

### Cimitiere Plains Solar Farm





Cimitiere Plains Solar Farm Project

Aboriginal Heritage Assessment

Final Version 3

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## Executive Summary

### Introduction

Sunspot 9 Pty Ltd, the proponent, is seeking development approval to establish a 288MW solar farm on private land, 5km northeast of George Town, Tasmania. The solar farm will be connected to the George Town substation to the southeast by 6km of double circuit transmission line on poles. The solar farm will be situated on approximately 454ha of rural land that is currently used for dryland agriculture, predominantly grazing.

The proposed solar farm site is located adjacent to Soldiers Settlement Road and the transmission lines are located adjacent to Musk Vale Road and Bridport Road, Bell Bay in the Northern Region of Tasmania (see Figures 1-2). The transmission line will be accessed via two existing access roads; Musk Vale Road which leads into a junction on the northern side of unnamed access tracks that exist throughout the proposed transmission line corridors and a private access track on the northern side of Bridport Road around 1.5km to the east of the East Tamar Highway/Bridport Road junction.

The transmission line will traverse approximately 5km of forest (and regenerating forest) and 1km of cleared land that is currently used for recreation and as part of the buffer area for the Bell Bay aluminium smelter. Poles will support two circuits that will operate at a voltage of up to 110kV. The easement for the transmission line will be up to 50m wide.

CHMA Pty Ltd and Vernon Graham (SAHO) have been engaged by the proponent to undertake an Aboriginal heritage assessment for the proposed Cimitiere Plains Solar Farm Project (the study area), to identify any potential Aboriginal heritage constraints. This report presents the findings of the Aboriginal heritage assessment. It should be noted that following the completion of the investigations, the proposed development footprint has been amended, partially in an effort to avoid Aboriginal heritage values that were identified during the Aboriginal heritage assessment. The Aboriginal heritage management recommendations presented in this report are based on this revised Project development footprint.

### AHR Search Results

As part of Stage 1 of the present assessment, a search was carried out on Aboriginal Heritage Register (AHR) to determine the extent of registered Aboriginal heritage sites within and in the general vicinity of the Cimitiere Plains Solar Farm Project study area.

The search shows that there are a total of 33 registered Aboriginal sites that are situated within an approximate 12km radius of the study area (search results provided by Claire Keating from AHT on 10-12-2021). 18 of these sites are classified as artefact scatters, 11 sites are classified as isolated artefacts, two sites are classified as shell midden/artefact scatters, one is a shell midden/isolated artefact and one shell midden.

Based on the available information, there are six registered Aboriginal sites that appear to be situated within or in the immediate vicinity of the study area (sites AH9366, AH9354, AH9336, AH9346, AH10399 and AH10606). The detailed AHR search results are presented in section 4.3 of this report.

## Summary of Survey Results

Four Aboriginal heritage sites were identified and recorded during the field survey inspection of the proposed Cimitiere Plains Solar Farm study area. One of these sites is an Artefact scatter (AH14118), with the other three sites classified as Isolated artefacts (AH14120, AH14121 and AH14122). All of these are new site recordings that do not correlate with any registered Aboriginal sites. Table i provides the summary details for the four identified and recorded sites, with Figure i showing the site locations. The detailed site descriptions are presented in Appendix 2.

A sub-surface test pitting program was undertaken across the area of Potential Archaeological Sensitivity (PAS) associated with site AH14118. A total of 15 test pits were excavated across the PAS area. A total of three stone artefacts were recovered from three separate test pits (pits 3, 8 and 14). The details of these artefacts are provided in Appendix 3. The identification of the three stone artefacts has extended the AH14118 site dimensions 62m southeast and 28m northeast. Figure 12 shows the revised spatial boundaries for site AH14118, based on the findings of the test pitting program. The test pitting confirmed the presence of low density artefact deposits associated with site AH14118. The artefacts appear to be confined to the top 15-20cm of the soil horizon. The detailed test pitting results are presented in section 7.3.

As noted previously, a search of the AHR shows that there are six other registered Aboriginal sites (AH9366, AH9354, AH9336, AH9346, AH10399 and AH10606) within the Cimitiere Plains Solar Farm Project study area. None of the artefacts associated with these sites were identified during the current survey. The details of these sites are presented in Section 7.2 of this report.

The field survey was able to confirm that there are no stone resources identified within the study area that would be suitable for stone artefact manufacturing. Nor are there any sizeable rock outcrops occurring within the study area, and therefore there is no potential for Aboriginal rock shelters to be present.

As discussed in Section 6, surface visibility across the study area was variable, ranging between <10% to 80%. Given these constraints, it cannot be stated with certainty that there are no undetected Aboriginal heritage sites present in the proposed Cimitiere Plains Solar Farm study area. With this acknowledged, the survey assessment still did achieve effective coverage of an estimated 119,410.5m<sup>2</sup>. This level of effective coverage is certainly sufficient to provide a reasonable indication as to the potential extent, nature and distribution of Aboriginal cultural heritage sites in the study area.

The survey results strongly indicate that site and artefact densities across the study area are likely to be low. If undetected sites are present, they are most likely to be isolated artefacts or small artefact scatters, representing sporadic Aboriginal activity. Given that soil deposits across much of the study area were generally shallow to skeletal, there is a very limited potential for sub-surface artefact deposits to be present.

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

**Table i: Summary details for Aboriginal sites AH14118, AH14120, AH14121 and AH14122.**

Site Name	Grid Reference	Site Type	Site Description
AH14118	[REDACTED]	Artefact Scatter	<p>Five white quartz flakes and a white quartz scraper are located on 5° slopes on both sides of a drainage ditch associated with an adjacent dam.</p> <p>The site has a low to medium potential for additional surface or sub-surface artefacts to be present. Sub-surface investigations have been implemented at site area, with a further three artefacts identified. The site has been heavily disturbed through farming.</p>
AH14120	[REDACTED]	Isolated Artefact	<p>A broken quartzite flake located on an erosion scald (bull pit) on a 5° slope amongst pasture land facing Cimitiere Creek which is 288m north.</p> <p>The site has a very low to low potential for additional surface or sub-surface artefacts to be present. This site has been heavily disturbed</p>
AH14121	[REDACTED]	Isolated Artefact	<p>A white quartz flake, located on an access track located 253m south of Cimitiere Creek. Immediately bordered by native vegetation.</p> <p>The site has a low to very low potential for additional surface or sub-surface artefacts to be present. This site has been heavily disturbed.</p>
AH14122	[REDACTED]	Isolated Artefact	<p>a white quartz flake located on the 15° slope of a light grey sandy soil pile associated with the construction of a nearby dam 200m south of Cimitiere Creek.</p> <p>The site has a low to very low potential for additional surface or sub-surface artefacts to be present. This site has been heavily disturbed.</p>

### Significance Assessments

AH14118, AH14120, AH14121 and AH14122 (recorded during the current assessment) have been assessed and allocated a rating of significance. A five-tiered rating system has been adopted for the significance assessment; low, low-medium, medium, medium-high and high. Table ii provides the summary details for significance ratings for AH14118, AH14120, AH14121 and AH14122. A more detailed explanation of the assessment ratings is presented in section 8. Section 9 of this report presents a statement of social significance provided by Vernon Graham for sites AH14118, AH14120, AH14121 and AH14122, and the study area as a whole.

**Table ii: Summary significance ratings for Aboriginal heritage sites AH14118, AH14120, AH14121 and AH14122.**

AH Number	Site Type	Scientific Significance	Aesthetic Significance	Historic Significance	Social Significance
AH14118	Artefact Scatter	Low-Medium	Low	N/A	Medium-High
AH14120	Isolated Artefact	Low	Low	N/A	Medium-High
AH14121	Isolated Artefact	Low	Low	N/A	Medium-High
AH14122	Isolated Artefact	Low	Low	N/A	Medium-High

### Management Recommendations

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

- Consultation with Vernon Graham (Aboriginal Heritage Officer).
- The legal and procedural requirements as specified in the *Aboriginal Heritage Act 1975* (The Act).
- The results of the investigation as documented in this report; and
- Background research into the extant archaeological and ethnohistoric record for the study area and the surrounding region.

As noted above, following the completion of the Aboriginal heritage investigations, the proposed development footprint for this project has been amended, partially in an effort to avoid Aboriginal heritage values that were identified during the Aboriginal heritage assessment. The following recommendations are based on the revised Project Footprint.

#### **Recommendation 1 (AH14118)**

Site AH14118 has been confirmed through surface and sub-surface investigations to be a low density artefact scatter. The site is located in the northern portion of the Project Footprint (see Figure i). The following grid references define the boundaries of this site.



The preferred management option is for the project to avoid any impacts to this site and for the site to be protected and conserved in-situ. To this end, the following measures should be put in place.

- The location of the site is to be plotted on the design plans for the Cimitiere Plains Solar Farm Project footprint.
- Prior to construction commencing in these areas, temporary high visibility protective barricading is to be erected around the identified boundaries of the site with a 5m buffer applied to the entire polygon of the site boundary. Barricading is to remain in place for the duration of construction.

- Construction contractors should be informed of the location of the site and informed that the site is not to be impacted.
- No soil disturbance works are to be carried out within the site boundaries, or within the barricaded zone of the site.
- Barricading is to be removed on completion of construction works.

As specified in section 10.1 of this report, all Aboriginal relics are protected under the Aboriginal Heritage Act 1975 (The Act). It is illegal to destroy, damage, deface, conceal or otherwise interfere with a relic, unless in accordance with the terms of a permit granted by the Minister. Therefore, if it appears that site AH14118 may be impacted by construction or other works, then the proponent, Sunspot 9 Pty Ltd will need to apply for and obtain a Permit to impact the site, prior to any works commencing.

#### ***Recommendation 2 (AH14120, AH14121 and AH14122)***

Three isolated artefact Aboriginal heritage sites were identified during the field survey inspection of the proposed Cimitiere Plains Solar Farm Project footprint (sites AH14120, AH14121 and AH14122). All three of these sites are located in the northern portion of the Project Footprint (see Figure i). The preferred management strategy is to avoid any impacts on these three sites and to protect the sites in situ. The following recommendations apply to these three sites.

- The location of the sites is to be plotted on the design plans for the Cimitiere Plains Solar Farm Project footprint.
- Prior to construction commencing in these areas, temporary high visibility protective barricading is to be erected around the identified boundaries of the three sites with a 2m radial buffer applied. Barricading is to remain in place for the duration of construction.
- Construction contractors should be informed of the location of the sites and informed that the sites are not to be impacted.
- No soil disturbance works are to be carried out within the site boundaries, or within the barricaded zones of the sites.
- Barricading is to be removed on completion of construction works.

As specified in section 10.1 of this report, all Aboriginal relics are protected under the *Aboriginal Heritage Act 1975* (The Act). It is illegal to destroy, damage, deface, conceal or otherwise interfere with a relic, unless in accordance with the terms of a permit granted by the Minister. Therefore, if it appears that sites AH14120, AH14121 and AH14122 may be impacted by construction works, then the proponent, Sunspot 9 Pty Ltd will need to apply for and obtain a Permit to impact the sites, prior to any works commencing.

#### ***Recommendation 3 (Site AH10399)***

Sites AH10399 is an Isolated artefact that is reported to be located at grid reference [REDACTED] Despite an extensive search, this site could not be relocated during the current survey program. The site is likely to remain in situ but covered by vegetation. Based on the grid reference provided on the AHR, this site is located in the Project Footprint (see Figure ii). The preferred management strategy is to avoid any impacts on this site and to protect the site in situ. The following recommendations apply to this site.

- The location of the site is to be plotted on the design plans for the Cimitiere Plains Solar Farm Project footprint.
- Prior to any future works commencing in the identified areas, temporary high visibility protective barricading is to be erected around the identified boundaries of the site with a 2m radial buffer applied. Barricading is to remain in place for the duration of construction.
- Construction or other works contractors should be informed of the location of the site and informed that the site is not to be impacted.
- No soil disturbance works are to be carried out within the site boundaries, or within the barricaded zone of the site.
- Barricading is to be removed on completion of construction works.

As specified in section 10.1 of this report, all Aboriginal relics are protected under the *Aboriginal Heritage Act 1975* (The Act). It is illegal to destroy, damage, deface, conceal or otherwise interfere with a relic, unless in accordance with the terms of a permit granted by the Minister. Therefore, if it appears that site AH10399 may be impacted by construction or other works, then Sunspot 9 Pty Ltd will need to apply for and obtain a Permit to impact the site, prior to any works commencing.

***Recommendation 4 (Sites AH9366, AH9354, AH9336, AH9346, and AH10606)***

Sites AH9366, AH9354, AH9336, AH9346, and AH10606 have been previously identified as being located within the Cimitiere Plains Solar Farm Project study area. Despite an extensive search, these sites could not be relocated during the current survey program. The sites are likely to remain in situ but covered by vegetation. These sites are now confirmed as being situated outside the revised Project Footprint (see Figure ii). The following recommendations apply to these sites.

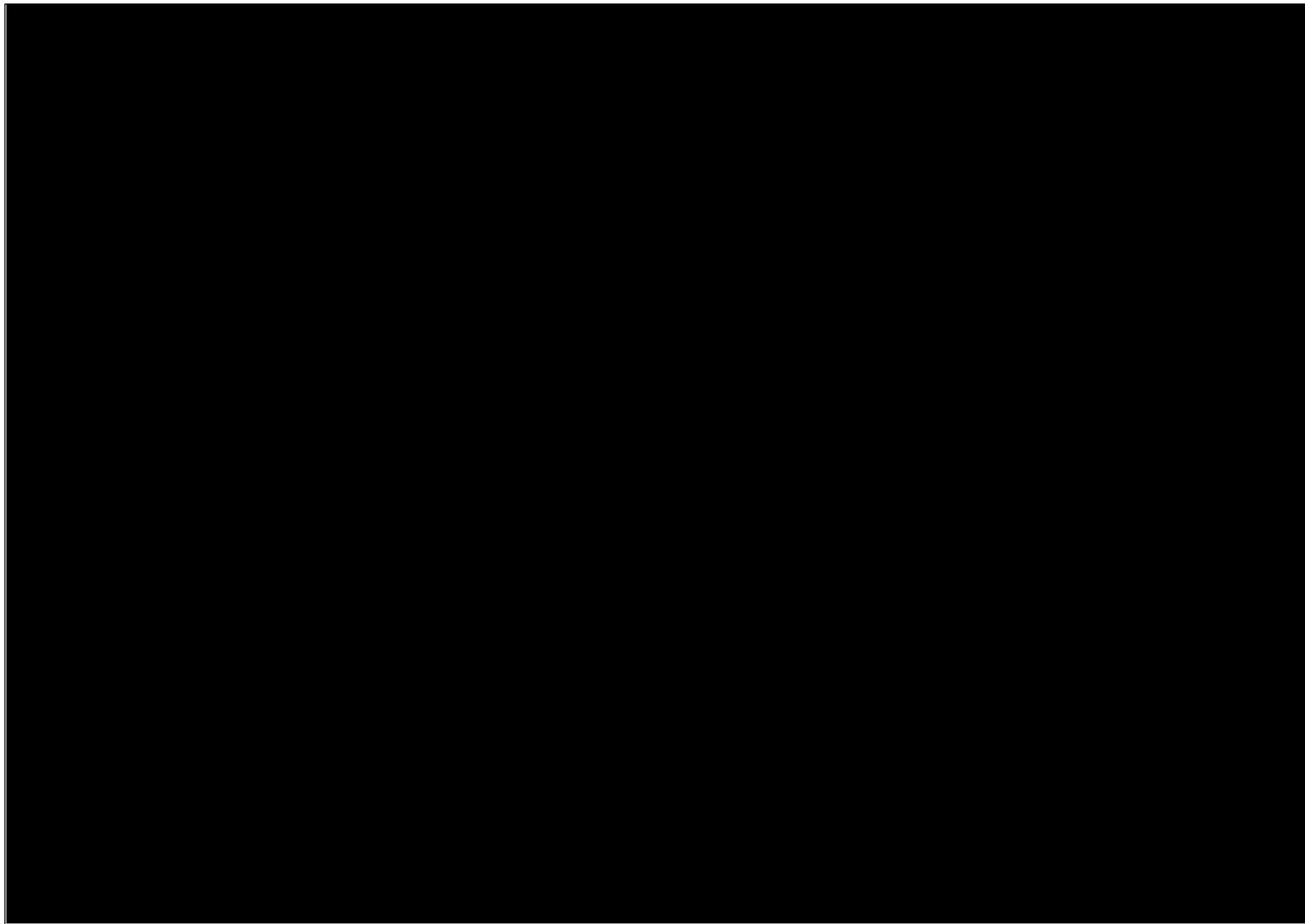
- The location of these sites is to be plotted on the design plans for the Cimitiere Plains Solar Farm Project footprint and it noted that the site areas are to be avoided.

***Recommendation 5 (Unanticipated Discovery Plan)***

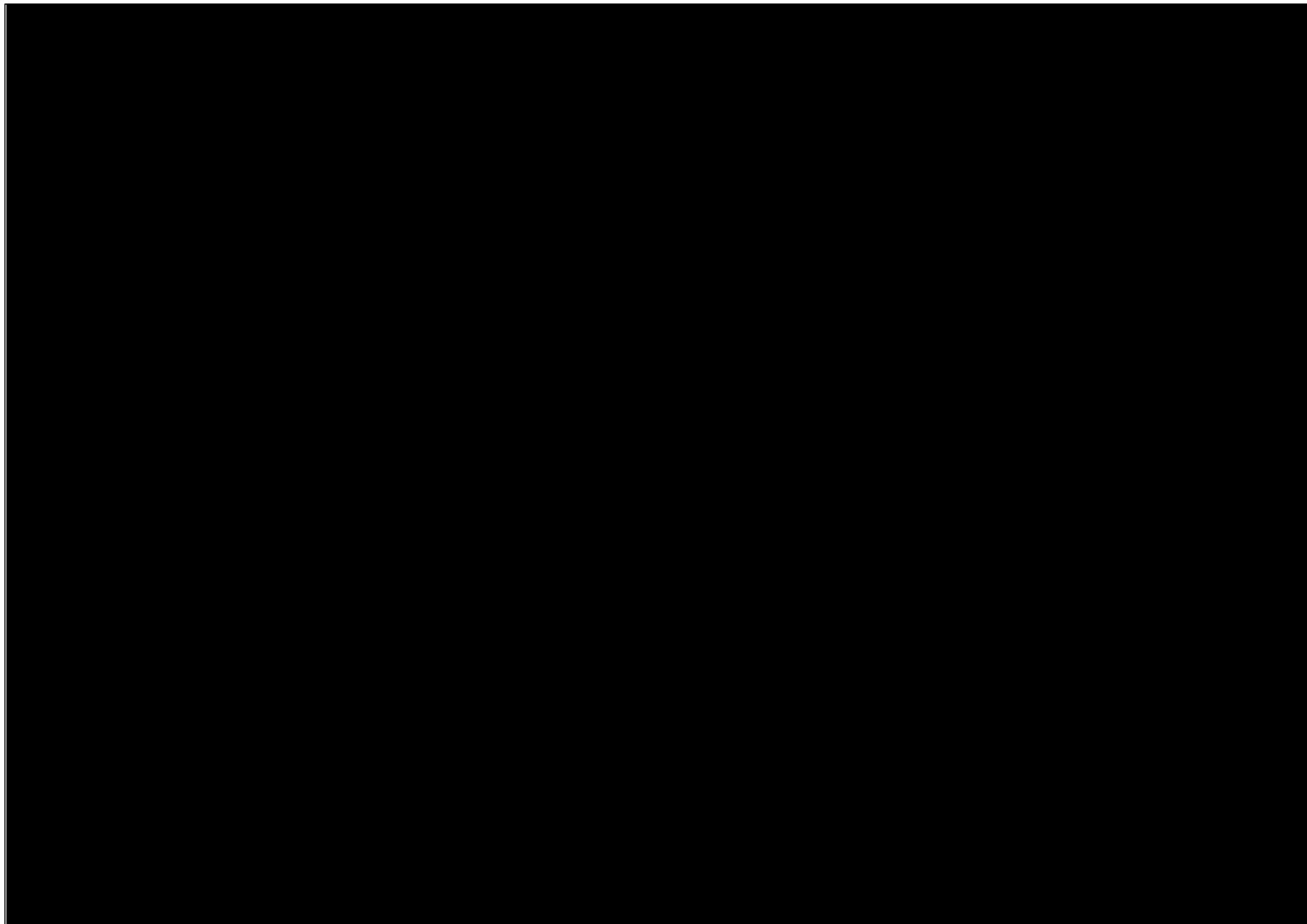
It is assessed that there is generally a low potential for additional undetected Aboriginal heritage sites to occur within the Cimitiere Plains Solar Farm Project footprint. However, if, during the course of the proposed works, previously undetected archaeological sites or objects are located, the processes outlined in the Unanticipated Discovery Plan should be followed (see Appendix 3). A copy of the Unanticipated Discovery Plan should be kept on-site during all ground disturbance and construction work. All construction personnel should be made aware of the Unanticipated Discovery Plan and their obligations under the *Aboriginal Heritage Act 1975* (the Act).

***Recommendation 6 (Provision of Reports)***

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



*Figure i: Aerial image showing the location of Aboriginal sites AH14118, AH14120, AH14121 and AH14122 in relation to the revised Project Footprint*



*Figure ii: Aerial image showing the location of AH10399 and closer registered sites in relation to the revised project footprint*

## 1.0 Project Outline

### 1.1 Project Details

Sunspot 9 Pty Ltd, the proponent, is seeking development approval to establish a 288MW solar farm on private land, 5km northeast of George Town, Tasmania (see Figure 1). The project is known as the Cimitiere Plains Solar Farm Project. The solar farm will be connected to the George Town substation by 6km of double circuit transmission line on poles. The solar farm will be situated on approximately 454ha of rural land that is currently used for dryland agriculture, predominantly grazing. The proposed infrastructure includes:

- Photovoltaic (PV) solar panels mounted on single-axis tracker frames
- Inverters to transform the direct current (DC) from the solar panels to alternating current (AC)
- On-site substation
- Security fence around the panels and the substation.
- Internal access tracks
- Electrical cables
- Site office and parking

The transmission line will traverse approximately 5km of forest (and regenerating forest) and 1km of cleared land that is currently used for recreation and as part of the buffer area for the Bell Bay aluminium smelter. Poles will support two circuits that will operate at a voltage of up to 110kV. The easement for the transmission line will be up to 50m wide.

The proposed solar farm site is located adjacent to Soldiers Settlement Road and the transmission lines are located adjacent to Musk Vale Road and Bridport Road, Bell Bay in the Northern Region of Tasmania. The transmission line will be accessed via two existing access roads; Musk Vale Road which leads into a junction on the northern side of unnamed access tracks that exist throughout the proposed transmission line corridors and a private access track on the northern side of Bridport Road around 1.5km to the east of the East Tamar Highway/Bridport Road junction. Figure 2 shows the solar farm footprint and associated infrastructure that was the focus of this assessment (the study area).

CHMA Pty Ltd and Vernon Graham Senior Aboriginal Heritage Officer (SAHO) have been engaged by the proponent to undertake an Aboriginal heritage assessment for the proposed Cimitiere Plains Solar Farm Project (the study area), to identify any potential Aboriginal heritage constraints. This report presents the findings of the Aboriginal heritage assessment. It should be noted that following the completion of the investigations, the proposed development footprint has been amended, partially in an effort to avoid Aboriginal heritage values that were identified during the Aboriginal heritage assessment. The Aboriginal heritage management recommendations presented in section 11 of this report are based on this revised Project development footprint.

