

Northern Midlands Solar Farm, Cressy Aboriginal Heritage Assessment
CHMA 2023

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Executive Summary

Introduction

Connorville Estates Pty Ltd (Connorville), the proponent, is seeking development approval to establish a solar farm on the Connorville Station property which is at 394 Connorville Rd, Cressy, in the Northern Midlands Region of Tasmania (see Figure 1). The project is known as the Northern Midlands Solar Farm Project (NMSF).

The proposed Northern Midlands Solar Farm will be situated on approximately 543ha of private rural land currently used for cropping and grazing livestock. The development area will be split into Solar West which encompasses approximately 369.2ha and Solar East which encompasses approximately 63.1ha.

The solar farm will be connected to the existing Palmerston Substation by a 220kV double circuit overhead transmission line. The proposed transmission line easement runs adjacent to the existing 110kV line (which does not have the capacity to accommodate this project). The proposed 220kV line is 15.4km in length and the easement is 35m in width (the easement width is narrow as it is proposed to utilise some of the existing 110kV easement). The width of the transmission easement increases as the line approaches Palmerston Substation, to allow for additional infrastructure. It should be noted that three 220kV transmission line route options were explored as part of the planning and technical assessment of the Northern Midlands Solar Farm proposal (Option 1, Option 2.1 and Option 2.2). In addition, there will be an internal 33kV transmission line which connects Solar East and Solar West and runs overhead along an existing access track. The proposed 33kV line is 4.0 km in length and the easement is expected to be 12m in width.

The entire "Development Area" for the project is approximately 543 Ha (This includes all the Proposal elements, i.e. Solar East & Solar West, access tracks, 220kV transmission line, main infrastructure area (including the switchyard, BESS, and O&M compound), construction areas/car parking, and internal 33kV line). Figure 2 shows the study area footprint for the Northern Midlands Solar Farm (NMSF).

CHMA Pty Ltd and Vernon Graham (SAHO) have been engaged by the proponent to undertake an Aboriginal heritage assessment for the proposed Northern Midlands Solar Farm Project study area (as shown in Figure 2), 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. Based on the findings of the assessments and advice from Watts Advisory and TasNetworks, Option 1 was selected as the preferred route for the new 220kV transmission line. The footprint for the solar farm was also slightly adjusted. Figure 3 shows the revised project development footprint. The detailed Masterplan design for the final NMSF Project development footprint is provided in Appendix 5. The Aboriginal heritage management recommendations presented in section 11 of this report are based on this revised NMSF 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 Northern Midlands Solar Farm Project study area.

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The search shows that there are a total of 38 registered Aboriginal sites that are situated within an approximate 5km radius of the study area (search results provided by Joel Williams from AHT on 10-10-2022). Thirteen (13) of these sites are classified as artefact scatters, 24 sites are classified as isolated artefacts and one site is classified as an Aboriginal stone quarry with an associated artefact scatter. The majority of these sites are clustered around the Macquarie River, to the north of the study area. Table 1 provides the summary details for these 38 registered Aboriginal sites, with Figure 6 showing the location of these sites in relation to NMSF project footprint. None of these 38 registered Aboriginal sites are located within or in the immediate vicinity of the NMSF project footprint. The closest registered site is AH11983 which is situated around 2km to the south. The detailed AHR search results are presented in section 4.2 of this report.

Summary of Field Survey Results

The field survey assessment of the NMSF study area resulted in the identification and recording of five Aboriginal heritage sites. Two of these sites are classified as artefact scatters (AH14167 and AH14168), with the other three sites classified as Isolated artefacts (AH14148, AH14165, AH14166). Table 3 provides the summary details for these five recorded sites, with Figures 10-13 showing the location of these five recorded sites in relation to the project footprint. The detailed site descriptions are presented in Appendix 2.

Besides the five 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 NMSF study area. As noted in section 4.2 of this report, the AHR search results show that there are no registered Aboriginal sites that are located within or in the immediate vicinity of the NMSF project footprint. 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. The detailed survey results and discussions are presented in section 7.

Table i: Summary details for Aboriginal sites AH14167, AH14168, AH14148, AH14165 and AH14166.

