s. 49).

The *Aboriginal Heritage Regulations 2007* require a CHMP to be prepared:

- If all or part of the proposed activity is a 'high impact activity'; and
- If all or part of the activity area is an area of 'cultural heritage sensitivity'; and
- If all or part of the activity area has not been subject to 'significant ground disturbance'.

The preparation of a CHMP can also be undertaken voluntarily. Having an Approved CHMP in place can reduce risk for a project during the construction phase by ensuring there are no substantial delays if sites happen to be found. Monitoring construction works is also rarely required if an approved CHMP is in place.

Approval of the CHMPs is the responsibility of either DPCD (AAV) or the Registered Aboriginal Parties. They will be examining the CHMPs in detail with key points including:

- Addressing whether harm to heritage can be avoided or minimised;

- All assessments (including test excavations) must be completed before management decisions are formulated; and
- Survey and excavation must be in accordance with proper archaeological practice and supervised by a person appropriately qualified in archaeology.

There are three types of CHMPs that may be prepared. These are:

- Desktop;
- Standard; and
- Complex.

A desktop CHMP is a literature review with fieldwork. If the results of the desktop show it is reasonably possible that Aboriginal cultural heritage could be present in the activity area, a standard assessment will be required.

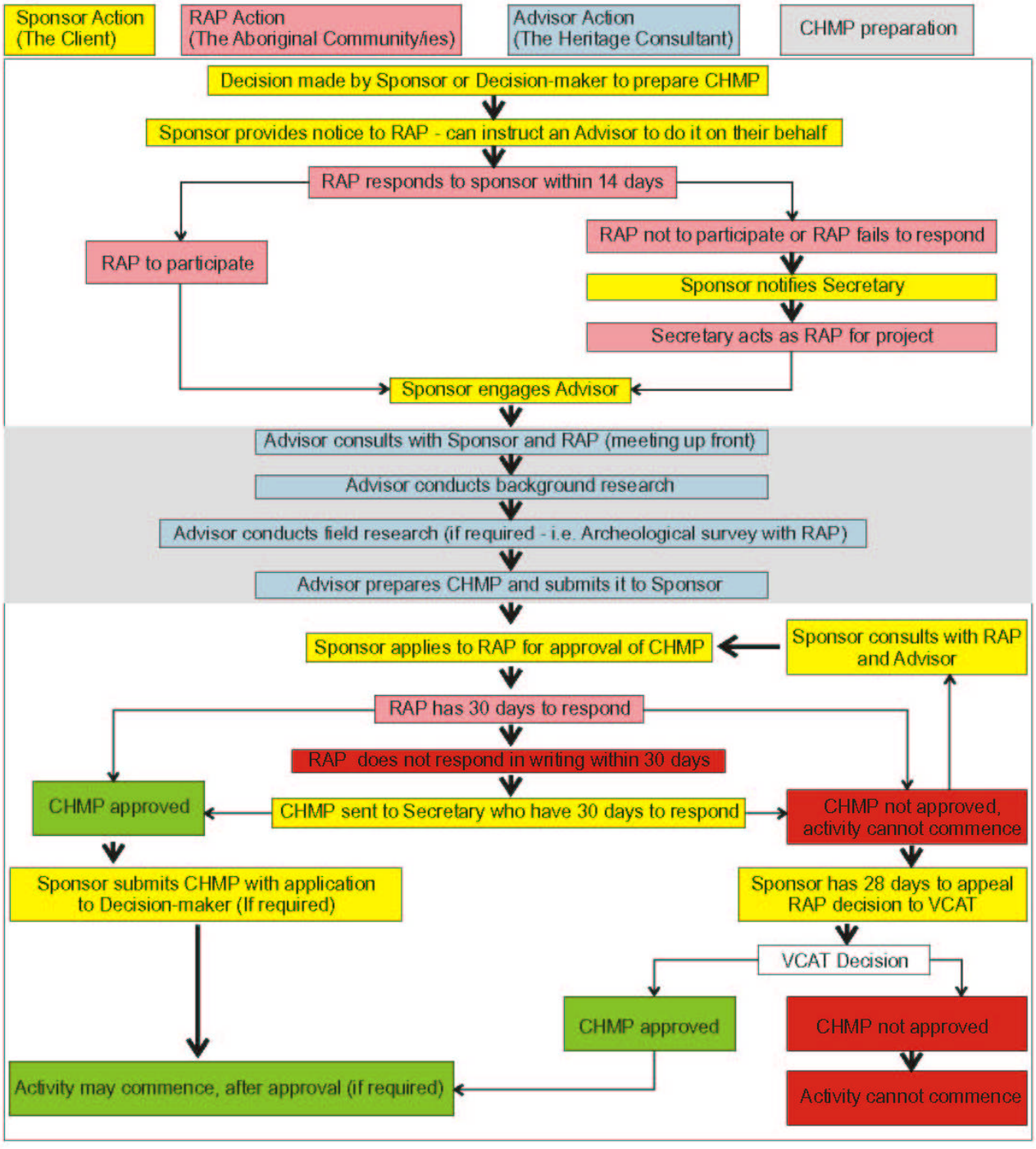
A standard assessment involves literature review and a ground of survey the activity area. Where the results of ground survey undertaken during a standard assessment have identified Aboriginal cultural heritage within the activity area, soil and sediment testing using an auger no larger than twelve centimetres in diameter may be used to assist in defining the nature and extent of the identified Aboriginal cultural heritage (Regulation 59(4)).

Where the results of ground survey undertaken during a standard assessment have identified Aboriginal cultural heritage within the activity area or areas which have the potential to contain Aboriginal cultural heritage sub surface, a complex assessment will be required. A complex assessment involves a literature review, a ground of survey, and sub surface testing. Sub surface testing is the disturbance of all or part of the activity area or excavation of all or part of the activity area to uncover or discover evidence of Aboriginal cultural heritage (Regulation 62(1)).

It is strongly advised that for further information relating to heritage management (e.g. audits, stop orders, inspectors, forms, evaluation fees, status of RAPs and penalties for breaching the Act) Sponsors should access the Aboriginal Affairs Victoria website (http://www.aboriginalaffairs.vic.gov.au/).

The following flow chart also assists in explaining the process relating to CHMPs.

ABORIGINAL CULTURAL HERITAGE MANAGEMENT PLAN PROCESS



A2.2 Commonwealth *Native Title Act 1993*

Native Title describes the rights and interests of Aboriginal and Torres Strait Islander people in land and waters, according to their traditional laws and customs. In Australia, Aboriginal and Torres Strait Islander people's rights and interests in land were recognised in 1992 when the High Court delivered its historic judgment in the case of Mabo v the State of Queensland. This decision overturned the legal fiction that Australia upon colonisation was terra nullius (land belonging to no-one). It recognised for the first time that Indigenous Australians may continue to hold native title.

Native Title rights may include the possession, use and occupation of traditional country. In some areas, native title may be a right of access to the area. It can also be the right for native title holders to participate in decisions about how others use their traditional land and waters. Although the content of native title is to be determined according to the traditional laws and customs of the title holders, there are some common characteristics. It may be possessed by a community, group, or individual depending on the content of the traditional laws and customs. It is inalienable (that is, it cannot be sold or transferred) other than by surrender to the Crown or pursuant to traditional laws and customs. Native Title is a legal right that can be protected, where appropriate, by legal action.

Native Title may exist in areas where it has not been extinguished (removed) by an act of government. It will apply to Crown land but not to freehold land. It may exist in areas such as:

- Vacant (or unallocated) Crown land;
- Forests and beaches;
- National parks and public reserves;
- Some types of pastoral leases;
- Land held by government agencies;
- Land held for Aboriginal communities;
- Any other public or Crown lands; and/or
- Oceans, seas, reefs, lakes, rivers, creeks, swamps and other waters that are not privately owned.

Native Title cannot take away anyone else's valid rights, including owning a home, holding a pastoral lease or having a mining lease. Where native title rights and the rights of another person conflict, the rights of the other person always prevail. When the public has the right to access places such as parks, recreation reserves and beaches, this right cannot be taken away by Native Title. Native Title does not give Indigenous Australians the right to veto any

project. It does mean, however, that everyone's rights and interests in land and waters have to be taken into account.

Indigenous people can apply to have their native title rights recognised by Australian law by filing a native title application (native title claim) with the Federal Court. Applications are required to pass a test to gain certain rights over the area covered in the application. The Native Title Tribunal (NNTT) was established to administer application processes. Once applications are registered, the NNTT will notify other people about the application and will invite them to become involved so all parties can try to reach an agreement that respects everyone's rights and interests. If the parties cannot agree, the NNTT refers the application to the Federal Court and the parties argue their cases before the Court.

As a common law right, native title may exist over areas of Crown land or waters, irrespective of whether there are any native title claims or determinations in the area. Native Title will therefore be a necessary consideration when Government is proposing or permitting any activity on or relating to Crown land that may affect native title[1].

A2.3 Victorian *Planning and Environment Act 1987*

All municipalities in Victoria are covered by land use planning controls which are prepared and administered by State and local government authorities. The legislation governing such controls is the *Planning and Environment Act 1987*. Places of significance to a locality can be listed on a local planning scheme and protected by a Heritage Overlay (or other overlay where appropriate). Places of Aboriginal cultural heritage significance are not often included on local government planning schemes.

A2.4 Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999*

The *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides a national framework for the protection of heritage and the environment and the conservation of biodiversity. The EPBC Act is administered by the Australian Government Department of Sustainability, Environment, Water, Population and Communities (SEWPaC). The Australian Heritage Council assesses whether or not a nominated place is appropriate for listing on either the National or Commonwealth Heritage Lists and makes a recommendation to the Minister on that basis. The Minister for the Environment, Water, Heritage and the Arts makes the final decision on listing. SEWPaC also administers the Register of the National Estate.

The objectives of the EPBC Act are:

[1] The information in this section was taken from the Department of Sustainability and Environment, Fact Sheet on Native Title, 2008.

- to provide for the protection of the environment, especially those aspects of the environment that are matters of national environmental significance;
- to promote ecologically sustainable development through the conservation and ecologically sustainable use of natural resources;
- to promote the conservation of biodiversity;
- to provide for the protection and conservation of heritage;
- to promote a cooperative approach to the protection and management of the environment involving governments, the community, land-holders and indigenous peoples;
- to assist in the cooperative implementation of Australia's international environmental responsibilities;
- to recognise the role of indigenous people in the conservation and ecologically sustainable use of Australia's biodiversity; and
- to promote the use of indigenous peoples' knowledge of biodiversity with the involvement of, and in cooperation with, the owners of the knowledge.

A2.5 Victorian *Coroner's Act 2008*

The Victorian *Coroner's Act 2008* requires the reporting of certain deaths and the investigation of certain deaths and fires in Victoria by coroners to contribute to the reduction of preventable deaths. Of most relevance to heritage is the requirement for any "reportable death" to be reported to the police (s. 12[1]). The *Coroner's Act 2008* requires that the discovery of human remains in Victoria (s. 4[1]) of a person whose identity is unknown (s. 4[g]) must be reported to the police.