### 1.2 Aims of the Investigation

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

- To undertake an Aboriginal cultural heritage assessment for the proposed Cimitiere Plains Solar Farm Project study area, as shown in Figures 1 and 2. The assessment is to be compliant with both State and Commonwealth legislative regimes, in particular the intent of the *Aboriginal Heritage Act 1975* and the associated *Aboriginal Heritage Standards and Procedures (June 2023)*.

- Search the Aboriginal Heritage Register (AHR) to identify previously registered Aboriginal heritage sites within and in the general vicinity of the study area.
- Undertake relevant archaeological, environmental and ethnohistorical background research to develop an understanding of site patterning within the study area.
- To locate, document and assess any Aboriginal heritage sites located within the study area.
- To assess the archaeological and cultural sensitivity of the study area.
- To assess the scientific and Aboriginal cultural values of any identified Aboriginal cultural heritage sites located within the study area.
- Consult with (or ensure the Aboriginal community representative consults with) Aboriginal organisation(s) and/or people(s) with an interest in the study area in order to obtain their views regarding the cultural heritage of the area.
- To develop a set of management recommendations aimed at minimising the impact of the proposed Cimitiere Plains Solar Farm Project on any identified Aboriginal heritage values.
- Prepare a report that documents the findings of the Aboriginal heritage assessment and meets the standards and requirements of the current *Aboriginal Heritage Standards and Procedures* prepared by AHT.

### **1.3 Project Methodology**

A three-stage project methodology was implemented for this assessment.

#### ***Stage 1 (Pre-Fieldwork Background Work)***

Before fieldwork was undertaken, the following tasks were completed by CHMA staff.

##### *Consultation with Aboriginal Heritage Tasmania*

Aboriginal Heritage Tasmania (AHT) was contacted and informed that CHMA had been engaged to undertake an Aboriginal heritage assessment for the Cimitiere Plains Solar Farm Project. As part of this initial contact, a search request of the Aboriginal Heritage Register (AHR) was submitted to AHT in order to ascertain the presence of any previously registered sites in the vicinity of the study area (search request submitted on 2-12-2021).

##### *The collation of relevant documentation for the project*

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

- The collation of information pertaining to any registered heritage sites located within the general vicinity of the study area.
- Mapping information showing the proposed footprint of the Cimitiere Plains Solar Farm Project.
- Relevant reports documenting the outcomes of previous Aboriginal heritage studies in the vicinity of the study area.
- Ethno-historic literature for the region.
- References to the land-use history of the study area.
- GIS Information relating to landscape units present in the study area;
- Geotechnical information for the study area, including soil and geology data.

### *Consultation with Aboriginal Heritage Officer*

Vernon Graham is the Senior Aboriginal Heritage Officer for this project. As part of Stage 1 works, Stuart Huys and Shay Hannah (CHMA archaeologists) were in regular contact with Vernon Graham. The main purpose of this contact was to discuss the scope of the present investigations, ratify the proposed methodology for the investigations and coordinate the timeframes for implementing fieldwork.

### **Stage 2 (Field Work)**

Stage 2 entailed the fieldwork component of the assessment. The field survey was undertaken by Shay Hannah (CHMA archaeologist), Vernon Graham (Senior Aboriginal Heritage Officer) and Kieran Graham (Trainee Aboriginal Heritage Officer), over a period of six days (31-8-2022 – 9-9-2022).

The field team walked a total of 44.073km of survey transects across the proposed Cimitiere Plains Solar Farm footprint, with the average width of each transect being 10m. As part of the field survey program, additional transects were walked in areas where there was improved surface visibility, in order to gain a better insight as to the potential presence or absence of Aboriginal sites across the study area. Section 6 provides further details as to the survey coverage achieved within the study area.

For any Aboriginal sites identified by the field team, the following details were recorded.

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

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

The results of the field investigation were discussed between Vernon Graham and Shay Hannah (CHMA Archaeologist). This included the potential cultural and archaeological sensitivity of the study area and possible management options.

### **Stage 3 (Sub-Surface Investigation)**

One location was selected for sub-surface investigation within the Cimitiere Plains Solar Farm Project study area, in the form of a test pitting program (the PAS of 130m x 30m area that encompasses site AH14118). This location was selected on the basis that it was assessed that there was an elevated potential for sub-surface Aboriginal cultural heritage deposits to be present. No other locations within the study area were assessed as having the sufficient potential to warrant test pitting. The identified 130m x 30m PAS is located on a discrete rise within the proposed footprint of the Cimitiere Plains Solar Farm Project.

The aim of the initial test pitting program was simply to determine the potential presence/absence of Aboriginal heritage deposits and features within the nominated footprint within the AH14118 site and the identified PAS. This information would then be used to inform any further Aboriginal heritage investigations or mitigation strategies at the AH14118 site and the identified 130m x 30m PAS.

To meet these aims, a total of 15 test pits were excavated within the identified 130m x 30m PAS, with each pit measuring 50cm x 50cm. As a general guide, the pits were spaced in a grid formation across the identified PAS footprint, with each pit being spaced at a distance of approximately 8m apart. The exact positioning of the pits was determined in the field by the project archaeologist and AHOs, with the pits being placed in areas of reduced disturbance, where there was an elevated potential for sub-surface deposits to be present.

The test pitting was focused in areas outside the identified boundaries of site AH14118. This meant that a Permit was not required to undertake the initial test pitting program. However, if Aboriginal heritage cultural deposits or suspected features were identified during the test pitting program then the excavation of the test pit in question would cease and AHT would be notified of the find.

Test pitting has been completed at the selected PAS location. At the completion of the test pitting program, the CHMA excavation Director (Stuart Huys) met with the proponent to discuss the findings of the test pitting works, and to ratify whether the site area could be avoided by the development footprint.

#### ***Stage 4 (Report Preparation)***

Stage four of the project involves the production of a Draft and Final Report that includes an analysis of the data obtained from the field survey, an assessment of archaeological sensitivity and management recommendations. The report has been prepared by Stuart Huys and Shay Hannah, in consultation with Vernon Graham.

A draft copy (electronic PDF version) of the report was submitted to the proponent for review. Any comments that were received have been incorporated into the final draft report. One electronic copy (PDF version) of the final draft report has been provided to Aboriginal Heritage Tasmania (AHT) for review and comment. In addition, CHMA has provided AHT and the proponent with all site spatial data files, and mapping associated with the project (in ESRI shape file format (GDA94). A copy of the report has been provided to Vernon Graham, to assist in the Aboriginal community consultation process. The report has been sent out to a range of Tasmanian Aboriginal organisations for review and comment. The outcomes of the consultation is provided in Appendix 6.

#### **1.4 Project Limitations**

Most archaeological investigations are subject to limitations that may affect the reliability of the results. The main constraint to the present investigation was restricted surface visibility due primarily to vegetation cover. At the time of the field survey, surface visibility across the proposed Cimitiere Plains Solar Farm footprint ranged between <10% and 80%, with the estimated average being 20%. Throughout the study area, there was a network of previously graded vehicle tracks that provided transects of improved surface visibility. There were also numerous areas where erosion scalds were present that provided locates of improved visibility. To offset constrained surface visibility, any areas of improved visibility were inspected in detail. The constraints in surface visibility limited the effectiveness of the survey assessment to some extent. The issue of surface visibility is further discussed in Section 6 of this report.

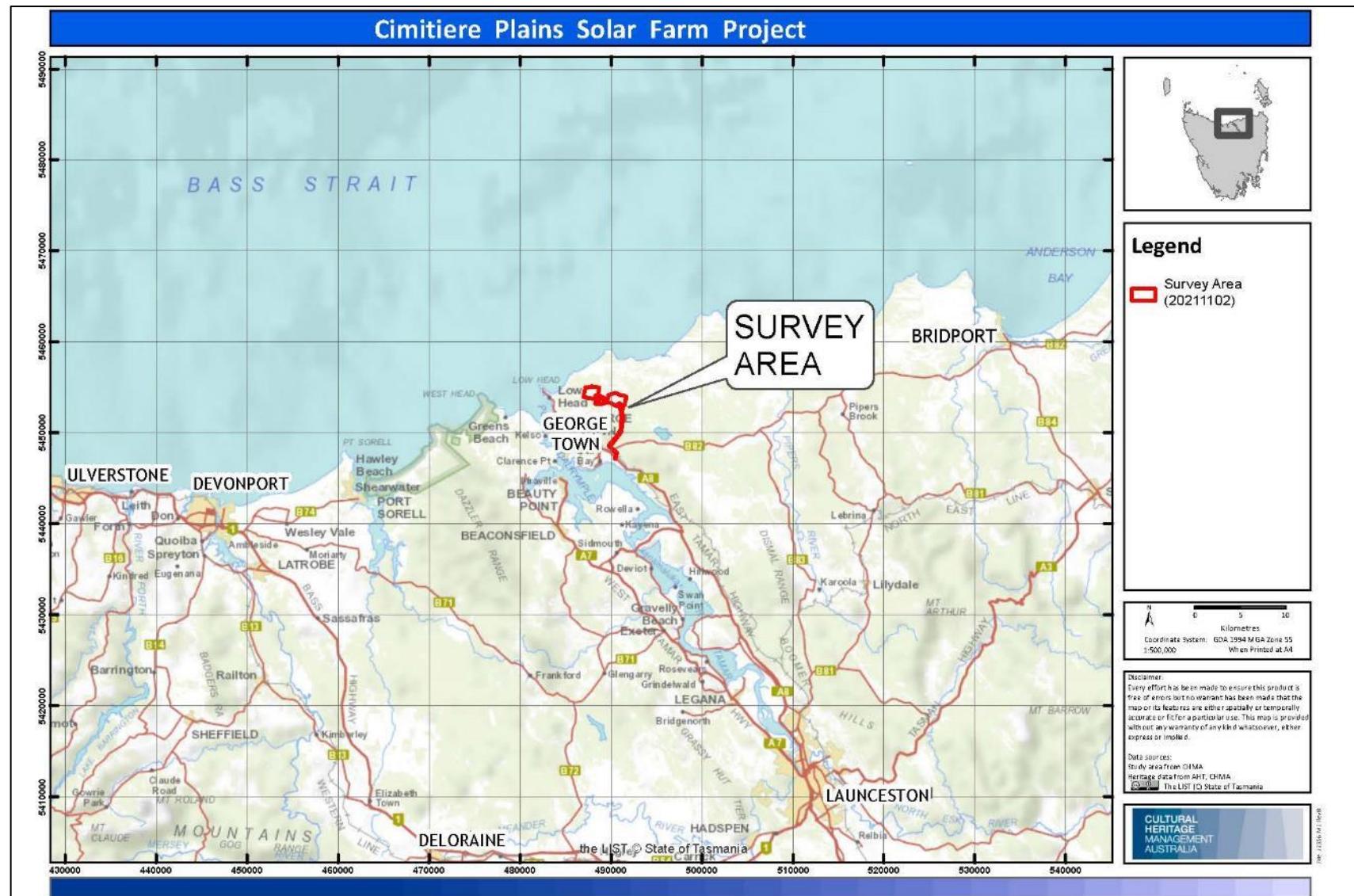
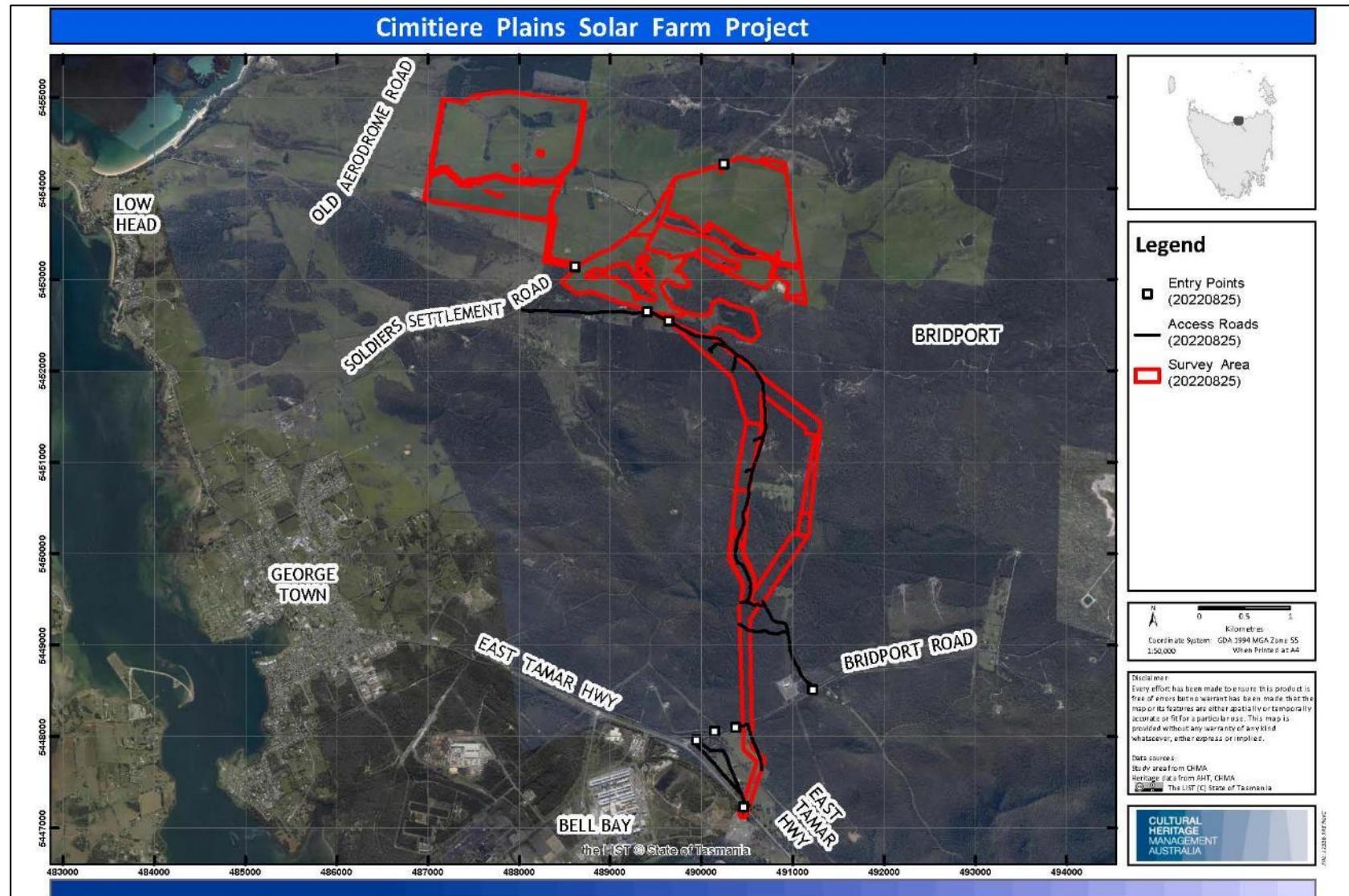


Figure 1: Topographic map showing the location of the study area near George Town in the Northern Region of Tasmania.



**Figure 2: Aerial image showing the study area footprint.**

## 2.0 Environmental Setting of the Study Area

### 2.1 Introduction

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

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

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

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

The following sections provide information regarding the landscape context of the study area including topography, geology, soils and vegetation.

### 2.2 Landscape Setting of the Study Area

The proposed Cimitiere Plains Solar Farm Project area (the study area) covers approximately 454ha. The northern sections of the study area are situated 4.12km to the northeast of George Town, while the southern sections of the study area are situated 4.9km to the southeast of George Town, in the Northern Region of Tasmania. Subsequently, the landscape of the study area is divided. Within the northern sections of the study area, the terrain is characteristically flat to moderately undulating pastureland, with some sections of lowland floodplains surrounding Cimitiere Creek (see Plates 1). The more gentle slope gradients occur throughout the northeast and northwest sections of the study area, where gradients range between 5° to 10° (see Plate 1 and Plate 3). In the southeast and southwest sections of the northern sections of the study area, the slope gradients increase to between

10° to 30°, with the steepest slopes present along the southern borders facing toward the Tippogoree Hills (see Plate 2).

The southern sections of the Cimitiere Plains Solar Farm Project study area are located to the east and at the base of the south-eastern end of the Tippogoree Hills. The Tippogoree Hills are a prominent series of ranges that fringe the eastern margins of the River Tamar. The terrain across the study area is characteristically flat to moderately undulating, with some sections of lowland floodplains (see Plate 9). The more gentle slope gradients occur across the far west portion of the study area at the base of Tippogoree Hills, where gradients range between 5° to 10° (see Plate 6). On the side slopes of the ridge lines, slope gradients increase to between 10° to 40°, with the steepest slopes being the northern side slopes of the ridges, running down towards watercourses such as Four Mile Creek (see Plate 5).

The underlying geology of the study area is a variable patchwork. The northern sections of the study area are Cenozoic cover sequences which consist of windblown and locally derived sand, Cenozoic cover sequences consisting of silt with rounded clasts of granite, schist, quartzite, conglomerate, derived from Permian strata and Palaeozoic Lower Parmeener Supergroup consisting of mudstone, sandstone, minor limestone, coal measures, Tasmanite oil shale, and basal tillite, diamictites, rhythmic clay stones (List 2022; Australian Stratigraphic Units Database 2022). Soils in the northern sections of the study area consist of light to dark grey sandy loam that are shallow to skeletal in depth (see Plate 3).

The underlying geology of the southern section of the study area is Cenozoic cover sequences which consist of windblown and locally derived sand, Jurassic dolerite and Upper Parmeener Supergroup consisting of cross-bedded quartz sandstone, feldspathic sandstone and shale (List 2022). Soils across the study area are regolith clays that have been derived through the decomposition of the parent bedrock. Soil depth is typically shallow to skeletal, with the underlying dolerite bedrock exposed to the surface across most parts of the southern sections of the study area (see Plate 5 and Plate 6).

The southern sections of the study area are positioned just inland (east/northeast) of Bell Bay, on the lower reaches of the River Tamar, which is the largest major water course in this part of the Northern Region. This is a 'ria' or drowned river valley formed by coastal submergence about 6,000 years ago. The shoreline of the estuary in the surrounds of Bell Bay is a low-energy shoreline, with mudflats and shoals exposed at low tide. The intertidal zone hosts a range of estuarine shellfish species, dominated by mud oysters and mussels, which would have been an important component of the traditional Aboriginal diet. The northern sections of the study area are positioned just inland (south) of Bass Strait. The shoreline of the Bass Strait hosts a range of saltwater shellfish species such as blue mussels, scallops and oysters and potentially seals coming from Tenth Island (now a recognised breeding colony 7 km offshore) (Wildlife Services 2018).

The only named water course in the vicinity of the southern sections of the study area is Four Mile Creek. This is a semi-permanent watercourse that flows in an east-to-west direction, emptying into the Lauriston Reservoir. The creek is located around 600m to the east of the study area. A small tributary of this creek flows along the north-western border of the study area. In the northern sections, the only named watercourse in the vicinity is

Cimitiere Creek. This is a semi-permanent watercourse that flows in a northwest-to-southeast direction. The creek is located in the centre of the northern sections of the study area and numerous small tributaries and drains run off the creek throughout the northern sections (see Figure 2).

The vegetation structure across most of the northern sections of the study area is dominated by agricultural pastures made up of native and introduced grass species (see Plate 1). Amongst the pasture are sparse stands of *Eucalyptus amygdalina* coastal forest and woodland that consists of Bracken Fern (*Pteridium esculentum*), eucalypts, Sagg (*Lomandra longifolia*), She-oak and Black Wattle saplings (*Acacia mearnsii*) (see Plate 4). There are also sparse stands along the edges of Cimitiere Creek of coastal scrub and heathland with Common Teatree (*Leptospermum scoparium*) and Sagg being the most prevalent species present (see Plate 3). Significant clearing, pastoral activity and construction of dam infrastructure have taken place across the majority of the northern sections of the study area and have resulted in the presence of introduced grasses. From an Aboriginal heritage perspective, any Aboriginal sites that are situated within these lesser disturbed sections of the sparse stands of native vegetation are likely to be reasonably intact.

The vegetation structure across most of the southern study area is dominated by *Eucalyptus amygdalina* forest and woodland scrub which is associated with the distribution of the dolerite bedrock (see Plate 5). Small patches of *Eucalyptus obliqua* dry forest and lowland grasses occur within the central-western portion of the study area. On the eastern boundary of the study area, there is also a small patch of *Eucalyptus amygdalina* - *Eucalyptus obliqua* damp sclerophyll forest. Selective logging has occurred across the majority of this native Eucalypt woodland. This logging activity has also resulted in dense undergrowth within the majority of the study area. The most prominent species present were Bracken Fern, Cutty Grass (*Gahnia grandis*), Sagg and Black Wattle saplings (see Plate 5, Plate 6 and Plate 7). Parts of the native forests, on the lower slopes of the ridges, have been more extensively cleared as part of past pastoral activities. From an Aboriginal heritage perspective, any Aboriginal sites that are situated within these lesser disturbed native forests are likely to be reasonably intact.

Parts of the study area have been more intensively disturbed. Within the southern sections of the study area, there have been access track extensions made with the main southern access road being covered in bitumen (see Plate 8). A network of previously graded and ungraded vehicle tracks occurs throughout the southern sections of the study area, particularly around the existing BassLink infrastructure, TasRail rail tracks and former plantation areas (see Plate 5 and Plate 8). Any Aboriginal sites that may be present within these more highly disturbed infrastructure areas will have been either destroyed or heavily impacted.

The study area has a cool, wet climate typical of northern Tasmania. Rainfall occurs throughout the year; with a mean annual rainfall of 589mm. Rainfall is highest in August and September (64mm – 71mm) and lower from January to February (28 – 31mm). The warmest months of the year are January and February when mean temperatures range from minimums of 10°C to maximums of about 23°C. Winter tends to be cold with mean annual temperatures in the coldest months of June and July ranging from 1.5°C mean minimum to maximum temperatures of about 11°C (BOM 2020).



Plate 1: View east showing Kieran Graham (Trainee Aboriginal Heritage Officer) on an undulation of 5°–10° and Cimitiere Creek present in the northern sections of the study area.



Plate 2: View southwest showing Vernon Graham (SAHO) a rise of 20° and one of the sparse stands of *Eucalyptus amygdalina* coastal forest and woodland present within the northern sections of the study area.



Plate 3: View northeast showing a tributary of Cimitiere Creek with light grey soils and stands of Common Teatree (*Leptospermum scoparium*) and Sagg.



Plate 4: View east showing one of the main graded access roads Musk Vale Road, George Town in the study area.



Plate 5: View east showing one of the graded access tracks in the southern sections of the study area and undulation of 35°.



Plate 6: View northeast showing *Eucalyptus amygdalina* forest and woodland scrub present within the southern sections of the study area.



Plate 7: View southwest showing the native regrowth vegetation present within the southern sections of the study area.



Plate 8: View west showing the partial bitumen-covered main access track in the southern sections of the study area.



Plate 9: View south showing one of the graded access tracks in the southern sections of the study area.

## 3.0 Ethno-historic Background

### 3.1 Aboriginal Social Organisation in Tasmania

Ryan (2012) explains that the terms 'nation' and 'clan' are the preferred terms used by the Tasmanian Aboriginal community in place of 'tribe' and 'band' respectively. This terminology has been adopted in the following discussion.