Site Name	Grid References (GDA 94)	Site Type	Site Description
AH14167	E 513344 N 5369234 E 513334 N 5369244 E 513319 N 5369301 E 513331 N 5369261 E 513344 N 5369256 E 513351 N 5369251	Artefact Scatter	Artefact scatter (90+ artefacts) located within three sand ditches with 10°–20° slopes, approximately 50m west of an unnamed watercourse. The site has a medium to high potential for additional surface or sub-surface artefacts to be present. The artefacts are likely to be confined to the PAS area defined in this report.
AH14168	E 511694 N 5368290 E 511678 N 5368308	Artefact Scatter	Artefact scatter (4 artefacts) located within a drainage line with slopes of 30°–90°. The site is located 3.8km southeast of Lake River. The site has some potential for additional surface or sub-surface artefacts to be present. Densities are likely to be low and confined to the PAS area defined in this report.

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Site Name	Grid References (GDA 94)	Site Type	Site Description
AH14148	E 512987 N 5367723	Isolated Artefact	A cream quartzite blade core located within an erosion scald on a hill with a 15° slope. Site is located 5.7km southeast of Lake River and 1.5km south of an unnamed watercourse. 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.
AH14165	E 512078 N 5368137	Isolated Artefact	An orange banded chert flake located in an erosion scald on a 5° within a drainage line surrounded by pastureland. Site is located 4.1km southeast of Lake River and 1.7km southwest of an unnamed watercourse. 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.
AH14166	E 509517 N 5368980	Isolated Artefact	A white quartz flake located in an erosion scald on the 15° slope of a dam wall surrounded by pastureland. Site is located 1.4km southwest of Lake River. 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.

Significance Assessments

AH14167, AH14168, AH14148, AH14165 and AH14166 (recorded during the current field 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 AH14167, AH14168, AH14148, AH14165 and AH14166. 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 AH14167, AH14168, AH14148, AH14165 and AH14166, and the study area as a whole.

Table ii: Summary significance ratings for recorded Aboriginal heritage sites

AH Number	Site Type	Scientific Significance	Aesthetic Significance	Historic Significance	Social Significance
AH14167	Artefact Scatter	Medium	Low-medium	N/A	High
AH14168	Artefact Scatter	Low-Medium	Low-medium	N/A	High
AH14148	Isolated Artefact	Low	Low-medium	N/A	Medium-High
AH14165	Isolated Artefact	Low	Low-medium	N/A	Medium-High
AH14166	Isolated Artefact	Low	Low-medium	N/A	Medium-High

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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, following the completion of the Aboriginal heritage 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. All five identified Aboriginal heritage sites and associated areas of Potential Archaeological Sensitivity are now avoided. The following recommendations are based on the revised NMSF Project Footprint.

Recommendation 1 (AH14167)

Site AH14167 is classified as an artefact scatter and is located in the north-western portion of the study area and incorporates an area of Potential Archaeological Sensitivity (PAS) measuring 300m x 50m. The revised NMSF Project Footprint avoids the identified boundaries of the site and associated PAS (see Figures i and iv). It is recommended that the following measures should be implemented to protect the site during construction.

- The site and PAS area should be plotted onto project design plans and noted that the site is to be avoided.
- Prior to construction works commencing, high visibility protective barricading to be placed around the defined boundaries of the site and PAS area with a 2m buffer radius applied. Barricading is to be removed once construction works have been completed.
- Construction crews are to be made aware of the location of the site and instructed 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 three sites.
- Barricading is to be removed on completion of construction works for the solar farm.

Recommendation 2 (AH14168)

Site AH14168 is classified as an artefact scatter and is located in the southwestern portion of the study area. The site is situated within a broader PAS measuring around 70m x 20m. The revised NMSF Project Footprint avoids the identified boundaries of the site and associated PAS (see Figures i and iii). It is recommended that the following measures should be implemented to protect the site during construction.

- The site and PAS area should be plotted onto project design plans and noted that the site is to be avoided.
- Prior to construction works commencing, high visibility protective barricading to be placed around the defined boundaries of the site and PAS area with a 2m buffer

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radius applied. Barricading is to be removed once construction works have been completed.

- Construction crews are to be made aware of the location of the site and instructed 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 three sites.
- Barricading is to be removed on completion of construction works for the solar farm.

Recommendation 3 (AH14148, AH14165 and AH14166)

Sites AH14148, AH14165 and AH14166 are all classified as Isolated artefacts. All three sites are confirmed as being located outside the revised NMSF Project Footprint (see Figures i-iii). The following recommendations apply to these three sites.