Appendix 3 - Archaeological Survey Attributes

ABORIGINAL CULTURAL HERITAGE PLACE ASSESSMENT:

ARCHAEOLOGICAL SURVEY AND EXCAVATION ATTRIBUTES FORM

Project Name: Residential Subdivision, Black Forest Road, Mambourin

Author/Consultant: Rick Bullers, Sylvana Szydzik and Mollie Harbour

Cultural Heritage Management Plan #: 11513

Cultural Heritage Permit #: N/A

Survey Attributes

Survey Date: 08.04.2011 & 27.04.2011 Ground Surface Visibility: Variable – 10-90%

Actual Survey Coverage (ha): 330 Effective Survey Coverage (m^2): 20.3

Survey Spacing (m): 5-10 m Transect Width (m): 8-40 m Number in Crew: 4-5

Landform: Low rises, drainage line Vegetation: crop stubble

Disturbance: vegetation clearance, ploughing

Survey Method	Survey Design	Sample	Survey Type
☑ Pedestrian	☐ Opportunistic	☑ Area	☑ Surface
☐ Remote sensing (specify)	☐ Random	☐ Transect	
	☑ Systematic	☐ Locality	
	☐ Stratified	☐ Haphazard	
	☐ Other	☐ Other	

Excavation method

Excavation Date: 24.05.2011 – 08.06.2011 Area Excavated: 0.0017%

Excavation Spacing (m): 25 – 50 m Transect Width (m): 1 m Number in Crew: 4

Test Trench Size (m): 1 x 1m (Qty 4) Depth (m): 200 mm

Excavation Method		Excavation Design	Sample
☑ Manual	☐ Uncontrolled Excavation (eg shovel pit)	☐ Opportunistic	☐ Area
☐ Mechanical		☐ Random	☑ Transect
☐ Auger		☑ Systematic	☐ Locality
	☐ Monitoring	☐ Stratified	☐ Haphazard
	☑ Controlled Excavation	☐ Other	☐ Other

Appendix 4 - Coordinates of Subsurface Testing and Datum Levels

Table A4.1: Datum and Back-site Details

Datum Name	Easting (GDA 94, Zone 55)	Northing (GDA 94, Zone 55)	Date	Height (m)	Back-site #	Back-site Height (m)	Back-site Description
Back-site 1	E 286699	N 5803861					STH E-15
Back-site 2	E 286982	N 5804202					STH D-5
Back-site 3	E 286727	N 5803397					STH J-11
Back-site 4	E 288391	N 5803910					STH AA-6
Datum 1	E 286685	N 5803883	25.05.2011	1.475	1	0.630	
Datum 2	E 286973	N 5804196	31.05.2011	1.510	2	1.460	
Datum 3	E 286746	N 5803393	31.05.2011	1.530	3	1.400	
Datum 4	E 288385	N 5803907	31.05.2011	1.510	4	1.370	

Table A4.2: Details of Stratigraphic Test Pits (STPs)

STP## Size (1 x 1 m)	STP## Size (e.g. 1 x 1 m)	Easting (GDA 94, Zone 55)	Northing (GDA 94, Zone 55)	S/W Corner (m)	N/W Corner (m)	N/E Corner (m)	S/E Corner (m)
STP01	South / West Corner	E 286965.012672	N 5804191.54774				
	Datum 1						
	Surface			1.490	1.500	1.515	1.545
	Base of spit 1			1.550	1.585	1.595	1.605
STP02	South / West Corner	E 286694.211326	N 5803882.87409				
	Datum 2						
	Surface			1.685	1.725	1.725	1.695
	Base of spit 1			1.710	1.750	1.745	1.740
	Base of spit 2			1.715	1.780	1.810	1.800
	Base of spit 3			1.825	1.780	1.815	1.835
STP03	South / West Corner	E 286752.764968	N 5803391.36329				
	Datum 3						

STP## Size (1 x 1 m)	STP## Size (e.g. 1 x 1 m)	Easting (GDA 94, Zone 55)	Northing (GDA 94, Zone 55)	S/W Corner (m)	N/W Corner (m)	N/E Corner (m)	S/E Corner (m)
	Surface			1.550	1.560	1.555	1.565
	Base of spit 1			1.620	1.621	1.619	1.581
STP04	South / West Corner	E 288391.199601	N 5803906.07972				
	Datum 4						
	Surface			1.495	1.485	1.455	1.460
	Base of spit 1			1.540	1.541	1.530	1.452

Table A4.3: Transect Shovel Test Pits, Radial Shovel Test Pits and Random Shovel Test Pit

Transect Number	Shovel Test Pit Number	Hole Distances (m)	Easting (GDA 94, Zone 55)	Northing (GDA 94, Zone 55)	Surface Height (m above sea level)	Base Height (m above sea level)
A	1	0 m	286562.339908	5804548.536740	66.015	65.875
	2	50 m	286557.794886	5804498.601740	71.246	71.046
	3	100 m	286552.689672	5804448.611650	68.557	68.377
	4	150 m	286547.967997	5804399.787850	68.014	67.824
	5	200 m	286542.859200	5804350.621860	67.725	67.605
	6	250 m	286537.515561	5804299.902940	67.338	67.038
	7	300 m	286533.867293	5804249.754320	65.200	65.070
	8	350 m	286530.198530	5804201.227250	65.048	64.808
	9	400 m	286525.047552	5804148.515090	64.351	64.171
B	1	0 m	286745.622065	5804141.567530	61.366	61.116

Transect Number	Shovel Test Pit Number	Hole Distances (m)	Easting (GDA 94, Zone 55)	Northing (GDA 94, Zone 55)	Surface Height (m above sea level)	Base Height (m above sea level)
	2	50 m	286748.115850	5804189.069690	61.197	61.077
	3	100 m	286754.269353	5804240.152190	61.228	60.978
	4	150 m	286757.218502	5804290.374460	61.245	61.035
	5	200 m	286761.898828	5804337.471730	61.817	61.737
	6	250 m	286766.378846	5804388.149100	62.281	62.181
	7	300 m	286770.678198	5804437.429860	62.383	62.253
	8	350 m	286775.992190	5804487.519770	62.413	62.273
	9	400 m	286780.529097	5804537.484880	62.272	20.202
C	1	0 m	286877.271934	5804195.012080	64.008	63.878
	2	25 m	286900.045302	5804184.544050	63.899	63.679
	3	50 m	286924.378795	5804173.561770	63.651	63.451
	4	75 m	286947.576129	5804163.419570	63.313	63.203
	5	100 m	286971.114105	5804152.877420	62.630	62.470
	6	125 m	286993.010533	5804142.773240	61.964	61.824
	7	150 m	287014.650829	5804132.964060	61.776	61.576
	8	175 m	287038.970816	5804121.790160	60.823	60.683
	9	200 m	287061.687606	5804111.642400	59.603	59.453
D	1	0 m	287075.661009	5804160.381710	60.843	60.603
	2	25 m	287050.589123	5804171.586990	61.840	61.620
	3	50 m	287027.508774	5804180.051510	62.535	62.385

Transect Number	Shovel Test Pit Number	Hole Distances (m)	Easting (GDA 94, Zone 55)	Northing (GDA 94, Zone 55)	Surface Height (m above sea level)	Base Height (m above sea level)
	4	75 m	287004.283493	5804191.115830	63.146	62.986
	5	100 m	286982.170100	5804201.973090	63.945	63.915
	6	125 m	286958.192065	5804212.550410	64.584	64.404
	7	150 m	286936.454929	5804222.068570	64.840	64.740
	8	175 m	286912.172307	5804232.534110	64.813	64.613
	9	200 m	286890.953607	5804241.692000	64.702	64.482
E	1	0 m	286371.782788	5803985.014990	63.133	62.953
	2	25 m	286393.825819	5803969.100590	62.694	62.574
	3	50 m	286417.564730	5803962.527560	63.022	62.762
	4	75 m	286439.124237	5803956.788690	62.751	62.571
	5	100 m	286462.766773	5803949.386110	62.462	62.322
	6	125 m	286484.668333	5803941.045160	62.474	62.374
	7	150 m	286509.843228	5803930.590860	62.166	62.046
	8	175 m	286533.440299	5803922.106760	62.421	62.301
	9	200 m	286555.647375	5803914.948540	62.398	62.198
	10	225 m	286579.868441	5803904.800400	62.247	62.067
	11	250 m	286602.259563	5803896.813220	61.590	61.380
	12	275 m	286628.568408	5803887.521680	61.434	61.314
	13	300 m	286652.110476	5803879.386320	61.122	61.002
	14	325 m	286673.027686	5803870.220530	60.659	60.459

Transect Number	Shovel Test Pit Number	Hole Distances (m)	Easting (GDA 94, Zone 55)	Northing (GDA 94, Zone 55)	Surface Height (m above sea level)	Base Height (m above sea level)
	15	350 m	286699.622910	5803861.484220	60.416	60.336
	16	375 m	286721.793495	5803853.284540	59.969	59.819
	17	400 m	286745.199845	5803845.290950	59.351	59.091
F	1	0 m	286508.444806	5803744.608000	N/A	N/A
	2	50 m	286503.618610	5803693.839540	N/A	N/A
	3	100 m	286499.446597	5803648.027490	N/A	N/A
	4	150 m	286492.609513	5803594.698230	N/A	N/A
	5	200 m	286489.327712	5803546.018190	N/A	N/A
	6	250 m	286485.498945	5803494.056350	N/A	N/A
	7	300 m	286479.860144	5803448.551940	N/A	N/A
	8	350 m	286474.937443	5803395.496170	N/A	N/A
	9	400 m	286472.377902	5803343.886230	N/A	N/A
G	1	0 m	286306.918214	5803310.219880	N/A	N/A
	2	25 m	286303.129942	5803285.596120	N/A	N/A
	3	50 m	286298.394603	5803260.735590	N/A	N/A
	4	75 m	286295.198249	5803235.993440	N/A	N/A
	5	100 m	286290.936444	5803210.185850	N/A	N/A
	6	125 m	286287.211247	5803187.006670	N/A	N/A
	7	150 m	286283.158253	5803162.182080	N/A	N/A
	8	175 m	286279.189697	5803136.597560	N/A	N/A

Transect Number	Shovel Test Pit Number	Hole Distances (m)	Easting (GDA 94, Zone 55)	Northing (GDA 94, Zone 55)	Surface Height (m above sea level)	Base Height (m above sea level)
	9	200 m	286275.474453	5803112.279600	N/A	N/A
H	1	0 m	286325.292501	5803112.786220	N/A	N/A
	2	25 m	286329.176620	5803136.766430	N/A	N/A
	3	50 m	286333.060739	5803162.097640	N/A	N/A
	4	75 m	286336.944858	5803186.584480	N/A	N/A
	5	100 m	286341.166727	5803211.915690	N/A	N/A
	6	125 m	286344.797534	5803235.220410	N/A	N/A
	7	150 m	286349.357152	5803261.058240	N/A	N/A
	8	175 m	286352.903522	5803285.376210	N/A	N/A
	9	200 m	286356.787641	5803310.031920	N/A	N/A
I	1	0 m	286713.167537	5803272.878230	62.904	62.754
	2	25 m	286705.966051	5803298.208100	62.634	62.554
	3	50 m	286698.913748	5803321.677140	62.254	62.144
	4	75 m	286690.309620	5803346.720440	62.042	61.932
	5	100 m	286683.835065	5803370.204240	68.469	68.339
	6	125 m	286676.806988	5803394.180020	68.244	68.124
	7	150 m	286669.030103	5803418.787290	68.291	68.141
	8	175 m	286662.887252	5803440.872230	67.798	67.598
	9	200 m	286655.837483	5803465.995300	67.213	67.003
	10	225 m	286649.488924	5803489.193540	66.528	66.318