According to Jones (1974), the social organisation of Tasmanian Aboriginal society appears to have consisted of three social units, these being the hearth group, the band (clan) and the tribe (nation). The hearth group was the basic family unit and would generally have consisted of a man and woman, their children, aged relatives and sometimes friends and other relatives. The size of hearth groups would generally range from between 2-8 individuals (Jones 1974: Plomley 1983). Plomley (1983) provides a description made by Peron of a hearth group he encountered at Port Cygnet:

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

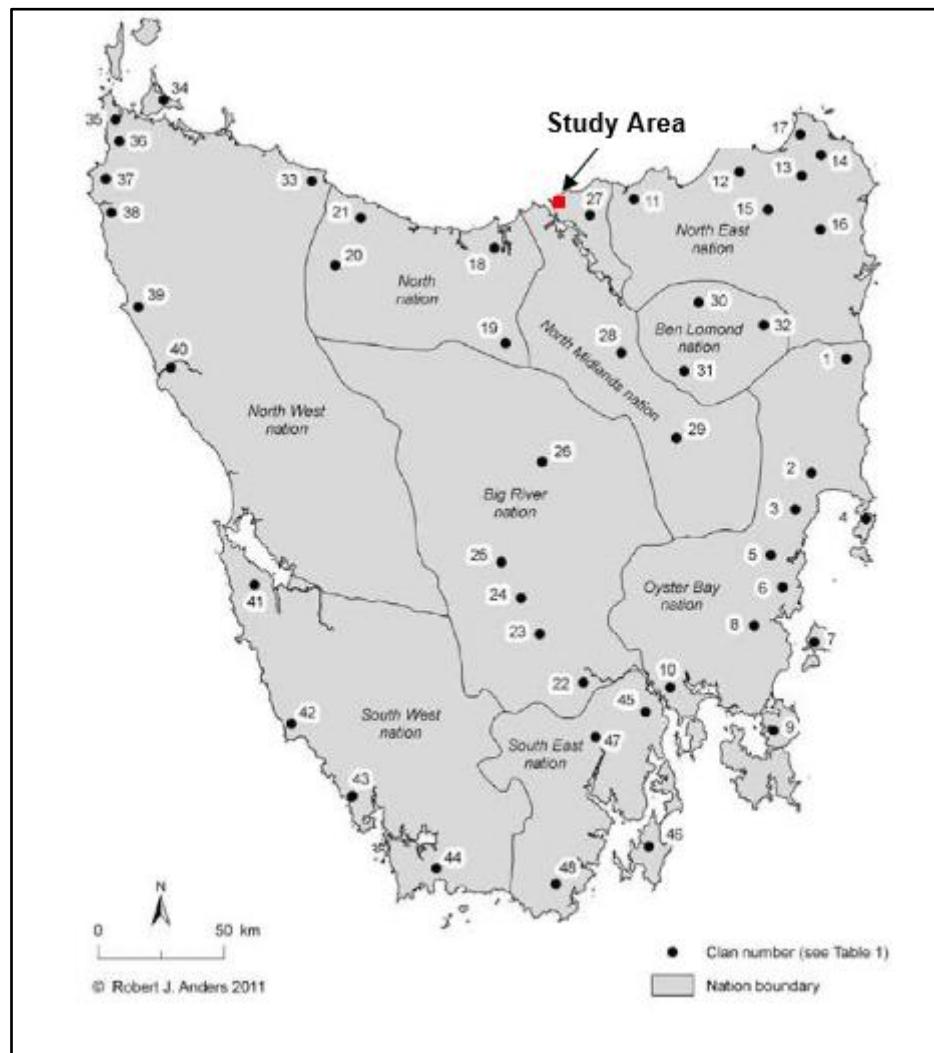
The clan appears to have been the basic social unit and was comprised of a number of hearth groups (Jones 1974). Jones (1974:324-325) suggests that the clan owned a territory and that the boundaries of this territory would coincide with well-marked geographic features such as rivers and lagoons. Whilst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

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

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

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

The current study area is located within the boundaries of the North Midlands Nation (see Figure 3). The territory of the North Midlands Nation ran from approximately St Peters Pass to Quamby Bluff in the west, along the Western Tiers through the Deloraine district through to the west edge of the Tamar Valley, and along the north coast of Tasmania. From here it ran southeast along the Pipers River, through to Launceston, then eastwards along the South Esk River through to St Paul's Dome. In total, the North Midlands nation occupied an area of approximately 6,750km<sup>2</sup> and incorporated around 160km of coastline (Ryan 2012:29).



**Figure 3: The Aboriginal Nations of Tasmania in relation to the study area (Ryan 2012:13).**

The North Midlands Nation was comprised of at least three clans. These were the Leterremairrener (Port Dalrymple people) who were located around the east Tamar, the Panninher (Norfolk Plains people) located around the Norfolk Plains, and the Tyerrernotepanner (Stoney Creek or Campbell Town people) who were situated in the vicinity of Campbell Town. There was possibly a fourth clan around the York Town area, west of the Tamar, and a fifth around the Isis River (Ryan 2012:29). Each clan is thought to have been comprised of between 50 and 80 people, with the overall population of the North Midlands nation estimated at between 300 and 400 people (Ryan 2012:29). The clan most

likely to have occupied the area around George Town (including the current study area) was the Leterremairrener (Port Dalrymple people)

The nations were among the first to experience British invasion in northern Tasmania in 1804, and as such, insufficient information exists as to the exact location of each clan. However, the clan most likely to have had rights over the land within which the study area is located are the Panninher clan who extensively utilized the plains areas surrounding Perth (Ryan 2012).

The largest kangaroo hunting grounds in Tasmania lay in the heart of North Midland country at Campbell Town, Norfolk Plains and Launceston, together with the rich marine and bird life provided by the Tamar River. As such, the North Midland nation had extensive relations with neighbours of the North, North East, Big River, Ben Lomond and Oyster Bay nations (Ryan 2012:31). These connections in turn facilitated seasonal access of the North Midland nation to the east coast at Oyster Bay through negotiations with the Oyster Bay Nation (Ryan 2012:31) and the existence of other seasonal travel routes to the east venturing into the territory of the Ben Lomond Nation to exchange ochre (Ryan 2012:31). Other major ochre sources in Tasmania were in the Western Tiers, in the territory of the North Nation.

The Panninher (Norfolk Plains clan) are said to have spent the winter on the lower reaches of the west bank of the Tamar exploiting available shellfish and swan eggs, before returning to their own country to exploit the hunting grounds in spring (Ryan 2012:31). The seasonal movement to the Great Western Tiers to obtain ochre in autumn is also recorded (see Figure 4).

Very few available ethnohistoric accounts exist, that relate to aspects of the material culture of the North Midlands Nation. One description of the huts used by the Aboriginal people of the Midlands is provided by John Bass in 1799 at Port Dalrymple:

*'Their huts, of which seven or eight were frequently found together like a little encampment, were constructed of bark torn in long strips from some neighbouring tree, after being divided transversely at the bottom, in such breadths as they judge their strength would be able to disengage from its adherence to the wood, and the connecting bark on each side. It is then broken in convenient lengths, and placed, slopingwise against the elbowing part of some dead branch that has fallen off from the distorted limbs of the gum tree; and a little grass is sometimes thrown over the top. But after all their labour, they have not ingenuity sufficient to place the slips of bark in such a manner as to preclude the free admission of rain'*

(Collins 1971, as reported in Kee 1990:17).

In a diary entry dated 22/10/1831, Robinson provides a comparatively detailed description of the clothes and tool kits used by people of the North Midlands Nation:

*'The costume of the native women is a mantle made of kangaroo skin. Their implements consist of a short stick eighteen inches long sharpened at the end similar to a chisel, and with this implement they bark the tree and use it in the same way a carpenter would use the same sort of tool. Instead of the mallet they use a stone. The wooden chisel is made to answer the purpose of a lever, hence we may call them mechanics. It is the business of the woman especially of the inland tribes to fetch wood for the fire. If the woman is married she carries her own and her husband's burden. Part of their luggage consists of a mull, a flat stone which the men*

*use for the purpose of preparing the pomatum to dress their hair with. The woman also carried with her for this purpose a large quantity of ochre. It is the business of the women also to hunt and catch opossum and for this purpose they carry a rope which they make of the long cutting grass of the iris. They also hunt other small animals, look for eggs &c. They carry with them also a sharp stone with which the men make their spears and waddies. The men carry their spears and waddies, their only weapons except stones which they throw with great dexterity. It is the business of the men to hunt kangaroo. The men also wear a mantle of kangaroo skin' (Plomley 1966:531).*

In an earlier diary entry dated 20/9/1831, Robinson describes that tea trees were procured to provide relatively straight timber with which spears were manufactured (Plomley 1966:215).

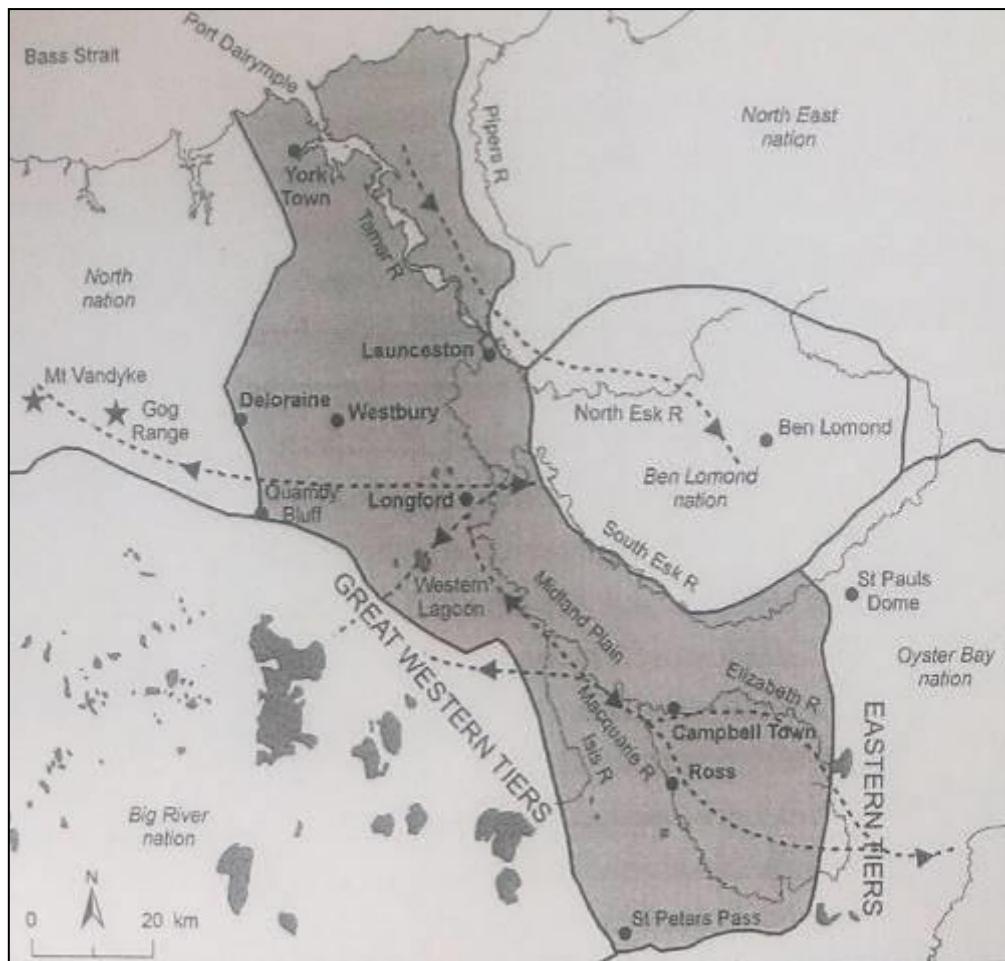
Robinson also records a number of instances of Aboriginal people in the Midlands using ochre for hair and body decoration. In one account, Robinson observes:

*'Previous to setting off the natives ochred or painted themselves. It might appear ludicrous to civilised society to see people daub their hair with a thick substance of ochre and grease, but I observe that my natives at Campbell Town procured some soft red brick which they pound into dust mixing it with grease to anoint their heads. I have not yet ascertained their particular motive for this custom and it is particular to only a few tribes' (Plomley 1966:501).*

In terms of food resources, Robinson provides a series of accounts in his diary entries of the range of foods eaten by the North Midlands Tribe. Birds and eggs appear to have formed a major component of the diet of the local inhabitants, with swans, ducks and red bills being some of the main species targeted (Plomley 1966: 217). A range of mammal species are also documented as having been hunted and eaten, including forester kangaroo, wallaby, kangaroo rat (possibly bandicoots), and possums (Plomley 1966). In a diary entry dated 22/10/1831, Robinson provides an interesting account of a kangaroo hunt undertaken by Aboriginal men:

*'...when the natives hunt...they surround the animal, and hence it is driven from one position to another till at length it becomes exhausted, when they rush upon it and seize the prey' (Plomley 1966:555-6).*

Only a few plant foods are documented in the ethnohistoric accounts as having been eaten. This includes a bulbous plant known as 'native bread' and a plant that has the appearance of asparagus that was found by the roots of peppermint trees (Plomley 1966). It is very likely that many more plant foods were eaten by the local Aboriginal population.



**Figure 4: Settlement and movement patterns of the Midland Plain clans (Ryan 2012:30).**

### 3.2 Culture Contact and Frontier Violence

The first recorded meeting between Europeans and the Aboriginal people of northeast Tasmania was in 1773 when Tobias Furneaux sailed into, and named, the Bay of Fires for the smoke he saw along the coast (Kee 1987:15). A quarter of a century later Jean-Baptiste-Louis Clarke Theodore also recorded smoke on the northeast coast (Plomley 1966, in Kee 1991:8). In 1800 Matthew Flinders observed smoke on the northern coast but noted that the Furneaux Islands appeared uninhabited (Kee 1987:15). Bass accompanied Flinders on further voyages later in 1800 and he observed that while smoke was often visible from ships, the people ran into the bush at the approach of Europeans (Kee 1987:15).

In 1804 Lieutenant Colonel William Patterson founded the European settlement at George Town. This camp was short-lived, with the party moving within a few weeks to the west bank of the River where they established York Town. The Port Dalrymple (Launceston) settlement was established in 1806. Hence, the study area was impacted from the very earliest phase of the European settlement of Tasmania. The Leterremairrener people would have been among those Aboriginal clans that bore the brunt of the contact period.

By the early nineteenth century sealers and whalers had established hunting grounds in the Bass Strait and inhabited islands and parts of the coast. In 1816 a sealer James Kelly met

up to 300 people at George Rocks. Kelly traded culled seals with the Aboriginal people of the coast in exchange for kangaroo (Kee 1987:19).

While there are some suggestions that initial contact between Aboriginal people and the whalers and sealers may have been friendly, Ryan's research on the North Midland nation indicates that 'at least 300 were probably killed outright by the settlers between 1820 and 1830' (Ryan 2012:19) and by the time George Augustus Robinson was moving through the area in 1830 – 1831, the sealers had instilled widespread terror among the Aboriginal people (Kee 1987:16). The sealers typically abducted women to be wives and to work on the sealers camps, and Robinson recorded that people along the northern coast referred to the murder of Aboriginal people at all the places where the sealers camped (Kee 1987:16).

This violent contact between Aboriginal people and Europeans, especially sealers, along the northeast coast had disastrous implications for the North Midlands nation. Apart from individual, emotional devastation, the loss of large numbers of women disrupted social organisation, as well as impacting on economic systems of gender-based division of labour (Kee 1987:16).

## 4.0 Background Archaeology

### 4.1 Previous Archaeological Investigations in the Region

The study area is located in the Northern Region of Tasmania. A number of regional archaeological investigations have been undertaken in the region over the past three decades. The most comprehensive, and pertinent investigations are those of Kee (1987, 1990 and 1991) and Moore (1997a and b). The following provides an overview of these studies.

#### **Kee (1990)**

In 1990 Kee implemented the Midlands Regional Aboriginal archaeological site investigation, which was funded through the National Estate Grants Program. The primary objectives of the study were primarily to establish (on the basis of literary and field research) a predictive model of site location for the Midlands Region, and secondly to carry out a limited archaeological excavation with the aim of providing a temporal context for the information generated for the study.

As part of the study, Kee (1990) surveyed 72km within the Midlands area. This survey resulted in the identification of 236 Aboriginal sites. This brought the total number of known Aboriginal sites in the Midlands to 350. The vast majority of these sites are classified as isolated artefacts or artefact scatters. The exception is the coastal fringes in the midlands where shell-midden sites tend to predominate. Stone quarries and suitable stone sources for procurement were identified in many locations throughout the Midlands, and a small number of rock shelters were also identified (Kee 1990).

As part of the analysis of the distribution of sites throughout the Midlands, Kee (1990) divided the Midlands into seven separate landscape divisions. These are Aeolian lunettes, coastal dunes and beaches, estuaries, lakes (uplands and lowlands), lowland hills and plains, upland hills and plains and rivers. The highest number of sites were identified in the Aeolian lunettes and coastal dunes, accounting for around 50% of the total number of sites recorded in the Midlands. Between 20 and 30 Aboriginal sites were recorded in each of the other five landscape divisions. Kee (1990) is of the opinion that the observed pattern of distribution accurately reflects true differences or variations in site densities throughout these different landscape divisions, and is not merely a product of skewed visibility or survey coverage.

Kee (1990) also noted a distinct difference in the distribution of site types within the Midlands Region, which she believes is also suggestive of differences in occupation patterns throughout the region. For example, the sites recorded around the margins of Lake Dulverton comprise mostly artefact scatters and rock shelters. Some of these sites are quite large (in terms of artefact numbers) and suggest intensive occupation. In contrast, the sites associated with the Aeolian lunettes were mostly small campsites located adjacent to lagoons, and are interpreted as being the product of short-term visitations to the area by small groups of people exploiting the resources of these lagoons and the associated hinterland areas.

One of the features of Kee's (1990) investigations is that the vast majority of sites identified as part of the field survey were recorded within ploughed farm paddocks, where the surface visibility is improved and the soils have been churned. This pattern of site location highlights the importance of good surface visibility in identifying sites during field surveys and demonstrates how varying conditions of surface visibility can potentially skew the results of survey investigations. Kee (1990) does not really adequately address this factor in her assessment. It is plausible that the factor of surface visibility variations could be a major contributor to the pattern of site distribution observed for the Midlands, with site densities being highest in the Aeolian dunes and coastal areas where surface visibility is improved and lowest in the Riverine and Uplands areas where surface visibility is poor. The only way to adequately determine how accurate the perceived pattern of site distribution is in the Midlands region would be through extensive sub-surface investigations within the various landscape divisions.

The summary interpretation provided by Kee (1990) for the observed archaeological record of the Midlands Region is that the areas with observed higher site and artefact densities correlate with areas where there is an increase in available resources, making these areas attractive for human habitation, and facilitating prolonged periods of occupation. Those areas with lower site and artefact densities also correlate with areas of decreased resource availability, resulting in shorter, less frequent occupation of these areas by small groups of people.

Taking into account historic records for the region, Kee (1990) presents a seasonal model of occupation for the Midlands Region. This model involves the movement of Aboriginal people around inland resource-rich zones such as lagoons and lakes in the spring and early summer months, with summertime spent on the north coast areas. It is suggested that the winter months may have been spent in the inland parts of the Uplands where there was good soil drainage.

#### **Kee (1987, 1991)**

Kee (1987, 1991) undertook the most comprehensive archaeological survey to date, of the North East Region of Tasmania. The early part of the study, including establishing the research aims and methodology, was carried out by Cosgrove and involved a regional investigation of the prehistoric archaeological resources in North East Tasmania. Kee subsequently took over the project, completing the aims of the research, which was to identify the selection criteria used in prehistoric settlement and determine the densities of sites in different environments. It was hoped that these results might give predictive capabilities to archaeological resources within the region.

The study area comprised 9 700km<sup>2</sup> in the North East of Tasmania and was bordered to the north and east by the coastline between Scamander and Stony Head, to the west by the watershed of the Pipers River, Tamar River and South Esk River and to the south by Fingal Bay. The investigation was based entirely upon a systematic survey (no sub-surface investigations were undertaken), which comprised just over 0.5% of the entire study area. Data was collected on the type, characteristics, artefact variability and location of sites across the landscape.

The study area was divided into major landforms, which were then stratified into two environments: coastal and inland. The line between coastal and inland was arbitrarily defined at 1km from the shore. Due to logistical issues, it was not possible to sample each landform proportionately given access, surface visibility, land use and so on. The hill landforms in particular were unable to be surveyed.

The following seven different landform divisions were made based on topography and environment:

- Coastal dunes;
- Coastal plains;
- Coastal low hills;
- Offshore Islands;
- Plains;
- Low hills;
- Hills.

A total of 230 sites are reported on in the study, only 189 of which were identified in the specific survey; previously recorded sites on the Register of the National Estate and the TASI site index were also included. Marked differences were clearly identified between the use of various landforms within the region and in particular between coastal and inland environments. The outcomes of the research and the predictive models generated are summarised by environment and landform below and in Table 1.

Inland environments were found to contrast with coastal areas in having considerably lower densities of sites but comprising larger assemblages and a wider range of artefact types present, dominated by heavily utilized and retouched classes. This may be the product of either proximity to raw materials causing raw material provisioning inland, or due to the need to perform a wider range of tasks in exploiting terrestrial resources inland, or both. The general sparsity of sites in inland areas is argued to be indicative of dispersed and short-term exploitation of a wide range of terrestrial resources (and hence the need for a more diversified toolkit). However significant differences were found to exist between landform types in inland environments; these are summarized below.

**Table 1: Predicted site types, densities and composition for North East Tasmania (data based on Kee's 1991 survey results).**

Landform	Predicted No of Sites per km <sup>2</sup>	Types of Sites (in order of frequency)	Predicted no of artefacts per site	Raw Materials	Assemblage Composition (predominantly)
Coastal Dunes	6	Middens, Scatters	17.1	Quartz, volcanics, silcrete	Unretouched
Coastal Plains	30	Middens, Scatters	2.4	Quartz, cherty hornfels, quartzite	Unretouched
Coastal Low Hills	12.6	Middens, Scatters	2.4	Quartz, cherty hornfels	Unretouched, some retouched present

Offshore Islands	3.9	Scatters	26.6	Quartz, chalcedony	Unretouched and retouched
Plains	1.6	Isolated finds, Scatters	8.5	Quartz, cherty hornfels, quartzite	Unretouched and retouched
Low Hills	2.5	Scatters, isolated finds, middens	1.5	Quartz, cherty hornfels, quartzite	Retouched
Hills	0.2	Isolated finds, scatters	108*	Quartz	Retouched

\* Based on Kee's data of only 5 assemblages.

***Mark Moore, Aboriginal Archaeology of Dry Sclerophyll Forest Conservation Reserves in Eastern Tasmania, 1997***

Mark Moore (1997a and b) undertook an archaeological assessment of a sample of dry sclerophyll forest in eastern Tasmania in an attempt to determine Recommended Areas for Protection (RAPs) in Tasmanian State Forest. The study involved a survey, site recording and lithic analysis for a range of sample sites. Over 380km of transects were surveyed within 34 forest blocks across eastern Tasmania (Moore 1997a:9). A total of 95 sites plus 5 'continuous' artefact scatters were recorded during the project (Moore 1997a:9).

The lithic analysis was based on technology, but no statistical analysis was attempted. Results were compared to experimental knapping studies (Moore 1997a:10). Moore identified duplex soils in particular as having the potential to conceal sites and therefore cautioned that in such environments surface survey alone may not be sufficient for site identification (Moore 1997a:13). Both small and large artefact scatters are identified by Moore as being of potential scientific significance when subject to lithic analysis (Moore 1997a:13).

Moore (1997a:13) suggests that 86% of the sites he identified in RAPs would have been located by following survey prescriptions outlined in the APZ guidelines. However, Moore (1997:13) adds that sites of high archaeological significance were found across all zones, not merely in zones predicted to be of High archaeological potential.

