

**Frasers Solar Farm
Frasers Lane Glengarry North**

Aboriginal and Historical Cultural Heritage Desktop Due Diligence Assessment



Report to South Energy Pty Ltd

14 December 2018

Landskape

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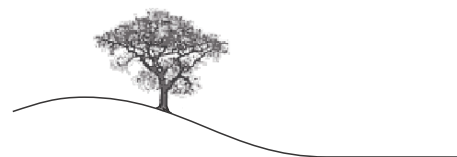
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Frasers Lane Glengarry North**

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Landscape

Natural and Cultural Heritage Management

a division of M.L. Copper Pty Ltd

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Executive Summary

South Energy Pty Ltd proposes to construct a 75 MW solar photovoltaic (PV) electricity generation facility at Frasers Lane, Glengarry North, in the Gippsland region of southeastern Victoria. The activity area for the proposed electricity generation facility measures approximately 108 ha.

As part of the planning approvals process preceding the Frasers Solar Farm archaeologist Dr Matt Cupper was engaged by Entura Pty Ltd on behalf of South Energy Pty Ltd to complete a preliminary investigation to identify any possible Aboriginal and historical cultural heritage constraints that might need to be addressed prior to installation of the proposed infrastructure. Dr Cupper is a qualified archaeologist and geoscientist, with 19 years' experience as a heritage advisor and high-level expertise in geomorphology.

The assessment comprised a desktop review of the Victorian Aboriginal Heritage Register (VAHR) maintained by Aboriginal Victoria, the Victorian Heritage Register (VHR) and Victorian Heritage Inventory (VHI) maintained by Heritage Victoria and Latrobe City Local Planning Scheme Heritage Overlay Schedule.

No Aboriginal or historical cultural heritage items or sites have previously been recorded in the proposed Frasers Solar Farm. Predictive modelling shows that there is a low potential for Aboriginal or historical cultural heritage to be harmed by the activity.

A modified waterway, Four Mile Creek, is near the southeastern corner of the activity area and the 2.4 hectare area within 200 m of the creek is an area of cultural heritage sensitivity according to regulation 26(1) of *Aboriginal Heritage Regulations* 2018 where not previously subject to significant ground disturbance.

Accordingly, the proposed construction of the Frasers Solar Farm does not require a mandatory Cultural Heritage Management Plan (CHMP) under Section 46 of the *Aboriginal Heritage Act* 2006 if activities are avoided within 200 m of Four Mile Creek. Additionally, earthworks should be avoided in the vicinity (within 5 m) of any dwelling, shed or outbuilding suspected to be greater than 75 years old.

In the event that any Aboriginal or historical cultural heritage places or items are encountered during the course of the proposed activity, all activities likely to harm the material must cease immediately and a Heritage Advisor, Aboriginal Victoria (tel:

1800 762 003) or Heritage Victoria (tel: 03 9938 6894) consulted about an appropriate course of action prior to recommencement of work.

If human skeletal remains are encountered during the course of the proposed activities all work in that area must cease. Remains must not be handled or otherwise disturbed except to prevent further disturbance. The Police or Victorian Coroner's office must be notified immediately. The Coronial Admissions and Enquiries Hotline is tel: 1300 888 544.

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List of Abbreviations

CHMP – Cultural Heritage Management Plan

HO – Heritage Overlay

VAHR – Victorian Aboriginal Heritage Register

VHI – Victorian Heritage Inventory

VHR - Victorian Heritage Register

1 Introduction

South Energy Pty Ltd proposes to construct a 75 MW solar photovoltaic (PV) electricity generation facility at Frasers Lane, Glengarry North, in the Gippsland region of southeastern Victoria. The activity area for the proposed electricity generation facility measures approximately 108 ha.

As part of the planning approvals process preceding the Frasers Solar Farm archaeologist Dr Matt Cupper was engaged by Entura Pty Ltd on behalf of South Energy Pty Ltd to complete a preliminary investigation to identify any possible Aboriginal and historical cultural heritage constraints that might need to be addressed prior to installation of the proposed infrastructure. Dr Cupper is a qualified archaeologist and geoscientist, with 19 years' experience as a heritage advisor and high-level expertise in geomorphology and soil science (see Section 1.2).

1.1 Aims of the Investigation

The aim of this preliminary cultural heritage investigation was to prepare a general statement identifying known Aboriginal and historical cultural heritage items and sites and any areas of archaeological potential within the activity area. Statutory requirements pertaining to Aboriginal and historical cultural heritage were also examined to determine their applicability to the proposed activity.