- The location of the sites is to be plotted on the design plans for the Northern Midlands Solar Farm 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 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 three sites.
- Barricading is to be removed on completion of construction works for the solar farm.

Recommendation 4 (Remainder of the study area)

Besides the sites dealt with in the recommendations above, no other Aboriginal heritage sites, suspected features, or specific areas of elevated archaeological potential were recorded during the survey assessment of the NMSF project footprint. It is advised that there are no further archaeological investigations warranted, and no additional Aboriginal heritage constraints to works proceeding.

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 Northern Midlands Solar Farm 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

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

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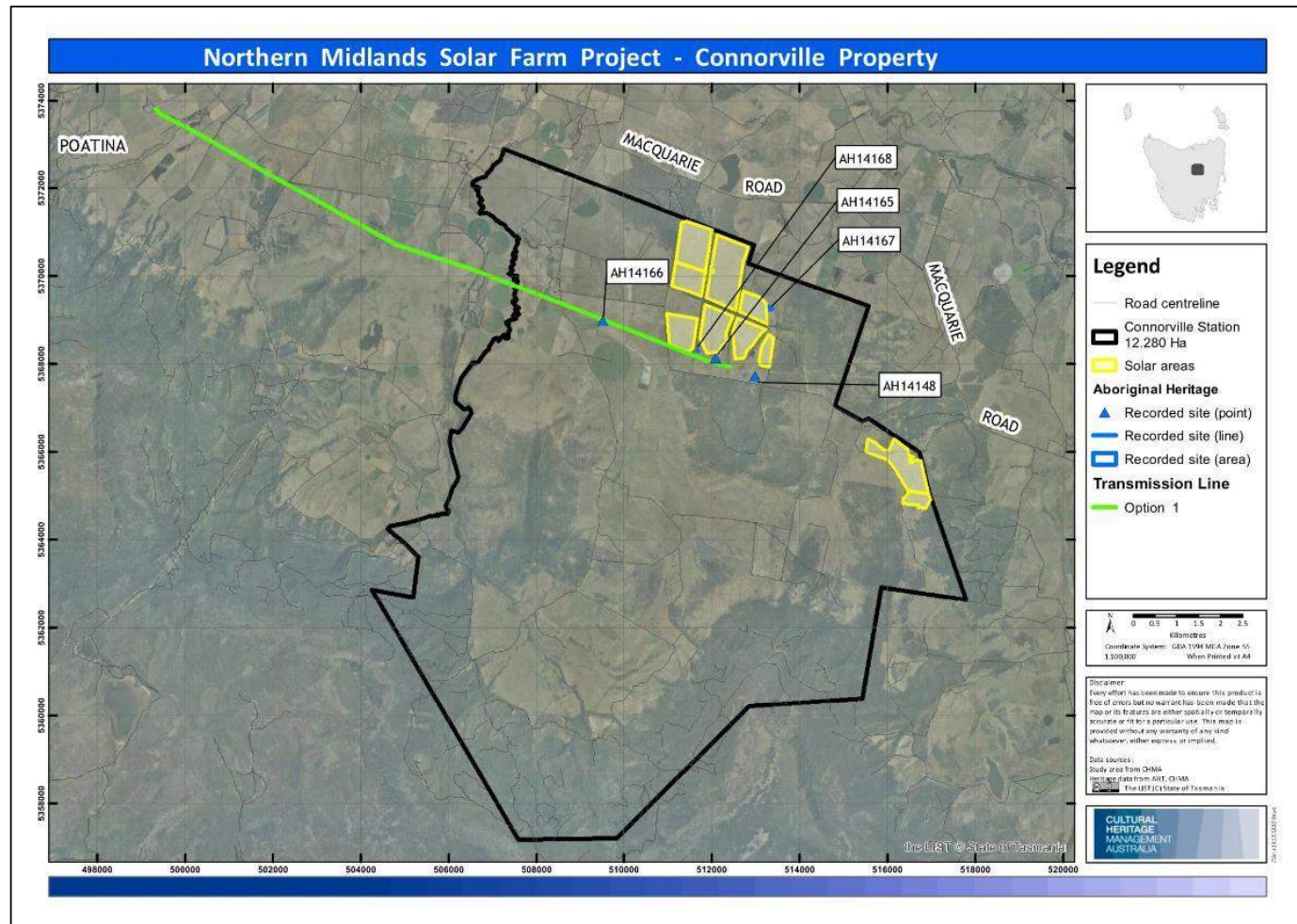


