

AN ARCHAEOLOGICAL DESKTOP STUDY Proposed Oaklands Windfarm Glenthompson



Shearing at "Red Hill" Glenthompson - State Library of NSW
"Red Hill" was located to the northwest of the study area

A Report Prepared For
URS

November 2006
(Amended May 2007)

**Terra
Culture**

Heritage Consultants
Suite 3/83 Station Street
FAIRFIELD MELBOURNE 3078

Phone: (03) 9486 4524 Fax: (03) 9481 2078

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John Hyett

TerraCulture Pty Ltd
Cultural Heritage Consultants
3/83 Station Street
Fairfield VIC 3078

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Jeremy Smith	Heritage Victoria
Matthew Phelan	Aboriginal Affairs Victoria

The following TerraCulture staff produced this report:

John Hyett	Report Writing, Mapping
Fiona Landy	Background Research
Barney Mezey	Background Research
Catherine Webb	Editing
Paul Bazalicki	Mapping

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1.0 INTRODUCTION

1.1 Preamble

Glenthompson is a rural township situated on the Glenelg Highway between Lake Bolac and Dunkeld, approximately 52 kilometres from Hamilton and around 238 kilometres from Melbourne by road. Oaklands Hill wind farm is being developed by Oakland's Hill Wind Farm Pty Ltd (the Proponent) which was formed as a result of the joint venture between Invest Bank Australia Limited and Windlab Systems Pty Ltd. Oaklands Hill Wind Farm Pty Ltd is considering developing a wind farm in an area approximately 5km south of Glenthompson and have commissioned URS to undertake the preliminary feasibility report and subsequent environmental approvals for the project. URS commissioned TerraCulture Pty Ltd to conduct the preliminary archaeological assessment.

1.2 Project Aims

An initial project brief provided by URS required TerraCulture to provide a preliminary assessment. After TerraCulture was initially engaged, the size of the survey area was expanded to approximately 2,322ha and following discussions it was decided that the preliminary assessment should be a desktop study only. This study would consist of:

1. Search of relevant heritage registers for known sites within the study area and up to 0.5 kilometres from the study area boundary;
2. Review previous archaeological studies and other relevant documents;
3. Collect and collate relevant background information on cultural history;
4. Determine models of Aboriginal and historical site distribution for testing during the fieldwork.

1.3 Aboriginal Affairs Victoria (AAV)

AAV Heritage Services Branch is the State Government body that administers the Commonwealth and State Legislation that serves to protect Aboriginal heritage in Victoria. This heritage includes archaeological sites, artefact collections and places of cultural significance. There is no requirement to notify AAV of the commencement of this desktop study, but AAV will be sent copies of this report.

1.4 Heritage Victoria (HV)

Heritage Victoria (HV) is the State Government body that administers the Heritage Act (1995). This Act serves to protect heritage in Victoria relating to non-indigenous or European settlement of the State. This heritage encompasses built structures, and modifications to the natural landscape, including archaeological features and deposits, resulting from its historic use. There was no requirement to notify HV of the commencement of this desktop study but HV will be sent copies of this report.

1.5 Aboriginal Community Consultation

Under the Regulations of the Commonwealth *Aboriginal and Torres Strait Islander Heritage Protection Act 1984*, the study area falls within the boundaries of the Framlingham Aboriginal Trust. Under the heritage legislation, this organisation represents the Aboriginal owners and custodians of Aboriginal cultural heritage sites within this part of the Western District. As this study did not involve any field component, there was no requirement to consult with this organisation at this stage.

Native Title

An on-line search of the Register of the National Native Title Tribunal indicates that no claims for native title have been registered as of 30 September 2006.

Cultural Significance

The *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* recognises a cultural significance to artefacts, sites and places, distinct from an assessment based on scientific values. Aboriginal people have their own views on the importance of individual archaeological sites or areas as being generally sensitive for Aboriginal heritage materials. This report focuses on scientific values but not to the exclusion of any views that may be expressed by relevant Aboriginal people.

1.6 Report Format and Contents

This study is a review of existing information on the Aboriginal and European heritage values in the vicinity of the proposed Oaklands windfarm study area. It does not involve a field component and thus there is no new survey data or field confirmation of any sites and places that are known or predicted to occur within the subject land.

A field component of the survey will be undertaken in accordance with instructions from the Minister for Planning in his EES determination. This work will:

- Inform any unregistered sites which may appear on the subject land.
- Prior to the commencement of the project an assessment of risks to Aboriginal cultural heritage will be provided to the satisfaction of AAV. This documentation will incorporate results into a program of field surveys together with a Cultural Heritage Management Plan prepared in consultation with relevant Aboriginal groups.

Neither Aboriginal Affairs Victoria nor Heritage Victoria has a standard brief for conducting desktop studies. This report generally follows the format recommended by AAV for reporting on archaeological field investigations. It deviates from this format where AAV recommends the inclusion of information that is not relevant to achieving the aims of the desktop study. As a stand-alone document, this report necessarily reiterates background information on the physical or historical context of the study area that may have been presented elsewhere.

For the remainder of this report the proposed Oaklands windfarm study area may be referred to more simply as the 'survey area' or 'subject land'. Appendix 1 contains a glossary of Technical terms that may appear in this report.

2.0 LEGISLATIVE PROTECTION FOR CULTURAL HERITAGE SITES

All heritage legislation is subordinate to the Coroner's Act 1985 in relation to the discovery of human remains.

2.1 State and Commonwealth Aboriginal Heritage Legislation

Victoria has both State and Commonwealth legislation providing protection for Aboriginal cultural heritage. With the exception of human remains interred after the year 1834, the *State Archaeological and Aboriginal Relics Preservation Act 1972* provides blanket protection for all material relating to the past Aboriginal occupation of Victoria, both before and after European occupation. This includes individual artefacts, scatters of stone tools, rock art sites, ancient camp sites, human burials, trees with slabs of bark removed (for the manufacture of canoes, shelters, etc.) and ruins and archaeological deposits associated with Aboriginal missions or reserves. The Act also establishes administrative procedures for archaeological investigations and the mandatory reporting of the discovery of Aboriginal sites. Aboriginal Affairs Victoria (AAV) administers the *Archaeological and Aboriginal Relics Preservation Act 1972*.

In 1987, Part IIA of the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* was introduced by the Commonwealth Government to provide protection for Aboriginal cultural property in Victoria. Immediately after enactment, the Commonwealth delegated the powers and responsibilities set out in Part IIA to the Victorian Minister Responsible for Aboriginal Affairs. Currently, the Hon. Gavin Jennings holds this delegation, and the legislation is administered on a day-to-day basis by AAV.

Whereas the State Act provides legal protection for all the physical evidence of past Aboriginal occupation, the Commonwealth Act deals with Aboriginal cultural property in a wider sense. Such cultural property includes any places, objects and folklore that 'are of particular significance to Aboriginals in accordance with Aboriginal tradition'. Again, there is no cut-off date and the Act may apply to contemporary Aboriginal property as well as ancient sites. The Commonwealth Act takes precedence over State cultural heritage legislation where there is conflict. In most cases, Aboriginal archaeological sites registered under the State Act will also be Aboriginal places subject to the provisions of the Commonwealth Act.

The Commonwealth Act prohibits anyone from defacing, damaging, interfering with or endangering an Aboriginal place unless the prior consent of the local Aboriginal community has been obtained in writing. The Schedule to the Act lists local Aboriginal communities and each community's area is defined in the Regulations so that the whole of Victoria is covered. The study area is in the community area of the Framlingham Aboriginal Trust

It should be noted that with the *Aboriginal Heritage Act 2006* replacing the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* on 28th May 2007, the contact details for the relevant Aboriginal community in relation to cultural heritage matters may change.

2.1.1 Summary of the Aboriginal Heritage Act 2006

The Victorian Parliament enacted a new Aboriginal Heritage Act in May 2006. This bill will replace both the current state Archaeological and Aboriginal Relics Preservation Act 1972 and the federal *Aboriginal and Torres Strait Islander Heritage Protection Act 1984 Part IIA* in relation to Aboriginal cultural heritage in Victoria. The Act will come into effect on the 28th May 2007.

Aboriginal Heritage Council

The Act establishes an Aboriginal Heritage Council to, amongst other things, advise the Minister in regard to cultural heritage matters and to register Aboriginal parties with a cultural heritage interest in an area.

Registered Aboriginal Parties

The Registered Aboriginal Parties replace the Aboriginal Communities under the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984 Part IIA* and may:

- Evaluate and approve or refuse to approve cultural heritage management plans that relate to the area for which the party is registered;
- Enter into cultural heritage agreements;
- Apply for interim and ongoing protection declarations: and
- Carry out any other functions conferred under this act.

More than one Registered Aboriginal Party may be registered for an area except where native title has been determined to exist, when the native title holder is the only registered party allowed.

Cultural Heritage Permits

A cultural heritage permit is required for various actions in relation to Aboriginal cultural heritage and must be referred to any Registered Aboriginal Party for the area. The party has 30 days to advise the Secretary in writing whether they object or agree to the granting of the permit and under what conditions they agree. The Secretary shall not grant the permit if a registered Aboriginal party objects within the 30 days nor shall the Secretary include any additional conditions that conflict with any conditions imposed by the registered Aboriginal party. A cultural heritage permit must not be granted for an activity for which a cultural heritage management plan is required under the act.

Cultural Heritage Agreement

A cultural heritage agreement may be made to deal with, but limited to, the following:

- Protection, maintenance or use of land containing an Aboriginal place;
- Protection, maintenance or use of an Aboriginal object;
- Rights of access to, or use of, Aboriginal places or objects by Aboriginal people; and
- The rehabilitation of Aboriginal places or objects.

A cultural heritage agreement may not deal with any activity for which a cultural heritage permit or cultural heritage management plan is required under the act.

Cultural Heritage Management Plan

A cultural heritage management plan under the act consists of an assessment of the area to determine the nature of any Aboriginal cultural heritage and a written report setting out the results of the assessment and recommendations to manage and protect any Aboriginal cultural heritage identified in the assessment. The assessment may include background

research, a ground survey and excavation of the ground. *The cultural heritage plan must comply with the prescribed standards.*

A cultural heritage management plan may be carried out voluntarily but **must** be carried out under the following conditions:

- If the regulations require the preparation of the plan for the activity; or
- The Minister directs the preparation of the plan; or
- If an Environment Effects Statement is required under the *Environment Effects Act 1978*.