Transect Number	Shovel Test Pit Number	Hole Distances (m)	Easting (GDA 94, Zone 55)	Northing (GDA 94, Zone 55)	Surface Height (m above sea level)	Base Height (m above sea level)
	11	250 m	286642.038600	5803515.469540	66.073	65.953
	12	275 m	286635.807805	5803538.516910	65.675	65.515
	13	300 m	286628.517027	5803562.868050	65.120	65.030
	14	325 m	286621.060648	5803587.894910	64.822	64.662
	15	350 m	286615.223844	5803609.392660	64.612	64.502
	16	375 m	286607.645020	5803635.377750	64.360	64.300
	17	400 m	286600.938084	5803658.653050	64.125	64.015
	18	425 m	286594.142413	5803682.813030	63.896	63.766
J	1	0 m	286657.838408	5803637.620360	64.710	64.460
	2	25 m	286664.068643	5803613.982650	64.661	64.501
	3	50 m	286670.846305	5803588.984140	64.744	64.544
	4	75 m	286677.436100	5803567.114450	64.901	64.781
	5	100 m	286684.670996	5803541.982250	65.006	64.946
	6	125 m	286691.618478	5803517.332240	65.294	65.204
	7	150 m	286698.659558	5803493.996830	65.784	65.684
	8	175 m	286706.499089	5803467.389480	66.007	65.907
	9	200 m	286713.439609	5803445.141350	66.055	65.925
	10	225 m	286719.404471	5803423.092890	66.437	66.327
	11	250 m	286727.121273	5803396.953930	65.926	65.636
	12	275 m	286734.040312	5803373.469650	65.736	65.606

Transect Number	Shovel Test Pit Number	Hole Distances (m)	Easting (GDA 94, Zone 55)	Northing (GDA 94, Zone 55)	Surface Height (m above sea level)	Base Height (m above sea level)
	13	300 m	286740.869984	5803349.417930	66.538	66.468
	14	325 m	286748.106275	5803325.760500	66.347	66.277
	15	350 m	286754.154009	5803301.830930	66.208	66.088
	16	375 m	286761.689824	5803277.718940	65.949	65.889
K	1	0 m	286814.307899	5803265.511270	64.539	64.459
	2	25 m	286807.630556	5803289.699290	64.704	64.574
	3	50 m	286800.500092	5803314.298610	64.831	64.621
	4	75 m	286794.348579	5803337.573810	65.315	65.195
	5	100 m	286786.822885	5803361.833690	65.820	65.710
	6	125 m	286780.423005	5803384.619630	65.963	65.873
	7	150 m	286773.000926	5803410.257450	65.702	65.632
	8	175 m	286766.673503	5803432.972350	65.080	64.990
	9	200 m	286759.356233	5803458.531030	64.503	64.423
	10	225 m	286752.110458	5803483.261320	64.141	64.011
	11	250 m	286745.853560	5803505.283680	64.303	64.193
	12	275 m	286738.937638	5803528.177010	64.233	64.113
	13	300 m	286731.263452	5803552.993350	64.150	63.900
	14	325 m	286724.499007	5803577.597350	63.985	63.835
	15	350 m	286717.186304	5803601.648130	63.947	63.767
L	1	0 m	286775.011622	5803575.095010	66.443	66.303

Transect Number	Shovel Test Pit Number	Hole Distances (m)	Easting (GDA 94, Zone 55)	Northing (GDA 94, Zone 55)	Surface Height (m above sea level)	Base Height (m above sea level)
	2	25 m	286782.161938	5803550.804160	66.456	66.356
	3	50 m	286789.137793	5803526.828940	66.440	66.240
	4	75 m	286796.021388	5803502.728020	66.443	66.363
	5	100 m	286803.139790	5803479.118560	66.429	66.279
	6	125 m	286809.975999	5803454.989260	67.036	67.006
	7	150 m	286816.939580	5803430.812040	67.212	66.992
	8	175 m	286823.784163	5803406.975340	67.246	67.066
	9	200 m	286830.739458	5803383.008020	67.078	66.898
	10	225 m	286837.907858	5803358.666920	67.033	66.853
	11	250 m	286844.794046	5803334.743700	66.641	66.481
	12	275 m	286851.765105	5803311.020040	66.251	66.111
	13	300 m	286858.525399	5803286.537580	65.877	65.597
	14	325 m	286865.480697	5803262.904430	65.761	65.481
M	1	0 m	287245.705475	5802986.210560	59.628	59.518
	2	25 m	287270.866090	5802983.388530	59.858	59.758
	3	50 m	287295.451918	5802980.612000	59.443	59.353
	4	75 m	287320.414640	5802977.517860	59.566	59.456
	5	100 m	287345.031625	5802974.546770	59.209	59.079
	6	125 m	287369.799697	5802971.489850	58.618	58.478
	7	150 m	287394.698053	5802968.147670	58.387	58.297

Transect Number	Shovel Test Pit Number	Hole Distances (m)	Easting (GDA 94, Zone 55)	Northing (GDA 94, Zone 55)	Surface Height (m above sea level)	Base Height (m above sea level)
	8	175 m	287419.854323	5802965.191460	58.162	57.982
	9	200 m	287444.820874	5802962.175530	58.101	57.961
	10	225 m	287469.251090	5802959.189290	57.823	57.523
	11	250 m	287494.120130	5802956.213940	57.680	57.560
	12	275 m	287519.638391	5802953.106320	57.689	57.569
N	1	0 m	287452.728825	5803011.471150	58.250	58.170
	2	25 m	287428.292935	5803014.140780	58.667	58.467
	3	50 m	287403.303330	5803017.005680	58.993	58.863
	4	75 m	287378.730472	5803020.065860	59.413	59.263
	5	100 m	287353.636415	5803023.114140	59.687	59.537
	6	125 m	287328.763224	5803026.220170	59.658	59.398
	7	150 m	287304.020124	5803029.272480	59.548	59.328
	8	175 m	287278.914976	5803032.317120	59.232	58.992
O	1	0 m	287213.966419	5803225.624570	58.353	58.293
	2	50 m	287219.054887	5803276.106890	58.605	58.525
	3	100 m	287224.425924	5803323.774330	58.919	58.739
	4	150 m	287228.201312	5803375.064420	59.265	59.145
	5	200 m	287232.497707	5803424.373610	59.497	59.417
	6	250 m	287236.972081	5803473.450090	59.283	59.093
	7	300 m	287242.158552	5803524.504290	58.767	58.687

Transect Number	Shovel Test Pit Number	Hole Distances (m)	Easting (GDA 94, Zone 55)	Northing (GDA 94, Zone 55)	Surface Height (m above sea level)	Base Height (m above sea level)
	8	350 m	287246.159077	5803577.958120	58.405	58.305
	9	400 m	287250.592987	5803624.490720	58.173	58.073
P	1	0 m	287625.578794	5803054.758360	58.327	58.247
	2	50 m	287629.530320	5803104.837410	58.575	58.495
	3	100 m	287634.874429	5803154.422200	58.455	58.225
	4	150 m	287639.670917	5803203.600820	57.807	57.677
	5	200 m	287643.470970	5803252.795310	55.420	55.290
	6	250 m	287648.265997	5803303.585560	53.143	52.883
	7	300 m	287652.018341	5803350.461790	53.033	52.913
	8	350 m	287657.275138	5803403.242230	53.747	53.587
	9	400 m	287661.601024	5803452.037720	55.692	55.562
Q	1	0 m	287916.844717	5803399.845740	49.149	48.969
	2	50 m	287912.325337	5803348.402370	48.933	48.713
	3	100 m	287908.016132	5803299.890160	48.236	48.036
	4	150 m	287904.146989	5803249.751440	47.548	47.468
	5	200 m	287898.352306	5803203.518090	47.647	47.476
	6	250 m	287895.025917	5803150.308540	47.210	46.990
	7	300 m	287891.007352	5803103.414110	46.943	46.813
	8	350 m	287886.098852	5803052.848120	47.041	46.941
	9	400 m	287881.001214	5803001.228740	47.008	46.908

Transect Number	Shovel Test Pit Number	Hole Distances (m)	Easting (GDA 94, Zone 55)	Northing (GDA 94, Zone 55)	Surface Height (m above sea level)	Base Height (m above sea level)
R	1	0 m	287528.900395	5803438.552420	58.363	58.203
	2	25 m	287533.536558	5803464.254020	58.919	58.799
	3	50 m	287537.678125	5803489.259450	59.649	59.529
	4	75 m	287541.999632	5803513.621900	60.319	60.259
	5	100 m	287546.220301	5803536.946880	60.828	60.698
	6	125 m	287550.516097	5803561.680770	61.404	61.304
	7	150 m	287554.063645	5803586.302080	61.927	61.767
	8	175 m	287558.233204	5803613.638840	61.839	61.779
	9	200 m	287563.028549	5803636.686420	61.467	61.356
S	1	0 m	287511.418254	5803633.996130	60.574	60.474
	2	25 m	287506.823384	5803611.776460	60.756	60.656
	3	50 m	287502.599270	5803585.385040	60.954	60.844
	4	75 m	287498.703987	5803561.397430	60.607	60.547
	5	100 m	287494.110360	5803533.792700	60.838	60.718
	6	125 m	287490.463388	5803510.324450	60.676	60.586
	7	150 m	287486.758085	5803485.696530	60.249	59.949
	8	175 m	287482.774363	5803461.697740	59.945	59.785
	9	200 m	287479.338992	5803439.579650	59.674	59.524
T	1	0 m	287339.712553	5803694.532170	59.933	59.833
	2	25 m	287341.623482	5803739.299590	59.712	59.592

Transect Number	Shovel Test Pit Number	Hole Distances (m)	Easting (GDA 94, Zone 55)	Northing (GDA 94, Zone 55)	Surface Height (m above sea level)	Base Height (m above sea level)
	3	50 m	287346.852938	5803791.330400	59.321	59.241
	4	75 m	287350.686571	5803838.707120	58.756	58.576
	5	100 m	287354.602226	5803889.491310	58.072	57.932
	6	125 m	287359.622619	5803940.350660	57.823	57.693
	7	150 m	287363.874791	5803989.391380	57.580	57.460
	8	175 m	287369.770377	5804041.009470	57.448	57.168
	9	200 m	287373.197105	5804088.876490	56.828	56.708
U	1	0 m	287469.954806	5803722.631610	58.710	58.590
	2	25 m	287474.242944	5803747.298520	58.522	58.362
	3	50 m	287478.673999	5803771.633510	58.579	58.499
	4	75 m	287483.262553	5803797.422960	58.665	58.485
	5	100 m	287487.681102	5803823.095790	58.693	58.613
	6	125 m	287492.143469	5803848.076180	58.490	58.330
	7	150 m	287497.241141	5803873.026610	58.352	58.272
	8	175 m	287501.771938	5803898.529930	58.365	58.265
	9	200 m	287506.250094	5803923.325320	58.193	58.053
V	1	0 m	287579.715740	5803930.269620	56.924	56.794
	2	25 m	287572.843489	5803907.283900	57.307	57.127
	3	50 m	287564.315607	5803879.180680	57.565	57.435
	4	75 m	287556.770160	5803853.739810	57.602	57.502