Preparation of this due diligence study involved review of the *Aboriginal Heritage Act 2006* and the *Aboriginal Heritage Regulations 2018* and the *Heritage Act 2017*. Any Aboriginal or historical cultural heritage sites or items recorded previously in the activity area were identified by searching the Victorian Aboriginal Heritage Register (VAHR) site database maintained by Aboriginal Victoria, Victorian Heritage Register (VHR) and Victorian Heritage Inventory (VHI) maintained by Heritage Victoria and the Heritage Overlay (HO) and Schedule of the Latrobe City Council.

A general predictive model examining possible cultural heritage site locations within the activity area was formulated from this and other relevant archaeological and environmental data. Preparation of this model also involved the use of topographic and geological maps and aerial photographs to identify landscape features likely to contain archaeological sites.

1.2 Personnel Involved in the Assessment

Landscape's principal research scientist Dr Matt Cupper undertook the investigation and produced this report. Dr Cupper has a wide background in the sciences and humanities, with degrees (including a PhD) in archaeology and classical history, geology and botany, with particular expertise in understanding the formation of archaeological sites and Quaternary environments. He has published extensively on these topics in high-profile, peer-reviewed scientific journals and was lead author for the Quaternary chapter of the *Geology of Victoria* (Cupper *et al.* 2003), the current, premier reference to Victoria's geology.

Dr Cupper is currently a Research Fellow in the School of Earth Sciences at The University of Melbourne (www.findanexpert.unimelb.edu.au/display/person20521), where he manages the luminescence dating facility in addition to teaching geological methods and sedimentary geology to undergraduate students and supervising postgraduate research. Dr Cupper is also an Honorary Research Associate in the Landscape Dynamics group of the Oxford Centre for the Environment in the School of Geography and the Environment at the University of Oxford (<http://www.geog.ox.ac.uk/research/landscape/old/people.html>).

As a consulting archaeologist and geoscientist, Dr Cupper has been engaged in hundreds of management and research-oriented studies throughout southeastern Australia for industry and government. Dr Cupper is also a Heritage Advisor, meeting the requirements of s.189(1) of the *Aboriginal Heritage Act 2006* (https://www.vic.gov.au/system/user_files/Documents/av/Heritage_Advisor_List_-_March_2018.DOC).