If the activity also requires statutory authorisation from another body, this authorisation must not be granted until an approved cultural heritage management plan is completed. Statutory authorisation must not be granted for an activity if that activity is inconsistent with the approved cultural heritage management plan.

The sponsor of a cultural heritage management plan must engage a cultural heritage advisor to assist in the preparation of the plan.

Before a cultural heritage management plan can begin written notice must be given to:

- The Secretary
- The Owner or occupier of the land
- Each relevant registered Aboriginal party.

A Registered Aboriginal party may elect to evaluate the plan and must reply in writing within 14 days of their intention to do so. If they do notify their intention they may also do all or any of the following:

- Consult in relation to the assessment;
- Consult as to the recommendations; and
- Participate in the conduct of the assessment.

The Secretary must be advised if a Registered Aboriginal party either declines to evaluate the plan or fails to respond within 14 days.

The act sets out various matters that must be considered in assessing whether a cultural heritage management plan is to be approved.

- Whether the activity will be conducted in a way that avoids harm to Aboriginal cultural heritage.
- If it is not possible to avoid harm, whether the activity will be conducted in a way that minimises harm.
- Specific measures for the management of Aboriginal cultural heritage material during and after the activity.
- Contingency plans for disputes, delays and other obstacles that may affect the conduct of the activity.
- Requirements for the custody and management of Aboriginal cultural material during the activity.

Application must be made to each Registered Aboriginal party that notified their intention to evaluate the plan for approval of the plan. Written notice of their decision to approve or reject the plan must be given within 30 days after receiving the application. If no Registered Aboriginal Party exists in the area or notified their intention to evaluate the plan or the relevant registered party fails to respond within the 30 day period, the plan is submitted to the Secretary for approval.

The act also makes provisions for a cultural heritage audit if the Minister reasonably believes that a cultural heritage permit or a cultural heritage management plan has been or is likely to be contravened or that the impact of the activity on Aboriginal cultural heritage will be greater than determined at the time the plan was approved.

There is also provision in the act for the issuing of Stop Orders, interim protection declarations and ongoing protection declarations.

Dispute Resolution Procedures and Appeals

If there is a dispute between two or more relevant Registered Aboriginal Parties as to whether a plan should be approved or rejected, the sponsor of the plan may refer the dispute to the Chairperson of the Heritage Council for alternative dispute resolution, which must take place within 30 days.

The sponsor of a cultural heritage management plan may apply to VCAT for review of a decision of a Registered Aboriginal Party to refuse approval of a plan, or if one of the relevant Registered Aboriginal Parties refuses to approve the plan and the dispute resolution procedure above has been followed, or if the Secretary refuses to approve the plan. In reaching a decision VCAT must take into account all matters required to be considered by the relevant Registered Aboriginal Party or the Secretary under this act.

2.2 Non- Aboriginal (European) Historic Archaeological Sites

The Heritage Act was passed in 1995. The main purposes of the Act are:

- To provide for the protection and conservation of places and objects of cultural heritage significance and the registration of such places and objects;
- To establish a Heritage Council; and
- To establish a Victorian Heritage Register

The Heritage Act serves to protect all categories of historic cultural heritage relating to the non-Aboriginal settlement of Victoria, including historic buildings, shipwrecks and archaeological sites. The Act defines an archaeological relic as:

- a) Any archaeological deposit; or
- b) Any artefact, remains or material evidence associated with an archaeological deposit-

which-

- c) Relates to the non-Aboriginal settlement or visitation of the area or any part of the area which now comprises Victoria; and
- d) is more than 50 years old- (Heritage Act 1995 Part 1 Section 3)

There are two categories of listing provided for under the Heritage Act (1995) the Heritage Register and the Heritage Inventory. The Heritage Register is established under Section 18 of the Act and the Heritage Inventory under Section 120.

The Heritage Register

The Heritage Register is a register of all heritage places, relics, buildings, objects or shipwrecks deemed to be of outstanding cultural significance within the State of Victoria. Section 23 of the Act sets out procedures for nomination of a place or object to the Heritage Register. Section 23(4) of the Act states that nominations are required to clearly specify why the place or object must be included in the Heritage Register and are to include an assessment of cultural significance against the criteria published by the Heritage Council. Nominations are assessed by the Executive Director of Heritage Victoria; if accepted, the Executive Director may then recommend to the Heritage Council that the nomination be accepted for inclusion in the Heritage Register. The notice of the recommendation must be published in a newspaper within the area where the place or object is located. Submissions in relation to a recommendation for inclusion in the Heritage Register can be made within 60 days after notification of a decision by the Executive Director. A person with a specific interest in the place or object, such as a property owner or local historical society, may

request a hearing by the Heritage Council into a recommendation by the Executive Director for nomination. Archaeological sites or places and relics from any such sites or places can be nominated for the heritage register.

Section 64 of the Heritage Act (1995), states that it is an offence under the Act to disturb or destroy a place or object on the Heritage Register. Under Section 67 of the Act, a person may apply to the Executive Director for a 'Permit to carry out works or activities in relation to a registered place or a registered object'. Permit applications within the classes of works identified in Section 64 must be referred to the heritage Council. They must also be publicly advertised and formal notification provided to local government authorities by the Executive Director. The Heritage Council will state, within 30 days of receiving a permit application, whether it objects to the issue of a permit after a period of 30 days.

The Heritage Inventory

Section 121 of the Acts states that the Heritage Inventory is a listing of all:

1. Places or objects identified as historic archaeological sites, areas or relics on the register under the *Archaeological and Aboriginal Relics Preservation Act 1972*;
2. All known areas where archaeological relics are located;
3. All known occurrences of archaeological relics; and
4. All persons known to be holding private collections of artefacts or unique specimens that include archaeological relics

Under Section 127 of the Act, it is an offence to disturb or destroy an archaeological site or relic, irrespective of whether it is listed on the Heritage Register or the Heritage Inventory.

Consent from Heritage Victoria is required to disturb or destroy historic archaeological sites, places, buildings or structures listed on the Victorian Heritage Inventory. An application may be made to the Executive Director for a Consent to disturb or destroy an archaeological site or relic listed on the Heritage Inventory under Section 129. Consent application fees apply. An application for Consent to uncover or expose an archaeological site or relic or to excavate land for the purpose of uncovering a site or relic is \$225.00. The fee scale for an application for Consent to disturb or destroy an archaeological site ranges upwards from \$420.00.

D Classification

Heritage Victoria has introduced a 'D' classification for places of low historical or scientific significance. Sites assigned a 'D' classification are listed on the Heritage Inventory but there is no requirement to obtain consent from Heritage Victoria to allow the removal of these sites.

2.3 Commonwealth Legislation

Changes to the way heritage legislation is managed by the Commonwealth has occurred with the introduction of new laws from 1 January 2004. These new laws incorporate elements from previous systems as well as the implementation of additional provisions and are administered under the *Environment Protection and Biodiversity Conservation Act 1999*. The new heritage system was implemented by the passage of three new acts through Parliament in September 2003. These acts were:

- *Environment and Heritage Legislation Amendment Act (No. 1) 2003* (which amended the *Environment Protection and Biodiversity Conservation Act 1999* to include Cultural Heritage);
- *Australian Heritage Council Act 2003* (which established the Australian Heritage Council, thus replacing the Australian Heritage Commission. It also permitted the retention of the Register of the National Estate); and

- *Australian Heritage Council (Consequential and Transitional Provisions) Act 2003* (which repealed the Australian Heritage Commission Act and permitted the transition of the new heritage system).

The implementation of these acts and the amendment to the *Environment Protection and Biodiversity Act 1999 (amended 2004)* resulted in cultural heritage (indigenous and non-indigenous) that is of National significance being administered under this legislation. The main features of the new heritage system are;

- The establishment of a new National Heritage List;
- Creation of a new Commonwealth Heritage List for places owned or managed by the Commonwealth;
- Creation of the Australian Heritage Council (which replaced the Australian Heritage Commission); and
- Management of the Register of the National Estate.

Environment Protection and Biodiversity Conservation Act 1999 (amended 2004) (EPBC Act)

The main aim of the EPBC Act 1999 was to protect natural places of importance to Australia from negative actions. However, the Act could also be applied to places of cultural heritage, and in 2004 the EPBC Act was amended to include provision for Indigenous and non-indigenous cultural sites that are of importance to the Nation. Under this law an application must be made to the Federal Minister for the Environment and Heritage for actions likely to have a negative impact upon sites or places listed on the National or Commonwealth Heritage lists. In order for the action to take place it requires approval under the EPBC Act. The Australian Heritage Council is the Federal Government's principal advisor on heritage issues.

The EPBC Act 1999 (amended 2004) enabled two new heritage lists to be established, the National List and the Commonwealth List. In addition, the Act permits the ongoing management of The Register of the National Estate by the Australian Heritage Council. Each of these lists has its own set of criteria and thresholds, and The Australian Heritage Council assesses all sites or places for their suitability for inclusion on the lists. These lists are further explained below.

National Heritage List (NHL)

This list consists of sites (both within and outside Australian territory) that are of **outstanding** national Indigenous, historic or natural value to the Nation of Australia. The list applies to sites that have 'special meaning for all Australians' and demonstrate important aspects of the history of Australia. A site or place on the National Heritage List will only be listed on the Commonwealth Heritage List if it is owned or managed by the Commonwealth.

Commonwealth Heritage List (CHL)

The Commonwealth Heritage List consists of sites that are owned or controlled (leased) by the Australian Government. The sites listed on this list will have been assessed as to whether they have **significant** heritage value to the Nation of Australia. This list may apply to sites owned or leased by the Commonwealth, including defence, communications and customs. A site or place on the Commonwealth Heritage List can also be listed on the National Heritage List.

Register of the National Estate (RNE)

The Register of the National Estate (RNE) is a register that was established under the *Australian Heritage Commission Act 1975*, but is now administered by the EPBC Act (2004) as a result of changes to heritage laws. The Commonwealth is the only body within Australia who is affected by constraints as a result of a site listing on the RNE. While there is no legislative protection under the EPBC Act for privately owned sites on the RNE, these sites however are usually listed on other State or Commonwealth registers that do provide

statutory protection. The Register of the National Estate contains natural, cultural and Indigenous places that are **special** to Australians and that are worth preserving for the future.