Transect Number	Shovel Test Pit Number	Hole Distances (m)	Easting (GDA 94, Zone 55)	Northing (GDA 94, Zone 55)	Surface Height (m above sea level)	Base Height (m above sea level)
	5	100 m	287548.817467	5803826.356980	57.630	57.530
	6	125 m	287540.964594	5803799.752240	57.986	57.816
	7	150 m	287533.822189	5803772.840430	58.019	57.949
	8	175 m	287526.149363	5803745.586770	58.019	57.919
	9	200 m	287519.492208	5803721.336750	58.081	57.951
W	1	0 m	287743.677342	5803699.898070	53.476	53.346
	2	50 m	287748.593811	5803749.796720	53.582	53.482
	3	100 m	287753.170205	5803799.055470	53.605	53.505
	4	150 m	287757.802191	5803852.296560	53.832	53.762
	5	200 m	287759.321728	5803899.829190	55.150	55.030
	6	250 m	287765.825653	5803949.573420	54.377	54.277
	7	300 m	287770.764303	5803998.685960	53.762	53.632
	8	350 m	287775.970458	5804048.809350	53.449	53.359
	9	400 m	287780.772546	5804102.818910	53.450	53.180
X	1	0 m	288371.654211	5803988.785320	47.120	46.980
	2	25 m	288362.766902	5803968.498640	48.352	48.182
	3	50 m	288354.215333	5803946.490980	48.849	48.809
	4	75 m	288343.702598	5803921.698980	48.997	48.967
	5	100 m	288333.047707	5803897.244210	48.933	48.763
	6	125 m	288324.355532	5803876.432810	48.956	48.796

Transect Number	Shovel Test Pit Number	Hole Distances (m)	Easting (GDA 94, Zone 55)	Northing (GDA 94, Zone 55)	Surface Height (m above sea level)	Base Height (m above sea level)
	7	150 m	288315.113237	5803854.093200	48.464	48.344
	8	175 m	288305.267382	5803829.493950	48.242	48.112
	9	200 m	288293.346260	5803806.103820	47.906	47.826
	10	225 m	288371.654211	5803988.785320	47.120	47.020
	11	250 m	288362.766902	5803968.498640	48.352	48.202
	12	275 m	288354.215333	5803946.490980	48.849	48.799
	13	300 m	288343.702598	5803921.698980	48.997	48.837
	14	325 m	288333.047707	5803897.244210	48.933	48.783
	15	350 m	288324.355532	5803876.432810	48.956	48.866
	16	375 m	288315.113237	5803854.093200	48.464	48.314
	17	400 m	288305.267382	5803829.493950	48.242	48.152
Y	1	0 m	287629.380862	5804161.622870	55.666	55.506
	2	25 m	287655.321815	5804158.051420	55.792	55.622
	3	50 m	287676.310734	5804155.580960	55.676	55.626
	4	75 m	287704.585830	5804151.992330	55.883	55.723
	5	100 m	287730.150058	5804148.786380	55.887	55.757
	6	125 m	287754.032121	5804145.882950	55.807	55.707
	7	150 m	287781.759361	5804143.418120	55.854	55.704
	8	175 m	287805.659883	5804140.854430	55.901	55.861
	9	200 m	287828.903437	5804138.389800	55.770	55.640

Transect Number	Shovel Test Pit Number	Hole Distances (m)	Easting (GDA 94, Zone 55)	Northing (GDA 94, Zone 55)	Surface Height (m above sea level)	Base Height (m above sea level)
	10	225 m	287854.493116	5804135.223410	55.839	55.759
	11	250 m	287877.774003	5804132.611970	55.830	55.760
	12	275 m	287902.890269	5804129.676690	55.717	55.587
	13	300 m	287929.548255	5804126.568350	55.326	55.196
	14	325 m	287953.313684	5804124.136700	55.113	54.983
	15	350 m	287978.534322	5804121.577280	55.270	55.140
	16	375 m	288003.118060	5804118.580340	54.785	54.645
	17	400 m	288029.290066	5804115.834050	53.595	53.445
Z	1	0 m	288371.654211	5803988.785320	47.120	47.000
	2	25 m	288362.766902	5803968.498640	48.352	48.252
	3	50 m	288354.215333	5803946.490980	48.849	48.799
	4	75 m	288343.702598	5803921.698980	48.997	48.897
	5	100 m	288333.047707	5803897.244210	48.933	48.833
	6	125 m	288324.355532	5803876.432810	48.956	48.806
	7	150 m	288315.113237	5803854.093200	48.464	48.344
	8	175 m	288305.267382	5803829.493950	48.242	48.142
	9	200 m	288293.346260	5803806.103820	47.906	47.816
AA	1	0 m	288342.415677	5803794.668630	48.243	48.143
	2	25 m	288352.316384	5803815.496890	48.167	48.077
	3	50 m	288363.137556	5803841.397800	48.710	48.610

Transect Number	Shovel Test Pit Number	Hole Distances (m)	Easting (GDA 94, Zone 55)	Northing (GDA 94, Zone 55)	Surface Height (m above sea level)	Base Height (m above sea level)
	4	75 m	288371.055563	5803860.724760	49.003	48.883
	5	100 m	288381.111321	5803884.611730	49.621	49.541
	6	125 m	288391.622134	5803910.615760	50.126	50.036
	7	150 m	288401.037398	5803931.601220	50.695	50.605
	8	175 m	288409.066689	5803952.457630	50.230	50.130
	9	200 m	288419.235071	5803978.417920	48.954	48.794
BB	1	0 m	288318.171325	5804092.267610	47.815	47.735
	2	50 m	288322.750838	5804144.601900	48.190	48.170
	3	100 m	288326.379807	5804192.640550	48.458	48.308
	4	150 m	288330.723653	5804240.572340	48.645	48.565
	5	200 m	288335.481781	5804290.844790	49.032	48.932
	6	250 m	288340.259760	5804340.321920	49.480	49.340
	7	300 m	288345.391567	5804393.582030	49.999	49.829
	8	350 m	288349.843789	5804442.581840	50.305	50.155
	9	400 m	288354.574913	5804490.172660	50.054	49.914
CC	1	0 m	288046.865712	5804531.749040	51.631	51.551
	2	25 m	288042.238124	5804506.647580	52.592	52.472
	3	50 m	288037.654470	5804482.123560	53.201	53.111
	4	75 m	288033.342395	5804458.462840	53.919	53.769
	5	100 m	288029.246901	5804433.172630	54.250	54.150

Transect Number	Shovel Test Pit Number	Hole Distances (m)	Easting (GDA 94, Zone 55)	Northing (GDA 94, Zone 55)	Surface Height (m above sea level)	Base Height (m above sea level)
	6	125 m	288025.099867	5804406.913670	54.357	54.307
	7	150 m	288020.337460	5804384.351150	54.452	54.312
	8	175 m	288016.070225	5804358.145930	54.338	54.248
	9	200 m	288012.047646	5804334.673570	54.281	54.141
DD	1	0 m	287349.477535	5804575.006580	60.593	60.403
	2	50 m	287345.334476	5804524.031620	59.543	59.393
	3	100 m	287339.917897	5804474.778420	58.689	58.599
	4	150 m	287336.771192	5804423.287630	58.095	58.015
	5	200 m	287332.997078	5804377.508420	57.245	57.155
	6	250 m	287329.427904	5804327.753130	56.289	56.219
	7	300 m	287323.790955	5804276.876300	55.280	55.190
	8	350 m	287318.666068	5804226.190890	54.459	54.349
	9	400 m	287312.372934	5804176.036170	53.593	53.443

Appendix 5 - Site Gazetteer

Table A5.1: Site Gazeteer

Site Name	Site Number	Primary Grid Coordinate (GDA 94, Zone 55)	Site Type	Landform	Cultural Heritage Significance
Argoona Road AS1	7822-2969	E 286699.530 N 5803887.270	Artefact Scatter	1st Order Drainage Line	Low
Argoona Road IA 1	7822-2973	E 288391.199 N 5803906.079	Isolated Artefact	Low Rise	Low

Appendix 6 – Artefact Analysis

Table A6.1: Artefact analysis

SITE NAME/NUMBER	ARTEFACT NUMBER	TEST HOLE NUMBER	DEPTH Mm	MATERIAL TYPE	COLOUR	ARTEFACT TYPE	FRACTURE TYPE	PLATFORM TYPE	PLATFORM WIDTH	TERMINATION TYPE	FLAKE SCARS	MAXIMUM DIMENSION	ORIENTED LENGTH	ORIENTED WIDTH	ORIENTED THICKNESS	COMMENTS
Argoona Road AS1	1	Surface	Surface	Silcrete (coarse)	Beige	Whole flake	Conchoidal	Crushed		Hinge	0	28.5 mm	28 mm	28 mm		Analysis taken from photo
Argoona Road AS1	2	Surface	Surface	Silcrete (coarse)	Beige	Core fragment/ flake	Conchoidal	Plain	30 mm	Feather	4	41 mm	41 mm	41 mm		Analysis taken from photo - appears to be base of unidirectional core, flaked off.
Argoona Road IA 1	1	STP04	0-50mm	Silcrete (fine)	Beige	Whole flake	Conchoidal	Crushed		Step	0	13.4 mm	13.4 mm	10.6 mm	2.6 mm	

Appendix 7 – Glossary

Items highlighted in ***bold italics*** in the definition are defined elsewhere in the glossary.

AAV	**Aboriginal Affairs Victoria**. A division of **DPCD** responsible for management of Aboriginal cultural heritage in Victoria.
Aboriginal cultural heritage likelihood	an area assessed by a Cultural Heritage Advisor as having potential for containing either surface or subsurface Aboriginal archaeological deposits. This term is used in this report to differentiate between *legislated* ***areas of cultural heritage sensitivity*** and areas considered by an archaeologist to be sensitive.
Aboriginal site	a location containing Aboriginal cultural heritage, e.g. ***artefact scatter***, ***isolated artefact***, ***scarred tree***, ***shell midden***, whether or not the site is registered in the ***VAHR***, cf. ***Aboriginal cultural heritage place***.
Angular fragment	an artefact which has technologically diagnostic features but has no discernible ventral or dorsal surface and hence is unidentifiable as either a flake or a core
Area of cultural heritage sensitivity	an area specified as an area of cultural heritage sensitivity in Division 3 or Division 4 of Part 2 of the *Aboriginal Heritage Regulations 2007*.
Artefact scatter	**s**tone artefact scatters consist of more than one stone artefact. Activities associated with this site type include stone tool production, hunting and gathering or domestic sites associated with campsites. Stone artefacts may be flakes of stone, cores (flakes are removed from the stone cores) or tools. Some scatters may also contain other material such as charcoal, bone, shell and ochre.
Assemblage	the name given to encompass the entire collection of artefacts recovered by archaeologists, invariably classified into diagnostic items used to describe the material culture.
Backed	when one margin of a flake is retouched at a steep angle, and that margin is opposite a sharp edge. The steep margin is formed by bi-polar or hammer and anvil knapping. Also used to describe artefacts with backing, e.g. backed artefact.
Backed artefact	a class of artefact employed by archaeologists to describe artefacts which are backed. Sometimes divided into Elouera, Bondi Point, Microlith and Geometric.