Figure 1. Location of the activity area for the proposed Fraser's Solar Farm

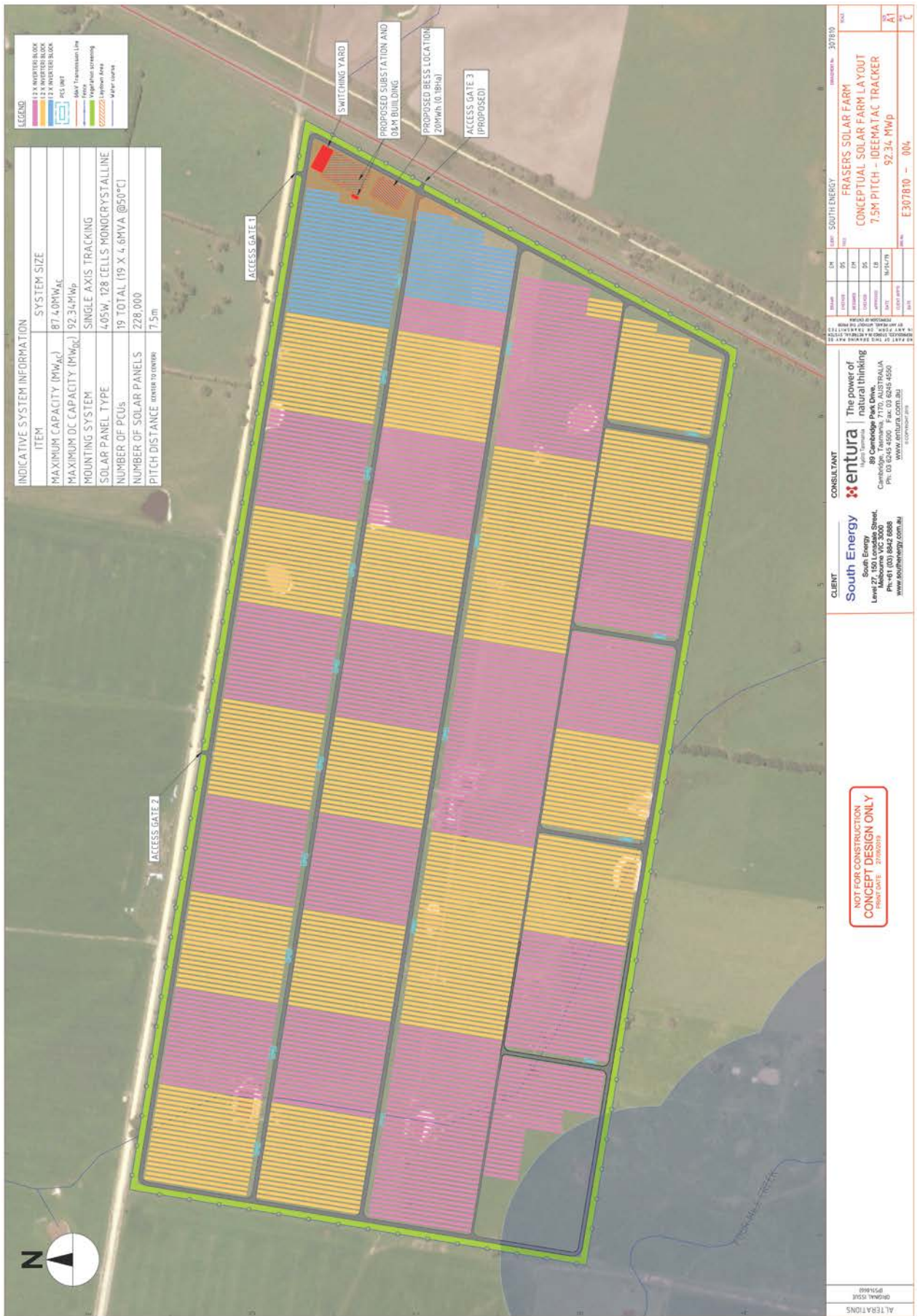


Figure 2. Design of the proposed Frasers Solar Farm

2 Contextual Information

2.1 Legislative Context

All Victorian registered and unregistered Aboriginal cultural heritage sites are protected by the *Aboriginal Heritage Act 2006* (commenced 28 May 2007). This Act prohibits the wilful destruction or disturbance of any Aboriginal cultural heritage site, place or object, whether on private or public land. Victorian historical sites are protected by the *State Heritage Act 2017*.

Aboriginal Victoria (Heritage Services Branch) is the Victorian State Government agency that administers the *Aboriginal Heritage Act 2006*. Heritage Victoria has responsibility for protecting historical cultural heritage.

2.1.1 *Aboriginal Heritage Act 2006*

The *Aboriginal Heritage Act 2006* and its *Aboriginal Heritage Regulations 2018* are of particular relevance to the proposed activity. A core component of this Act is the preparation of Aboriginal Cultural Heritage Management Plans (CHMPs), which are required under certain circumstances for high impact activities. Aboriginal Cultural Heritage Management Plans must meet prescribed standards and be approved by Aboriginal Victoria before they can be used to support permit applications to local government or other agencies.

The regulations can be used to determine if an Aboriginal Cultural Heritage Management Plan is required for an activity. Section 4 of this scoping study makes such a determination for the proposed activity. The regulations also detail the standards expected of an Aboriginal Cultural Heritage Management Plan.

2.1.2 *Heritage Act 2017*

The *Heritage Act 2017* provides protection for all Victorian historical sites and items that are at least 75 years old.

s.123(1) of the Act states:

A person must not, without a consent issued under section 124, knowingly or negligently deface, damage or otherwise interfere with, or carry out an act, likely to endanger -

(a) a site recorded in the Heritage Inventory; or

(b) an archaeological site which is not recorded in the Heritage Inventory.

Archaeological site means a place that (a) contains an artefact, deposit or feature that is 75 or more years old; and (b) provides information of past activity in the State; and (c)

requires archaeological methods to reveal information about the settlement, development or use of the place; and (d) is not associated only with Aboriginal occupation of the place.

2.1.3 Latrobe Planning Scheme

Historical cultural heritage in the study area is protected by the Latrobe Planning Scheme. Clauses 15.03 and 21.06 of the Latrobe Planning Scheme outline the objectives and strategies of heritage conservation policy in the Latrobe City Council local government area. Heritage Overlay (HO) maps and the Schedule to the Heritage Overlay form clause 43.01 of the Latrobe Planning Scheme. They depict the locations of historical cultural heritage in the Latrobe City Council local government area and outline the heritage conservation controls in place for each historical feature.

2.1.4 Australia ICOMOS Charter for the Conservation of Places of Cultural Significance (*Burra Charter*)

The *Australia ICOMOS Charter for the Conservation of Places of Cultural Significance* (Burra Charter) was adopted at a conference at the historic mining town of Burra, South Australia, in 1979 (last updated 2013). This charter defines the procedures and basic principles to be followed in the preservation of all types of sites. Cultural significance is a term used to encompass all the meanings and values that a particular place may have to people, beyond its utilitarian value. It refers to 'aesthetic, historical, scientific or social value for past or present generations, or for its likely value to future generations' (Marquis-Kyle and Walker, 1992: 73).

Under the guidelines of *The Burra Charter* Aboriginal and historical cultural heritage has social value. According to the charter, social value is defined as:

...the qualities for which a place has become a focus of spiritual, political, national, or other cultural sentiment to a majority or minority group (Marquis-Kyle and Walker, 1992: 73).