3.0 PHYSICAL BACKGROUND

3.1 Description of the Subject Land

The Glenthompson study area covers an area of approximately 2,322ha in total with a large area excluded where no works or impact will occur. The land appears to be generally hilly, intersected by streams and watercourses, the largest of which is Reedy Creek. Contours vary within the study area from 250m ASL along part of Reedy Creek to 340m ASL on hilltops overlooking the creeks. The land is used for grazing and cropping.

3.2 Climate

Following the trend for much of southern Victoria, the Western District, and by extension Glenthompson, has a temperate climate with cold to mild winters and hot summers. According to the BOM website, Hamilton Airport, the closest weather station to Glenthompson, shows that the mean annual rainfall over a twenty year period is 658 mm, with the wettest month being August and the driest February. Summer temperatures are warm to hot – averaging 27 degrees Celsius in February. Winter temperatures are cold, averaging 12 degrees Celsius with the lowest winter minimums in June and July. The hottest day recorded during the twenty-year period of observations was 42.6 degrees with the coldest being –3.8 degrees. The local climate provided no constraints to the Aboriginal settlement of the area in terms of the seasonal movement of people or the location of habitation sites.

3.3 Geology & Geomorphology

The subject land lies within the West Victorian Volcanic Plains (Cochrane *et al.* 1991, Figure 3.9). These plains were formed by lava flows from numerous volcanoes that have erupted from 4.5 million years ago until about 7240 years ago. Most of this volcanic activity occurred between 2 and 4.5 million years ago. Numerous, relatively thin, basalt flows form the bulk of the plain. The plains are flat to undulating with many hills formed by extinct volcanoes. Lakes and swamps are common, formed inside depressions caused by the action of wind on ash from one of the volcanic types and in areas where existing creeks were blocked by lava flows. Soil types within the plains vary according to a variety of factors and most are suitable for grazing with the red duplex soils northwards from Hamilton also suitable for cropping (Cochrane *et al.* 1991: 80-85).

3.4 Native Flora & Fauna

Remnant vegetation is usually a good indicator of the degree of ground disturbance and in turn a measure of the likelihood of *in situ* Aboriginal archaeological deposits, at least in shallow deposits. It is also a good indicator of the range of plant species available for use by the local Aboriginal groups during pre-contact times.

The subject land and surrounding areas have long been cleared of their native vegetation. The DSE biodiversity map showing the 1750 Ecological Vegetation Class (EVC) for the area lists the study area as containing a series of mosaics that include Damp Sands Herb-Rich Woodlands, Plains Grass Woodlands, Grassy Woodlands, Hills Herb-Rich Woodlands and Creepline Grassy Woodlands in various proportions. These EVCs contained a variety of trees including Brown Stringybark, Swamp Gum, Manna Gum, Narrow-leaf Peppermint, Yellow Box and River Red Gum. The understorey contained numerous smaller trees and herbs that provided a rich environment for Aboriginal people and the animal species they hunted.

A number of animal species in the area were hunted by Aboriginal people. Kangaroo, wallaby, possums, reptiles, emus and other birds were numerous. These provided Aboriginal people with meat and material for a variety of other uses. Bones from kangaroos and emus were used for a number of purposes including as needles for sewing or repairing animal skin cloaks, and spear points, while kangaroo sinew was used for binding points on spears (hafting) and sewing.

3.5 Significance of Natural Environment for Cultural Heritage Issues

The subject land is situated in well-watered country with a series of hills and valleys. The potential for Aboriginal cultural heritage material is usually higher the closer to a water supply, but the woodlands and grasslands would have supported a potential food supply, both animal and vegetable, that the Aboriginal inhabitants would have utilized. The hilltops would also have provided vantage points from which to view the surrounding countryside, either to search for game or to watch for other people.

4.0 HISTORICAL BACKGROUND

The following section presents a brief historical account of the former Aboriginal and European settlement of the Glenthompson subject land. Its purpose is to provide a historical context for the archaeological investigation.

4.1 Chronology of Aboriginal Settlement

By at least 40,000 years BP all parts of the Australian continent (Sahul) had been colonised by Aboriginal people. This colonisation included the southeastern corner of the continent.

In Victoria, there are few Aboriginal archaeological sites south of the Great Dividing Range with late Pleistocene dates. However recent research has pushed back the known occupation dates in the Grampians, to the northwest of the current study area, to around 22,000 BP (Bird et al 1998).

Without a more detailed chronology and other palaeoenvironmental and archaeological evidence, it is not possible to reconstruct how the *Djab wurrung* (see below) and their ancestors adapted to climatic changes during the late Pleistocene and Holocene periods. Certainly, these changes would have affected the demography of Aboriginal groups and the timing, duration and reasons for occupying the volcanic plains to the west of Port Phillip Bay. Some aspects of the local landscape may have remained constant, such as the local hydrology and by extension, the importance of major creeks as the principal sources of potable water. Other features like vegetation would have evolved and altered with changes in climate and sea levels.

4.2 The *Djab wurrung*

Europeans made first written observations on the Aboriginal people of the Port Phillip District from 1802, when explorers began to chart the entrance to Port Phillip Bay. While Melbourne was one of the locations from where much of southern Victoria was colonised, much of the written and illustrated text on the Aboriginal people of the area during the colonial period is limited to the remarks of a few observers.

Most of the text relates to 1835 onwards when there was a permanent European presence in the Port Phillip District and as such its value as a record of *traditional* Aboriginal life is debatable.

The primary sources of this ethnohistory have been collated by Clark (1990) in his reconstruction of traditional language boundaries in western Victoria. These sources include journal entries and government correspondence produced by explorers such as Matthew Flinders and Charles Grimes, as well as settlers and missionaries, particularly G.A. Robinson, the Chief Aboriginal Protector. Following Clark, in 1835 the subject land was located on the traditional lands of Aboriginal people known as the *Djab wurrung*, a language group whose territory included the upper reaches of the Hopkins River, from Stawell in the north to Hexham in the south and between the Wannon River and Salt Creek.

4.3 *Djab wurrung* Linguistic and Social Organisation

The area around the proposed Glenthompson windfarm was the traditional home of the *Djab wurrung* language speakers. This language group, of whom Clark (1990) has identified 41 clans, occupied an area from Stawell in the north, to Hamilton in the south and east to Lake Bolac. The *Djab Wurrung* were divided into matrilineal moieties, clan membership passing down through the mother's line, with clans and individuals belonging to either the *Gamadj* (black cockatoo) or *Grugidj* (white cockatoo) moiety (Clark 1990:91,108).

This matrilineal descent system, while similar to the *Jardwadjali* to the east and the *Dhauwurd wurrung* (*Gundidjmara*) to the south, differed from the *bunjil-waa* patrilineal descent system of

their neighbours to the northeast, the *Wada wurrung* (Barwick 1984:113), but this did not prevent marriage and ceremonies being shared between the different groups. Clans from the *Djab wurrung* intermarried with clans from adjoining language groups, the *Dja Dja wurrung*, the *Dhauwurd wurrung* (*Gundidjmara*), the *Jardwadjali* and the *Wada wurrung*, as well as joining them for ceremonies and hunting during the mid-summer and early autumn (Clark 1990: 91-92). Although G A Robinson, the chief protector, reported the *Djab wurrung* were “in amity with natives extending over an extensive region of the interior, from the Loddon east to the Wannon west, and from Buloke [Lake Bolac] on the south to the Grampians and Pyrenees and beyond the Wimmera” this close association with some neighbouring clans did not always extend to other clans within those language groups who regarded the *Djab wurrung* as *mainmait*, foreign or wild men (Clark 1990: 91-92).

Historical records are sparse as to the location of the clans within the study area. According to Clark (1990: 118, 125) the sole evidence for the clans within this area comes from George Robinson’s journal of 1843, where he refers to the *Cart cart worrate gundidj* as belonging to the plain on Hutchinson and Gibb’s station. This station was ‘Bushy Creek’, later divided into two; ‘Bushy Creek’ and ‘Glenronald’ in 1853 (Spreadborough and Anderson 1983: 91). The current study area is within the boundaries of ‘Glenronald’ (see Section 4.4).

At least some of the *Djab wurrung* clans were reported to have buried their dead in trees (Clark 1990:135) although G.A. Robinson also describes a burial that involved the interment of the body in a grave on the bank of a river. Robinson considered there was a dividing line in burial customs around this area with the people to the west cremating their dead while those to the east interred them (Presland 1980: 121). In more recent times there have been discoveries of tree burials within the territory of the *Djab wurrung*. Two secondary tree burials, involving the re-interment of two or more individuals, have been located to the west of Ararat, one found in close proximity to a burial discovered in 1854. Also within the *Djab wurrung* territory was the primary interment of a child in a hollow tree in the vicinity of Stawell (T. Richards pers. comm.)

First contact with the Europeans occurred when Major Mitchell startled two women of the *Utoul balug* (near Mount Cole) and their children in September 1836, though it is highly probable they had heard of the arrival of the Europeans through their contacts with groups closer to the coast (Clark 1990: 92,135). By 1838 the influx of squatters had begun and most of the *Djab wurrung* land had been alienated by 1846. An early attempt by Aborigines to assimilate Europeans into their society, with the reciprocal obligations involved, failed and after a brief period of armed resistance, broken by the introduction of the Native Police Corps along with a detachment of the Border Police, the takeover of their land was complete. The discovery of gold, with the influx of European and Chinese miners also helped destroy *Djab wurrung* society and by 1869 most of the surviving *Djab wurrung* had been relocated at either Lake Condah or Framlingham mission stations (Clark 1990: 92-101).

4.4 Summary of European History

Major Mitchell’s passage through the country in 1836 led to a pastoral expansion in the Port Phillip District, much of which extended out from the route that Mitchell took and subsequent settlers followed. The current study area lies within the boundaries of Bushy Creek pastoral run which was licenced to Hutchinson and Kidd in 1840 (Robinson in his diaries refers to the owners as Hutchinson and Gibbs). This run was subdivided into two in 1853 with Hutchinson retaining the larger northern section of the run, Glenronald (forfeited in 1869), while Kidd retained the southern section and the station name (Spreadborough and Anderson 1983: 91, 104). It is within the Glenronald run that the present study area is situated.

An examination of the parish plans shows that, while the first land in the area was alienated from the Crown in 1862, the land within the study area was mostly sold between 1873 and 1876. The largest landowner within the study area at this time was W Bell. The township of Yuppeckiar (now called Glenthompson) had the first land sales in 1871. Read’s Inn was established on the corner of the road between Hamilton and Ballarat and the road to Ararat. While some further subdivision has occurred, many of the original Crown allotments appear to still be intact and subdivision appears to have been relatively minimal.