Bipolar	a flaking technique where the object to be reduced is rested on an anvil and struck. This process is identified by flakes with platform angles close to 90 degrees as well as apparent initiation from both ends. Some crushing may also be visible.
Burials	Aboriginal communities strongly associate burial sites with a connection to country and are opposed to disturbance of burials or their associated sites. General considerations for the presence of burial sites are the suitability of Sub surface deposits for digging purposes; with soft soil and sand being the most likely. They are more likely near water courses or in dunes near old lake beds or near the coast. Burials are often located near other sites such as oven mounds, ***shell middens*** or ***artefact scatters***.
Chert	a cryptocrystalline siliceous sedimentary stone.
CHMP	**Cultural Heritage Management Plan**. A plan prepared under the *Aboriginal Heritage Act 2006*.
Core	an artefact which has technologically diagnostic features. Generally this class of artefact has only negative scars from flake removal, and thus no ventral surface, however, for the purposes of this research core has been employed to encompass those artefacts which were technically flakes but served the function of a core (ie. the provider of flakes).
Cortex	the weathered outer portion of a stone, often somewhat discoloured and coarser compared with the unweathered raw material.
Decortications	the process of removing cortex from a stone (generally by flaking).
Deep ripping	the ploughing of soil using a ripper or subsoil cultivation tool to a depth of 60 cm or more (see ***significant ground disturbance***).
DPCD	Department of Planning and Community Development. The Victorian State Government department, of which ***AAV*** is a part, responsible for management of Aboriginal cultural heritage in Victoria.
Flake	an artefact which has technologically diagnostic features and a ventral surface.
High impact activity	an activity specified as a high impact activity in Division 5 of Part 2 of the *Aboriginal Heritage Regulations 2007*.
HV	**Heritage Victoria.** A division of **DPCD** responsible for management of historical heritage in Victoria.

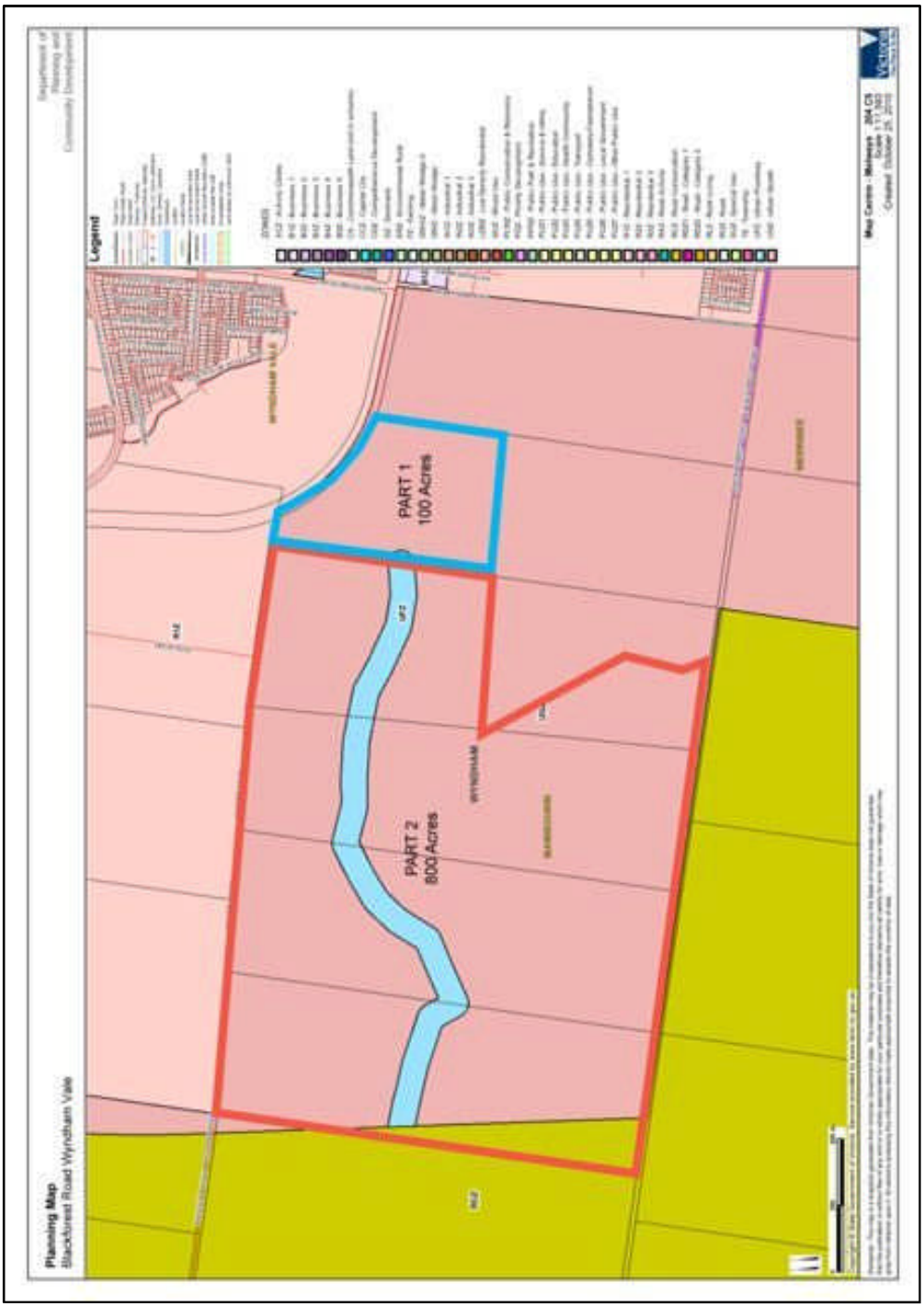
Isolated finds or artefacts	isolated finds refer to a single artefact. These artefacts may have been dropped or discarded by its owner once it was of no use. This site type can also be indicative of further Subsurface archaeological deposits. These site types can be found anywhere within the landscape, however, they are more likely to occur within contexts with the same favourable characteristics for stone artefact scatter sites.
Manuport	an object which has been carried by humans to the site.
Oriented length	dimension measured according to the following criteria: The length of the flake from the platform, at 90˚ to force indicators such as ring-crack, bulb of percussion, force ripples and striations, to the opposing end. Where there were an insufficient number of features present to take this measurement, such as when the flake was broken, this variable was not recorded (sometimes referred to as percussion length).
Oriented thickness	dimension measured at 90˚and bisecting the oriented width dimension. This was done from the ventral surface to the dorsal surface (sometimes referred to as percussion thickness).
Oriented width	dimension measured at 90˚and bisecting the oriented length dimension. This was done from one margin to the other. As this measurement and oriented thickness, both rely on oriented length, these were not recorded where the oriented length was not recorded (sometimes referred to as percussion width).
Procurement	the process of obtaining raw material for reduction.
Quarries	**s**tone quarries were used to procure the raw material for making stone tools. Quarries are rocky outcrops that usually have evidence of scars from flaking, crushing and battering the rock. There may be identifiable artefacts near or within The site such as unfinished tools, hammer stones, anvils and grinding stones.
Quartz	a crystalline form of silica.
RAP	**Registered Aboriginal Party**. An Aboriginal organisation with responsibilities relating to the management of Aboriginal cultural heritage for a specified area of Victoria under the *Aboriginal Heritage Act 2006*.
Raw material	the kind of stone the artefacts were manufactured from.
Reduction	the process of removing stone flakes from another pieces of stone. Generally this is performed by striking (hard hammer percussion) one rock with another to remove a flake.
Registered cultural heritage place	An Aboriginal site recorded in the ***VAHR***, cf. ***Aboriginal site***.

Retouch	retouch is when a ***flake*** is removed after the manufacture of the original flake. This sequence can be observed when a flake scar is present and encroaches over the ventral surface and thus must have been made after the initial flake removal. Recorded whether retouch was absent or present on the artefact.
Rock shelter	a concave area in a cliff where the cliff overhangs; or a concave area in a tor where the tor overhangs; or a shallow cave, where the height of the concave area is generally greater than its depth.
Scarred trees	it is known that the wood and bark of trees have been used for a variety of purposes, such as carrying implements, shield or canoes. The removal of this raw material from a tree produces a 'scar'. The identification of a scar associated with Aboriginal custom as opposed to natural scarring can be difficult. The scar should be of a certain size and shape to be identifiable with its product; the tree should also be mature in age, from a time that Aboriginal people were still active in the area.
Significant ground disturbance	disturbance of topsoil or surface rock layer of the ground or a waterway by machinery in the course of grading, excavating, digging, dredging or ***deep ripping***, but does not include ploughing other than ***deep ripping***.
Silcrete	a silicified sedimentary stone, often with fine inclusions or grains in a cryptocrystalline matrix. Because of the nature of the grains in silcrete (a hindrance in knapping/flaking predictability) the stone is sometimes heat treated. This exposure to heat can be identified by the presence of pot-lidding as well as a 'lustre' to the stone which is otherwise absent in the stones' natural state. Exposure to sufficient heat homogenises the stone matrix and improves the knapping (flake path) predictive potential (Crabtree & Butler 1964; Mandeville & Flenniken 1974; Purdy 1974; Domanski & Webb 1992; Hiscock 1993; Domanski *et al*. 1994). Similar to indurated mudstone, it has also been demonstrated that silcrete from the Hunter Valley often turns a red colour after being exposed to heat (Rowney 1992; Mercieca 2000).
Stone arrangements	**s**tone arrangements are places where Aboriginal people have deliberately positioned stones to form shapes or patterns. They are often known to have ceremonial significance. They can be found where there are many boulders, such as volcanic areas and are often large in size, measuring over five metres in width.
Taphonomy	the study of the processes (both natural and cultural) which affect the deposition and preservation of both the artefacts and the site itself.

Technology	a form of artefact analysis which is based upon the knapping/ manufacturing process, commonly used to subsequently infer behaviour patterns, cultural-selection and responses to raw material or the environment.
Thumbnail scraper	a conceptual class of artefact employed to describe small rounded retouched flakes with steep margins (based on the classification by Mulvaney & Kamminga 1999).
VAHR	**Victorian Aboriginal Heritage Register**. A register of Aboriginal cultural heritage places maintained by ***AAV***.
VHI	**Victorian Heritage Inventory**. A register of places and objects in Victoria identified as historical archaeological sites, areas or relics, and all private collections of artefacts, maintained by ***HV***. Sites listed on the VHI are not of State significance but are usually of regional or local significance. Listing on the VHR provides statutory protection for that a site, except in the case where a site has been "D-listed".
VHR	**Victorian Heritage Register**. A register of the State's most significant heritage places and objects, maintained by ***HV***. Listing on the VHR provides statutory protection for that a site.