Some sites and items also have scientific value. This is assessed according to each particular site's research or scientific potential to provide information about past Australian culture, the environment, or human behaviour generally. According to *The Burra Charter*:

The scientific or research value of a place will depend upon the importance of the data involved or its rarity, quality or representativeness and on the degree to which the place may contribute further substantial information (Marquis-Kyle and Walker, 1992: 73).

2.2 Environmental Context

The proposed Frasers Solar Farm is located in the Gippsland region of southeastern Victoria approximately 60 km inland from the coast and the associated Gippsland Lakes that lie landward of a coastal barrier system. Climate of this region is dry subhumid, annually receiving approximately 750 mm of rainfall (Bureau of Meteorology 2018). Geologically, Glengarry is part of the Gippsland sedimentary basin (Talent 1969, Vandenberg 1997, Holdgate and Gallagher 2003, Cupper *et al.* 2003). Uplifted bedrock hills and ranges of the southern Victorian highlands abut the northern, onshore flank of the basin.

Much of the basin, including the submarine areas, is occupied by Plio-Pleistocene alluvium of the Haunted Hills Gravel (Talent 1969, Vandenberg 1997, Holdgate and Gallagher 2003, Cupper *et al.* 2003). These are gravels, sands and clays deposited by outwash fans and rivers from the highlands, including palaeo-courses of the Latrobe River (Joyce and Webb 2003). The activity area is located on one-such alluvial terrace elevated above the modern valley of the Latrobe River.

Prior to settlement by Europeans, the alluvial terrace in the activity area is likely to have supported a vegetation cover of 'Plains Grassy Forest' and 'Plains Grassy Woodland', *Eucalyptus* spp. Forest and open woodland with a grassy understorey, according to DELWP's (2018) NatureKit Victoria Biodiversity Interactive Map Ecological Vegetation Classes pre-1750. Current land use of the activity area is grazing pasture.

Overall, the environment of the activity area has been substantially modified by past European land use practices. This has included removal of the original vegetation including clear-felling of the eucalypt trees, land levelling and ploughed cultivation for cereal crops and pasture for introduced sheep and cattle. The construction of roads, fences, channels and dams has also impacted the activity area.

2.3 Aboriginal Cultural Heritage Context

Previous archaeological studies of the Gippsland region have demonstrated Aboriginal occupation dating back to the height of the last ice age some 18,000 years ago. The oldest cultural sequence in the region comes from Cloggs Cave near Buchan (Flood 1980). The deposit in this cave shows intensive Aboriginal occupation of the site from 17,720 ± 840 years Before Present (BP; ANU 1044) to 8,720 ± 230 years BP (ANU 1011). However, later phases indicate only intermittent occupation. The stone assemblages from the earlier phases are dominated by large, steep-edged scrapers and unifacial pebble tools. Later industries comprise geometric microliths, a few Bondi points, bipolar scaled pieces and small low-angled scrapers.

Most Aboriginal archaeological sites in Gippsland are along the coast and probably date from about 4500 years ago when sea levels stabilised near their present levels following the melting of the glaciers and ice caps. Excavation of shell midden deposits in particular have shown how shellfish gathering patterns and technology changed over this period (e.g. Coutts *et al.* 1976). These changes are usually interpreted by archaeologists as responses to changing environmental conditions. Some characteristic stone artefacts of the period were burins, backed blades and geometric microliths, although flakes and flaked pieces generally dominate stone assemblages. The most commonly used raw materials were quartz, silcrete and quartzite (see also Presland 1983).

Gaughwin's (1981, 1988) investigation of Westernport to the west of the current activity area identified salient features of the regional archaeological record. She located a total of 264 Aboriginal places, with 247 of these located along the high-energy coastline fronting Bass Strait, mostly in sand dunes behind rock platforms and bay head beaches. Cliff top occupation was also recorded. Most of the places were shell middens (dominated by Limpet), with associations of stone artefacts. Some 10 % of the stone artefacts were finished tools such as flakes, scrapers and blades (Gaughwin 1981, 1988). Marine chert and quartz was the most frequently used raw material, with beach cobbles a common source. Comparatively few places were located in the southern foothills of the Strzelecki Ranges.

Coutts' (1970) excavation of stratified dune sands at Wilsons Promontory to the southwest of the current activity area identified two cultural phases dating from ~6500 years ago. The first phase (Yanackie A) saw exploitation of rock platform shellfish such as Turbo and Variegated Limpet and the production of backed blade assemblages dominated by introduced quartzite. The second phase (Yanackie B), beginning ~1000 years ago, saw a change to Pipis and the replacement of backed blades with artefacts made from local flint and quartz. The change to Pipis may be the result of rock platform erosion and the subsequent growth of sandy shorelines. The abandonment of backed blades ~1000 years ago is consistent with general trends observed elsewhere in mainland Australian places.