5.0 ARCHAEOLOGICAL BACKGROUND

The desktop component of this investigation was undertaken by searching relevant Commonwealth, State and local registers for any known heritage sites or places. These searches were conducted via the register web sites or manually, which required visits to registries and inspections of hard-copy records. Previous archaeological studies undertaken in the area were also reviewed

5.1 Previous Archaeological Investigations

5.1.1 *Aboriginal Archaeology*

A search of the AAV Aboriginal Cultural Heritage Reports show that there have been several archaeological studies conducted within the surrounding area, most of these being studies of Aboriginal rock art in the Grampians and of little relevance to the current investigation. Archaeological investigations close to the subject land are briefly reviewed below.

Regional Studies

No regional studies appear to have been conducted that are either close to or include the current study area. The Victorian Archaeological Survey (VAS), the forerunner to AAV and HV, did conduct a Summer Field Programme based at Yambuk, near Port Fairy, over the summer of 1976/77 during which areas within the Willaura 1:100 000 map sheet were surveyed for Aboriginal sites (Coutts 1977: 7-8). Results of the surveys were not included within the report on the 1976/77 programme and a search of reports held at AAV failed to find any further information regarding these surveys. Several sites were recorded within the current study area during this survey (see Section 5.2.1 below), but the nature and extent of the survey is unknown.

Local Studies

Glenthompson – Ararat Telecom OFC Route (Wood 1992a)

This was a predictive (desktop) study that investigated the possible impact on Aboriginal sites along a proposed optic fibre cable route between Glenthompson and Ararat, in private property parallel to the Ararat-Hamilton railway line. The study identified five mound sites and two scarred trees within close proximity to the route and recommended further investigation in areas close to streams and swamps, as these areas were considered to have potential to contain unrecorded Aboriginal sites.

Glenthompson – Streatham Telecom OFC Route (Wood 1992b)

This was a predictive (desktop) study that investigated the possible impact on Aboriginal sites along a proposed optic fibre cable route between Glenthompson and Streatham, following the Glenelg Highway. The study identified a rock arrangement north of Lake Bolac in close proximity to the route and recommended further investigation in areas close to streams and swamps, as these areas were considered to have potential to contain unrecorded Aboriginal sites.

A Survey of 3 Telecom OFC Routes (Wood 1992c)

Following the studies outlined above, Wood surveyed the areas predicted as having potential to contain further Aboriginal sites, along with another route between Hamilton and Penshurst. Two new sites were identified, the closest to the current study area being an artefact scatter located in the road reserve of the Glenelg Highway about 1.5 km east of Glenthompson, close to a shallow and ill defined seasonal watercourse. Three artefacts were found, two of quartz and the other silcrete.

Collections

During the 1950s and 1960s Hammett collected Aboriginal artefacts around Australia. One area he collected from was Glenthompson and although he did not always note the exact location of the artefacts many were listed from Glenthompson and at least some of these

came from the property 'Red Hill' on the northern side of Vanrenens Lane to the north and west of the current study area (C. Webb pers. com.)

5.1.2 Historical Archaeology

The only study for historical sites found during the background searches was the Land Conservation Council's 1996/1997 investigation into Historic Places in South-Western Victoria. This study identified the Primary School No. 947 in Glenthompson as being of historical significance and recommended that it be included within the local Municipal Planning Scheme. No other sites were identified within the Glenthompson area.

5.2 Registered Aboriginal Archaeological Sites

AAV maintains a register of all recorded Aboriginal archaeological sites in Victoria. Where available, site cards were copied and checked against the relevant report and maps contained therein. A separate register contains details of Aboriginal historic places.

5.2.1 Aboriginal Archaeological Sites

Despite the lack of recent surveys within the general area there are numerous Aboriginal sites registered around the Glenthompson area. The vast majority of these sites were recorded by VAS staff during the 1970s with earth features (mounds/fire places) the predominant site type, making up some 40% of the site types recorded. Other site types that occur are artefact scatters (27%) and scarred trees (22%), with collections, quarries and stone features making up the remainder.

Within the current study area, but situated within the areas where there will be no works or impact, there are eighteen sites registered. Seventeen of these were recorded during August 1977 by VAS staff and the other in 1980 by another VAS staff member. Several of these sites have multiple components so the number of site types within this area does not match the number of sites. Artefact scatters and earth features are the main site types with nine of each and there are three scarred trees and three collections recorded. All the sites are recorded in close proximity to Reedy Creek.

Details of the survey strategy and area covered during the time these sites were recorded are not available. An examination of the hand drawn sketches showing the location of the sites on the site cards recorded in 1977 show a strip of land either side of Reedy Creek marked as 'area surveyed' but whether this was the entire area surveyed or only the area around where the sites were located is unclear. One of the archaeologists whose name is on the site-recording card was contacted but he was unsure of the survey strategy. He thinks the survey was in response to possible sites reported to VAS. The field notes held in AAV archives were checked but shed no further light on the extent of the area surveyed. It is suspected that the 1980 site was the result of a possible site reported to VAS by a member of the public (possibly the land owner) and inspected and recorded by a VAS archaeologist.

5.2.2 Aboriginal Historic Places

There are no registered Aboriginal Historic Places in the vicinity of the Glenthompson subject land.

5.3 Registered Historical Sites

5.3.1 Heritage Victoria

HV maintains the Victorian Heritage Inventory containing a list of largely archaeological sites that are afforded protection under the Heritage Act 1995. HV is also responsible for maintaining the Victorian Heritage Register, which lists historic heritage sites in Victoria of State or National significance. Relevant site cards and reports were examined.

Victorian Heritage Register

There are no sites on the Heritage Register within 2 kilometres of the subject land.

Heritage Inventory

There are no sites on the Heritage Inventory within 2 kilometres of the subject land.

5.3.2 National Trust of Australia (Victoria)

The National Trust of Australia (Victoria) is a non-profit, non-government organisation that has been operating since 1956. The National Trust Register contains over 7000 listed historical and cultural heritage places within Victoria. Classification on the National Trust register does not in itself provide any legal protection to a heritage place. However, it can often lead to legal protection as classified places are nominated for inclusion on either the Victorian Heritage Register (for places of State significance) or local government (for places of regional or local significance), which does provide legal protection.

The on-line National Trust (Victoria) register of classified places was accessed for this study and no sites were listed on the register within two kilometres of the subject land.

5.3.3 Register of the National Estate

The Register of the National Estate (RNE) is compiled and maintained by the Australian Heritage Council. There are currently more than 12,000 natural and cultural heritage places listed on the Register. Listing on the RNE does not itself confer any protection on a registered place, and does not directly affect the use of places by private, state and local government owners or land managers. However, the actions of the Commonwealth Government are constrained by listings in the RNE.

The on-line Australian Heritage Database was accessed for this study. One site is recorded on the Register of the National Estate in the Glenthompson area. This site (ID 3809) is an Indigenous place, listed as the Nareeb Grinding Grooves, located near Bundoran Lane, well to the west of the current study area.

5.3.4 Local Planning Scheme

The Shire of Southern Grampians has a Heritage Overlay to their Planning Scheme. The Planning Scheme gives Council the ability to regulate or prohibit the use or development of any land, as set out in Section 6(2) of the State Planning and Environment Act 1987.

The Shire of Southern Grampians Planning Scheme was accessed through DSE Planning Schemes Online. No sites were found on the overlay within two kilometres of the subject land.

5.3.5 Other Historical Values

As mentioned in section 4.4 above, Major Mitchell passed through the area in 1836. The Australian Bicentennial Authority provided funds for the development and implementation of the Major Mitchell Trail to commemorate his journey. A book describing the trail was produced in 1990 (DCE 1990). The Major Mitchell Trail is not listed in any of the Registers or in the Shire Heritage Overlay and, therefore, has no legal protection. Members of the community may, however, assign it cultural significance outside the legal and archaeological values that this report is qualified to examine.

6.0 DESKTOP RESULTS

To summarise, there are several Aboriginal archaeological sites recorded within and in the vicinity of the subject land and no historical sites on any of the registers. One other historical feature, the Major Mitchell Trail, passes along the boundary of the study area.

6.1 Aboriginal Archaeology

Previous studies in the area have shown there was an Aboriginal presence in the general area before European settlement.

There are eighteen registered Aboriginal sites within the broad area of the subject land although within locations where no work is proposed. These sites are all located along Reedy Creek. The site cards for sites in the Glenthompson area, but outside the study area, were examined but in many cases they did not contain enough information regarding the landform in which the site was located. Of the three major site types identified in the study area, Earth Features such as mounds are generally located on low lying ground near water; Scarred Trees can be located anywhere across the landscape where European land clearing practices have left mature trees; and artefact scatters may be found anywhere Aboriginal people camped or rested. As pointed out by Murphy (1996), surface visibility, or lack thereof, may bias the results of surveys in finding archaeological sites within the different landforms. Often erosion scars are prevalent along watercourses, which allow better visibility and hence expose more archaeological material.

Archaeological evidence from the rest of Victoria indicates that hilltops were often favoured sites for Aboriginal people to occupy and that archaeological deposits are often present. Slopes and ridges were used for travel corridors and also often contain archaeological deposits.

There has been no scientific assessment made of the sites recorded within the study area and it is not known how much these sites have deteriorated over the past 29 years since they were first recorded. It should be noted that Aboriginal communities (who have the statutory power to issue or refuse Consents to Disturb) may place significance on a site other than the scientific significance. For some Aboriginal communities the rapid population decline brought about by the influx of Europeans contributes greatly to the significance placed upon the archaeology.

Although much of the area has been subject to ploughing over the years since European settlement this is unlikely to have destroyed Aboriginal sites if present. Ploughing will move artefacts across the landscape but will not destroy those artefacts. It is the presence of the artefacts that generally define a site and there is no provision under the legislation to disregard a site because it has been disturbed to some extent. The extent of disturbance is dependant in the case of ploughing on both the depth of the site and the depth of the plough zone. Shallow ploughing does not have the potential to disturb a buried site as much as deep subsoil ploughing.

6.2 Historical Archaeology

Given that there are no registered historical archaeological sites within 2 kilometres of the study area and taking into account the rural nature of the area combined with the large land holdings, it is considered unlikely that any historical archaeological sites will be present.