Appendix 8 – Council Zoning Requirements

Zoning Map



Urban Growth Zone

37.07 **URBAN GROWTH ZONE**

13/03/2010 VC63

Shown on the planning scheme map as **UGZ** with a number.

Purpose

To implement the State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.

To manage the transition of non-urban land into urban land in accordance with a precinct structure plan.

To provide for a range of uses and the development of land in accordance with a precinct structure plan.

To contain urban use and development to areas identified for urban development in a precinct structure plan.

To provide for the continued non-urban use of the land until urban development in accordance with a precinct structure plan occurs.

To ensure that, before a precinct structure plan is applied, the use and development of land does not prejudice the future urban use and development of the land.

Application of provisions

Part A – No precinct structure plan applies

The provisions of clauses 37.07-1 to 37.07-8 apply if no precinct structure plan applies to the land.

Part B – Precinct structure plan applies

The provisions of clauses 37.07-9 to 37.07-16 apply if a precinct structure plan applies to the land.

Precinct structure plan provisions

A precinct structure plan applies to land when the precinct structure plan is incorporated in this scheme.

PART A - PROVISIONS FOR LAND WHERE NO PRECINCT STRUCTURE PLAN APPLIES

37.07-1 **Table of uses**

13/03/2010 VC63

Section 1 – Permit not required

USE	CONDITION
Agriculture (other than Animal keeping, Apiculture, Intensive animal husbandry, Rice growing and Timber production)	
Apiculture	Must meet the requirements of the Apiary Code of Practice, May 1997.
Bed and breakfast	No more than 6 persons may be accommodated away from their normal place of residence. At least 1 car parking space must be provided for each 2 persons able to be accommodated

USE	CONDITION
	away from their normal place of residence.
Carnival Circus	Must meet the requirements of A 'Good Neighbour' Code of Practice for a Circus or Carnival, October 1997.
Dependent person's unit	Must be the only dependent person's unit on the lot. Must meet the requirements of Clause 37.07-2.
Dwelling (other than Bed and breakfast)	Must be the only dwelling on the lot. The lot must be at least 40 hectares. Must meet the requirements of Clause 37.07-2.
Geothermal energy extraction	Must meet the requirements of Clause 52.08-4.
Greenhouse gas sequestration	Must meet the requirements of Clause 52.08-6.
Greenhouse gas sequestration exploration	
Home occupation Informal outdoor recreation Mineral exploration	
Mining	Must meet the requirements of Clause 52.08-2.
Minor utility installation Natural systems Railway Road	
Search for stone	Must not be costeaning or bulk sampling.
Telecommunications facility	Buildings and works must meet the requirements of Clause 52.19.
Tramway	

Section 2 – Permit required

USE	CONDITION
Animal boarding	
Animal keeping (other than Animal boarding)	Must be no more than 5 animals.
Car park	Must be used in conjunction with another use in Section 1 or 2.
Cemetery Community market Crematorium	
Dependent person's unit – if the Section 1 condition is not met	Must meet the requirements of Clause 37.07-2.
Display home	
Dwelling (other than Bed and breakfast) – if the Section 1	Must be no more than two dwellings on the lot.

USE	CONDITION
conditions are not met	Must meet the requirements of Clause 37.07-2.
Education centre Emergency services facility	
Freeway service centre	Must meet the requirements of Clause 52.30.
Freezing and cool storage	
Group accommodation	Must be used in conjunction with Agriculture, Outdoor recreation facility, Rural industry, or Winery. Must be no more than 6 dwellings.
Hospital Host farm Interpretation centre Leisure and recreation (other than Informal outdoor recreation and Motor racing track) Manufacturing sales Medical centre Mineral, stone, or soil extraction (other than Mineral exploration, Mining, and Search for stone) Nursing home	
Place of assembly (other than Carnival, Circus, and Place of worship)	Must not be used for more than 10 days in a calender year.
Place of worship Primary produce sales Real estate agency	
Residential hotel Restaurant	Must be used in conjunction with Agriculture, Outdoor recreation facility, Rural industry, or Winery.
Rice growing Rural industry Rural store	
Store (other than Freezing and cool storage and Rural store)	Must be in a building, not a dwelling, and used to store equipment, goods, or motor vehicles used in conjunction with the occupation of a resident of a dwelling on the lot.
Timber production	Must meet the requirements of Clause 52.18.
Utility installation (other than Minor utility installation and Telecommunications facility) Veterinary centre Wind energy facility Winery	

Section 3 - Prohibited

USE
Accommodation (other than Dependent person's unit, Dwelling, Group accommodation, Host farm, Nursing home, and Residential hotel)
Industry (other than Rural industry)
Intensive animal husbandry
Motor racing track
Office (other than Medical centre and Real estate agency)
Retail premises (other than Community market, Manufacturing sales, Primary produce sales and Restaurant)
Saleyard
Warehouse (other than Store)
Any other use not in Section 1 or 2

37.07-2 **Use of land for a dwelling**

10/06/2009 VC48

A lot used for a dwelling must meet the following requirements:

- Access to the dwelling must be provided via an all-weather road with dimensions adequate to accommodate emergency vehicles.
- The dwelling must be connected to a reticulated sewerage system or if not available, the waste water must be treated and retained on-site in accordance with the State Environment Protection Policy (Waters of Victoria) under the Environment Protection Act 1970.
- The dwelling must be connected to a reticulated potable water supply or have an alternative potable water supply with adequate storage for domestic use as well as for fire fighting purposes.
- The dwelling must be connected to a reticulated electricity supply or have an alternative energy source.

These requirements also apply to a dependent person's unit.

37.07-3 **Subdivision of land**

10/06/2009 VC48

A permit is required to subdivide land.

Each lot must be at least 40 hectares.

A permit may be granted to create smaller lots if any of the following apply:

- The subdivision is to create a lot for an existing dwelling. The subdivision must be a two lot subdivision. An agreement under section 173 of the Act must be entered into with the owner of each lot created which ensures that the land may not be further subdivided so as to create a smaller lot for an existing dwelling. The agreement must be registered on title.
- The subdivision is the re-subdivision of existing lots and the number of lots is not increased. An agreement under section 173 of the Act must be entered into with the owner of each lot created which ensures that the land may not be further subdivided so as to increase the number of lots. The agreement must be registered on title.
- The subdivision is by a public authority or utility service provider to create a lot for a utility installation.

37.07-4 **Buildings and works**

10/06/2009 VC48

A permit is required to construct or carry out any of the following:

- A building or works associated with a use in Section 2 of Clause 37.07-1. This does not apply to:
  - An alteration or extension to an existing dwelling provided the floor area of the alterstion or extension is no more than 50 square metres.

- An alteration or extension to an existing building used for agriculture provided the floor area of the alteration or extension is no more than 100 square metres. The building must not be used to keep, board, breed or train animals.

- Earthworks which change the rate of flow or the discharge point of water across a property boundary.
- Earthworks which increase the discharge of saline water.
- A building which is within any of the following setbacks:
  - 100 metres from a Road Zone Category 1 or land in a Public Acquisition Overlay to be acquired for a road, Category 1.
  - 40 metres from a Road Zone Category 2 or land in a Public Acquisition Overlay to be acquired for a road, Category 2.
  - 20 metres from any other road.
  - 5 metres from any other boundary.
  - 100 metres from a dwelling not in the same ownership.
  - 100 metres from a waterway, wetlands or designated flood plain.

37.07-5 Referral of applications

10/06/2008 VC48

An application of the kind listed below must be referred in accordance with section 55 of the Act to the referral authority specified in Clause 66.03.

- An application to use or develop land for any of the following:
  - Display home
  - Education centre
  - Hospital
  - Medical centre
  - Nursing home
  - Place of worship
  - Real estate agency.
- An application to subdivide land to create a lot smaller than 40 hectares in area.

37.07-6 Environmental audit

10/06/2008 VC48

Before a nursing home, pre-school centre or primary school commences on potentially contaminated land, or before the construction or carrying out of buildings and works in association with a nursing home, pre-school centre or primary school commences on potentially contaminated land, either:

- A certificate of environmental audit must be issued for the land in accordance with Part IXD of the Environment Protection Act 1970, or
- An environmental auditor appointed under the Environment Protection Act 1970 must make a statement in accordance with Part IXD of that Act that the environmental conditions of the land are suitable for the sensitive use.

In this clause, "potentially contaminated land" means land used or known to have been used for industry, mining, or the storage of chemicals, gas, wastes or liquid fuel (if not ancillary to another use of the land).

37.07-7 Decision guidelines

10/06/2008 VC48

Before deciding on an application to use or subdivide land, construct a building or construct or carry out works, in addition to the decision guidelines in Clause 65, the responsible authority must consider, as appropriate:

- The State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.

- The effect on the future urban development and use of the land, and adjacent or nearby land, having regard to:
  - Any relevant Growth Area Framework Plan.
  - Any precinct structure plan being prepared for the area.
  - Any comments or directions of the referral authority.
- Whether the proposal will prejudice the logical, efficient and orderly future urban development of the land, including the development of roads, public transport and other infrastructure.
- The capability of the land to accommodate the proposed use or development, including the disposal of effluent.
- How the use or development relates to sustainable land management.
- Whether the site is suitable for the use or development.
- The impact of the siting, design, height, bulk, colours and materials to be used on the natural environment, major roads, vistas and water features, future urban use of the land, and the measures to be undertaken to minimise any adverse impacts.
- The impact on the character and appearance of the area or features of architectural, historic or scientific significance or of natural scenic beauty or importance.
- The location and design of existing and proposed infrastructure including roads, public transport, walking and cycling networks, gas, water, drainage, telecommunications and sewerage facilities.
- Whether the use and development will require new or upgraded infrastructure, including traffic management measures.

37.07-8 **Advertising signs**

21/07/2009
VC53

Advertising sign requirements are at Clause 52.05. The zone is in Category 3.

Despite the provisions of Clause 52.05-9, a permit may be granted, for a period of not more than 5 years, to display an advertising sign that promotes the sale of land or dwellings.

PART B - PROVISIONS FOR LAND WHERE A PRECINCT STRUCTURE PLAN APPLIES

37.07-9 **Use of land**

10/05/2008
VC48

Any requirement in the Table of uses and any requirement specified in the schedule to this zone must be met.

Table of uses

Section 1 – Permit not required

USE	CONDITION
Any use in Section 1 of a zone applied by the schedule to this zone	Must comply with any condition opposite the use in Section 1 of the applied zone Must comply with any condition specified in the schedule to this zone
Any use specified in the schedule to this zone as a use for which a permit is not required	Must comply with any condition specified in the schedule to this zone

Section 2 – Permit required

USE	CONDITION
Any use in Section 2 of a zone applied by the schedule to this zone	Must comply with any condition opposite the use in Section 2 of the applied zone Must comply with any condition specified in the schedule to this zone
Any use specified in the schedule to this zone as a use for which a permit is required	Must comply with any condition specified in the schedule to this zone
Any other use not in Section 1 or 3	

Section 3 - Prohibited

USE
Any use in Section 3 of a zone applied by the schedule to this zone
Any use specified in the schedule to this zone

37.07-10 Subdivision of land

10/05/2009 VC48

A permit is required to subdivide land. Any requirement in the schedule to this zone must be met.