Ten of the 34 zones surveyed by Moore (1997a) are of particular relevance to the current study area. These zones are all in the region surrounding the study area, from Lefroy and Emu Ground in the north through to the mouth of the Tamar River (Moore 1997a:22). The two units closest to the study area are Lefroy and Den Ranges, and Moore (1997a:22) also surveyed a unit concentrated on the southern reaches of Pipers River.

In Moore's study, 40% of the recorded sites were isolated artefacts, while 26% of recorded sites were classified as small artefact scatters defined as 'several flakes from one or more reduction events scattered within a small area' (Moore 1997a:38, 40). 'Extended artefact scatters' that typically contained more artefacts and artefact types distributed across a broad area comprised 7% of the total number of recorded sites (Moore 1997a:41). 8% of sites were

recorded as quarries ('toolstone quarries') (Moore 1997a:42). Other site types recorded by Moore (1997a:43) were middens and rock shelters.

Moore (1997a:73) surveyed 27.5km in the Tippogoree Hills and recorded 4 artefact scatters and 2 isolated artefacts. 23.5km was surveyed at Lefroy with 2 artefact scatters and 1 isolated artefact identified. No sites were recorded from the 8.7km of survey transects walked at the Den Range, nor were any sites recorded at Emu Ground where 5km of survey transects were walked. The section surveyed by Moore (1997a:73) at Pipers River did not result in any sites being recorded, despite the 10.2km of survey transect. Four isolated artefacts were recorded in the parcel surveyed (26.4km total transects) at Prossers Forest, some 50km south of the Back Creek study area at the mouth of the Tamar estuary. Five isolated artefacts and 6 artefact scatters were recorded at Trevallyn, where Moore surveyed 9.2km, and 3 isolated artefacts and 4 artefact scatters were recorded at the Cliff Grounds Reserve near Launceston (from 10.5km of survey transects). No sites were recorded in the final survey parcel in the vicinity of Weavers Creek where 1.7km was surveyed (Moore 1997a:73). The importance of the Tamar estuary is indicated by these results, as is the predominance of isolated artefacts and artefact scatters in the site types for the region.

Moore (1997b:40) summarised research into Tasmanian stone tool production. He explains that the raw material was quarried from surface exposures and cores were 'roughed out' at the quarry site. The material was then 'exported' and carried by the clan for internal use or for trade. The clan carried cores as they travelled and struck flakes to modify into tools as required. As tools such as scrapers became blunt they were resharpened through 'rejuvenation' techniques. Moore claims from his review of recorded Tasmanian sites that cores were 'used up' for rapidly than formal tools, which were carried for extended periods. People, therefore, needed regular access to quarry sites. The wealth of stone resources available in Tasmania, however, meant that people did not need to undertake the recycling of materials or extensive reduction of tools (Moore 1997b:41).

Moore (1997b:41) identified ten quarries within the Dry Sclerophyll forest of the east coast. Moore (1997b:66) argues that in Tasmania there is evidence of a two-pronged method of stone tool procurement. The first was based on the opportunistic acquirement of cores from cobbles that would be carried long distances and heavily reduced. These sites ranged from the exploitation of beach cobbles and gravel to dolerite and hornfels exposures in the ranges.

Moore (1997b:63) concludes that the majority of artefacts located in Dry Sclerophyll forests in eastern Tasmania are unmodified flakes resulting from core reduction by people as needed during travel across the landscape. These cores were usually small and may have had some minimal reduction before being transported. Moore (1997b) argues that most raw material is derived from cobbles extracted from fluvial or colluvial gravel deposits (Moore 1997b:64). Reduction was usually by heavy percussion blows, and both unmodified flakes and cores were used as tools for cutting and scraping (Moore 1997b:64). At Waterhouse Point in the northeast, Moore (1997b:64) identified a bipolar quartz industry, as well as evidence of bipolar chert flakes.

The second method was the planned, 'logistical', visits to specialised quarry sites such as hornfels and dolerite exposures for the express purpose of acquiring material from which to

flake large scrapers (Moore 1997b:66). Production of large scrapers did not occur so haphazardly across the landscape, as it required specialised resources, in particular hornfels (Moore 1997b:64). The need to acquire these specialised stone resources (which were not as common as cobble deposits) required planning and ventures by the entire clan group for the purpose of acquiring the stone material. This archaeological interpretation fits with the ethnographic evidence discussed in Section 3.2.

This two-pronged system resulted in what Moore (1997b:71) terms a 'low cost, low-risk encounter procurement strategy.' Transported cores were frequently used and replaced opportunistically, while scrapers were heavily reduced as the raw material for scraper production was sourced only a few times a year. Thus, the tools were highly flexible, especially cores which could be used for multiple cutting tasks as well as to produce flakes (Moore 1997b:71). Scraper blanks were also fashioned into a range of tool types (Moore 1997b:84). Moore (1997b:85) argues that the procurement of specialised large scraper blanks began around 6000 years BP, around the time of Holocene population expansion and as an adaptation to maximising time available to spend on procuring food.

Moore (1997b:67) presents a picture of what the basic Tasmanian Aboriginal toolkit may have looked like at any one time:

*The transported Aboriginal lithic toolkit probably included several scrapers in various states of resharpening, several small cores in various states of reduction, a small hammerstone for core reduction and scraper rejuvenation, several unmodified flakes which proved highly useful for cutting tasks, and perhaps a ballywine stone.*

(Moore 1997b:67)

## 4.2 Investigations in the Vicinity of the Study Area

There have been a number of previous smaller scale archaeological investigations undertaken in the general vicinity of the Cimitiere Plains Solar Farm study area. These investigations have focused on specific infrastructure projects. Probably the most extensive and relevant to the current assessment are the investigations undertaken by CHMA (2013a and b) for the Low Head Wind Farm Project, which is located just to the north of the current study area.

The CHMA (2013a) assessment was focused on the proposed Wind Farm site area, which incorporated 12 proposed turbine locations and the network of access tracks and cable alignments that interconnected these turbines. The field survey resulted in the identification of eight Aboriginal heritage sites. Five of the recorded sites were classified as artefact scatters (sites AH11843, AH11846, AH11847, AH8749 and AH0653), with one of the sites (AH0653) also having a sparse scatter of shell midden material associated with the stone artefact scatter. Site AH0653 was also the largest of the recorded sites in terms of spatial extent and numbers of associated artefacts. The site comprised over 100 surface artefacts that were spread along a vehicle track and adjacent erosion scald areas on the foreshore margins of the coastal reserve at Green Bluff. The other four recorded artefact scatters each comprised between 3 and 12 surface artefacts. In each instance it was assessed that there was the potential for additional undetected artefact deposits to be associated with these sites. The remaining three recorded sites (AH11844, AH11845 and AH11848) were classified as isolated stone artefacts (CHMA 2013a:69).

In addition to the eight Aboriginal sites identified during the field survey investigations, CHMA (2013a:74-75) noted that were another 12 registered Aboriginal sites that were situated within 300m of the proposed footprint of the wind farm infrastructure layout. Three of these sites that appeared to be located within 100m of the proposed development footprint (AH9065, AH9960 and AH10038). The location of sites AH9960 and AH10038 were both re-identified, however, no artefacts or midden material could be found at these site locations. The two sites were confirmed as being around 100m north-east of the centre point location of Turbine 1, outside the project footprint. Site AH9065 was not relocated. CHMA (2013a:74) confirmed that the site had been incorrectly plotted and was in fact situated 150m to the south-west, on an access track.

Sites AH9955, AH9956, AH9957 and AH9714 were all noted by CHMA (2013a:74) to be situated within 200m of the centre point of Turbine locations 5 and 11, or the proposed access track alignment between these turbines. The sites were all recorded along an old access track that runs in a north-south direction from an electricity sub-station site. The sites are all situated on the crests of a series of low relief dunes traversed by the track. Despite an extensive search, CHMA (2013a:74) were not able to re-identify any of these sites.

The remaining five sites (AH8752, AH8754, AH9958, AH9959 and AH9064) were all reported to be situated over 200m away from the proposed infrastructure layout footprint (CHMA 2013a:75).

Based on the observations made during the field assessment, together with predictive modelling, CHMA (2013a:79-83) developed an Aboriginal sensitivity rating for the windfarm project footprint. Turbine locations 1, 3 and 10 were assessed as being potential of high sensitivity, based on the presence of Aboriginal heritage sites within or in the immediate vicinity of these turbines and the likelihood of sub-surface cultural deposits being present. The access tracks between turbines 3 and 4, 6 and 7 and 9 and 10 were also assessed as being of High or Medium high sensitivity. The remainder of the project footprint was rated between low and moderate sensitivity.

CHMA (2013a:95) advised that the preferred management strategy for sites that were located within the wind farm development footprint was to re-align the project footprint so as to avoid impacts to identified sites. Where this was not possible, it was recommended that sub-surface investigations should be undertaken at site areas in order to more accurately determine the extent and nature of artefact deposits present. This in turn would provide a greater level of information on which to base mitigation strategies.

CHMA (2013b) subsequently carried out the assessment of the proposed power corridor that extends between the George Town substation and the wind farm site. The assessment also included the following additional infrastructure at the wind farm site:

- 3.1km long section of proposed road upgrade;
- 800m section of proposed new road;
- 3.3km of additional power distribution lines;
- a 50m x 50m proposed laydown area.

Five Aboriginal heritage sites were recorded as part of the CHMA (2013b) assessment (AH9345, AH9737, AH9741, AH11867, AH11868)). All five sites were located either within, or immediately adjacent to the proposed power corridor route.

Sites AH9345 and AH9741 were both situated within, or immediately adjacent to the proposed power corridor. These two registered sites had previously been recorded as small artefact scatters. However, during the CHMA (2013b) assessment, only a single isolated artefact could be re-located at each site location (CHMA 2013b:23).

Sites AH9737, AH11867 and AH11868 were all confirmed as being situated between 30-40m outside the bounds of the proposed power corridor. Site AH9737 was classified as an isolated artefact, and is located on the edge of a vehicle access track that runs under the existing Basslink power line. Site AH11867 was a discreet stone artefact scatter comprising 7 artefacts that was located on a series of erosion scalds, directly underneath the existing Basslink power line. Site AH11868 was a small artefact scatter, comprising 5 artefacts, that was located immediately north of Soldiers Settlement Road (CHMA 2013b:23).

CHMA (2013b:23) noted that there were an additional 15 registered Aboriginal sites that were situated within 100m-200m of the powerline corridor. All of these sites were confirmed as being outside the project footprint. CHMA (2013b:27) observed that the grid reference coordinates provided for four of these registered Aboriginal sites that were recorded in the vicinity of the Converter Station appeared to be incorrect (sites AH9335, AH9336, AH9346, AH9347). The descriptions presented in the site cards for these sites placed them within or immediately adjacent to the Converter Station. However, the grid references placed them some distance away.

#### **4.3 Registered Aboriginal Sites in the Vicinity of the Study Area**

As part of Stage 1 of the present assessment, a search was carried out on Aboriginal Heritage Register (AHR) to determine the extent of registered Aboriginal heritage sites within and in the general vicinity of the Cimitiere Plains Solar Farm Project study area.

The search shows that there are a total of 33 registered Aboriginal sites that are situated within an approximate 12km radius of the study area (search results provided by Claire Keating from AHT on 10-12-2021). Eighteen (18) of these sites are classified as artefact scatters, 11 sites are classified as isolated artefacts, two sites are classified as shell midden/artefact scatters, one is a shell midden/isolated artefact and one shell midden. Table 2 provides the summary details for these 33 registered Aboriginal sites, with Figures 5 and 6 showing the location of these sites in relation to the study area.

Based on the available information, there are six registered Aboriginal sites that appear to be situated within or in the immediate vicinity of the study area (sites AH9366, AH9354, AH9336, AH9346, AH10399 and AH10606). These sites are highlighted in red in Table 2. The following provides a summary overview of the information available for these six sites.

AH9366 was originally recorded by Vernon Graham in 2004 during a monitoring program for BassLink. AH9366 is described as being an isolated artefact with a white quartz flake located between two towers on the side of an access track associated with the BassLink Electrical Substation at George Town. The site is located 100m southeast of an unnamed tributary running of Cimitiere Creek on a flat hilltop. Surface visibility was originally recorded as very good (80%-100%). The original recording noted that the site had been highly disturbed, as much as 85%.

AH9354 was originally recorded by Vernon Graham in 2003 during a monitoring program for BassLink. AH9354 is described as being a 10m x 10m artefact scatter with one manuport,

one core and two debitage pieces. The materials present are cherty hornfels, quartz, and boned chert. The site was located within a wind row within plantation land with grass, heath, eucalypt and tea tree scrub vegetation on a gentle slope beside an access track. The site was located 500m northeast of Four Mile Creek with very good surface visibility (80%–100%). The current recording of AH9354 located the site on the western side of an existing graded access track within the Cimitiere Plains Solar Farm footprint. The site is located on a gravelly slope of 5° leading down to the access track. Vegetation on and surrounding the site consists of moss, grass, Sagg, eucalypts and a species of Melaleuca. The site and the immediate surroundings have been subject to high levels of disturbance from light and heavy vehicle activity, clearing and past logging activity.

AH9336 was originally recorded by Vernon Graham in 2003 during a monitoring program for BassLink. AH9336 is described as being an isolated artefact comprising two white quartz debitage artefacts. The site was located within a dry eucalypt forest on the eastern side of the BassLink Electrical Substation adjacent to a drain and gravel access track. The site was located 30m southeast of Four Mile Creek on flat terrain with very good surface visibility (80%–100%). The current recording of AH9336 is located on the western side of an existing graded access track within the Cimitiere Plains Solar Farm footprint. The site is located on a gravelly slope of 5° leading down to the access track. Vegetation on and surrounding the site consisted of Bracken Fern, Sagg, Blackwood and a species of Melaleuca. The site and the immediate surroundings have been subject to high levels of disturbance from light and heavy vehicle activity, clearing and past logging activity.

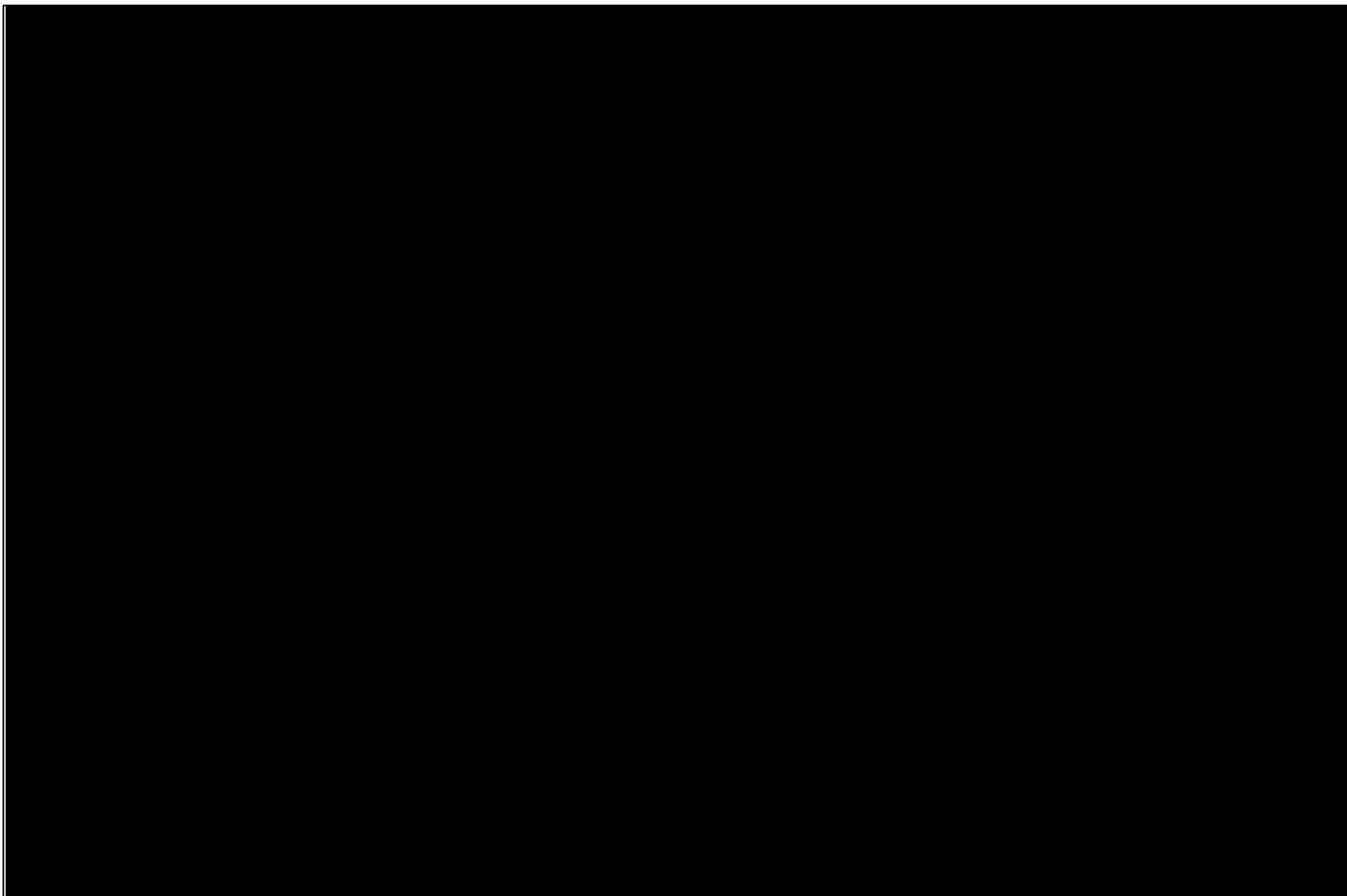
AH9346 was originally recorded by Vernon Graham in 2003 during a monitoring program for BassLink. AH9346 is described as an isolated artefact comprising one steep-edge scraper and one broken flake. The materials present are cherty hornfels and white quartz. The site was recorded as being located on a flat dry eucalypt plantation, with very good surface visibility (80%–100%), 150m south of Four Mile Creek.

AH10399 was originally recorded by Steve Stanton and Vanessa Edmonds in 2007 during a survey for the Tamar Valley Power Station – Phase 2 Environmental Studies project. AH10399 is described as an isolated artefact comprising of a white chert flake on gently sloping terrain within tea tree scrub 100m metres east of Four Mile Creek. Surface visibility at the time of the original recording was poor (11%–30%) and the site had been heavily disturbed (100%) due to light vehicle and agricultural activity.

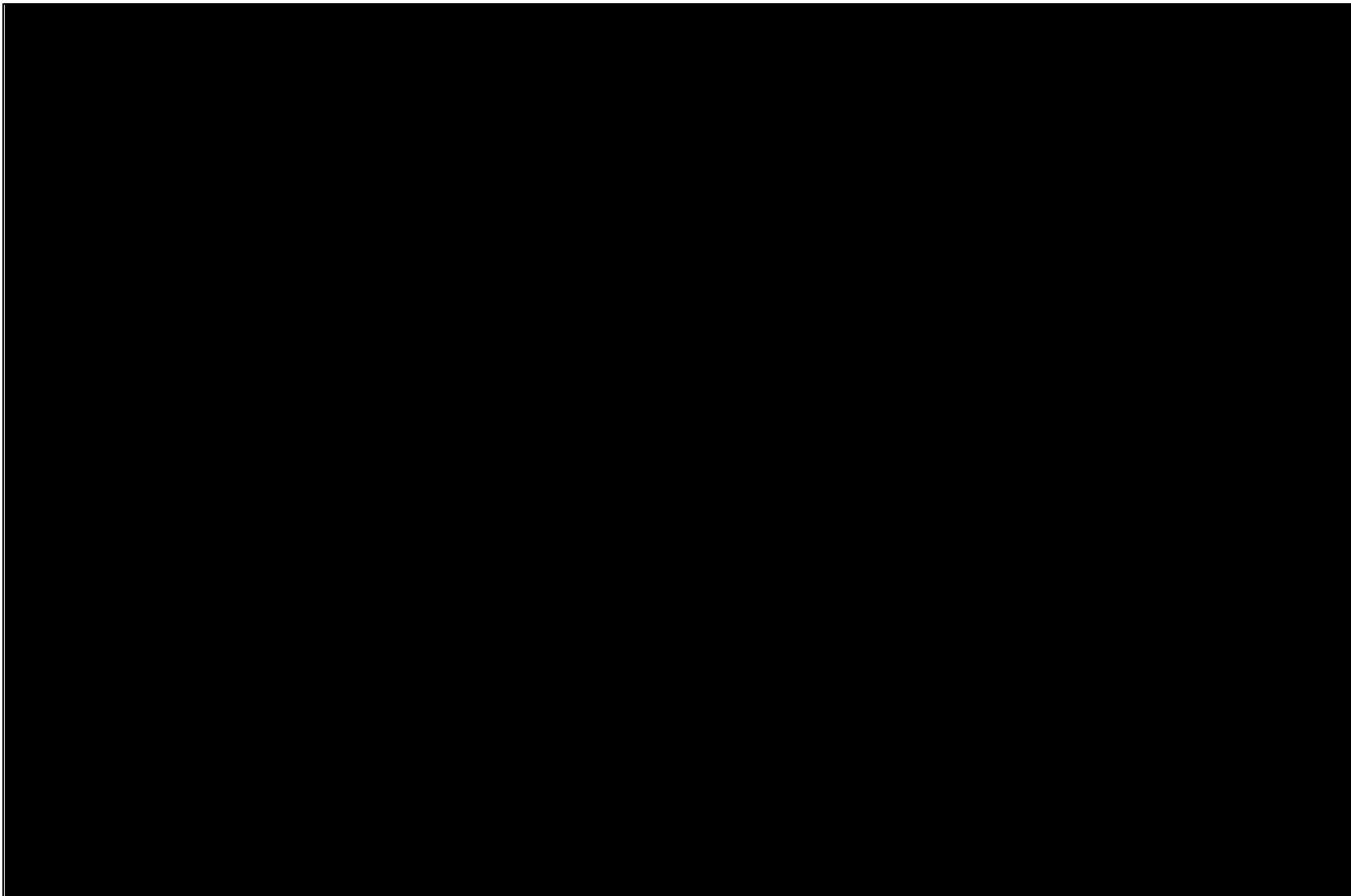
AH10606 was originally recorded by Trent Graham and Vernon Graham in 2008 during a survey of the Alinta Energy (Tamar Valley) Waste Supply Pipeline project. AH10606 is described as a 10m<sup>2</sup> artefact scatter consisting of a white quartz steep-edge scraper and a damaged cherty hornfels retouched flake on a highly disturbed site (95%) due to clearing for the installation of the pipeline, 200m west of Four Mile Creek. Surface visibility was originally recorded as very good (80%–100%).