6.3 Other Historical Values

Major Mitchell's journey through Victoria and his subsequent report played a large role in attracting Europeans to the area and opening up the western district of what is now Victoria to European settlement. On the nineteenth of September 1836 Mitchell's route took him through the current study area. Campsites of the 18th and 19th are situated outside the current study

area and it is considered highly unlikely that any archaeological traces of his journey would be present within the study area. On the layout of the wind turbines dated 1st November 2006 it is probable that three or four of the turbines will be visible from the Trail.

It is beyond the scope of this archaeological report to determine the effect this would have on cultural values, other than archaeological values, placed upon the trail by members of the community. It must be remembered that the Major Mitchell Trail is a modern construct that follows an approximation of the route followed by Major Mitchell, being confined to public land and not following Mitchell's route through what is now private property. The landscape has changed considerably since 1836 when Major Mitchell passed through and will continue to change as developments occur.

The construction of the Oakland's wind farm is considered to have no effect on any archaeological values of Major Mitchell's route or the Major Mitchell Trail that follows the approximate area that Major Mitchell passed through.

7.0 RECOMMENDATIONS

7.1 Aboriginal Archaeology

The desktop study has shown that Aboriginal people inhabited the Glenthompson area in general and the study area in particular. Although all the known sites within the study area are located within areas where no works are proposed, close to Reedy Creek, it is considered highly unlikely that archaeological evidence of the former use of the land by Aboriginal people would be restricted to this landform. Previous archaeological studies across Victoria show that, while Aboriginal archaeological sites may be located anywhere across the landscape, they are more likely to be located in close proximity to water sources, on hilltops and along ridgelines.

Recommendation 1

That an archaeological survey be carried out in conjunction and consultation with the relevant Aboriginal community. For 'optimal results' this survey should be undertaken prior to construction and after determination of the location of the wind turbines, access tracks and other associated infrastructure work; the survey should concentrate on these areas. Depending on ground conditions and visibility within the survey area this survey is likely to identify areas that would require a subsurface testing program to determine the presence or otherwise of Aboriginal cultural heritage material. The Proponent should be aware that, depending on the results of the survey and consultation with the relevant Aboriginal community, it may be necessary to make further changes to the layout of the wind farm. For this reason some flexibility in the windfarm detailed design and proposed turbine, track and infrastructure positions is required to take account of issues identified during the survey.

7.2 Historical Archaeology

Recommendation 2

Although the potential for cultural heritage sites relating to post-European settlement is considered to be low it is recommended that a survey for historical archaeological sites be carried out concurrently with the survey for Aboriginal archaeology.

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MAPS

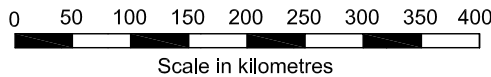


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Scale in kilometres



Heritage Consultants
 Suite 3,
 83 Station St,
 Fairfield, 3078
 VICTORIA
 Ph. 03 9486 4524
 Fax. 03 9481 2078

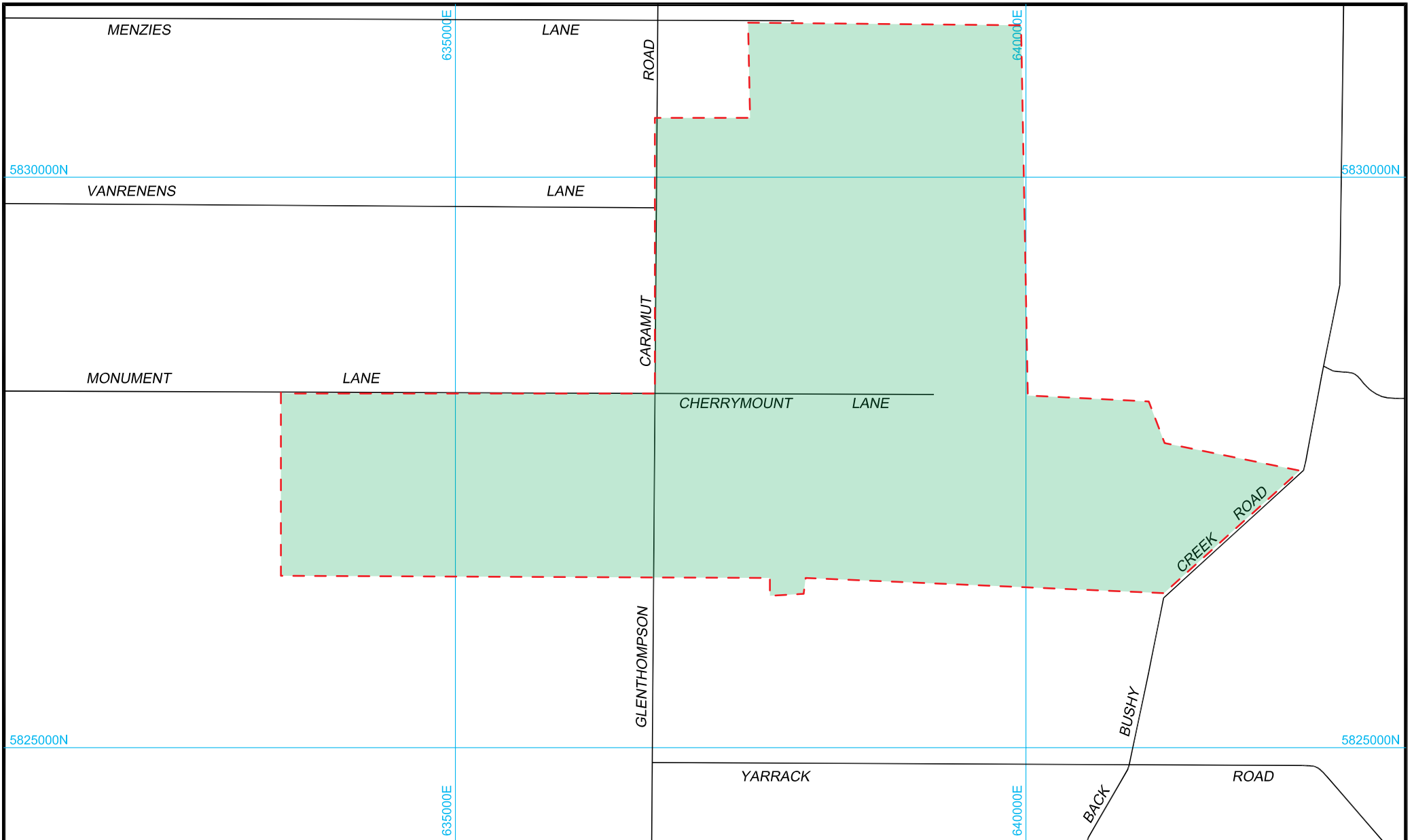


Drawing No.:

Regional Map
 Proposed Oaklands Windfarm
 Glenthompson

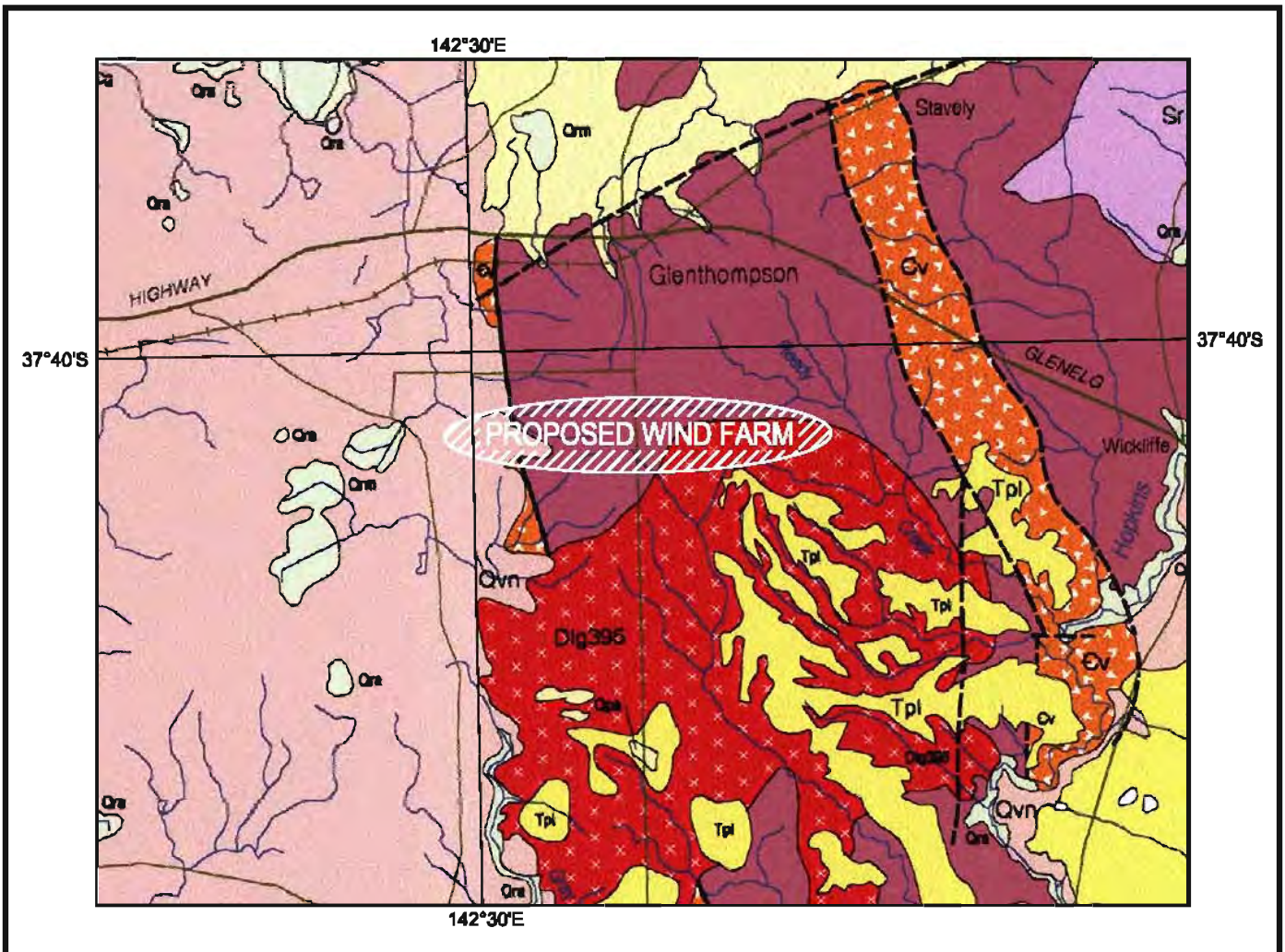
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Datum: GDA94	Format: A4