Stratified midden deposits in two small granite caves on Great Glennie Island southwest of Wilsons Promontory have also been excavated (Fullagar 1986). One revealed six periods of occupation dating back to ~1500 years ago. The stone artefacts recovered comprised flint and quartz comparable to the Yanackie B material. The topmost layer contained mid-19th century British colonial material. The faunal assemblage was dominated by seal bones and Limpet shell. However, the most recent layer also

contained numerous bird and fish bones suggesting that the local Aboriginal economy had expanded and diversified prior to European settlement.

Hotchin and May (1984) and Hotchin (1989) have identified three basic types of coastal Aboriginal site at the Gippsland Lakes, southeast of the activity area:

1. Sites represented by estuarine shell (*Anadara trapezia*, *Ostrea angasi*) and microlithic assemblages produced mainly from introduced silcrete. These sites typically occur around the shores of the Gippsland Lakes and date from roughly 2000 to 4000 years ago when the lakes were estuarine.
2. Middens represented by thin scatters of *Plebidonax deltoides* shell and sparse quartz assemblages produced from locally obtained beach pebbles. These sites are common along the coastal foredunes and date to within the past 1000 years.
3. Thicker *Plebidonax* middens in the back-beach environment also dating to within the past 1000 years. The artefact assemblages associated with these middens are dominated by quartz but also include silcrete microliths and bone points. These sites relate to a lake phase transitional between estuarine and freshwater conditions.

Aboriginal occupation of the Gippsland Lakes has been further elucidated by Hall (1989). In 32 sample areas he recorded a total of 249 sites. Of these, 215 (86%) were surface scatters of artefacts or isolated finds, 33 (13%) were scarred trees and one was an Aboriginal burial. Some of these sites (21) were located on the northeastern shore of Lake Wellington some 40 km east of Glengarry North. Among them was the burial. Ten of the scarred trees were located on the 'Glencoe' property near Longford. Hall (1989) proposed that this area was the site of an early contact period camp.

Aboriginal sites in the hinterland of the Gippsland Lakes region, of which Glengarry North is a part, tend to be concentrated on sources of permanent or semi-permanent freshwater. Hall (1989) observed that the size of sites and the density of artefacts in them is greatest near lakes and streams. Sites are also concentrated around swamps and wetlands. These were resource zones highly valued by Aboriginal people. Near the shoreline these sites mostly comprise shell middens in association with scatters of stone artefacts. Sites inland usually comprise stone artefact scatters but may include scarred trees. Most campsites are located on gently sloping, well-drained ground elevated above the local water source.

Prehistoric Aboriginal occupation of the area around Glengarry North has been elucidated by Wesson and Beck (1981) during their regional archaeological survey of the Driffield Project. Wesson and Beck's (1981) assessment encompassed the area between Morwell and Yallourn and south to Yinnar, but less than 1 % of the study area

received survey coverage. 132 Aboriginal sites were recorded, comprising 104 isolated finds of stone artefacts, 22 surface scatters of stone artefacts, 4 scarred trees and 2 stone sources. Wesson and Beck (1981) considered that site location was affected by proximity to water, access to and availability of resources and other natural resources (e.g. stone), vantage, drainage and type of ground surface.

The fine-grained silcrete found to dominate the stone artefacts recorded does not occur in the Driffield study area and no source for this rock type has yet to be found. In terms of site situation, there was a bias towards the crests (36 %) and slopes of rises (35 %), with creek banks and undulating land (10 %) also having sites. Level plains and river terraces had the least number of sites (5 %), though Wesson and Beck (1981) note that the number of sites located was directly affected by ground surface visibility conditions. The largest number of sites was located within the Hills landform, and this was also the land system that received greater survey coverage due to higher levels of ground surface visibility.

2.3.1 Aboriginal Cultural Heritage Site Types

Based on the results and analytical conclusions of previous archaeological surveys in similar landscape contexts in the Gippsland region it is possible to predict the types and topographic contexts of Aboriginal cultural heritage sites in the study area. The occurrence and survival of archaeological sites is, however, dependent on many factors including micro-topography and the degree of land surface disturbance.

The types of Aboriginal cultural heritage site previously recorded in the Gippsland region are described below.

Stone artefact scatters

Scatters of stone artefacts exposed at the ground surface are one of the most commonly occurring types of archaeological site in the region. In rare instances, sites that were used over a long period of time may accumulate sediments and become stratified. That is, there may be several layers of occupation buried one on top of another.

Stone artefact scatters are almost invariably located near permanent or semi-permanent water sources. Local topography is also important in that stone artefact scatters tend to occur on level, well-drained ground elevated above the local water source. In Gippsland they are commonly located in coastal dunes, on river terraces and along creek-lines and also around the margins of lakes, swamps and claypans.