**Table 2: Registered Aboriginal sites in a 12km radius of the Cimitiere Plains Solar Farm Project study area (based on the results of the AHR search dated 10-12-2021).**

AH Number	Site Type	Locality	Grid Reference Easting (GDA94)	Grid Reference Northing (GDA94)
10128	Shell Midden	Low Head		
10399	Isolated Artefact	Bell Bay	[REDACTED]	[REDACTED]
10606	Artifact Scatter	Bell Bay	[REDACTED]	[REDACTED]
10677	Artifact Scatter	Bell Bay		
10822	Artifact Scatter	Low Head		
10823	Isolated Artefact	Low Head		
10824	Artifact Scatter	Low Head		
11034	Isolated Artefact	George Town		
11867	Artifact Scatter	George Town		
11868	Artifact Scatter	George Town		
8750	Artifact Scatter	George Town		
8752	Artifact Scatter	George Town		
9308	Isolated Artefact	George Town		
9334	Artifact Scatter	George Town		
9335	Artifact Scatter	George Town		
9336	Isolated Artefact	George Town	[REDACTED]	[REDACTED]
9345	Artifact Scatter	George Town		
9346	Isolated Artefact		[REDACTED]	[REDACTED]
9347	Artifact Scatter			
9353	Isolated Artefact	George Town		
9354	Artifact Scatter	George Town	[REDACTED]	[REDACTED]
9366	Isolated Artefact	George Town	[REDACTED]	[REDACTED]
9673	Artifact Scatter	George Town		
9713	Isolated Artefact	Bell Bay		
9714	Artifact Scatter	Low Head		
9722	Isolated Artefact	George Town		
9737	Isolated Artefact	George Town		
9741	Artifact Scatter			
9955	Shell Midden, Artifact Scatter	Low Head		
9956	Shell Midden, Isolated Artefact	Low Head		
9957	Shell Midden, Artifact Scatter	Low Head		
13879	Artifact Scatter			
13905	Artifact Scatter			



*Figure 5: Topographic map showing the location of registered Aboriginal sites located within a 12km radius of the study area (based on the results of the AHR search dated 10-12-2021).*



***Figure 6: Aerial map showing the location of registered Aboriginal sites located within a 12km radius of the study area (based on the results of the AHR search dated 10-12-2021).***

## 5.0 Predictive Modelling

### 5.1 Introduction to Predictive Modelling

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

### 5.2 Predictive Models; Strengths and Weaknesses

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

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

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

The findings of previous archaeological investigations undertaken in the general vicinity of the study area, together with the results of the AHR search, indicate that by far the most likely site types that will be encountered during the current assessment will be artefact scatters and isolated artefacts. The following provides a definition for the site types likely to

be encountered in the study area and a general predictive statement for their distribution across the study area.

As discussed in section 4.1 of this report, other Aboriginal site types have been recorded in the Northern Tasmanian Region, in the general surrounds of the study area. These include shell midden sites, Aboriginal stone quarries and Aboriginal rock shelters. Shell middens are unlikely to occur within the study area due to the northern sections being located 3.5km southwest of the Bass Strait coastline and the southern sections, being located 2km northeast of the Tamar River. The underlying geology across the northern sections primarily consists of Cenozoic cover sequences consisting of silt with rounded clasts of granite, schist, quartzite and conglomerate. Tippogoree Hills, with Mount George and side slopes (including the study area), is dolerite. These stone materials present in both sections were generally not well suited for Aboriginal artefact manufacturing and as such it is highly unlikely that Aboriginal stone quarries will be present in the study area. Dolerite is also not conducive to the formation of rock overhangs and as such Aboriginal rock shelters are not likely to be present.

### ***Artefact Scatters and Isolated artefacts***

#### ***Definition***

Isolated artefacts are defined as single-stone artefacts. Where isolated finds are closer than 50 linear metres to each other they should generally be recorded as an artefact scatter. Artefact scatters are usually identified as a scatter of stone artefacts lying on the ground surface. For the purposes of this project, artefact scatters are defined as at least 2 artefacts within 50 linear metres of each other. Artefacts spread beyond this can be best defined as isolated finds.

It is recognised that this definition, while useful in most instances, should not be strictly prescriptive. On some large landscape features, for example, sites may be defined more broadly. In other instances, only a single artefact may be visible, but there is a strong indication that others may be present in the nearby sediments. In such cases, it is best to define the site as an Isolated Find/Potential Archaeological Deposit (PAD).

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

#### ***Site Distribution Patterns:***

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

- The majority of artefact scatters are located in close proximity to a watercourse, on relatively level and well-drained ground.
- Larger open artefact scatters (representing more intensive activity, such as regular camp areas), tend to be located on level, elevated landscape features, close to (within 500m) major watercourses. The most common areas are the elevated basal slopes of hills, the level spines of spurs (around the termination point of the spur), or on elevated sand bodies.

- Sites in the Midlands are likely to occur at the intersection of the hilly country with the plains. Sheltered valleys at the base of ridgelines have been noted as having an increased likelihood of containing archaeological sites.
- Site and artefact densities on the lower-lying flood plains of watercourses tend to be comparatively lower. This may be reflective of the fact these low-lying areas were less favoured as camp locations, due to such factors as rising damp and vulnerability to flooding; and
- Site and artefact densities also tend to be comparatively lower in areas away from watercourses.
- Site and artefact densities are comparatively lower in moderate to steeply sloping terrain.
- Isolated artefacts may be found distributed across the landscape.

**Predictive Statement:**

The proposed Cimitiere Plains Solar Farm Project area is situated within the northern sections of the study area the terrain is characteristically flat to moderately undulating pastureland, with some sections of lowland floodplains surrounding Cimitiere Creek. The more gentle slope gradients occur throughout the northeast and northwest sections of the study area, where gradients range between 5° to 10°. In the southeast and southwest sections of the northern sections of the study area, the slope gradients increase to between 10° to 30°, with the steepest slopes present along the southern borders facing toward the Tippogoree Hills. The terrain across the study area is characteristically flat to moderately undulating. The more moderate slope gradients occur in the southern sections within the study area, closer to the base of Tippogoree Hills. Slope gradients increase between 5° to 20°, with the steeper slopes being the west side slopes of the ridges. The closest watercourse to the study area is 600m southwest of Four Mile Creek. This is a semi-permanent watercourse that flows in an east-to-west direction, emptying into the Lauriston Reservoir.

Applying the broad regional pattern of site distribution to the study area, it is anticipated that the density of sites (artefact scatters and isolated artefacts), and the density of artefacts associated with these sites would generally be expected to be low to medium. If sites are present in the study area, they are likely to be isolated artefacts or small artefact scatters, representing sporadic hunting and travelling through this landscape. These sites are most likely to be present in those parts of the study area where the slope gradient decreases to below 5°. Higher-density artefact scatters, representing more intensive activities such as interim campsites are unlikely to occur in the study area.

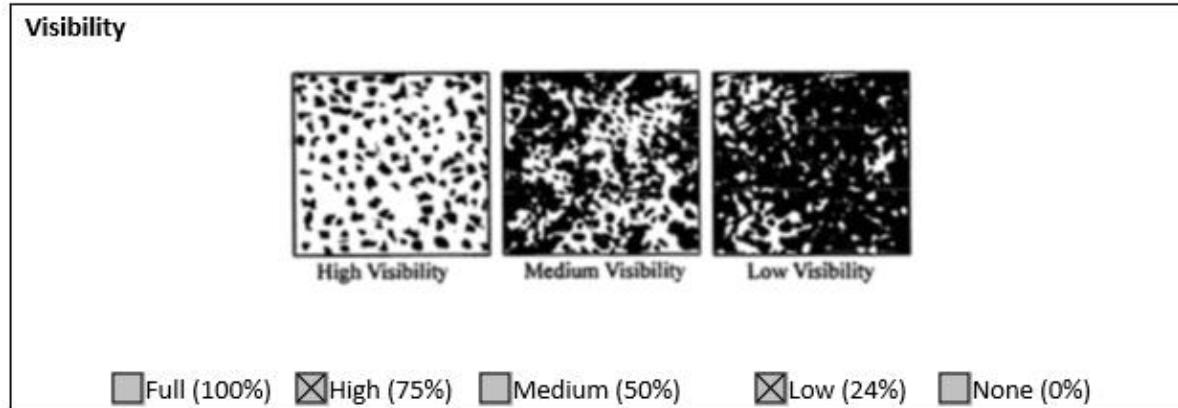
## 6.0 Survey Coverage of the Study Area

### Survey Coverage and Surface Visibility

Survey coverage refers to the estimated portion of a study area that has been visually inspected during a field survey. Surface Visibility refers to the extent to which the actual soils of the ground surface are available for inspection. There are a number of factors that can affect surface visibility, including vegetation cover, surface water and the presence of introduced gravels or materials. Figure 7 provides a useful guide for estimating surface visibility.

The field survey was undertaken by Shay Hannah (CHMA archaeologist), Vernon Graham (Senior Aboriginal Heritage Officer) and Kieran Graham (Trainee Aboriginal Heritage Officer), over a period of 6 days (31-8-2022 – 9-9-2022). The field team walked a total of 44.073km of survey transects. In the solar farm, the average width of each transect was 10m. Within the powerline corridors and access tracks, the average width of each transect was 5m. Table 3 provides the total transects walked for each section and Figure 8 shows the alignment of the survey transects walked by the field team.

The survey transects were predominantly focused within the solar farm, power line corridors and access tracks within the Cimitiere Plains Solar Farm study area. Surface visibility within the solar farm ranged from between <10% and 80%, with the average being just 25%, which is in the low range. Surface visibility within the power line corridors ranged between <10% and 50%, with the average being 20%. Improved surface visibility was found along the access tracks which ranged from 50% and 100%, with the average being 70%. Vegetation cover was the main impediment to visibility.



*Figure 7: Guidelines for the estimation of surface visibility.*

### Effective Coverage

Variations in both survey coverage and surface visibility have a direct bearing on the ability of a field team to detect Aboriginal heritage sites, particularly site types such as isolated artefacts and artefact scatters (which are the site types most likely to occur in the study area). The combination of survey coverage and surface visibility is referred to as effective survey coverage. Table 3 presents the estimated effective survey coverage achieved during the course of the survey assessment. The effective coverage is estimated to have been around 119,410.5m<sup>2</sup>. This level of effective coverage is assessed as being adequate for the purposes of determining the potential extent, nature and distribution of Aboriginal cultural heritage sites in the study area.

**Table 3: Effective Survey Coverage achieved across the surveyed areas.**

Area Surveyed	Survey Transects	Estimated Surface Visibility	Effective Survey Coverage
Solar Farm	$24,405\text{m} \times 10\text{m} = 244,050\text{m}^2$	25%	$61,012\text{m}^2$
Access Tracks	$15,051\text{m} \times 5\text{m} = 75,255\text{m}^2$	70%	$52,678.5\text{m}^2$
Transmission Line Corridors	$5720\text{m} \times 5\text{m} = 28,600\text{m}^2$	20%	$5720\text{m}^2$
<b>Total</b>	<b>347,905m<sup>2</sup></b>		<b>119,410.5m<sup>2</sup></b>



Plate 10: View east showing an erosion scald with 80% visibility surrounded by vegetation cover which reduced visibility to an average of 25%.



Plate 11: View northeast showing visibility along a tributary at 70%.



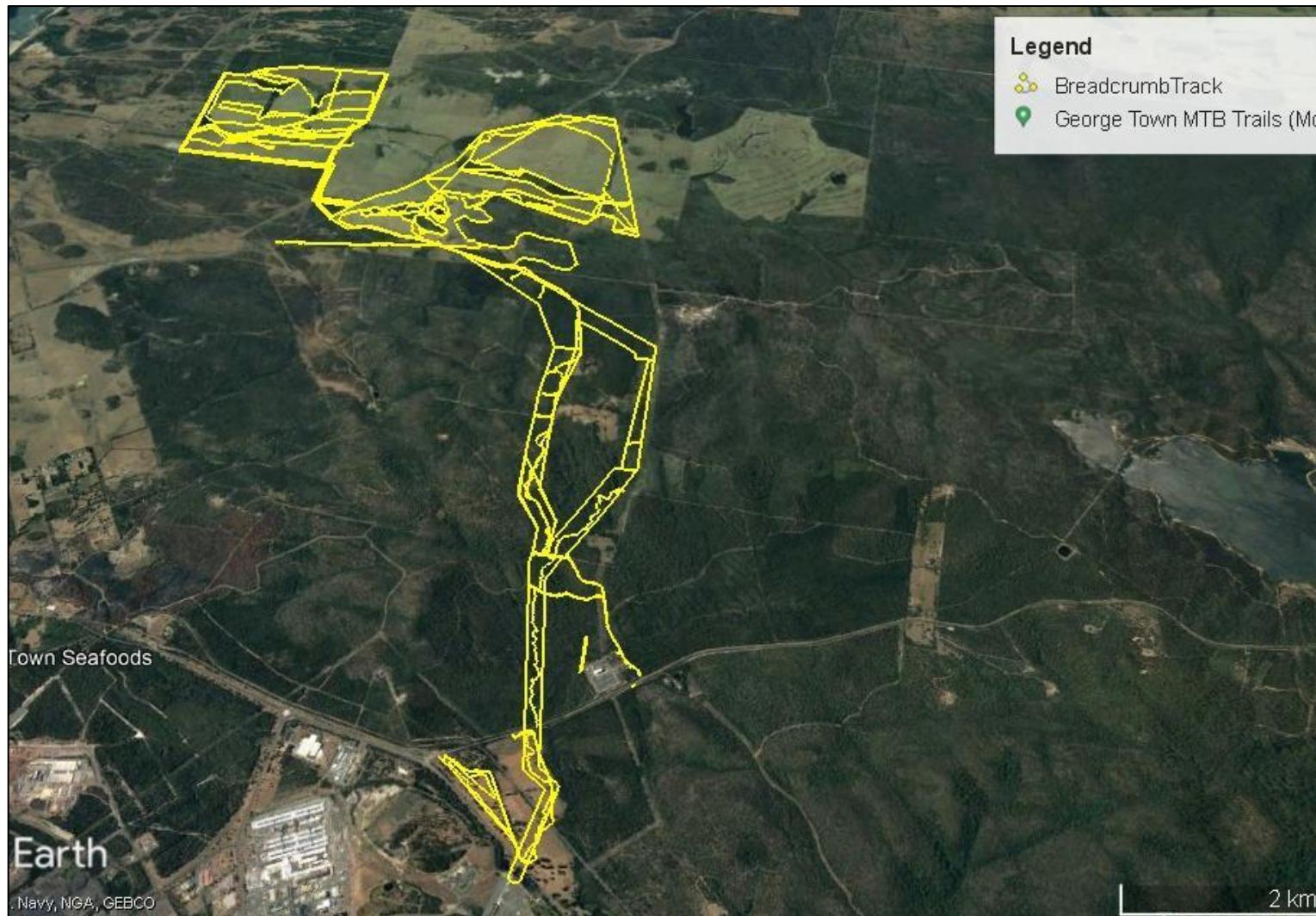
Plate 12: View southeast showing an ungraded access track within the study area where visibility was increased to 100%.



Plate 13: View northeast showing the average surface visibility of 20% within the southern sections of the study area.



Plate 14: View southwest showing surface visibility at <10% within the proposed transmission line corridors.



**Figure 8: Aerial image showing survey transects walked by the field team across the study area.**

## 7.0 Survey Results and Discussion

### 7.1 Summary Survey Results

The field survey assessment resulted in the identification and recording of four Aboriginal heritage sites. One of these sites is an Artefact scatter (AH14118), with the other three sites classified as Isolated artefacts (AH14120, AH14121 and AH14122). All of these are new site recordings that do not correlate with any registered Aboriginal sites. Table 4 provides the summary details for these four registered Aboriginal sites, with Figure 9 showing the location of these sites in relation to the study area. The following provides a brief description for each site. The detailed site descriptions are provided in Appendix 2.

AH14118 is a 20m x 15m low-density artefact scatter comprising six artefacts that are situated along the 5° slopes on both sides of a drainage ditch associated with an adjacent dam. The site is located 690m southwest of Cimitiere Creek. AH14118 is situated in a heavily disturbed context, with the site having been impacted by the construction of the dam and drainage ditch, clearing and ploughing of surrounding paddocks. Any additional undetected artefact deposits associated with the site are expected to have been impacted to some extent. Given some constraints in surface visibility (particularly outside the drainage ditch), it can't be stated with certainty that there are no additional undetected artefacts associated with site AH14118. Based on observed surface expressions, the indications are that artefact densities are likely to be low to medium and will most likely be restricted to the same general micro-landscape unit where the surface artefacts were identified. Given the potential for sub-surface deposits to be present, this area was selected for further sub-surface investigations (see section 7.3 for further details).

AH14120 is a broken pale pink quartzite flake artefact situated within an erosion scald (bull pit) measuring 1m x 1m on a 5° slope facing Cimitiere Creek which is 288m to the north. Despite surface visibility within the erosion scald being 100%, no other artefacts were identified. This was due to the presence of grass and vegetation cover immediately surrounding the erosion scald where the artefact was recorded. The vegetation covers restricted surface visibility to an average of 25% due to grass and vegetation cover. AH14120 is situated in a heavily disturbed context, with the site having been impacted by the clearing and ploughing of surrounding paddocks. Any additional undetected artefact deposits associated with the site are expected to have been impacted to some extent. Given some constraints in surface visibility (particularly outside the erosion scald), it can't be stated with certainty that there are no additional undetected artefacts associated with site AH14120. However, all indications are that artefact densities are likely to be low to very low.

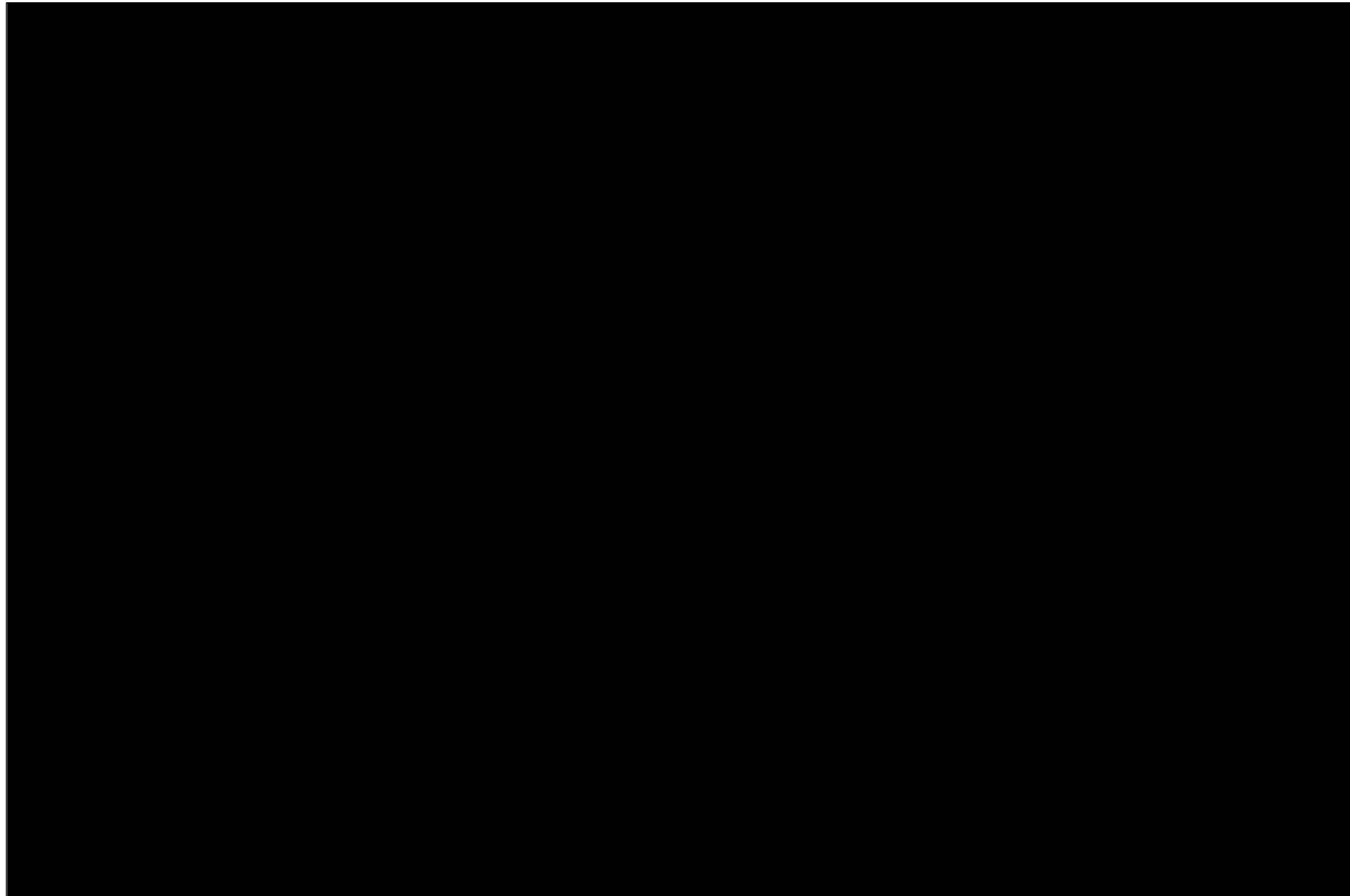
Site AH14121 is a white quartz flake situated along an ungraded access track on a <5° slope 253m south of Cimitiere Creek. The field team walked the entire length of the ungraded access track, but no additional artefacts were identified. Off the access track, surface visibility was restricted to an average of 20% due to grass and vegetation cover. This is significantly less than the 100% surface visibility along the access track. AH14121 is situated in a heavily disturbed context, with the site having been impacted by the clearing and ploughing of surrounding paddocks. Any additional undetected artefact deposits associated with the site are expected to have been impacted to some extent. Given some constraints in surface visibility (particularly outside of the access track), it can't be stated with certainty that there are no additional undetected artefacts associated with site AH14121. However, all indications are that artefact densities are likely to be low to very low.

AH14122 is a white quartz flake situated on a 15° slope of soil pile associated with the construction of a nearby dam, 200m south of Cimitiere Creek. The field team walked

additional transects 15m around the site, but no additional artefacts were identified. Outside the slopes of the soil pile, surface visibility was restricted to an average of 20% due to grass and vegetation cover. This is significantly less than the 80% surface visibility on the slopes of the soil pile. AH14122 is situated in a heavily disturbed context, with the site having been impacted by the construction of the dam, and the clearing and ploughing of surrounding paddocks. Any additional undetected artefact deposits associated with the site are expected to have been impacted to some extent. Given some constraints in surface visibility (particularly outside of the soil pile), it can't be stated with certainty that there are no additional undetected artefacts associated with site AH14122. However, all indications are that artefact densities are likely to be low to very low.

**Table 4: Summary details for Aboriginal sites AH14118, AH14120, AH14121 and AH14122.**

Site Name	Grid Reference	Site Type	Site Description
AH14118	[REDACTED]	Artefact Scatter	Five white quartz flakes and a white quartz scraper are located on 5° slopes on both sides of a drainage ditch associated with an adjacent dam. The site has a low to medium potential for additional surface or sub-surface artefacts to be present. This site has been selected for further sub-surface investigations (see section 7.3).
AH14120	[REDACTED]	Isolated Artefact	A broken quartzite flake located on an erosion scald (bull pit) on a 5° slope amongst pasture land facing Cimitiere Creek which is 288m north. The site has a very low to low potential for additional surface or sub-surface artefacts to be present. This site has been heavily disturbed
AH14121	[REDACTED]	Isolated Artefact	A white quartz flake located on an access track located 253m south of Cimitiere Creek. Immediately bordered by native vegetation. The site has a low to very low potential for additional surface or sub-surface artefacts to be present. This site has been heavily disturbed.
AH14122	[REDACTED]	Isolated Artefact	A white quartz flake located on the 15° slope of a light grey sandy soil pile associated with the construction of a nearby dam 200m south of Cimitiere Creek. The site has a low to very low potential for additional surface or sub-surface artefacts to be present. This site has been heavily disturbed.



*Figure 9: Aerial image showing the location of the four Aboriginal sites recorded during the survey assessment of the Study Area*

## 7.2 Registered Aboriginal Sites not Relocated During the Assessment

As discussed previously in section 4.3, there are six previously registered Aboriginal heritage sites (AH9366, AH9354, AH9336, AH9346, AH10399 and AH10606) that are potentially situated within or in the immediate vicinity of the Cimitiere Plains Solar Farm study area. Figure 10 shows the location of these sites in relation to the study area. As part of the survey assessment the field team attempted to relocate and record these six sites. None of these sites could be relocated. The following provides a brief description for each site.