A permit granted must:

- Be generally in accordance with the precinct structure plan applying to the land.
- Include any conditions or requirements specified in the schedule to this zone.

37.07-11 Buildings and works

10/05/2009 VC48

If the schedule to this zone specifies:

- That the provisions of a zone apply to the development of land, the provisions of the zone apply to land in the circumstances specified in the schedule.
- Provisions relating to the development of land, those provisions apply to land in the circumstances specified in the schedule.

If the schedule to this zone specifies that a permit is required to construct a building or construct or carry out works, a permit granted must:

- Be generally in accordance with the precinct structure plan applying to the land.
- Include any conditions or requirements specified in the schedule to this zone.

37.07-12 Application requirements

10/05/2009 VC48

An application to use or subdivide land, construct a building or construct or carry out works, must be accompanied by any information specified in the schedule to this zone.

37.07-13 Exemption from notice and review

10/05/2009 VC48

An application under clause 37.07-9 to 37.07-11 which is generally in accordance with the precinct structure plan applying to the land is exempt from the notice requirements of section 52(1)(a), (b) and (d), the decision requirements of section 64(1), (2) and (3) and the review rights of section 82(1) of the Act., unless the schedule to this zone specifies otherwise.

37.07-14 Decision guidelines

10/05/2008 VC48

Before deciding on an application to use or subdivide land, construct a building or construct or carry out works, in addition to the decision guidelines in Clause 65, the responsible authority must consider, as appropriate:

- The State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.
- Any relevant Growth Area Framework Plan.
- The precinct structure plan applying to the land, including the vision and objectives of the precinct structure plan.
- Any guidelines in the schedule to this zone.

37.07-15 Inconsistencies between specific and applied zone provisions

10/05/2008 VC48

If there is an inconsistency between the specific provisions specified in the schedule to this zone and the provisions of a zone applied by the schedule to this zone, the specific provisions prevail to the extent of any inconsistency.

37.07-16 Advertising signs

10/05/2008 VC48

Advertising sign requirements are at Clause 52.05. This zone is in the category specified in the schedule to this zone or, if no category is specified, Category 3.

Notes: *Refer to the* State Planning Policy Framework *and the* Local Planning Policy Framework, *including the* Municipal Strategic Statement, *for strategies and policies which may affect the use and development of land.*

Check whether an overlay also applies to the land.

Other requirements may also apply. These can be found at Particular Provisions.

Rural Conservation Zone

35.06 **RURAL CONSERVATION ZONE**

13/09/2010 VC63

Shown on the planning scheme map as **RCZ** with a number (if shown).

Purpose

To implement the State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.

To conserve the values specified in the schedule to this zone.

To protect and enhance the natural environment and natural processes for their historic, archaeological and scientific interest, landscape, faunal habitat and cultural values.

To protect and enhance natural resources and the biodiversity of the area.

To encourage development and use of land which is consistent with sustainable land management and land capability practices, and which takes into account the conservation values and environmental sensitivity of the locality.

To provide for agricultural use consistent with the conservation of environmental and landscape values of the area.

To conserve and enhance the cultural significance and character of open rural and scenic non urban landscapes.

35.06-1 **Table of uses**

13/09/2010 VC63

Section 1 - Permit not required

USE	CONDITION
Animal keeping (other than Animal boarding)	Must be no more than 2 animals.
Apiculture	Must meet the requirements of the Apiary Code of Practice, May 1997.
Bed and breakfast	No more than 6 persons may be accommodated away from their normal place of residence. At least 1 car parking space must be provided for each 2 persons able to be accommodated away from their normal place of residence.
Carnival **Circus**	Must meet the requirements of A 'Good Neighbour' Code of Practice for a Circus or Carnival, October 1997.
Geothermal energy extraction	Must meet the requirements of Clause 52.08-4
Greenhouse gas sequestration	Must meet the requirements of Clause 52.08-6.
Greenhouse gas sequestration exploration	
Home occupation	
Informal outdoor recreation	
Mineral exploration	

RURAL CONSERVATION ZONE PAGE 1 OF 7

USE	CONDITION
Mining	Must meet the requirements of Clause 52.08-2.
Minor utility installation	
Natural systems	
Railway	
Road	
Search for stone	Must not be costeaning or bulk sampling.
Telecommunications facility	Buildings and works must meet the requirements of Clause 52.19.
Tramway	

Section 2 - Permit required

USE	CONDITION
Agriculture (other than Animal keeping, Apiculture, Intensive animal husbandry, and Timber production)	
Car park	Must be used in conjunction with another use in Section 1 or 2.
Community market	
Dependent person's unit	Must be the only dependent person's unit on the lot. Must meet the requirements of Clause 35.06-2.
Dwelling (other than Bed and breakfast)	Must be the only dwelling on the lot. This does not apply to the replacement of an existing dwelling if the existing dwelling is removed or altered (so it can no longer be used as a dwelling) within one month of the occupation of the replacement dwelling. Must meet the requirements of Clause 35.06-2.
Emergency services facility	
Freezing and cool storage	The goods stored must be agricultural produce, or products used in agriculture.
Group accommodation	Must be used in conjunction with Agriculture, Rural industry, or Winery. Must be no more than 6 dwellings. The lot on which the use is conducted must be at least the minimum subdivision area specified in a schedule to this zone. If no area is specified, the lot must be at least 40 hectares. This condition only applies to land in Metropolitan Melbourne.

USE	CONDITION
Host farm	
Interpretation centre	
Mineral, stone, or soil extraction (other than Mineral exploration, Mining, and Search for stone)	
Plant nursery	
Pleasure boat facility	
Primary produce sales	
Renewable energy facility (other than Wind energy facility)	Must meet the requirements of Clause 52.42.
Residential hotel	Must be used in conjunction with Agriculture, Rural industry, or Winery. The number of bedrooms must not exceed the number specified in a schedule to the zone or 80 bedrooms, whichever is the lesser. The lot on which the use is conducted must be at least the minimum subdivision area specified in a schedule to this zone. If no area is specified, the lot must be at least 40 hectares. This condition only applies to land in Metropolitan Melbourne.
Restaurant	Must be used in conjunction with Agriculture, Rural industry, or Winery. The number of patrons present must not exceed the number specified in a schedule to the zone or 150 patrons, whichever is the lesser. The lot on which the use is conducted must be at least the minimum subdivision area specified in a schedule to this zone. If no area is specified, the lot must be at least 40 hectares. This condition only applies to land in Metropolitan Melbourne.
Rural industry (other than Abattoir and Sawmill)	
Rural store	
Timber production	Must meet the requirements of Clause 52.18.
Utility installation (other than Minor utility installation and Telecommunications facility)	
Wind energy facility	Must meet the requirements of Clause 52.32.
Winery	

Section 3 - Prohibited

USE
Abattoir
Accommodation (other than Dependent person's unit, Dwelling, Group accommodation, Host farm, and Residential hotel)
Animal boarding
Industry (other than Rural industry)
Intensive animal husbandry
Leisure and recreation (other than Informal outdoor recreation)
Retail premises (other than Community market, Plant nursery, Primary produce sales, and Restaurant)
Place of assembly (other than Carnival and Circus)
Sawmill
Warehouse (other than Freezing and cool storage, and Rural store)
Any other use not in Section 1 or 2

35.06-2 **Use of land for a dwelling**

19/01/2006 VC37

A lot used for a dwelling must meet the following requirements:

- Access to the dwelling must be provided via an all-weather road with dimensions adequate to accommodate emergency vehicles.
- The dwelling must be connected to a reticulated sewerage system or if not available, the waste water must be treated and retained on-site in accordance with the State Environment Protection Policy (Waters of Victoria) under the Environment Protection Act 1970.
- The dwelling must be connected to a reticulated potable water supply or have an alternative potable water supply with adequate storage for domestic use as well as for fire fighting purposes.
- The dwelling must be connected to a reticulated electricity supply or have an alternative energy source.

These requirements also apply to a dependent person's unit.

35.06-3 **Subdivision**

19/01/2006 VC37

A permit is required to subdivide land.

Each lot must be at least the area specified for the land in a schedule to this zone. If no area is specified, each lot must be at least 40 hectares.

A permit may be granted to create smaller lots if any of the following apply:

- The subdivision is the re-subdivision of existing lots, the number of lots is not increased, and the number of dwellings that the land could be used for does not increase. An agreement under Section 173 of the Act must be entered into with the owner of each lot created which ensures that the land may not be further subdivided so as to increase the number of lots. The agreement must be registered on title. The requirement to enter into an agreement only applies to a lot which could be further subdivided in accordance with this scheme.

- The subdivision is by a public authority or utility service provider to create a lot for a utility installation.

35.06-4 **Long term lease or licence for Accommodation**

31/10/2008 VC43

A permit is required to lease or license a portion of a lot for a period of more than 10 years if the portion is to be leased or licensed for the purpose of Accommodation.

Each portion of a lot leased or licensed for the purpose of Accommodation must be at least the area specified as the minimum subdivision area for the land in a schedule to this zone. If no area is specified, each portion of a lot leased or licensed for the purpose of Accommodation must be at least 40 hectares.

This provision only applies to land in Metropolitan Melbourne.

35.06-5 **Buildings and works**

15/09/2008 VC49

A permit is required to construct or carry out any of the following:

- A building or works associated with a use in Section 2 of Clause 35.06-1. This does not apply to:
  - An alteration or extension to an existing dwelling provided the floor area of the alteration or extension does not exceed the area specified in a schedule to this zone or, if no area is specified, 50 square metres. Any area specified must be more than 50 square metres.
  - An out-building associated with an existing dwelling provided the floor area of the out-building does not exceed the area specified in a schedule to this zone or, if no area is specified, 50 square metres. Any area specified must be more than 50 square metres.
  - An alteration or extension to an existing building used for agriculture provided the floor area of the alteration of extension does not exceed the area specified in a schedule to this zone or, if no area is specified, 50 square metres. Any area specified must be more than 50 square metres. The building must not be used to keep, board, breed or train animals.
  - A rainwater tank.
- Earthworks specified in a schedule to this zone, if on land specified in a schedule.
- A building which is within any of the following setbacks:
  - 100 metres from a Road Zone Category 1 or land in a Public Acquisition Overlay to be acquired for a road, Category 1.
  - 40 metres from a Road Zone Category 2 or land in a Public Acquisition Overlay to be acquired for a road, Category 2.
  - 20 metres from any other road.
  - 5 metres from any other boundary.
  - 100 metres from a dwelling not in the same ownership.
  - 100 metres from a waterway, wetlands or designated flood plain.

35.06-6 **Decision guidelines**

31/10/2008 VC43

Before deciding on an application to use or subdivide land, lease or license a portion of a lot for a period of more than 10 years if the portion is to be leased or licensed for the purpose of Accommodation, construct a building or construct or carry out works, in addition to the decision guidelines in Clause 65, the responsible authority must consider, as appropriate:

General issues

- The State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.
- Any Regional Catchment Strategy and associated plan applying to the land.
- The capability of the land to accommodate the proposed use or development.
- How the use or development conserves the values identified for the land in the schedule.
- Whether use or development protects and enhances the environmental, agricultural and landscape qualities of the site and its surrounds.
- Whether the site is suitable for the use or development and the compatibility of the proposal with adjoining land uses.