MAP 1: Regional Map



 MGA Zone 54	KEY Study Area	 Scale in metres	 Heritage Consultants Suite 3, 83 Station St, Fairfield, 3078 VICTORIA Ph. 03 9486 4524 Fax. 03 9481 2078	Drawn: J.H	Study Area Oaklands Windfarm Glenthompson
				Datum: GDA94	
Date: 2/5/2007	Heights: AHD				
Format: A4	Drawing No.:				

Map 2: Study area



QUATERNARY	MOSTLY HOLOCENE	Qra Fluvial alluvium, gravel, sand, silt Qrc Fluvial "gully" alluvium, colluvium: gravel, sand, silt Qrm Peloids: lagoon and swamp deposits: silt, clay Qrt Fluvial alluvial terrace gravel, sand, silt Qrd Acolite: coastal and inland dunes: dune sand, some swamp deposits	SILURIAN TO DEVONIAN		SDk Fluvial: lacustrine: conglomerate, massive, sandstone, siltstone Sub Marine: thin to thick bedded siltstone, sandstone, conglomerate Sul Marine: sandstone, mudstone, thin to thin bedded Sud Marine: siltstone, thin-bedded sandstone Suk Marine: siltstone, sandstone, thin-bedded Sum Marine: sandstone, mudstone, medium to thin-bedded Sip Marine: sandstone, thick to thin bedded, siltstone, conglomerate Sls Marine: sandstone, thick to thin bedded, siltstone, conglomerate Sla Marine: sandstone, thick to thin bedded, siltstone, minor conglomerate Sid Marine: siltstone, thin-bedded, minor sandstone, conglomerate Oub Marine: black shale, thin bedded sandstone, calcareous siltstone Our Marine: sandstone, thin to thick bedded, shale, mudstone, minor conglomerate
	HOLOCENE TO PLEISTOCENE	Qqc Fluvial: gravel, sand, silt Qpe Fluvial "gully" alluvium, colluvium: gravel, sand, silt Qpe Lacustrine: limestones, minor sand Qpy Peloids: lagoon deposits: black silt, clay Qp2 Fluvial: gravel, sand, silt Qa Fluvial: silt, sand, minor gravel Qd Acolite: dune deposits: sand, clay, calcareous sand Tpo Fluvial: post-Newer Volcanic hillwash: gravel, sand, silt Tpa Fluvial: post-Newer Volcanics silt, sand, minor gravel Qva Extrusive: scoria	SILURIAN	UPPER	Ou Marine: sandstone, shale, mudstone Ol Marine: sandstone, siltstone, shale, chert Olm Marine: sandstone, siltstone, shale, chert, Darriwillian Ola Marine: sandstone, siltstone, shale, chert, Castlemilian (=Chevonian) Oty Marine: sandstone, siltstone, shale, chert, Yarranian Oll Marine: sandstone, siltstone, shale, chert, Lunanfieldian Olb Marine: sandstone, siltstone, shale, chert, Bendigorian Oin Marine: sandstone, siltstone, shale, chert, Chevonian Oir Marine: sandstone, thick bedded, siltstone, shale, chert Cug Marine: chert, silty sandstone, shale, pale-coloured conglomerate Cvm Marine: shale, volcanoclastic sandstone
PLEISTOCENE	Qm Extrusive: tholeiitic to alkaline basalt, minor scoria and ash Qvt Extrusive: alkaline series: trachyte, mugearite, hawaiiite, basaltoid Tpb Fluvial: gravel, sand, silt Tp Fluvial: gravel, sand, silt Tmn Marine: glauconitic silt, marl, minor limestones Tmv Extrusive: olivine tholeiite Tom Marine: limestone, calcareous sandstone, sandstone, quartzite, sandy limestone, with intercalated olivine basalt lens Tvo Extrusive: tholeiitic and minor alkaline basalt	ORDOVICIAN		LOWER	G217 Strathgole Granite S-type G218 Trazool Granite S-type G219 King Parrot creek Granodiorite S-type G220 Flowerdale Granodiorite Unassigned G221 Mount Disappointment Granodiorite I-type G222 Glenelg Granodiorite Unassigned G223 Black Range Granodiorite Unassigned G240 Silvan Granodiorite I-type G241 Lyttonfield Granodiorite I-type G275 Morang Granodiorite I-type G276 Bulla Admettia S-type G277 You Yanga Granite I-type G278 Ingleson Granite I-type G280 Mount Egerton Granite I-type G282 Berringo Granodiorite I-type G288 Pyselong Granodiorite Unassigned G284 Bayrion Granodiorite I-type G285 Beesvick Granodiorite I-type G287 Glenauis Microgranite S-type G290 Harcourt Granodiorite I-type
HOLOCENE TO PLEISTOCENE	Qvn Marine: glauconitic silt, marl, minor limestones Qm Extrusive: tholeiitic to alkaline basalt, minor scoria and ash Qvt Extrusive: alkaline series: trachyte, mugearite, hawaiiite, basaltoid Tpb Fluvial: gravel, sand, silt Tp Fluvial: gravel, sand, silt Tmn Marine: glauconitic silt, marl, minor limestones Tmv Extrusive: olivine tholeiite Tom Marine: limestone, calcareous sandstone, sandstone, quartzite, sandy limestone, with intercalated olivine basalt lens Tvo Extrusive: tholeiitic and minor alkaline basalt		GAMBRIAN	UPPER TO MIDDLE	
TERTIARY	PLIOCENE TO MIOCENE	Tew Fluvial: sand, sandy and silty clay, carbonaceous, pyrite in part TRe Fluvial: conglomerate, sandstone, siltstone P Fluvio-glacial, glauconitic tillite, diamictite, sandstone, mudstone, conglomerate Metamorphic: hornfels		GAMBRIAN	LOWER
PERMIAN	MIOCENE	Duh Intrusive: felsic dykes Dud Intrusive: granite Dug Intrusive: granite Dve4 Extrusive: biotite-hypersthene rhyodacite ignimbrite, recrystallized Dve3 Extrusive and lacustrine: garnet-bearing rhyodacite ignimbrite, recrystallized, siltstone Dve2 Extrusive: rhyolite to rhyodacite ignimbrite, welded Dve1 Extrusive: rhyolite lava, coherent flow-banded to auto-brecciated Dvm2 Extrusive: biotite-hypersthene rhyodacite ignimbrite, recrystallized Dvm1 Extrusive: rhyolite ignimbrite, welded	GAMBRIAN		
	OLIGOCENE	Dvm Marine: thin-bedded sandstone, siltstone Dhm Marine: sandstone, thick to thin bedded, siltstone, minor conglomerate, limestone lenses Dlg Marine: black shale, black siltstone Dlc Marine: limestone, massive mid-grey recrystallized Dh Marine: siltstone, minor sandstone Di Marine: sandstone, mudstone			

Terra Culture
Heritage Consultants

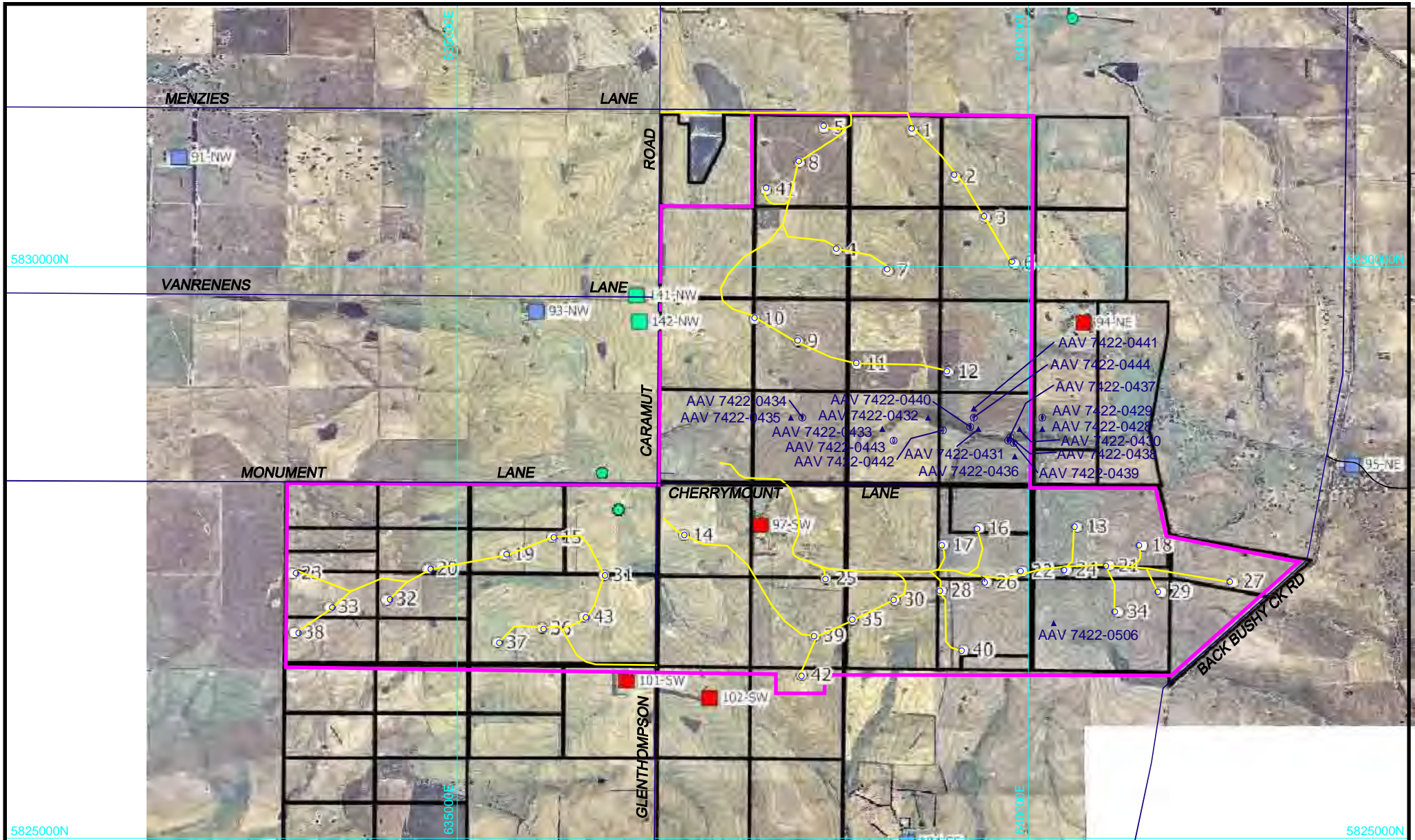
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**REGIONAL GEOLOGY
GLENTHOMPSON**