AH9366 was originally recorded by Vernon Graham in 2004 during a monitoring program for BassLink. AH9366 is described as being an isolated artefact with a white quartz flake located between two towers on the side of an access track associated with the BassLink Electrical Substation at George Town. The site is located 100m southeast of an unnamed tributary running of Cimitiere Creek on a flat hilltop. Surface visibility was originally recorded as very good (80%–100%). The original recording noted that the site had been highly disturbed, as much as 85%. This site was not identified during the current survey of the Cimitiere Plains Solar Farm Project. The field team walked a 20m radius around the site, however, no artefacts associated with the site were identified.

AH9354 was originally recorded by Vernon Graham in 2003 during a monitoring program for BassLink. AH9354 is described as being a 10m x 10m artefact scatter with very good surface visibility (80%–100%) with one manuport, one core and two debitage pieces. The materials present are cherty hornfels, quartz, and boned chert. The current recording of AH9354 located the site on the western side of an existing graded access track within the Cimitiere Plains Solar Farm footprint. Surface visibility was <10% due to vegetation cover, significantly less than that noted by Graham (2003) and has been heavily disturbed. The field team walked a 20m radius around the site, however, no artefacts associated with the site were identified due to vegetation cover and very poor surface visibility. Site AH9354 is situated in a heavily disturbed context, with the site having been impacted by the construction of the access tracks and drainage infrastructure. Any additional undetected artefact deposits associated with the site are expected to have been impacted to some extent.

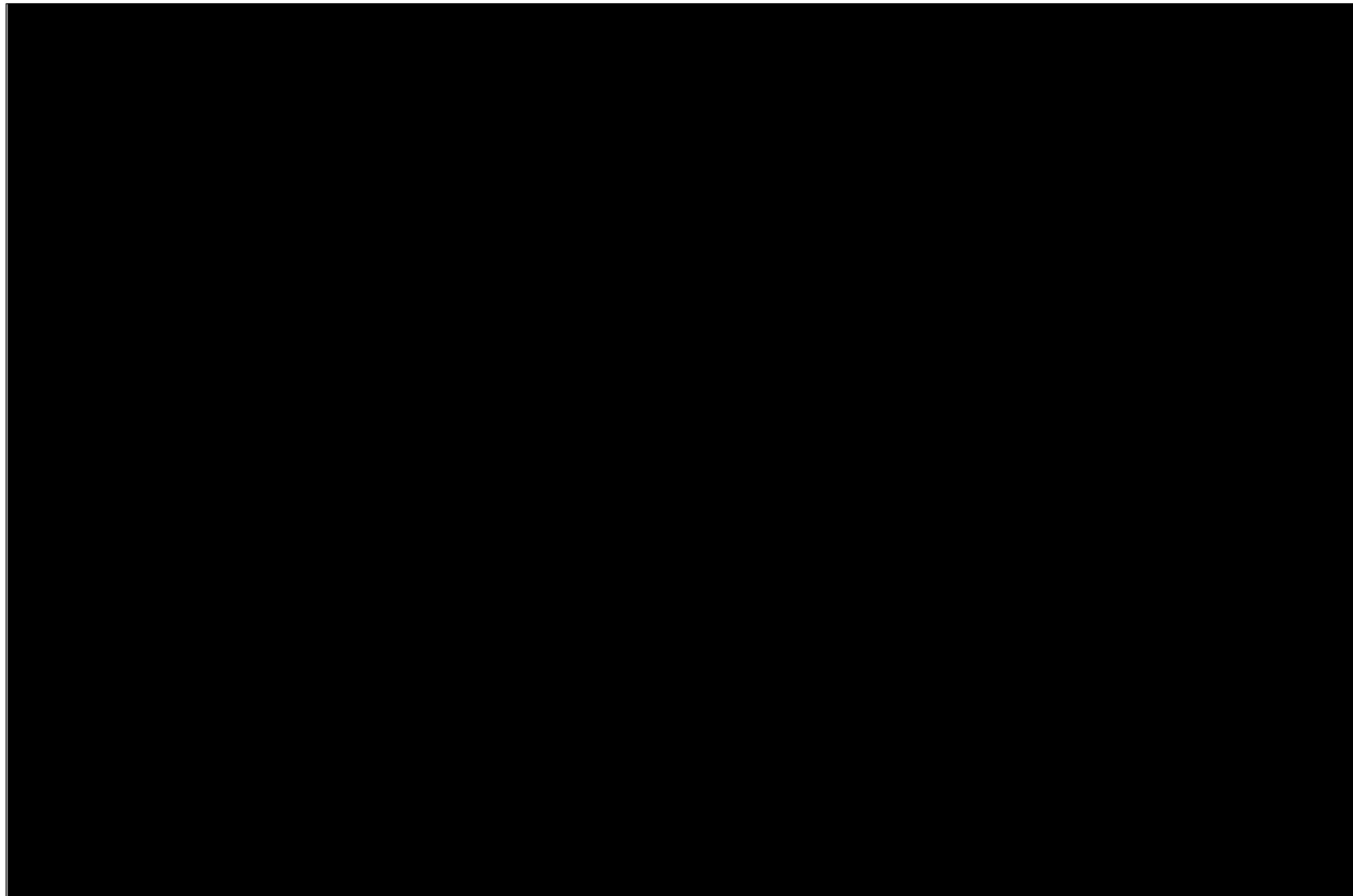
AH9336 was originally recorded by Vernon Graham in 2003 during a monitoring program for BassLink. AH9336 is described as being an isolated artefact comprising two white quartz debitage artefacts with very good surface visibility (80%–100%). The current recording of AH9336 is located on the western side of an existing graded access track within the Cimitiere Plains Solar Farm footprint. Surface visibility was <10% due to vegetation cover, significantly less than that noted by Graham (2003) and has been heavily disturbed. The field team walked a 20m radius around the site, however, no artefacts associated with the site were identified due to vegetation cover and very poor surface visibility. CHMA (2013b) also was unable to relocate this site, and it was noted that the grid reference provided on the AHR was likely to be incorrect. The descriptions presented in the site card for the site placed it within or immediately adjacent to the Converter Station. However, the grid references places the site some distance away.

AH9346 was originally recorded by Vernon Graham in 2003 during a monitoring program for BassLink. AH9346 is described as an isolated artefact comprising one steep-edge scraper and one broken flake with very good surface visibility (80%–100%). The current recording of AH9346 places it on the western side of an existing graded access track within the Cimitiere Plains Solar Farm footprint. The site is situated within a flat bitumen access road intersection

leading to the BassLink converter station. Surface visibility was <10% due to vegetation cover, significantly less than that noted by Graham (2003) and has been heavily disturbed. The field team walked a 20m radius around the site, however, no artefacts associated with the site were identified. CHMA (2013b) also was unable to relocate this site, and it was noted that the grid reference provided on the AHR was likely to be incorrect. The descriptions presented in the site card for the site placed it within or immediately adjacent to the Converter Station. However, the grid references places the site some distance away

AH10399 was originally recorded by Steve Stanton and Vanessa Edmonds in 2007 during a survey for the Tamar Valley Power Station – Phase 2 Environmental Studies project. AH10399 is described as an isolated artefact comprising of a white chert flake with poor surface visibility (11%–30%) and the site had been heavily disturbed (100%) due to light vehicle and agricultural activity. The current recording AH10399 places the site approximately 3m south of the Bell Bay Line and along the eastern border of a power line corridor within the Cimitiere Plains Solar Farm footprint at Lauriston Park, Bell Bay. Surface visibility was <10% due to vegetation cover, significantly less than that noted by Graham (2003) and has been heavily disturbed. The field team walked a 20m radius around the site, however, no artefacts associated with the site were identified due to vegetation cover and very poor surface visibility.

AH10606 was originally recorded by Trent Graham and Vernon Graham in 2008 during a survey of the Alinta Energy (Tamar Valley) Waste Supply Pipeline project. AH10606 is described as a 10m<sup>2</sup> artefact scatter consisting of a white quartz steep-edge scraper and a damaged cherty hornfels retouched flake on a highly disturbed site (95%) with very good surface visibility (80%–100%). The current recording of AH10606 places the site along an ungraded access track consisting of light grey sandy soil and introduced grasses in Lauriston Park, Bell Bay within the Cimitiere Plains Solar Farm footprint. Surface visibility within the bare soil patches was 100% by <10% due to vegetation cover in the immediate surroundings, significantly less than that noted by Graham (2003) and has been heavily disturbed. The field team walked a 20m radius around the site, however, no artefacts associated with the site were identified due to vegetation cover and very poor surface visibility.



*Figure 10: Aerial image showing the location of the six registered Aboriginal sites within the study area.*

### 7.3 Results of the Sub-surface Investigations

One location was selected for sub-surface investigation within the Cimitiere Plains Solar Farm Project study area, in the form of a test pitting program. This was an area of Potential Archaeological Sensitivity (PAS) associated with site AH14118, which measures around 130m x 30m. This location was selected on the basis that it was assessed that there was an elevated potential for sub-surface Aboriginal cultural heritage deposits to be present. No other locations within the study area were assessed as having the sufficient potential to warrant test pitting. The identified 130m x 30m PAS is located on a discrete rise within the proposed footprint of the Cimitiere Plains Solar Farm Project.

The aim of the initial test pitting program was simply to determine the potential presence/absence of Aboriginal heritage deposits and features within the nominated footprint within the AH14118 site and the identified PAS. This information would then be used to inform any further Aboriginal heritage investigations or mitigation strategies at the AH14118 site and the identified 130m x 30m PAS.

To meet these aims, a total of 15 test pits were excavated within the identified 130m x 30m PAS, with each pit measuring 50cm x 50cm. As a general guide, the pits were spaced in a grid formation across the identified PAS footprint, with each pit being spaced at a distance of approximately 8m apart. The exact positioning of the pits was determined in the field by the project archaeologist and AHOs, with the pits being placed in areas of reduced disturbance, where there was an elevated potential for sub-surface deposits to be present. Figure 11 shows the placement of these test pits in relation to the original site boundaries for site AH14118. Each pit was excavated in 5cm spits, with a square flat-bladed shovel until such time that bedrock or decomposed bedrock was encountered. All excavated soils were placed into buckets which were labelled according to provenance. These soils were then dry-sieved through 3mm screen mesh. At the completion of test pitting, each pit was in-filled.

A total of three stone artefacts were recovered from three separate test pits (pits 3, 8 and 14). The details of these artefacts are provided in Appendix 3. The artefacts from pits 3 and 14 were both recovered from the top 5cm of the soil horizon. The artefact from pit 8 was recovered from spit 3, at a depth of between 10cm to 15cm. In accordance with the agreed test pitting procedures, as soon as these artefacts were recovered, the excavation of these three test pits was terminated and the pits were infilled, with the artefacts placed back into these pits at the depth that they were recovered from. Table 5 provides the summary details for the test pitting results.

The identification of the three stone artefacts has extended the AH14118 site dimensions to 62m southeast and 28m northeast. The grid references below define the revised boundaries of the site. Figure 12 shows the revised spatial boundaries for site AH14118, based on the findings of the test pitting program.



The test pitting confirmed the presence of low density artefact deposits associated with site AH14118. The artefacts appear to be confined to the top 15-20cm of the soil horizon. This top soil horizon has been subject to quite high levels of land disturbances associated with

past land clearing and farming. This will have resulted in the artefacts having been moved up and down through the soil horizon and probably some level of horizontal displacement. There is very little potential for intact artefact deposits to be present. Based on the available evidence, it is likely that site AH14118 is representative of an interim camp site location that was used occasionally by people moving through the hinterland plains area.

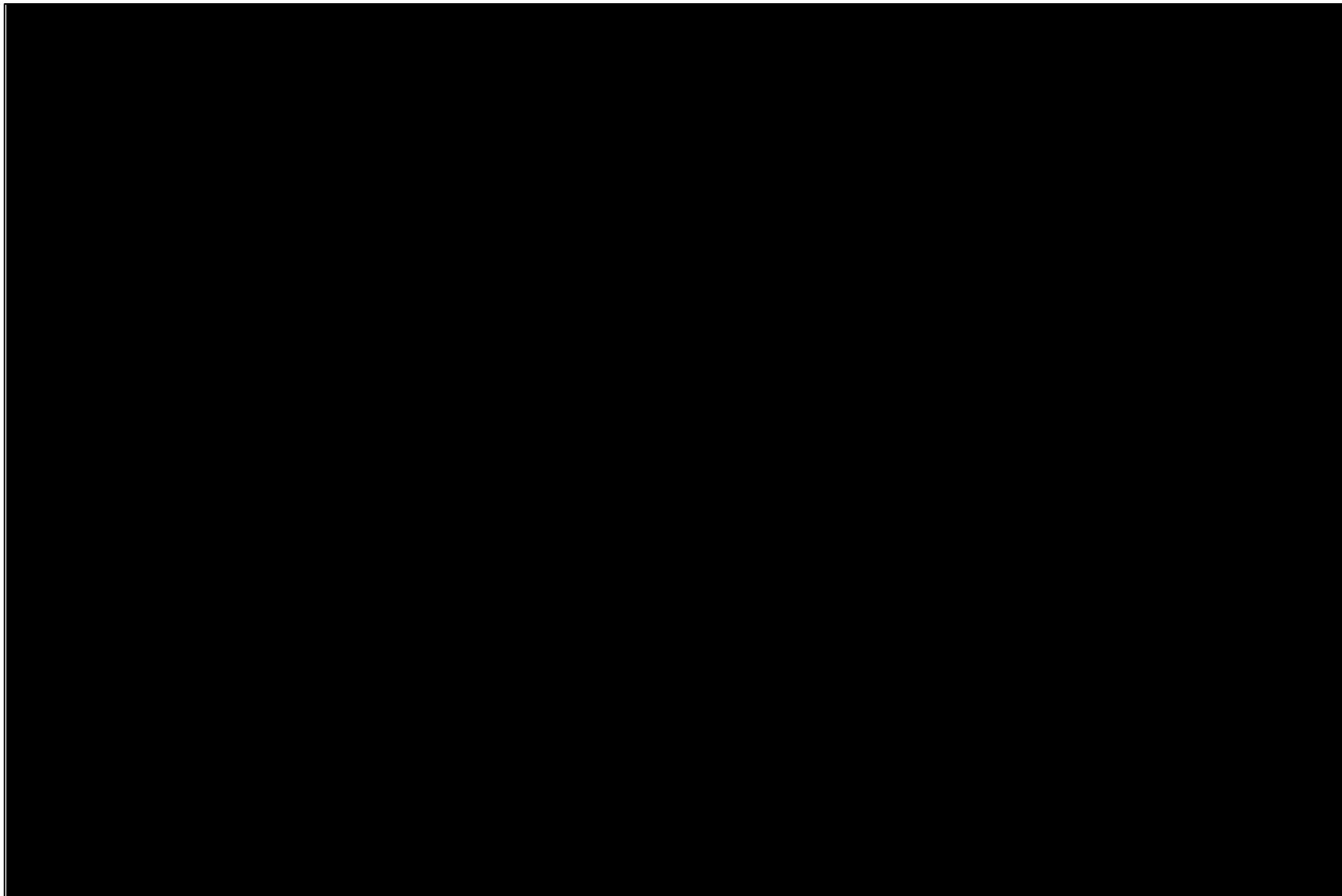
It should be noted that the remainder of the PAS area associated with site AH14118, that sits outside of the redefined boundaries of the site, has been demonstrated through the test pitting program to be of low archaeological sensitivity. There are no further management requirements for the PAS areas outside the redefined boundaries of the site.



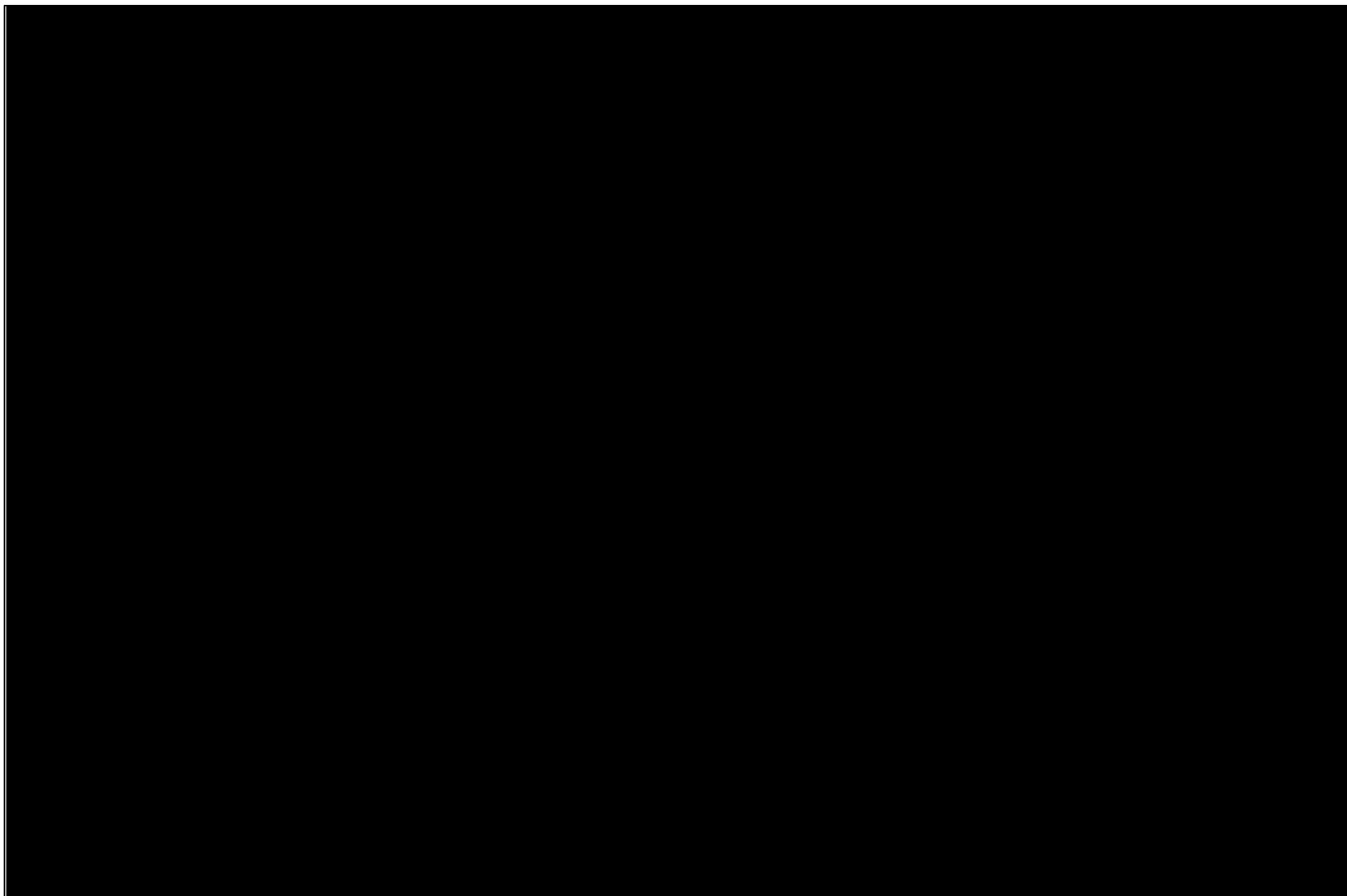
Plate 15: An excavated test pit at the identified 130m x 30m PAS.

**Table 5: Summary details of the test pitting results at the identified 130m x 30m PAS location.**

Pit Number	Grid Reference (GDA94) Easting	Grid Reference (GDA94) Northing	Spit 1 (0–5cm)	Spit 2 (5–10cm)	Spit 3 (10–15cm)	Spit 4 (15–20cm)	Spit 5 (20–25cm)
1			0	0	0	0	
2			0	0	0	0	
3			1 white quartz flake				
4			0	0	0	0	
5			0	0	0	0	
6			0	0	0		
7			0	0	0	0	
8			0	0	1 white quartz flake		
9			0	0	0	0	
10			0	0	0	0	0
11			0	0	0	0	
12			0	0	0	0	0
13			0	0	0	0	0
14			1 white quartz flake	0			
15			0	0	0	0	0



***Figure 11: Aerial image showing the location of the test pitted tower locations.***



***Figure 12: Aerial image showing the revised extent of site AH14118.***

## 7.4 Further Discussions

Besides the four abovementioned sites and their associated artefacts, no additional Aboriginal sites, suspected features or specific areas of elevated archaeological potential were identified during the survey assessment of the Cimitiere Plains Solar Farm study area. The field survey was also able to confirm that there are no stone resources identified within the study area that would be suitable for stone artefact manufacturing. Nor are there any sizeable rock outcrops occurring within the study area, and therefore there is no potential for Aboriginal rock shelters to be present.

As discussed in Section 6, surface visibility across the surveyed areas was variable, with averages ranging between 20% to 80%. Surface visibility across the surveyed areas was variable, with averages ranging between 20% to 80%. Whilst the survey coverage for the field program was an estimated 347,905m<sup>2</sup>, effective coverage was decreased to around 119,410.5m<sup>2</sup>. Given these constraints, it cannot be stated with certainty that there are no undetected Aboriginal heritage sites present across the surveyed areas. However, the survey results strongly indicate that site and artefact densities across the study area are likely to be low. If undetected sites are present, they are most likely to be isolated artefacts or small artefact scatters, representing sporadic Aboriginal activity. It should be noted that there are two specific landscape features present within the study area footprint, where there would be an elevated likelihood for sites or artefact densities may be present. These specific landscape features are Cimitiere Creek and Four Mile Creek, which are both semi-permanent watercourses, as well as their associated tributaries and finally the rises with slopes of 5° or more. These watercourses would not only be a source of fresh water during the settlement and movement patterns of the Leterremairrener (Port Dalrymple people) but also an area where food resources such as bush tucker, Wallaby and other game could be acquired. As noted in section 2, the northern sections of the study area are on a floodplain with rises in the landscape with slopes of 5° or more. The combined potential water and food resources, along with the natural rises that would provide a suitable area for short-term occupation mean that these areas are of elevated potential for the identification of Aboriginal sites. The southern sections, whilst more mountainous, are surrounded by floodplains and rises of 5° or above in those areas would provide the same benefits as those in the northern sections. Cimitiere Creek runs through the northern section of the proposed development footprint of the Solar Farm. The creek margins and surrounds was extensively surveyed as part of this assessment and a pattern of low density artefact scatters and isolated artefacts was identified along the slight rise areas bordering the creek (see recorded site details). These site areas have been addressed in the management recommendations. The immediate riparian margins of the creek will largely be excluded from the development footprint due to environmental factors. Four Mile Creek is only crossed by an existing access track to the transmission line corridor in the south of the project footprint. The remainder of the creek is outside the project footprint and will not be impacted.

The findings of this assessment and the interpretations of these findings are generally consistent with the observations made by Kee (1991) and Moore (1997) for the Northern and North-Eastern regions. The findings of previous regional archaeological investigations undertaken indicate that site densities are generally significantly lower compared with coastal regions. However, there does appear to be a distinct increase in site and artefact densities around the margins of the natural lakes and marshes in the region, particularly around the Tamar River, as well as along the coastline. The study area is situated away from these larger water bodies and therefore site densities would be expected to be lower away from the major resource zones, reflecting more sporadic activity.