Rural issues

- The environmental capacity of the site to sustain the rural enterprise.
- The need to prepare an integrated land management plan.
- The impact on the existing and proposed infrastructure.
- Whether the use or development will have an adverse impact on surrounding land uses.

Environmental issues

- An assessment of the likely environmental impact on the biodiversity and in particular the flora and fauna of the area.
- The protection and enhancement of the natural environment of the area, including the retention of vegetation and faunal habitats and the need to revegetate land including riparian buffers along waterways, gullies, ridgelines, property boundaries and saline discharge and recharge areas.
- How the use and development relates to sustainable land management and the need to prepare an integrated land management plan which addresses the protection and enhancement of native vegetation and waterways, stabilisation of soil and pest plant and animal control.
- The location of on site effluent disposal areas to minimise the impact of nutrient loads on waterways and native vegetation.

Design and siting issues

- The need to minimise any adverse impacts of siting, design, height, bulk, and colours and materials to be used, on landscape features, major roads and vistas.
- The location and design of existing and proposed infrastructure services which minimises the visual impact on the landscape.
- The need to minimise adverse impacts on the character and appearance of the area or features of archaeological, historic or scientific significance or of natural scenic beauty or importance.
- The location and design of roads and existing and proposed infrastructure services to minimise the visual impact on the landscape.

35.06-7 **Advertising signs**

31/10/2006
VC43

Advertising sign requirements are at Clause 52.05. This zone is in Category 4.

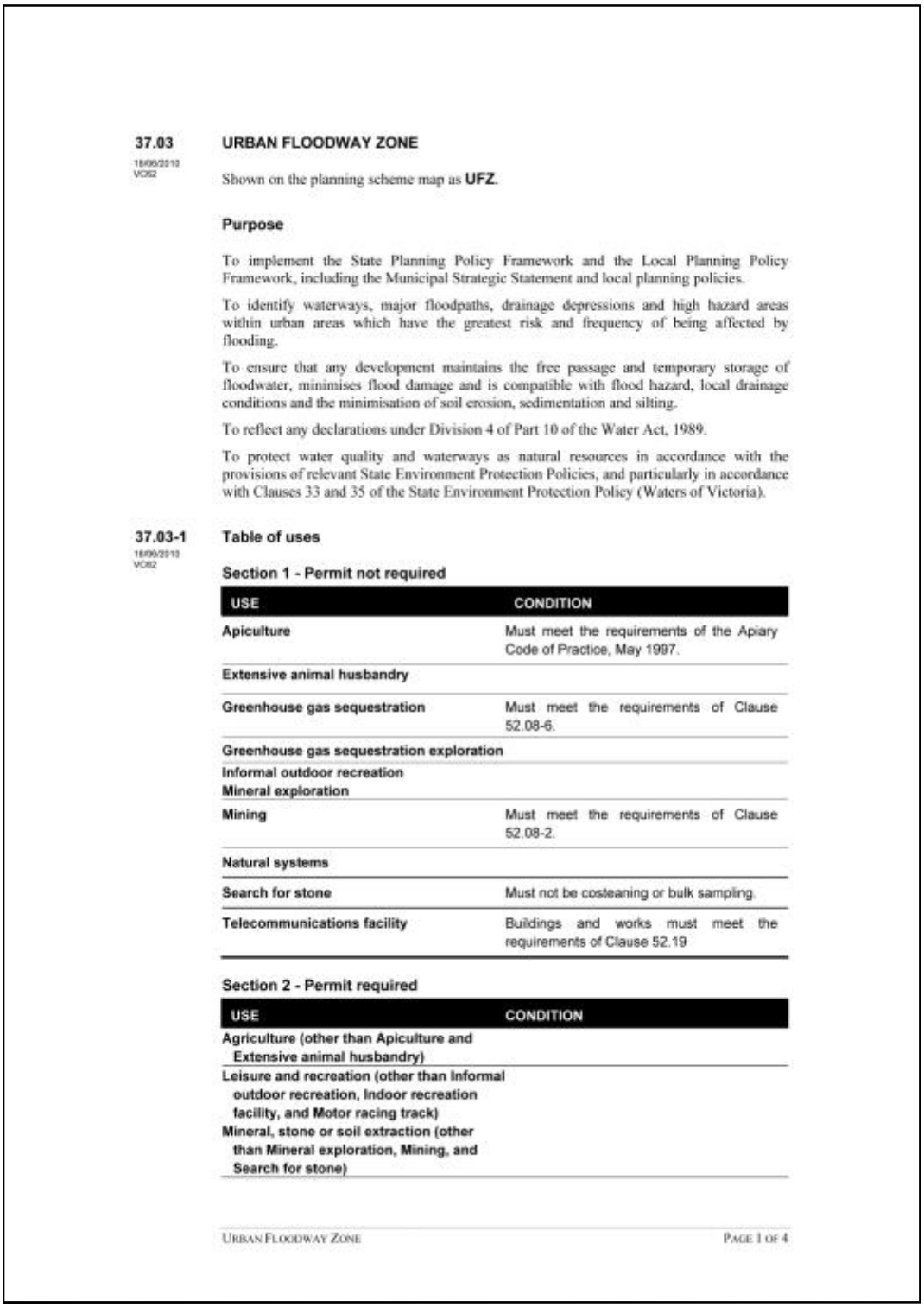
Notes:

Refer to the State Planning Policy Framework *and the* Local Planning Policy Framework, *including the* Municipal Strategic Statement, *for strategies and policies which may affect the use and development of land.*

Check whether an overlay also applies to the land.

Other requirements may also apply. These can be found at Particular Provisions.

Urban Floodway Zone



37.03 URBAN FLOODWAY ZONE

18/06/2010 VC62

Shown on the planning scheme map as **UFZ**.

Purpose

To implement the State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.

To identify waterways, major floodpaths, drainage depressions and high hazard areas within urban areas which have the greatest risk and frequency of being affected by flooding.

To ensure that any development maintains the free passage and temporary storage of floodwater, minimises flood damage and is compatible with flood hazard, local drainage conditions and the minimisation of soil erosion, sedimentation and silting.

To reflect any declarations under Division 4 of Part 10 of the Water Act, 1989.

To protect water quality and waterways as natural resources in accordance with the provisions of relevant State Environment Protection Policies, and particularly in accordance with Clauses 33 and 35 of the State Environment Protection Policy (Waters of Victoria).

37.03-1 Table of uses

18/06/2010 VC62

Section 1 - Permit not required

USE	CONDITION
Apiculture	Must meet the requirements of the Apiary Code of Practice, May 1997.
Extensive animal husbandry	
Greenhouse gas sequestration	Must meet the requirements of Clause 52.08-6.
Greenhouse gas sequestration exploration	
Informal outdoor recreation	
Mineral exploration	
Mining	Must meet the requirements of Clause 52.08-2.
Natural systems	
Search for stone	Must not be costeaning or bulk sampling.
Telecommunications facility	Buildings and works must meet the requirements of Clause 52.19

Section 2 - Permit required

USE	CONDITION
Agriculture (other than Apiculture and Extensive animal husbandry)	
Leisure and recreation (other than Informal outdoor recreation, Indoor recreation facility, and Motor racing track)	
Mineral, stone or soil extraction (other than Mineral exploration, Mining, and Search for stone)	

URBAN FLOODWAY ZONE PAGE 1 OF 4

USE	CONDITION
Road	
Utility installation (other than Telecommunications facility)	

Section 3 - Prohibited

USE
Indoor recreation facility
Motor racing track
Any other use not in Section 1 or 2

37.03-2 **Buildings and works**

15/09/2006 VC49

A permit is required to construct a building or construct or carry out works, including:

- A fence.
- Roadworks.
- Bicycle pathways and trails.
- Public toilets.
- A domestic swimming pool or spa and associated mechanical and safety equipment if associated with one dwelling on a lot.
- A pergola or verandah, including an open-sided pergola or verandah to a dwelling with a finished floor level not more than 800mm above ground level and a maximum building height of 3 metres above ground level.
- A deck, including a deck to a dwelling with a finished floor level not more than 800mm above ground level.
- A non-domestic disabled access ramp.

This does not apply to:

- Flood mitigation works carried out by the responsible authority or floodplain management authority.
- The following works in accordance with plans prepared to the satisfaction of the responsible authority:
  - The laying of underground sewerage, water and gas mains, oil pipelines, underground telephone lines and underground power lines provided they do not alter the topography of the land.
  - The erection of telephone or power lines provided they do not involve the construction of towers or poles.
- Post and wire and post and rail fencing.

37.03-3 **Subdivision**

18/01/2006 VC37

A permit is required to subdivide land. A permit may only be granted to subdivide land if the following apply:

- The subdivision does not create any new lots, which are entirely within this zone. This does not apply if the subdivision creates a lot, which by agreement between the owner and the relevant floodplain management authority, is to be transferred to an authority for a public purpose.

- The subdivision is the resubdivision of existing lots and the number of lots is not increased, unless a local floodplain development plan incorporated into this scheme specifically provides otherwise.

37.03-4 Application requirements

19/01/2006
VC37

Local floodplain development plan

If a local floodplain development plan has been developed for the area and has been incorporated into this scheme, an application must be consistent with the plan.

Flood risk report

If a local floodplain development plan for the area has not been incorporated into this scheme, an application must be accompanied by a flood risk report to the satisfaction of the responsible authority. The flood risk report must consider the following, where applicable:

- The existing use and development of the land.
- Whether the proposed use or development could be located on flood-free land or land with a lesser flood hazard outside this zone.
- The susceptibility of the development to flooding and flood damage.
- The potential flood risk to life, health and safety associated with the development. Flood risk factors to consider include:
  - The frequency, duration, extent, depth and velocity of flooding of the site and accessway.
  - The flood warning time available.
  - The danger to the occupants of the development, other floodplain residents and emergency personnel if the site or accessway is flooded.
- The effect of the development on redirecting or obstructing floodwater, stormwater or drainage water and the effect of the development on reducing flood storage and increasing flood levels and flow velocities.
- The effects of the development on environmental values such as natural habitat, stream stability, erosion, water quality and sites of scientific significance.

37.03-5 Referral of applications

19/01/2006
VC37

An application must be referred to the relevant floodplain management authority under Section 55 of the Act unless in the opinion of the responsible authority the proposal satisfies requirements or conditions previously agreed in writing between the responsible authority and the floodplain management authority.

37.03-6 Decision guidelines

19/01/2006
VC37

Before deciding on an application, in addition to the decision guidelines in Clause 65, the responsible authority must consider, as appropriate:

- The State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.
- The local floodplain development plan or flood risk report.
- Any comments of the relevant floodplain management authority.

37.03-7 Advertising signs

19/01/2006 VC37

Advertising sign requirements are at Clause 52.05. This zone is in Category 4 unless a schedule to this zone specifies a different category.

Notes: *Refer to the* State Planning Policy Framework *and the* Local Planning Policy Framework, *including the* Municipal Strategic Statement, *for strategies and policies which may affect the use and development of land.*

Check whether an overlay also applies to the land.

Other requirements may also apply. These can be found at Particular Provisions.

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