Drawn: P.B. Date: 3/4/2006
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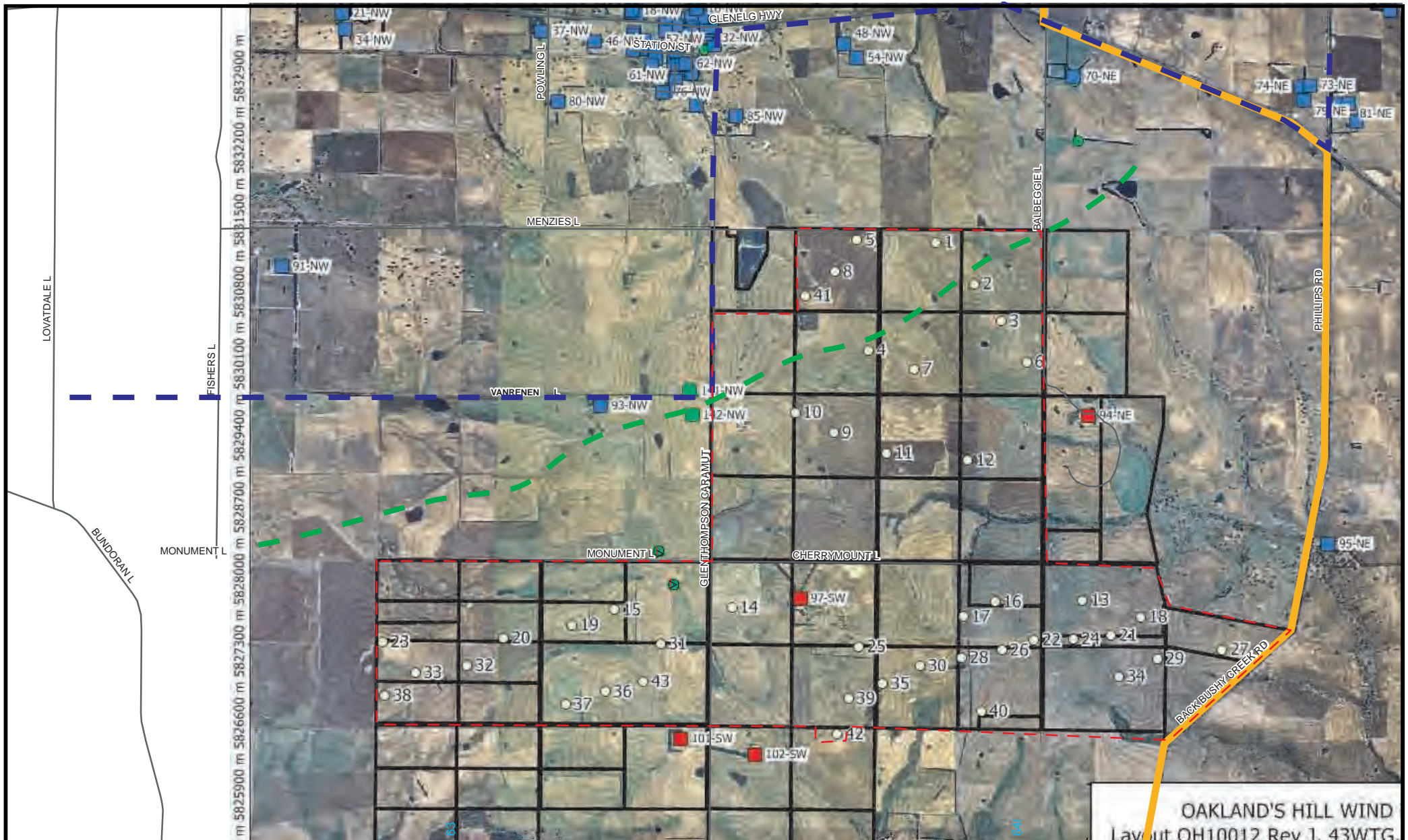
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MAP 3: Regional Geology - Glenthompson



 MGA Zone 54	KEY ▲ Aboriginal Artefact Scatter ○ Proposed Wind Turbine ● Scarred Tree ◻ Study Area ● Aboriginal Earth Feature ⚡ Proposed Access Tracks		 Scale in metres	 Heritage Consultants Suite 3, 83 Station St, Fairfield, 3078 VICTORIA Ph. 03 9486 4524 Fax. 03 9481 2078	Drawn: P.B.	Registered Aboriginal Sites Proposed Windfarm Site Oaklands Hill
	Datum: GDA94					
Date: 14/5/2007						
Heights: AHD						
	Format: A4	Dwg No.: Aboriginal Sites - May 2007 Study Area.dwg				

MAP 4: Registered Aboriginal Sites within the Study Area.



OAKLAND'S HILL WIND
Layout OH10012 Rev 1. 43WTG

	<p>KEY</p> <p>- - - Study Area</p> <p>- - - Major Mitchell Trail</p> <p>- - - Approx Major Mitchell Route</p>		<p>Heritage Consultants Suite 3, 83 Station St, Fairfield, 3078 VICTORIA Ph. 03 9486 4524 Fax. 03 9481 2078</p>	<p>Drawn: J.H</p>	<p>Study Area Oaklands Windfarm Glenthompson</p>
	<p>Datum: GDA94</p>			<p>Date: 2/05/2007</p>	
<p>Heights: AHD</p>	<p>Format: A4</p>	<p>Drawing No.:</p>			
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Map 5: Study area showing proposed location of turbines, the Major Mitchell Trail and Major Mitchell's route

APPENDIX 1- GLOSSARY OF TERMS

Glossary of Terms

The following glossary presents definitions for words and terms that may have been used in the preceding TerraCulture report. Archaeological site types or specific stone artefact types that have counterparts elsewhere in the world are usually defined according to their known or inferred use in Aboriginal Australia. The definitions of some terms are based on common usage or convention rather than literal meaning. Italicised words within any definition have also been separately defined.

Aboriginal: Referring to indigenous people and their descendants who occupied Australia at the time of European colonisation.

Aboriginal Archaeology: The scientific study of the material remains of past indigenous peoples. Aboriginal archaeology covers both the *pre-contact* (also known as prehistoric) and the *post-contact* period.

Aboriginal Archaeological Site: A location with material evidence of past activity by indigenous people. Activities such as the manufacture and use of stone artefacts have a recognisable archaeological signature. Other activities will have little or no material consequences and are regarded as being archaeologically invisible.

Aboriginal Archaeological Site Types: Aboriginal archaeological sites can be classified into generic types according to their context, fabric and probable function. Aboriginal Affairs Victoria currently recognises some 10-site types including stone artefact scatters, shell middens and scarred trees.

Aboriginal Artefact Scatter: A collection of Aboriginal artefacts usually distributed across the surface of the ground. Stone artefacts are a common component and can be found in association with organic remains, shell, ochre and charcoal. Artefact scatters are the material remains of past Aboriginal use of a location and are generally referable to technological and economic behaviour. They are also called surface scatters.

Aboriginal Burial: Aboriginal interment consisting of human skeletal remains. Aboriginal burials occur in a wide range of forms and physical contexts and may be found with grave goods.

Aboriginal Historic Place: Aboriginal historic places are the locations of events, places or place names that were recorded in historical documents or in oral tradition during the *post contact period*. Unlike Aboriginal archaeological sites, Aboriginal historic places do not necessarily retain any physical evidence of any former structures, activities or specific events.

Anvil: A flat stone used as a platform in the manufacture of stone artefacts (bi-polar flaking) or in the processing of foods, ochre and other materials. With bipolar flaking the *core* is rested on the anvil and struck with a *hammer stone* creating a *flake*. Use leaves small circular depressions (pitting) on the anvil surface usually towards the centre. Anvil stones are often recovered as broken halves; the break being across the centre line of the stone where there has been most wear.

Archaeology: Conventionally, the scientific study of the material remains of past human activity.

Artefact: Any object created or modified by humans.

Artefact Scatter: A collection of artefacts usually distributed across the surface of the ground.

Assemblage: Archaeological term used to describe a collection of artefacts associated by a particular place or time and assumed to have been generated

by a single group of people. An assemblage can be made from different *artefact* types.

Axe Blank: A stone that has been shaped through the removal of *flakes* but not yet sharpened.

Axe Grinding Groove: Oval shaped indentations in stony outcrops that are the result of grinding during the manufacturing and sharpening of *ground edge axes*. These indentations are usually but not exclusively formed in sandstone outcrops and can occur singly or in multiples. Axe-grinding grooves are typically found close to water, which appears to have been used to maintain the sandstone's abrasiveness.

Backed Blade: A stone blade that has been retouched along one of its lateral margins to prepare the edge for hafting.

Basalt: Igneous volcanic rock that can be used to make *stone artefacts*. Basalt is common in western Victoria where there has been recent volcanic activity.

Before Present (BP): referring to years before present, which for radiocarbon dating is arbitrarily fixed at 1950.

Bi-polar Flaking: The process of manufacturing stone artefacts through the use of a hammer and anvil. A *core* is struck with a hammerstone while resting on an anvil, detaching angular *flakes* that display bruising or crushing at either end.

Blade: A *flake* that is at least twice as long as it is wide.

Bulb of Percussion: A rounded protrusion on the interior surface of a *flake* caused when the *core* is struck with the *hammerstone*. The bulb is located below the striking platform and allows the identification of the orientation of the flake. The bulb of percussion is often considered the best evidence for a human agency in the manufacture of a stone flake.

Bulbar Scar: A small scar or removal of stone on the *bulb of percussion*.

Ceramics: Generic term used to describe *historical artefacts* that are made from ceramic material.

Chert: A hard fine-grained sedimentary rock high in silica and commonly used in the manufacture of stone artefacts.

Civic: A term used to describe historic structures or material culture relating to past government or public activity e.g. town hall, public parks or gardens.