## 8.0 Site Significance Assessments

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

### 8.1 Assessment Guidelines

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

### 8.2 The Burra Charter

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

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

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

#### *Aesthetic Value*

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

#### *Historic Value*

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

#### *Scientific Value*

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

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

### **Social Value**

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

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

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

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

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

### **8.3 Significance Criteria Relevant to Indigenous Sites**

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

#### **1) Aboriginal Cultural / Social Significance**

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

#### **2) Scientific (Archaeological) Significance**

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

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

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

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

#### **8.4 Summary Significance Ratings for Recorded Sites**

Sites AH14118, AH14120, AH14121 and AH14122 which were recorded during the survey assessment of the proposed Cimitiere Plains Solar Farm study area, have been assessed and allocated a rating of significance, based on the criteria presented in section 8.2. As discussed in section 8.2, Aboriginal sites are usually assessed in terms of their scientific and social significance. The concepts of Aesthetic significance and Historic significance are rarely applied in the assessment of Aboriginal sites unless there is direct evidence of European/Aboriginal contact activity at the site, or the site has specific and outstanding aesthetic values. However, based on advice received from AHT, aesthetic and historic significance values have also been taken into consideration as part of the assessment of these sites.

A five-tiered rating system has been adopted for the significance assessment; low, low-medium, medium, medium-high and high. Table 6 provides the summary details for the significance ratings of sites AH14118, AH14120, AH14121 and AH14122. A more detailed explanation of the assessment ratings is presented in sections 8.5 to 8.7. Section 8.8 provides an assessment of significance in relation to the *Aboriginal Heritage Act 1975* (the Act), Section 9 of this report presents a statement of social significance provided by Vernon Graham for these sites and the study area as a whole.

**Table 6: Summary significance ratings for Aboriginal heritage sites AH14118, AH14120, AH14121 and AH14122.**

AH Number	Site Type	Scientific Significance	Aesthetic Significance	Historic Significance	Social Significance
AH14118	Artefact Scatter	Low-Medium	Low	N/A	Medium-High
AH14120	Isolated Artefact	Low	Low	N/A	Medium-High
AH14121	Isolated Artefact	Low	Low	N/A	Medium-High
AH14122	Isolated Artefact	Low	Low	N/A	Medium-High

## 8.5 Scientific Significance for Recorded Sites

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

Sites AH14120, AH14121 and AH14122 are classified as Isolated artefacts, with site AH14118 demonstrated to be a low density artefact scatter. Isolated artefacts and artefact scatters are two of the most common site types recorded in the Northern Region, and more broadly, the State of Tasmania (as demonstrated through the AHR search results for this project). As such, the scientific significance of artefact scatters and isolated artefacts usually relates primarily to their research potential as opposed to the rarity of the site type. The potential exception to this is where comparatively rare artefact types (either tool or stone material types) are represented in assemblages.

In this instance, sites AH14120, AH14121 and AH14122 are assessed as being of low scientific significance. Site AH14118 is assessed as being of Low-medium scientific significance. The rationale for this assessment is as follows.

- 1) Isolated artefacts and artefact scatters are common site types in the region and as such rarity is not a consideration.
- 2) The artefact assemblages associated with the four sites are comprised of stone material types (quartz and quartzite) and stone tool types (flakes) that are commonly represented in artefact assemblages across the region. As such, rarity is again not a consideration.
- 3) Sites AH14120, AH14121 and AH14122 are assessed as having a very limited potential to comprise additional undetected surface and sub-surface artefact deposits. These three sites are also situated in moderate to heavily disturbed contexts, being situated on ungraded vehicle tracks and dam sites in areas where the vegetation surrounding the vehicle tracks has also been cleared as part of past land uses. This means that there is very little potential for intact artefact deposits to be present, which reduces the research potential of the two sites.

4) Site AH14118 has been demonstrated to be a low density artefact scatter that comprises sub-surface artefact deposits. The site is assessed as having a medium-level potential to comprise additional undetected surface and sub-surface artefact deposits, however densities are likely to be consistently low and the artefact deposits are likely to be in a quite heavily disturbed context. This limits the research potential of the site.

## 8.6 Aesthetic Significance of Recorded Sites

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

Sites AH14118, AH14120, AH14121 and AH14122 are situated around the gentle to moderate undulations of pastureland within the northern sections of the study area. The sites are all quite heavily disturbed contexts, being situated on ungraded vehicle tracks and areas that have been subject to past land disturbances associated with clearing and other land practices. The aesthetics of the broader northern sections of the study area have been significantly disturbed. Therefore, the landscape setting of sites AH14118, AH14120, AH14121 and AH14122 are assessed as being of low aesthetic significance.

## 8.7 Historic Significance of Recorded Sites

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

Historic significance is not an attribute often considered when assessing the significance of Aboriginal sites unless there is direct evidence for some form of European/Aboriginal contact activity. In this instance, no such evidence exists for sites AH14118, AH14120, AH14121 and AH14122. As such the concept of historic significance is not applicable to these sites.

## 8.8 Significance Under the Aboriginal Heritage Act 1975

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

**Aboriginal tradition** means –

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

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

- (a) the archaeological or scientific history of Aboriginal people; or

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

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

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

The archaeological or scientific history of Aboriginal people (a) is covered under the concept of Scientific significance. This component of significance, as it relates to sites AH14118, AH14120, AH14121 and AH14122, have been addressed in detail in sections 8.2, 8.3 and 8.5 of this report.

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

The notion of Aboriginal cultural, social and spiritual significance, and the assessment of these values is a matter for Aboriginal people and can only be made by the appropriate Aboriginal representatives of the relevant communities. Section 9 of this report presents a statement of cultural/social significance provided by Vernon Graham for the sites recorded during the current assessment, and the study area as a whole. Vernon Graham is an experienced Aboriginal Heritage Officer and a respected member of the Tasmanian Aboriginal community, and as such is well placed to provide this statement. In addition, the report has been sent out to a range of Aboriginal communities for review and comment. The results of the consultation program are presented in Appendix 6.

As described in section 3 of this report, the available ethnographic information indicates that the Cimitiere Plains Solar Farm Project study area is within land traditionally occupied by the Leterremairrener (Port Dalrymple people) of the Northern Midlands Nation.

Sites AH14118, AH14120, AH14121 and AH14122 are four of a number of Aboriginal sites that have been recorded within this northern region. These sites provide tangible evidence for the occupation of this area by the Leterremairrener people, and they retain a level of significance and importance to the present-day Tasmanian Aboriginal community (see section 9).

## **9.0 Consultation with Aboriginal Communities and Statement of Aboriginal Significance**

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

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

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

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

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

The impact of the project on Aboriginal heritage:

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

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

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

Four Aboriginal sites were identified during the field survey of the proposed Cimitiere Plains Solar Farm study area. Because of the recording of four Aboriginal sites in the study area, the decision has been made to distribute this report to a select range of Aboriginal community groups in the north of the State for review and comment. The report has also been provided to AHT for review.

Vernon Graham has provided a statement of the Aboriginal cultural values attributed to the study area as a whole. This statement is presented below.

***Statement of Cultural/Social Significance by Vernon Graham***

*Aboriginal heritage/relics are not renewable. Hence any cultural heritage values provide a direct link to past occupation undertaken by traditional indigenous ancestors in the region of the project proposal. This provides a story or link for the Aboriginal community today and facilitates the connection to social-cultural heritage values, ethnohistory /story and the relationship pertaining to country. This is an integral part of regaining knowledge so it can be encapsulated and retained by both the individual Aboriginal people and for the Aboriginal community collectively.*

*We did identify four Aboriginal heritage sites, AH14118, AH14120, AH14121 and AH14122, during the survey of the proposed Cimitiere Plains Solar Farm Project area. These sites are important to the Tasmanian Aboriginal community as they provide a tangible material link to our ancestors. My conversations with the Aboriginal community organisations that have I have consulted for this project confirm that our people would like to see these four recorded Aboriginal sites protected and left in-situ if possible. I would also personally support this approach. If it is not possible to conserve and protect any of these sites, then the preferred option would be to salvage collect the artefacts and to relocate these artefacts to a safe location on Country.*

*No other Aboriginal heritage sites were identified during our investigations of the proposed solar farm study area. There were six other previously recorded Aboriginal heritage sites that are reported to be present within the southern part of the study area, around Lauriston Park and Bridport Road. I recorded most of these sites back around 2003 and 2004. Despite an extensive search, we couldn't find these sites again. Some of these sites such as AH9336 and AH9346 may in fact be plotted incorrectly and are likely to be around the Convertor station site. Although I don't have any exact recollections of this.*

*Based on the survey results, and my observations made during the field survey, I am satisfied that there is a low potential for other Aboriginal sites to be present in the study area. If care is taken to avoid sites AH14118, AH14120, AH14121 and AH14122, then I am satisfied that this proposal poses a minimal risk of impacting Aboriginal heritage values.*

*Even if the site of the project proposal contains no further evidence of Aboriginal heritage there are always the cultural resources (flora, fauna, aquaculture or any other resource values that the earth may offer) and the living landscape, which highlight the high significance to the Aboriginal cultural heritage values to the country. Parts of the study area, on the floodplains and forested areas, are lesser undisturbed, and there are bush tucker resources present in this area that I observed during the survey. This includes the native she-oak, tea tree and a range of ferns and native grasses. There is likely to be some impact on these bush tucker resources as part of the development of the Cimitiere Plains Solar Farm Project.*

## 10.0 Statutory Controls and Legislative Requirements

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

### 10.1 State Legislation

In Tasmania, the *Aboriginal Heritage Act 1975* (the Act) is the primary Act for the treatment of Aboriginal cultural heritage. The Act is administered by the Minister for Aboriginal Affairs, through Aboriginal Heritage Tasmania (AHT) in the Department of Premier and Cabinet (DPAC). AHT is the regulating body for Aboriginal heritage in Tasmania and ‘[n]o fees apply for any application to AHT for advice, guidance, lodgement or permit application’.

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

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

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

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

Other amendments include:

- An obligation to fully review the Act within three years.
- Increases in maximum penalties for unlawful interference or damage to an Aboriginal relic. For example, maximum penalties (for deliberate acts) are 10,000 penalty units (currently \$1.57 million) for bodies corporate other than small business entities and 5,000 penalty units (currently \$785,000) for individuals or small business entities; for reckless or negligent offences, the maximum penalties are 2,000 and 1,000 penalty units respectively (currently \$314,000 and \$157,000). Lesser offences are also defined in sections 10, 12, 17 and 18.
- Prosecution timeframes have been extended from six months to two years.
- The establishment of a statutory Aboriginal Heritage Council to advise the Minister.

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

## **10.2 Commonwealth Legislation**

There are also a number of Federal Legislative Acts that pertain to cultural heritage. The main Acts being; *The Australian Heritage Council Act 2003*, *The Aboriginal and Torres Strait Islander Heritage Protection Act 1984* and the *Environment Protection and Biodiversity Conservation Act 1999*

### ***Australian Heritage Council Act 2003 (Comm)***

The *Australian Heritage Council Act 2003* defines the heritage advisory boards and relevant lists, with the Act's Consequential and Transitional Provisions repealing the Australian Heritage Commission Act 1975. The Australian Heritage Council Act, like the Australian Heritage Commission Act, does not provide legislative protection regarding the conservation of heritage items in Australia but has compiled a list of items recognised as possessing heritage significance to the Australian community.

### ***The Aboriginal and Torres Strait Islander Heritage Protection Act 1984.***

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

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

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

The Commonwealth Act 'overrides' State legislation if the Commonwealth Minister is of the opinion that the State legislation (or undertaken process) is insufficient to protect the threatened areas or objects. Thus, in the event that an application is made to the Commonwealth Minister for a Stop Order, the Commonwealth Minister will, as a matter of course, contact the relevant State Agency to ascertain what protection is being imposed by the State and/or what mitigation procedures have been proposed by the land user/developer.

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

- If the Federal Court, on application from the Commonwealth Minister, is satisfied that a person has engaged or is proposing to engage in conduct that breaches the 'Stop Order', it may grant an injunction preventing or stopping such a breach (s.26). Penalties for breach of a Court Order can be substantial and may include a term of imprisonment;

- If a person contravenes a declaration in relation to a significant Aboriginal area, penalties for an individual are a fine of up to \$10,000.00 and/or 5 years gaol and for a Corporation a fine up to \$50,000.00 (s.22);
- If the contravention is in relation to a significant Aboriginal object, the penalties are \$5,000.00 and/or 2 years gaol and \$25,000.00 respectively (s.22);
- In addition, offences under s.22 are considered 'indictable' offences that also attract an individual fine of \$2,000 and/or 12 months gaol or, for a Corporation, a fine of \$10,000.00 (s.23). Section 23 also includes attempts, inciting, urging and/or being an accessory after the fact within the definition of 'indictable' offences in this regard.

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

#### ***Environment Protection and Biodiversity Conservation Act 1999 (Comm)***

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

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

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

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

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

In addition to the above amendments to the *Environment Protection and Biodiversity Conservation Act 1999* to include provisions for the protection and conservation of heritage, the Act also enables the identification and subsequent listing of items for the Commonwealth and National Heritage Lists. The Act establishes the *National Heritage List*, which enables the inclusion of all heritage, natural, Indigenous and non-Indigenous, and the *Commonwealth Heritage List*, which enables the listing of sites nationally and internationally that are significant and governed by Australia.

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

## 11.0 Aboriginal Cultural Heritage Management Plan

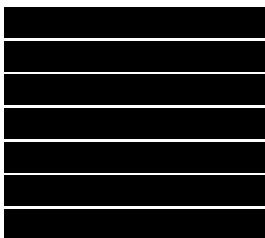
Heritage management options and recommendations provided in this report are made based on the following criteria.

- Consultation with Vernon Graham (Aboriginal Heritage Officer).
- The legal and procedural requirements as specified in the *Aboriginal Heritage Act 1975* (The Act).
- The results of the investigation as documented in this report; and
- Background research into the extant archaeological and ethnohistoric record for the study area and the surrounding region.

As noted in section 1.1 of this report, following the completion of the Aboriginal heritage investigations, the proposed development footprint for this project has been amended, partially in an effort to avoid Aboriginal heritage values that were identified during the Aboriginal heritage assessment. The following recommendations are based on the revised Project Footprint.

### **Recommendation 1 (AH14118)**

Site AH14118 has been confirmed through surface and sub-surface investigations to be a low density artefact scatter. The site is located in the northern portion of the Project Footprint (see Figure 13). The following grid references define the boundaries of this site.



The preferred management option is for the project to avoid any impacts to this site and for the site to be protected and conserved in-situ. To this end, the following measures should be put in place.

- The location of the site is to be plotted on the design plans for the Cimitiere Plains Solar Farm Project footprint.
- Prior to construction commencing in these areas, temporary high visibility protective barricading is to be erected around the identified boundaries of the site with a 5m buffer applied to the entire polygon of the site boundary. Barricading is to remain in place for the duration of construction.
- Construction contractors should be informed of the location of the site and informed that the site is not to be impacted.
- No soil disturbance works are to be carried out within the site boundaries, or within the barricaded zone of the site.
- Barricading is to be removed on completion of construction works.

As specified in section 10.1 of this report, all Aboriginal relics are protected under the Aboriginal Heritage Act 1975 (The Act). It is illegal to destroy, damage, deface, conceal or otherwise interfere with a relic, unless in accordance with the terms of a permit granted by the Minister. Therefore, if it appears that site AH14118 may be impacted by construction or

other works, then the proponent, Sunspot 9 Pty Ltd will need to apply for and obtain a Permit to impact the site, prior to any works commencing.

#### ***Recommendation 2 (AH14120, AH14121 and AH14122)***

Three isolated artefact Aboriginal heritage sites were identified during the field survey inspection of the proposed Cimitiere Plains Solar Farm Project footprint (sites AH14120, AH14121 and AH14122). All three of these sites are located in the northern portion of the Project Footprint (see Figure 13). The preferred management strategy is to avoid any impacts on these three sites and to protect the sites in situ. The following recommendations apply to these three sites.

- The location of the sites is to be plotted on the design plans for the Cimitiere Plains Solar Farm Project footprint.
- Prior to construction commencing in these areas, temporary high visibility protective barricading is to be erected around the identified boundaries of the three sites with a 2m radial buffer applied. Barricading is to remain in place for the duration of construction.
- Construction contractors should be informed of the location of the sites and informed that the sites are not to be impacted.
- No soil disturbance works are to be carried out within the site boundaries, or within the barricaded zones of the sites.
- Barricading is to be removed on completion of construction works.

As specified in section 10.1 of this report, all Aboriginal relics are protected under the *Aboriginal Heritage Act 1975* (The Act). It is illegal to destroy, damage, deface, conceal or otherwise interfere with a relic, unless in accordance with the terms of a permit granted by the Minister. Therefore, if it appears that sites AH14120, AH14121 and AH14122 may be impacted by construction works, then the proponent, Sunspot 9 Pty Ltd will need to apply for and obtain a Permit to impact the sites, prior to any works commencing.

#### ***Recommendation 3 (Site AH10399)***

Sites AH10399 is an Isolated artefact that is reported to be located at grid reference [REDACTED] Despite an extensive search, this site could not be relocated during the current survey program. The site is likely to remain in situ but covered by vegetation. Based on the grid reference provided on the AHR, this site is located in the Project Footprint (see Figure 14). The preferred management strategy is to avoid any impacts on this site and to protect the site in situ. The following recommendations apply to this site.

- The location of the site is to be plotted on the design plans for the Cimitiere Plains Solar Farm Project footprint.
- Prior to any future works commencing in the identified areas, temporary high visibility protective barricading is to be erected around the identified boundaries of the site with a 2m radial buffer applied. Barricading is to remain in place for the duration of construction.
- Construction or other works contractors should be informed of the location of the site and informed that the site is not to be impacted.
- No soil disturbance works are to be carried out within the site boundaries, or within the barricaded zone of the site.

- Barricading is to be removed on completion of construction works.

As specified in section 10.1 of this report, all Aboriginal relics are protected under the *Aboriginal Heritage Act 1975* (The Act). It is illegal to destroy, damage, deface, conceal or otherwise interfere with a relic, unless in accordance with the terms of a permit granted by the Minister. Therefore, if it appears that site AH10399 may be impacted by construction or other works, then Sunspot 9 Pty Ltd will need to apply for and obtain a Permit to impact the site, prior to any works commencing.

***Recommendation 4 (Sites AH9366, AH9354, AH9336, AH9346, and AH10606)***

Sites AH9366, AH9354, AH9336, AH9346, and AH10606 have been previously identified as being located within the Cimitiere Plains Solar Farm Project study area. Despite an extensive search, these sites could not be relocated during the current survey program. The sites are likely to remain in situ but covered by vegetation. These sites are now confirmed as being situated outside the revised Project Footprint (see Figure 14). The following recommendations apply to these sites.

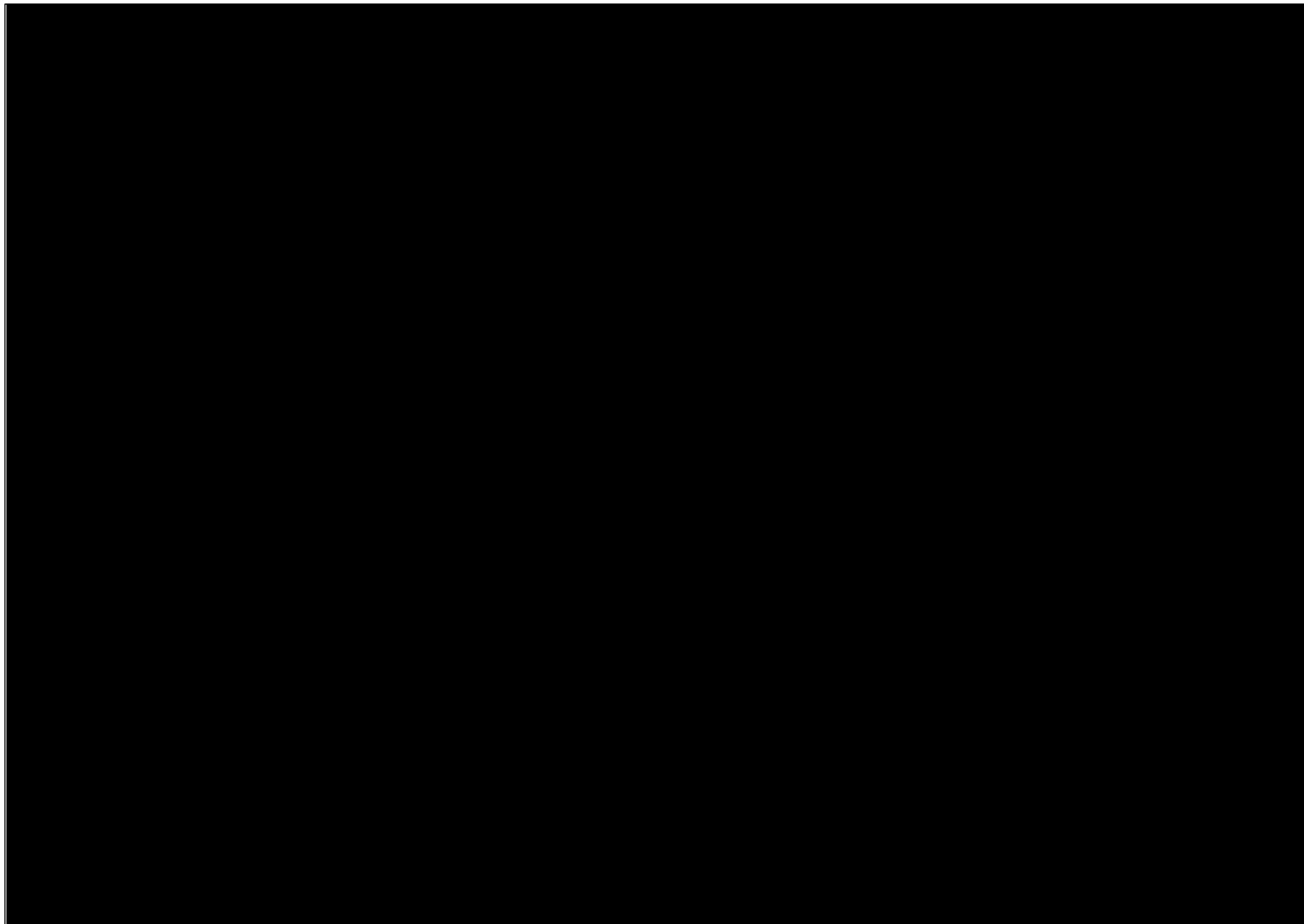
- The location of these sites is to be plotted on the design plans for the Cimitiere Plains Solar Farm Project footprint and it noted that the site areas are to be avoided.