Shell middens

Shell middens are deposits of shell and other food remains accumulated by Aboriginal people as food refuse. Middens are most frequently found as thin layers or small patches of shell and often contain stone or bone artefacts and evidence of cooking. Such sites are relatively common along the Gippsland coast and associated Gippsland Lakes.

Stone quarries

Quarries are locations where Aboriginal people obtained raw material for their stone tools or ochre for their art and decoration. Materials commonly used for making flaked stone tools include chert, silcrete, quartz and quartzite. Most stone in the Gippsland region was probably sourced from bedrock in the southern Victorian highlands and chert nodules from along the coast.

Rockshelter sites

Caves or shelters in cliff lines and beneath boulder overhangs were often used by Aboriginal people as campsites. Because of the confined area in these shelters and because of repeated Aboriginal occupation of such sites, the occupation deposits that they contain are often richer than open campsites and are usually stratified.

Rockshelters will only be found where suitable geological formations are present. They may occur as sandstone overhangs, shelters beneath granite tors or as limestone caves.

Rock art sites

Rock art consists of paintings, drawings and/or engravings on rock surfaces. In most instances in the wider region, rock art is related to the distribution of rockshelters but it may also be found on freestanding rocks.

Water holes

Rock wells are subterranean water sources that have been either modified or maintained by Aboriginal people. Besides being important for the provision of clean drinking water rock wells may also have mythological significance to Aboriginal people and are often sacred places.

Grinding grooves

Grinding grooves result from Aboriginal people having rubbed the edges of stone axe-heads repeatedly against a soft abrasive rock in order to shape or sharpen them. Grinding grooves are normally located adjacent to creeks where suitable stone for grinding may be present. In most instances, sandstone outcrops provided the most suitable surfaces for grinding purposes.

Scarred trees

Slabs of bark were cut from trees by Aboriginal people and used for a variety of purposes including roofing shelters and constructing canoes, shields and containers. Scars also resulted from the cutting of toeholds for climbing trees to obtain honey or to capture animals such as possums.

In Gippsland River Red Gums are the most commonly scarred species. The classification of modified trees as natural, European or Aboriginal is often problematic. However, if the scar is Aboriginal the tree must now be more than ~150 years old.

Stone arrangements, ceremonial rings and ceremony and dreaming sites

Stone arrangements range from cairns or piles of rock to more elaborate arrangements such as stone circles or standing slabs of rock held upright by stones around the base. Some stone arrangements were used in ceremonial activities whilst others may represent sacred or totemic sites. Other features associated with the spiritual aspects of Aboriginal life are those now called 'ceremony and dreaming' sites. These can be either stone arrangements or natural features such as rock outcrops, which may be associated with initiation ceremonies or the activities of ancestral creators.

Burials

Aboriginal burial grounds may consist of a single interment or a suite of burials. Burials tend to be in areas of sandy soil that were easy to dig and above floodwaters. Burials are not commonly preserved in the inland parts of Gippsland due to the acidic soils but are more common in coastal dunes fronting Bass Strait and at the Gippsland Lakes. Knowledge of Aboriginal burial grounds is best sought from local Aboriginal communities.

2.3.2 Previously Recorded Aboriginal Cultural Heritage Sites in the Activity Area

According to Aboriginal Victoria's Victorian Aboriginal Heritage Register (VAHR), accessed on 6 December 2018, no Aboriginal cultural heritage sites have been located previously in the activity area for the proposed Frasers Solar Farm. Additionally, no Aboriginal cultural heritage sites have been identified along the entire length of Four Mile Creek. This may partly be due to patchy survey coverage, but is probably largely attributable to the extensive landscape modifications that have occurred since European settlement obliterating any Aboriginal cultural heritage sites, had they previously occurred in this area.

The closest archaeological site to the proposed Frasers Solar Farm is an isolated find of a stone artefact on Eaglehawk Creek, over 4 km south of the activity area.

2.4 Historical Cultural Heritage Context

The first European to visit southeastern Victoria was George Bass, who in 1797-1798 sailed a whaleboat *Venus* south from Sydney along what is now the southern New South Wales and eastern Victorian coastlines (Flinders 1814, Middleton 1931, Bird 1975). During the Napoleonic Wars in the early nineteenth century soldiers and convicts from Sydney were posted at Red Point on Westport to the west of Glengarry North as an outpost to deter possible occupation by the French (Rogers 1975, Cole 1984, Bennett 2004).

Tasmanian farmer and businessman, John Batman, sought land grants on the coast of southern Victoria in the 1820s, but the colonial authorities rejected his applications (Billot 1979). In 1835 as a leading member of the Port Phillip Association, Batman explored Port Phillip Bay to the west of Glengarry North and negotiated a 'treaty' with the local Aboriginal people to rent their land on an annual basis. The Governor of New South Wales would not recognize the 'treaty', claiming that the land belonged to the Crown (Billot 1979). Nevertheless, Batman's settlement at Melbourne flourished.