Classification: The ordering of archaeological material according to age, type, fabric or other criteria.

Coastal Flint: Geologically, flint is a type of chert. A coastal form is found in limestone reefs along the Victorian and South Australian coastlines and is often detached as nodules on the roots of kelp and subsequently washed up on beaches. The appearance of the flint varies but is often fine grained with larger white intrusions and a thick outer *cortex* or crust and is blue to cream in colour. Coastal flint is often the dominant rock type in stone artefact sites on or near the Victorian coast.

Contact Site: General term used to describe an *Aboriginal archaeological site* that shows the use of European (non-indigenous) materials such as artefacts made with glass, metal or ceramic. Contact sites are usually considered to be the result of activities performed at or before the time of permanent European settlement.

Context: Refers to the place of artefacts or archaeological features with regards to time and space.

Core: A piece of stone from which other stone artefacts are made. In *freehand flaking* the *core* would be struck with a *hammerstone* removing *flakes* and other fragments of stone often referred to as *debitage*.

Core Tool: A *core* displaying signs of use.

- Core Tool and Scraper Tradition:** Aboriginal stone artefacts belonging to the core tool and scraper tradition include core tools, large steep edged scrapers, round flat scrapers and notched implements. These assemblages are believed to pre-date the *Small Tool Tradition*.
- Cortex:** The weathered external surface of a stone. Cortex often identifies the origins and original form of flaked stone, e.g. river pebbles.
- Cultural Heritage:** The consequences of humanity including its relationship with the natural environment that are ascribed significance and considered to be worth preserving.
- Debitage:** Fragments of stone that are generated during the manufacture and maintenance of *stone artefacts*. These fragments may or may not display the typical characteristics of flaked stone.
- Deposit:** A term used to describe buried archaeological material.
- Desktop Study:** Investigation of the known or potential cultural heritage values according to the landform type, historical records and other archival material and the results of previous archaeological investigations.
- Domestic Assemblage:** A collection of historical artefacts generated by or associated directly with past household activity e.g. *ceramic* plates, bottles and cutlery, food refuse.
- Dry Stone Wall:** A wall that has been constructed using stone without any binding material. Dry stone walls take on many different forms and vary according to stone type and function. In western Victoria they are assembled with basalt stones collected from the surface of paddocks.
- Excavation:** The systematic removal of archaeological deposits using archaeological techniques.
- Fabric:** A synonym for original material.
- Feature:** A notable formation or structure (conventionally immovable) discovered during *excavation*.
- Fish trap:** A structure made from stone, wood or reeds intended to guide fish or eels into a confined space to be collected or speared. Often constructed perpendicular to the main channel of a creek or river, or in the intertidal zone of estuaries, bays and oceans.
- Flake:** A piece of stone detached by percussion or pressure from a *core*. The flake will usually display characteristic features such as a *platform* and *bulb of percussion*. The *core* will display a negative flake scar. These features assist in distinguishing between stone that has been altered through human agency and that which has been naturally shaped.
- Flake Tool:** A flake that has been shaped through the removal of other smaller flakes (*retouched*) or shows evidence of use (*use wear*).
- Freehand Flaking:** A technique of manufacturing or shaping stone artefacts whereby a hand-held stone is hit directly with the hammerstone, also handheld.
- Grinding Stone:** Stone with a flat surface used as a mortar in the processing of food or other hard materials through pounding, crushing or grinding. Grinding stones are identifiable by the presence of wear in the form of shallow depressions and pitting.
- Ground Edge Axes:** Stone axes that are commonly oval or round in shape and that have edges formed by grinding and sharpening. Ground edge axes were attached (hafted) to wooden handles using resin or other binding material. Axes from Mount William a large quarry near Lancefield in Victoria are known to have been traded in the form of *axe blanks* over long distances (see *axe grinding groove and axe blanks*).
- Ground Exposure:** A measure of the quantity of sediment that would normally be buried beneath a modern land surface.
- Ground Visibility:** A term used to describe the area of the ground's surface that is visible during archaeological field surveys. Effective ground visibility refers to the actual area of ground visible during a field survey calculated as the area of ground inspected multiplied by the percentage of ground visibility.
- Hafting:** The process of attaching a stone artefact onto a wooden handle.
- Hammerstone:** A stone that has been used to strike a *core* to create a *flake*, often causing pitting or other wear on the stone's surface.
- Hearth:** Fireplace often recognised archaeologically through the presence of charcoal or burnt (discoloured) ground. Historical hearths are usually associated with brick or stone structures.
- Historical Archaeological Site:** The material remains or other physical evidence of activity associated with the *post-contact* period; including portable artefacts and structural features of former buildings.
- Historical Archaeology:** The study of artefacts and archaeological features relating to the post-contact period.
- Holocene:** The geological period covering the last 10,000 years BP.
- Hornfels:** A metamorphic rock, hard and fine-grained.
- Industry:** A single class of artefacts that are consistent in their form and that can be credited to a single group of people.
- Industrial Archaeology:** *Archaeology* concerned with the material consequences of industrial activity.
- In situ:** In its original place.
- Layer:** A recognisable band of material of varying thickness.
- Limestones:** Carbonate-rich sedimentary rocks that are formed through the accumulation of organic remains.
- Manuport:** An object that is unmodified but has been transported to its find location by humans.
- Makers Marks:** Marks that have been etched, engraved or printed onto the surface of mass manufactured goods, including glasswares and ceramics.
- Maritime Archaeology:** The archaeological investigation of shipwrecks, piers, jetties and other maritime structures.
- Microliths:** Small stone artefacts. In Australia microliths such as *backed blades* are often associated with *assemblages* from the late prehistoric period after ca 6000 years BP.
- Monitoring (see watching brief)**
- Mound:** Aboriginal mounds consist of ground that is artificially elevated above the natural levels. Thought to be a consequence of repeated occupation at the same location particularly through the use of earth ovens, mounds can contain a wide range of artefactual material including burials. Mounds that have all but been destroyed are recognisable through changes in the colour and composition of the ground, especially the presence of charcoal.
- Platform:** Face of core that is struck by a *hammerstone*, leaving remnants on both the *core* and the resultant *flake*.
- Pleistocene:** The geological period equivalent to the last ice age and preceding the *Holocene* from ca 2 million to 10,000 years ago. The late Pleistocene commonly refers to the last 40,000 years BP.
- Post-contact Period:** The time after contact between Aboriginal peoples and Europeans. Also referred to as the historic period. In Victoria the post-contact period begins in early 1800s.

Posthole: A hole that has been dug into the ground to house a post. Postholes are often filled with stone or other packing material (more recently concrete).

Post Deposition: After deposition; term commonly used with reference to factors affecting the preservation of artefacts and archaeological features.

Pre-contact Period: The time period before contact between Aboriginal peoples and Europeans. In Victoria this ends with permanent European settlement.

Quartz: A hard mineral that varies from white to blue in colour and in transparency from opaque to clear.

Quartzite: A metamorphic rock formed through the 'recrystallisation of quartz rich sandstone'.

Radiocarbon Dating: Radiometric dating technique for establishing the age of organic (carbon) remains based on the rate of decay of the radioactive isotope carbon 14 (C14).

Retouch: Secondary modifications to stone artefacts such as trimming or resharpening. Retouch often indicates use of a stone *flake* and therefore its identification of an actual tool (cf waste flake)

Rock Art, Aboriginal: Aboriginal artworks on rock surfaces such as paintings, stencils, etchings and engravings.

Rock Well Aboriginal: A natural depression that may have been augmented through the removal of rock and from which water was collected.

Ruin: what remains of a former historic structure.

Salvage Excavation: The systematic documentation and recovery of an archaeological site prior to its destruction. Also known as rescue archaeology.

Sandstone: Sedimentary rocks that consist mostly of quartz.

Scarred Trees, Aboriginal: Trees that were used as a source of bark to make canoes and other items. Bark was cut using a stone axe and then levered from the sapwood leaving a scar. The bark around the edge of this scar is called regrowth. Natural scarring is common on some trees and is often difficult to distinguish from scars made by Aborigines during the *pre-contact period*.

Scarred Trees, Historic: Bark continued to be used by Aborigines and Europeans alike during the post-contact period for roofing, trail blazes, mile markers etc.

Scraper: A stone tool made on a *flake* or *core* with steep *retouch* along one or more edges.

Shell Middens (Marine or Coastal and Freshwater): The remains of shellfish that were gathered and eaten by Aboriginal people. They may also contain other stone artefacts, charcoal and ash, and the bones of vertebrate prey. *Burials* are also known to occur in shell midden deposits. Aboriginal shell middens are often confused with natural shell deposits.

Shipwreck: The remains of a ship.

Silcrete: A highly silicious rock formed by the replacement of a parent rock (commonly sandstone) by silica in solution.

Small Tool Tradition: Aboriginal stone artefacts belonging to the small tool tradition are characterised by heavily retouched *microliths* and backed implements and are presumed to be a mid to late *Holocene* development.

Spit: arbitrary quantity of excavated ground.

Stratigraphy: A geological term used to describe the sequence of vertical *layers* and *deposits* that comprise an archaeological site.

Stone Arrangement, Aboriginal: Locations where Aboriginal people have positioned rocks to form shapes or patterns. In Victoria, stone arrangements are an uncommon site type.

Stone Artefacts, Aboriginal: Stones that have been modified or used by Aboriginal people.

Stone Quarry, Aboriginal: Sources of stone used for the purpose of manufacturing stone artefacts.

Subject Land: The area that is under investigation. Also referred to as the study area.

Subsurface Testing: The testing for buried archaeological material through manual or mechanical excavation.

Survey, Pedestrian: The act of looking for archaeological material. Also known as foot survey.

Taphonomy: The study of how archaeological sites are formed.

Toe Holds, Aboriginal: Small scars on the trunks and branches of trees which are a result of the removal of bark to form notches to facilitate climbing.

Usewear: The wear displayed on the surface of an artefact as a result of its use.

Waste Flake: An unmodified and unused *flake*.

Watching Brief: The monitoring of earthworks or other forms of disturbance at the location of a known archaeological site or of a landform considered sensitive for artefacts or other archaeological material. A watching brief is often a condition of a grant of Consent to disturb or destroy an archaeological site. Also known as monitoring.

Windscreen Survey: Field survey based on observations made from a vehicle. Also known as a drive-through survey (cf pedestrian survey).

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