***Recommendation 5 (Unanticipated Discovery Plan)***

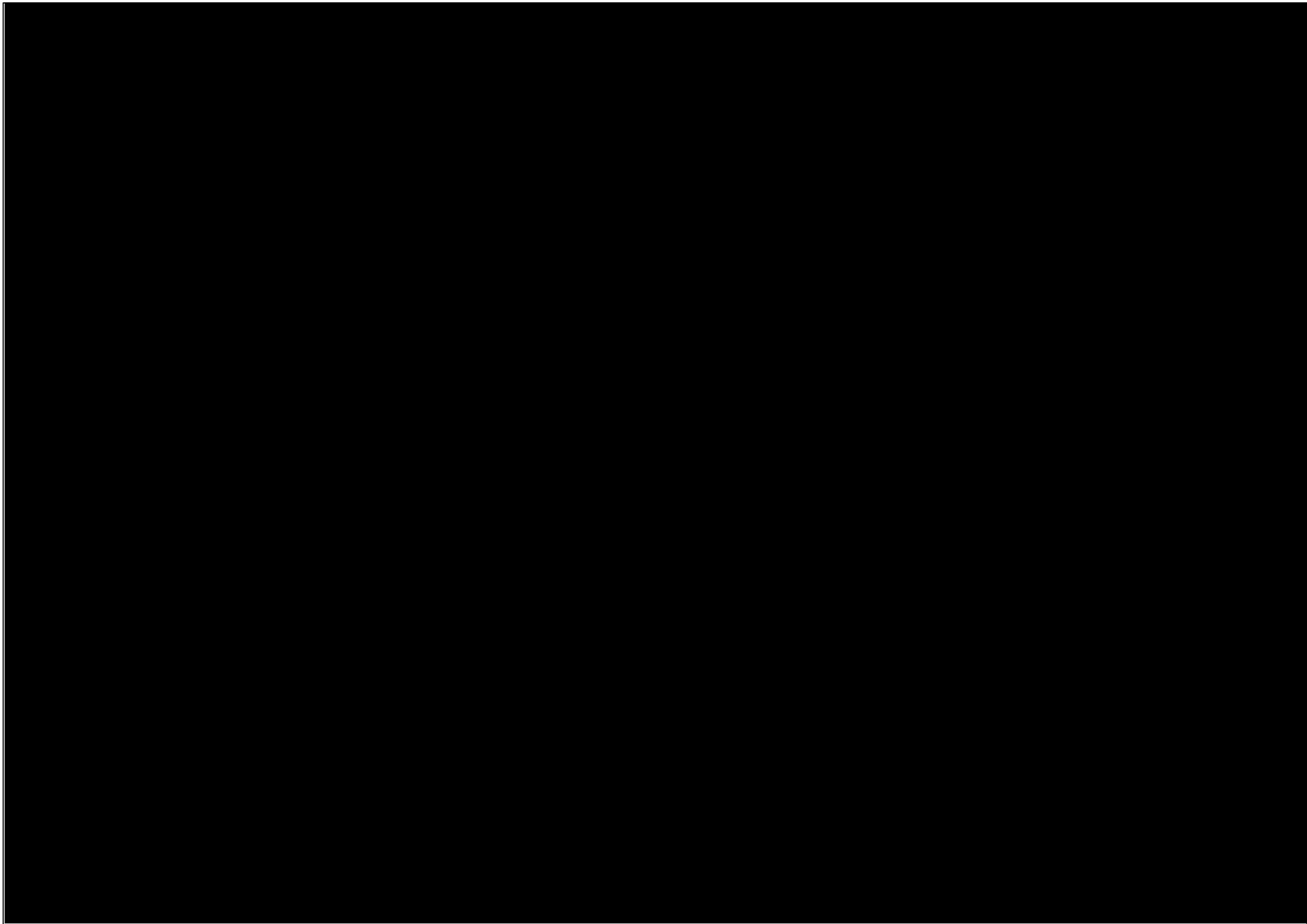
It is assessed that there is generally a low potential for additional undetected Aboriginal heritage sites to occur within the Cimitiere Plains Solar Farm Project footprint. However, if, during the course of the proposed works, previously undetected archaeological sites or objects are located, the processes outlined in the Unanticipated Discovery Plan should be followed (see Appendix 3). A copy of the Unanticipated Discovery Plan should be kept on-site during all ground disturbance and construction work. All construction personnel should be made aware of the Unanticipated Discovery Plan and their obligations under the *Aboriginal Heritage Act 1975* (the Act).

***Recommendation 6 (Provision of Reports)***

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



*Figure 13: Aerial image showing the location of Aboriginal sites AH14118, AH14120, AH14121 and AH14122 in relation to the revised Project Footprint*



*Figure 14: Aerial image showing the location of AH10399 and closer registered sites in relation to the revised project footprint*

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## Glossary of Terms

### *Aboriginal Archaeological Site*

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

### *Artefact*

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

### *Assemblage (lithic)*

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

### *Broken Flake*

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

### *Chert*

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

### *Cobble*

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

### *Core*

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

### *Core Fragments*

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

### *Cortex*

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

### *Debitage*

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

*Flake (general definition)*

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

*Flake fragment*

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

*Flake portion (broken flake)*

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

*Flake scraper*

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

*Nodules*

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

*Pebble*

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

*Quartz*

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

*Quartzite*

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

*Retouch (on stone tools)*

An area of flake scars on an artefact resulting from intentional shaping, resharpening, or rejuvenation after breakage or blunting of a cutting edge. In resharpening a cutting edge the

retouch is invariably found only on one side (see also 'indeterminate retouched piece', 'retouch flake' etc).

*Scraper*

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

*Silcrete*

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

*Site Integrity*

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

*Stone Artefact*

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

*Stone procurement site*

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

*Stone tool*

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

*Use wear*

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

## **Appendix 1**

### **Gazetteer of Recorded Sites**

**Summary Details for Artefact Scatter 1, Isolated Artefact 1, Isolated Artefact 2 and Isolated Artefact 3.**

Site Name	Grid Reference	Site Type	Site Description
AH14118	[REDACTED]	Artefact Scatter	Five white quartz flakes and a white quartz scraper are located on 5° slopes on both sides of a drainage ditch associated with an adjacent dam. The site has a low to medium potential for additional surface or sub-surface artefacts to be present. This site has been heavily disturbed
AH14120	[REDACTED]	Isolated Artefact	A broken quartzite flake located on an erosion scald (bull pit) on a 5° slope amongst pasture land facing Cimitiere Creek which is 288m north. The site has a very low to low potential for additional surface or sub-surface artefacts to be present. This site has been heavily disturbed
AH14121	[REDACTED]	Isolated Artefact	A white quartz flake located on an access track located 253m south of Cimitiere Creek. Immediately bordered by native vegetation. The site has a low to very low potential for additional surface or sub-surface artefacts to be present. This site has been heavily disturbed.
AH14122	[REDACTED]	Isolated Artefact	a white quartz flake located on the 15° slope of a light grey sandy soil pile associated with the construction of a nearby dam 200m south of Cimitiere Creek. The site has a low to very low potential for additional surface or sub-surface artefacts to be present. This site has been heavily disturbed.

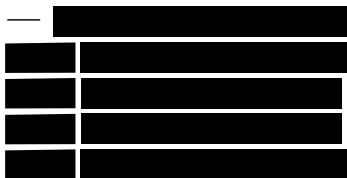
## **Appendix 2**

### **Detailed Site Descriptions**

**Site Name: AH14118**

**Site Type: Artefact Scatter**

**Grid Reference:**



AH14118 is a 20m x 15m low-density scatter located on 5° slopes on both sides of a drainage ditch associated with an adjacent dam. The soils along the drainage ditch and immediate surrounds consist of light grey sandy loam soil. The greater surrounds of the site consist of gently to moderately undulating pasture land, with stands of native grasses, Sagg, bracken fern and eucalypts in various stages of growth. The site is located 690m southwest of Cimitiere Creek. Surface visibility along the drainage ditch slopes is 60% and surface visibility within the immediate surrounds of the drainage ditch is poor, averaging at 20%.

The artefact recorded at AH14118 consists of 5 white quartz flakes and 1 quartz scraper, located on the aforementioned drainage ditch. Besides the quartz artefacts noted above, no additional artefacts were identified.

Given some constraints in surface visibility (particularly outside the drainage ditch), it can't be stated with certainty that there are no additional undetected artefacts associated with site AH14118. However, all indications are that artefact densities are likely to be low to medium.

**Artefact Details:**

— White quartz flakes dimensions:

No. 1: 23mm x 28mm x 7mm

No. 2: 12mm x 10mm x 3mm

No. 3: 15mm x 7mm x 4mm

No. 4: 7mm x 10mm x 3mm

No. 5: 24mm x 10mm x 3mm

White Quartz Scraper: 39mm x 35mm x 9mm



Plate 16: View southeast showing white quartz flake no.1 associated with AH14118.



Plate 17: View southeast showing the location of white quartz flake no.1 on a 5° slope.



Plate 18: View northwest showing white quartz flake no.2 associated with AH14118.



Plate 19: View northwest showing white quartz flake no.3 associated with AH14118.



Plate 20: View west showing white quartz flakes no.4 and no.5 associated with AH14118.



Plate 21: View northwest showing the white quartz scraper associated with AH14118.



Plate 22: View north showing the location of AH14118 and the surrounding landscape.

**Site Name: AH14120**

**Site Type: Isolated Artefact**

**Grid Reference:**

— [REDACTED]

AH14120 is located in an erosion scald (bull pit) consisting of light red/brown soil on a 5° slope facing Cimitiere Creek which is 288m north. The site is immediately surrounded by flat to moderately undulating pastures. Surface visibility within the bull pit is 100% and surface visibility within the immediate surrounds of the erosion scald (bull pit) was poor, averaging 20%.

The artefact recorded at AH14120 consists of a pale pink broken quartzite flake. The artefact is located in a bull pit on a 5° slope where surface visibility is 100%. Besides the isolated quartzite artefact noted above, no additional artefacts were identified.

Given some constraints in surface visibility (particularly outside the bull pit), it can't be stated with certainty that there are no additional undetected artefacts associated with site AH14120. However, all indications are that artefact densities are likely to be low to very low.

**Artefact Details:**

— Pale pink quartzite broken flake dimensions: 25mm x 25mm x 16mm



Plate 22: View northeast showing the pale pink quartzite broken flake from AH14120.



Plate 23: View northeast showing the pale pink quartzite broken flake from AH14120.



Plate 24: View northeast showing the location of AH14120 on a 5° slope.

**Site Name: AH14121**

**Site Type: Isolated Artefact**

**Grid Reference:**

[REDACTED]

AH14121 is located on an ungraded access track consisting of light grey sandy loam soil on a slope of less than 5°. The greater surrounds of the site consist of gently to moderately undulating pasture land, with stands of native grasses, Sagg, bracken fern and eucalypts in various stages of growth. The site is located 253m south of Cimitiere Creek.

Surface visibility along the access track is 80% and surface visibility within the immediate surrounds of the access track is poor, averaging at 20%.

The artefact recorded at AH14121 consists of a white quartz flake, located on the aforementioned access track. Besides the isolated quartzite artefact noted above, no additional artefacts were identified.

Given some constraints in surface visibility (particularly outside the access track), it can't be stated with certainty that there are no additional undetected artefacts associated with site AH14121. However, all indications are that artefact densities are likely to be low to very low.

**Artefact Details:**

- White quartz flake dimensions: 16mm x 15mm x 15mm



Plate 25: View northeast showing the white quartz flake associated with AH14121.



Plate 26: View northeast showing the white quartz flake associated with AH14121.



Plate 27: View northeast showing the location of AH14121 on a slope of <5°.

**Site Name: AH14122**

**Site Type: Isolated Artefact**

**Grid Reference:**

[REDACTED]

AH14122 is located on the 15° slope of a light grey sandy loam soil pile associated with the construction of a nearby dam. The site is located 200m south of Cimitiere Creek. The site is immediately surrounded by flat to moderately undulating pasture land, covered with introduced grass species and stands of tea trees.

Surface visibility on the slope is 80% and surface visibility within the immediate surroundings of the slope is poor, averaging at 20%.

The artefact recorded at AH14122 consists of a white quartz flake, located on the aforementioned slope. Besides the isolated quartz artefact noted above, no additional artefacts were identified.

Given some constraints in surface visibility (particularly outside the access track), it can't be stated with certainty that there are no additional undetected artefacts associated with site AH14122. However, all indications are that artefact densities are likely to be low to very low.

**Artefact Details:**

- White quartz flake dimensions: 42mm x 45mm x 10mm



Plate 28: View northwest showing the white quartz flake associated with AH14122.



Plate 29: View northwest showing the white quartz flake associated with AH14122.



Plate 30: View southeast showing AH14122 on a 15 slope.

## **Appendix 3**

### **Unanticipated Discovery Plan**

# Unanticipated Discovery Plan

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

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

## **Discovery of Aboriginal Relics other than Skeletal Material**

### **Step 1:**

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

### **Step 2:**

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

### **Step 3:**

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

## **Discovery of Skeletal Material**

### **Step 1:**

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

### **Step 2:**

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

### **Step 3:**

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

### **Step 4:**

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

### **Step 5:**

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

## Guide to Aboriginal site types

### Stone Artefact Scatters

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

### Shell Middens

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

### Rockshelters

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

*Further information on Aboriginal Heritage is available from:*

#### Aboriginal Heritage Tasmania

#### Community Partnerships and Priorities

#### Department of Premier and Cabinet

GPO Box 123 Hobart TAS 7001

Telephone: **1300 487 045**

Email: **aboriginalheritage@dpac.tas.gov.au**

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

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### Quarries

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

### Rock Marking

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

### Burials

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



## **Appendix 4**

### **Photos of Artefacts Recovered from the Stage 1 Sub-surface Investigation**



Plate 23: View northeast showing artefact no.1 – white quartz flake identified within test pit 3.



Plate 24: View northeast showing artefact no.1 – white quartz flake identified within test pit 3.



Plate 25: View southwest showing artefact no.2 – white quartz flake identified within test pit 8.



Plate 26: View southwest showing artefact no.2 – white quartz flake identified within test pit 8.



Plate 27: View northwest showing artefact no.3 – white quartz flake identified within test pit 14.



Plate 28: View northwest showing artefact no.3 – white quartz flake identified within test pit 14.

## **Appendix 5**

### **Pit Profile Details and Photos**

Square Number	Grid Reference (GDA94) Easting	Grid Reference (GDA94) Northing	Square Size	Pit Profile
1	[REDACTED]	[REDACTED]	50cm x 50cm	<ul style="list-style-type: none"> <li>• 0–4cm Upper humic layer</li> <li>• 4–15cm Dark grey sand</li> <li>• 15–20cm Light grey sand</li> <li>• 20–37cm Light grey sand</li> </ul> <p>Note: Tree, grass and shrub roots throughout pit.</p>
2	[REDACTED]	[REDACTED]	50cm x 50cm	<ul style="list-style-type: none"> <li>• 0–4cm Upper humic layer</li> <li>• 4–20cm Light grey sand</li> <li>• 20–22cm Light grey sand with increasing clay content with depth.</li> <li>• 23cm Compact mottled yellow regolith clays and light grey sand.</li> </ul>
3	[REDACTED]	[REDACTED]	50cm x 50cm	<ul style="list-style-type: none"> <li>• 0–4cm Upper humic layer</li> <li>• 4–5cm Dark grey sand</li> </ul> <p>Note: Tree, grass and shrub roots throughout pit.</p>
4	[REDACTED]	[REDACTED]	50cm x 50cm	<ul style="list-style-type: none"> <li>• 0–3cm Upper humic layer</li> <li>• 3–17cm Mottled dark grey and light grey sand</li> <li>• 17–22cm Compact mottled yellow regolith clays and light grey sand.</li> </ul> <p>Note: Tree, grass and shrub roots throughout pit.</p>
5	[REDACTED]	[REDACTED]	50cm x 50cm	<ul style="list-style-type: none"> <li>• 0–4cm Upper humic layer</li> <li>• 4–15cm Dark grey sand</li> <li>• 15–22cm Light grey sand</li> <li>• 22cm Compact mottled yellow regolith clays and light grey sand.</li> </ul> <p>Note: Tree, grass and shrub roots throughout pit.</p>
6	[REDACTED]	[REDACTED]	50cm x 50cm	<ul style="list-style-type: none"> <li>• 0–5cm Upper humic layer</li> <li>• 5–12cm Dark grey sand</li> <li>• 12–20cm Light grey sand</li> <li>• 20cm Compact light grey sand with sparse mottled yellow regolith clays.</li> </ul> <p>Note: Tree, grass and shrub roots throughout pit.</p>
7	[REDACTED]	[REDACTED]	50cm x 50cm	<ul style="list-style-type: none"> <li>• 0–5cm Upper humic layer</li> <li>• 5–10cm Mottled dark grey and light grey sand</li> <li>• 10–24cm Light grey sand</li> <li>• 24cm Compact light grey sand with sparse mottled yellow regolith clays.</li> </ul> <p>Note: Tree, grass and shrub roots throughout pit.</p>
8	[REDACTED]	[REDACTED]	50cm x 50cm	<ul style="list-style-type: none"> <li>• 0–5cm Upper humic layer</li> <li>• 5–15cm Dark grey sand</li> <li>• 15cm Dark grey sand</li> </ul> <p>Note: Tree, grass and shrub roots throughout pit.</p>

9	[REDACTED]	[REDACTED]	50cm x 50cm	<ul style="list-style-type: none"> <li>• 0–3cm Upper humic layer</li> <li>• 3–14cm Light grey sand</li> <li>• 14–25cm Firm dark grey sand with mottled dark yellow regolith clays.</li> </ul> <p>Note: Tree, grass and shrub roots throughout pit.</p>
10	[REDACTED]	[REDACTED]	50cm x 50cm	<ul style="list-style-type: none"> <li>• 0–3cm Upper humic layer</li> <li>• 3–10cm Dark grey sand</li> <li>• 10–28cm Compact light grey sand with charcoal inclusions throughout.</li> </ul> <p>Note: Tree, grass and shrub roots throughout pit.</p>
11	[REDACTED]	[REDACTED]	50cm x 50cm	<ul style="list-style-type: none"> <li>• 0–3cm Upper humic layer</li> <li>• 3–20cm Mottled light and dark grey sand</li> <li>• 20–23cm Light grey sand, with thick tree routes present at 21–23cm.</li> </ul> <p>Note: Tree, grass and shrub roots throughout pit.</p>
12	[REDACTED]	[REDACTED]	50cm x 50cm	<ul style="list-style-type: none"> <li>• 0–3cm Upper humic layer</li> <li>• 3–10cm Dark grey sand</li> <li>• 10–30cm Light grey sand with sparse charcoal inclusions throughout.</li> <li>• 30cm Compact light grey sand.</li> </ul> <p>Note: Tree, grass and shrub roots throughout pit.</p>
13	[REDACTED]	[REDACTED]	50cm x 50cm	<ul style="list-style-type: none"> <li>• 0–3cm Upper humic layer</li> <li>• 3–11cm Dark grey sand</li> <li>• 11–30cm Light grey sand with sparse charcoal inclusions throughout.</li> <li>• 30cm Compact light grey sand.</li> </ul> <p>Note: Tree, grass and shrub roots throughout pit.</p>
14	[REDACTED]	[REDACTED]	50cm x 50cm	<ul style="list-style-type: none"> <li>• 0–3cm Upper humic layer</li> <li>• 3–5cm Dark grey sand</li> </ul> <p>Note: Tree, grass and shrub roots throughout pit.</p>
15	[REDACTED]	[REDACTED]	50cm x 50cm	<ul style="list-style-type: none"> <li>• 0–3cm upper humic layer</li> <li>• 3–20cm Mottled dark grey and light grey sand with sparse yellow regolith clays.</li> <li>• 20–31cm Loose light grey sand.</li> </ul> <p>Note: Tree, grass and shrub roots throughout pit.</p>



Plate 29: View northwest showing the west wall of Pit 1.



Plate 30: View northwest showing the west wall of Pit 2.



Plate 31: View south showing the south wall of Pit 3.



Plate 32: View north showing the north wall of Pit 4.



Plate 33: View northwest showing the west wall of Pit 5.



Plate 34: View northwest showing the west wall of Pit 6.



Plate 35: View west showing the west wall of Pit 7



Plate 36: View west showing the west wall of Pit 8.



Plate 37: View northwest showing the west wall of Pit 9.



Plate 38: View northeast showing the north wall of Pit 10.



Plate 39: View northeast showing the north wall of Pit 11.



Plate 40: View northeast showing the north wall of Pit 12.



Plate 41: View northeast showing the northern wall of Pit 13.



Plate 42: View north showing the north wall of Pit 14.



Plate 43: View northeast showing the north wall of Pit 15.

## **Appendix 6**

### **Aboriginal Community Consultation Outcomes**



**Palawa Consultancy; Cross Cultural Awareness Training, Arts Traditional Crafts**

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**21<sup>st</sup> September 2023**

**“Aboriginal Heritage Assessment of the Cimitiere Plains Solar Farm Project, via George Town Northern Tasmania.”**

Organisation	Information Letter Sent	Response To Letter	Meeting Date	Summary of Comments and Feedback
Aboriginal Elders Council of Tasmania (AECT), Launceston	10 <sup>th</sup> Sept 2023 via email	Verbal in person	11 <sup>th</sup> September in person	<p>Had discussions with Rosemaria Brown, Admin Officer for the Elders Council, said “respect for the elders past and present, also acknowledge the traditional owners of the land on which we live. and the broader Aboriginal community continuing spiritual connection to the land / Mother Earth”.</p> <p>In relation to the Solar Farm Project via George Town re; the assessment the elders, if possible, would like all Aboriginal heritage / cultural values to be protected and managed.</p> <p>However, we know that there was Aboriginal heritage located during the assessment and if the project goes ahead, we hope any Aboriginal heritage values can be avoided.</p>
Hank Horton (“Kooparoona Niara Aboriginal Mob”) of the Deloraine community,	10 <sup>th</sup> Sept 2023 via email	Via phone	15 <sup>th</sup> September via phone & text	<p>The Kooparoona Niara (Mob) Aboriginal Association; The response from Hank over the phone, thanks for the report.</p> <p><b><u>Responded via Text on the 15<sup>th</sup> Sept:</u></b></p> <p>The Kooparoona Niara (Mob) have stated, yeah, we have a few issues in regard to tools /Aboriginal Cultura Heritage Values etc. If the project goes ahead and to avoid any impacts to Aboriginal relics (heritage) stone tools need to be relocated, where will they be relocated to if this happens, this evidence shows places where the ancestors “<u>the old fellows</u>” have been, the story of the place. Because of this we Kooparoona Niara Mob we have issues, again it just adds more damage which has already been done aye!</p> <p>This is just adding to the other impacts that have happened in the past as its ongoing aye such as housing roads etc. It just keeps on happening!</p> <p>From the Mob all good, however that all Aboriginal Cultural / Heritage values be respected, protected and ensure that good management is put in place.</p>



**Palawa Consultancy; Cross Cultural Awareness Training, Arts Traditional Crafts**

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Aboriginal Land Council of Tasmania (ALCT), Launceston	10 <sup>th</sup> Sept 2023 via email	Verbal in person	15 <sup>th</sup> September in person	I've communicated with the Aboriginal Land Council of Tasmania (ALCT), Launceston, have stated no comments regarding the Proposal, however if ALCT need to make a point regarding any projects and or development proposals they would!
Tasmanian Aboriginal Centre, Launceston (TAC), Launceston	Not sent refer to comments	Verbal	31 <sup>st</sup> August in person	I have communicated several occasions with Tasmanian Aboriginal Centre (TAC), Launceston, on the 31 <sup>st</sup> September 2023 I tried again, they have stated again no comments and no more reports forwarded to L'ton TAC.
Melythina tiakana warrana (Heart of Country) Aboriginal Corporation (MTWAC), Northeast mob.	10 <sup>th</sup> Sept 2023 via email	Via email	20 <sup>th</sup> September via Email	<p>The melythina tiakana warrana (Heart of Country) Aboriginal Corporation (MTWAC) have had a discussion regarding their boundaries which is the Northeast Coastal Plans Nation that MTWAC represents, from Pipers River to St Helens, this area includes Mount William ranges and extending to Ben Lomond regarding any assessments within the boundaries.</p> <p>However, if needed MTWAC board retains the opportunity to have an input concerning project proposals and developments.</p> <p>Comments from MTWAC as follows;</p> <p>Comments are that it would be nice for the planning of this development, and others, including the transmission lines corridors, to be mindful of all Aboriginal Heritage including Natural Values, as well as Aboriginal Heritage sites and the artifacts / relics.</p>