Initial European occupation of area east of Melbourne was hampered by the inaccessibility of both the swampy coast and rugged and densely vegetated hinterland. Paweł Edmund Strzelecki, eventually beating a path through the region in 1840, named it for NSW governor Major Sir George Gipps. He encouraged Scot Samuel Anderson, the first settler in the area, who had established a presence on the Bass River to the west of Glengarry North, to explore the area further east around Tarwin River. Anderson (cited in Hayes 1992), wrote of the area: "The view from the neighbouring hills however, was most unattractive – nothing to be seen for more than 20 miles in every direction but extensive heathy plains and hills, and all the low country along the banks of the river covered with impenetrable scrub of tea-tree and prickly mimosa."

Lieutenant David Parry O'Kedan took up the 34,000 acre Rosedale pastoral run north of the Latrobe River encompassing the activity area in 1844 (Spreadborough and Anderson 1983).

A policy of closer settlement was pursued in southeastern Victoria during the second half of the nineteenth century. Beginning in 1860, four Acts of Parliament, known collectively as 'the Selection Acts', by degrees broke the squatters' monopoly and radically altered the direction of land use in Gippsland from grazing to dairy farming. Rosedale pastoral run encompassing the activity area was resumed and subdivided for selectors in the 1870s.

2.4.1 Historical Cultural Heritage Site Types

The types of historical heritage sites that occur Gippsland include:

Pastoral and Agricultural Sites

Historical sites in Gippsland mostly relate to the arrival of European graziers, agriculturalists and associated industries during the late nineteenth and early twentieth centuries. Old homesteads and associated structures such as work sheds, dairies, shearing sheds and labourer's quarters are examples of historical sites that have been previously. Less conspicuous sites include survey markers, particularly those blazed on eucalypt trees, which are also of historical interest.

Urban Sites

Towns in Gippsland contain historically significant commercial, public and residential buildings from the nineteenth and early twentieth centuries. Examples include railway stations, municipal halls, churches, libraries, schools and courthouses. Parks, gardens and cemeteries including the monuments, grave markers and other structures they contain also have historical significance.

Industrial and Mining Sites

Industrial features are dispersed across the region, which include abandoned butter factories, saw mills and mining sites. Such sites mainly comprise earthworks but can also contain ruined built structures and abandoned machinery including steam engines and boilers.

Transport and Communication sites

Small bridges made from timber or masonry occur in the region. Historic mileage markers are also encountered. The remains of early telegraph lines such as timber poles with glass and ceramic insulators are preserved. The railway lines established in the late nineteenth century have historical features including stations and sidings.

2.4.2 Previously Recorded Historical Cultural Heritage Sites in the Activity Area

There are no historical items in the activity area for the proposed Frasers Solar Farm listed on the Victorian Heritage Register (VHR) or Victorian Heritage Inventory (VHI), nor is it covered by any Heritage Overlays (HO) of the Latrobe City Council Planning Scheme. The closest historical site to the activity area is the grave of a suicide victim, Federick Gay, buried on unconsecrated farmland adjacent to the Toongabbie Cemetery, listed on the Victorian Heritage Inventory (H8221-0016), approximately 4 km northeast of the activity area.

3 Cultural Heritage Risk Assessments

3.1 Aboriginal Cultural Heritage Predictive Statement

Previous archaeological studies indicate that the most frequently recorded Aboriginal cultural heritage sites in the Gippsland region are stone artefact scatters (AV Victorian Aboriginal Heritage Register for Traralgon 8221 1:100,000 map sheet area). Shell middens, scarred trees, burials, stone quarries, rockshelters and axe grinding grooves are also represented in the archaeological record. Based on these observations of archaeological site types and their distribution and landscape setting, the following predictive model of Aboriginal cultural heritage site locations for the activity area can be proposed. A summary of the predictive model is presented in Table 1.

Past Aboriginal occupation of the broader study area would have been heavily focussed on the Latrobe River and its associated wetlands because these areas offered a rich resource zone. Consequently, most archaeological sites can be expected adjacent to freshwater sources. Although Aboriginal people would have regularly journeyed into the hinterland to collect plants, hunt animals and exploit mineral resources, these areas including the activity area have a much lower probability of containing Aboriginal cultural heritage places and items than the riverine corridor.

The landscape setting of the activity area therefore precludes the possibility of encountering some site types. For example, shell middens will not be encountered, because these are normally restricted to within 100 m of permanent water sources, absent from the activity area. Scarred trees are improbable because River Red Gum do not grow in the activity area. Stone features such as Aboriginal quarries, rock shelters and axe grinding grooves will also definitely not occur because suitable rock outcrop is absent. Burials are unlikely, given that most occur in sandy dunes near the coast.

Four Mile Creek, a headwater stream, is near the activity area, but no Aboriginal cultural heritage sites have previously been recorded along its course.

The potential for encountering Aboriginal cultural heritage in the activity area is also mitigated to a large extent by the high degree of previous disturbance. For example, modification of the original land surface by clearing, land levelling and ploughing would have obliterated earthen and stone features and dispersed stone artefacts, had they previously existed in this area. Past removal the original vegetation further reduces the chance of encountering scarred trees.

Table 1. Desktop predictive model of encountering Aboriginal cultural heritage sites in the proposed activity area.

Scarred trees	Stone artefacts	Rock-shelters	Grinding grooves	Burials	Stone quarries	Shell middens
Low	Low	Negligible	Negligible	Negligible	Negligible	Negligible

3.2 Historical Cultural Heritage Predictive Statement

Any historical cultural heritage sites in the activity area could be anticipated to most likely relate to early pastoral and agricultural activities of the last half of the nineteenth century or the first half of the twentieth century. Site types that had the potential to occur included dwellings, sheds and outbuildings, discarded farm machinery and blazed survey marks. These features are most regularly encountered at homesteads.

The risk of encountering historical sites in the activity area can be minimised by avoiding earthworks near (within 5 m of) any dwelling, shed or outbuilding suspected of being greater than 75 years old.

4 Assessment of Proposed Activity According to *Aboriginal Heritage Regulations 2018*

All Aboriginal cultural heritage is protected by the State *Aboriginal Heritage Act 2006*. Responsibility rests with the proponent of a development to demonstrate that due care and diligence have been taken to identify and avoid impacts on archaeological sites through construction works.

A key component of the Act is Aboriginal Cultural Heritage Management Plans, which are required under certain circumstances for high impact activities.

Using the *Aboriginal Heritage Regulations 2018* that accompany the *Aboriginal Heritage Act 2006* it is possible to determine whether the development proposal for the Frasers Solar Farm would trigger the requirement for an Aboriginal Cultural Heritage Management Plan.

The *Aboriginal Heritage Regulations 2018* (r. 7) stipulate that an Aboriginal Cultural Heritage Management Plan is required for a proposed activity, if:

- (a) all or part of the activity area for the activity is an area of *cultural heritage sensitivity*¹; and,
- (b) all or part of the activity is a *high impact activity*.

Use of land to generate electricity is a *high impact activity* (see r.46[1][b][xxx]).

Part (2.4 hectares in the southwestern corner) of the activity area is within 200 metres of Four Mile Creek, a waterway and thus an area of cultural heritage sensitivity (where not subject to previous significant ground disturbance) according to r.26(1) of the *Aboriginal Heritage Regulations 2018*.

It is therefore recommended that no activities for the proposed Frasers Solar Farm occur within 200 m of Four Mile Creek, in which case, the activity would not require a mandatory Cultural Heritage Management Plan (CHMP) under Section 46 of the *Aboriginal Heritage Act 2006*

¹ An area of 'cultural heritage sensitivity' means an area with the potential to contain Aboriginal cultural heritage items, places and/or values.

5 Conclusions and Recommendations

No Aboriginal or historical cultural heritage items or sites have previously been recorded in the proposed Frasers Solar Farm. Predictive modelling shows that there is a low potential for Aboriginal or historical cultural heritage to be harmed by the activity.

A modified waterway, Four Mile Creek, is near the southeastern corner of the activity area and the 2.4 hectare area within 200 m of the creek is an area of cultural heritage sensitivity according to regulation 26(1) of *Aboriginal Heritage Regulations* 2018 where not previously subject to significant ground disturbance.

Accordingly, the proposed construction of the Frasers Solar Farm does not require a mandatory Cultural Heritage Management Plan (CHMP) under Section 46 of the *Aboriginal Heritage Act* 2006 if activities are avoided within 200 m of Four Mile Creek. Additionally, earthworks should be avoided in the vicinity (within 5 m) of any dwelling, shed or outbuilding suspected to be greater than 75 years old.

In the event that any Aboriginal or historical cultural heritage places or items are encountered during the course of the proposed activity, all activities likely to harm the material must cease immediately and a Heritage Advisor, Aboriginal Victoria (tel: 1800 762 003) or Heritage Victoria (tel: 03 9938 6894) consulted about an appropriate course of action prior to recommencement of work.

If human skeletal remains are encountered during the course of the proposed activities all work in that area must cease. Remains must not be handled or otherwise disturbed except to prevent further disturbance. The Police or Victorian Coroner's office must be notified immediately. The Coronial Admissions and Enquiries Hotline is tel: 1300 888

6 References

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