Figure i: Aerial image showing the location of the five recorded Aboriginal heritage sites in relation to the revised NMSF Project Footprint

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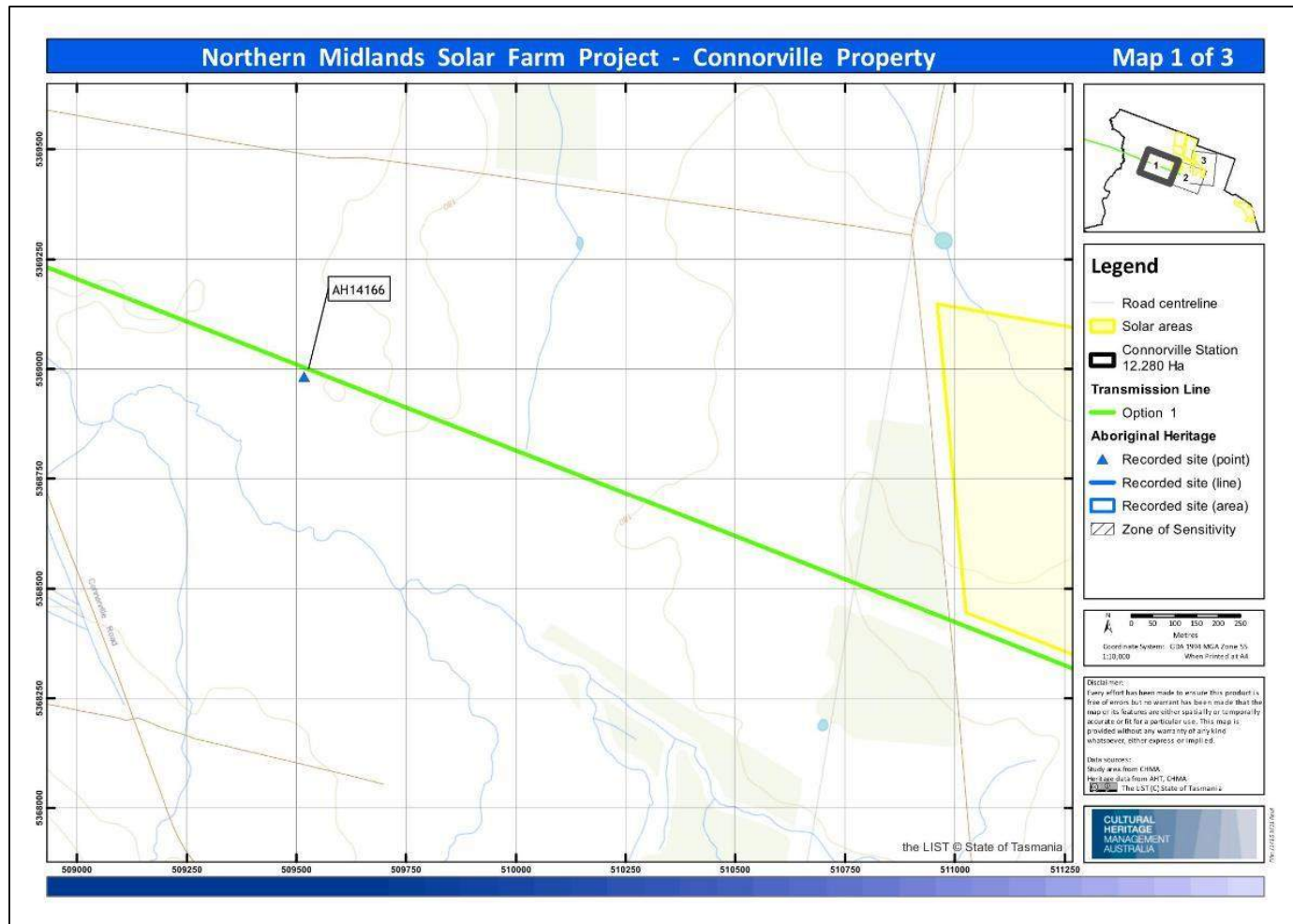


Figure ii: Topographic map showing the location of site AH14166 in relation to the revised NMSF Project Footprint

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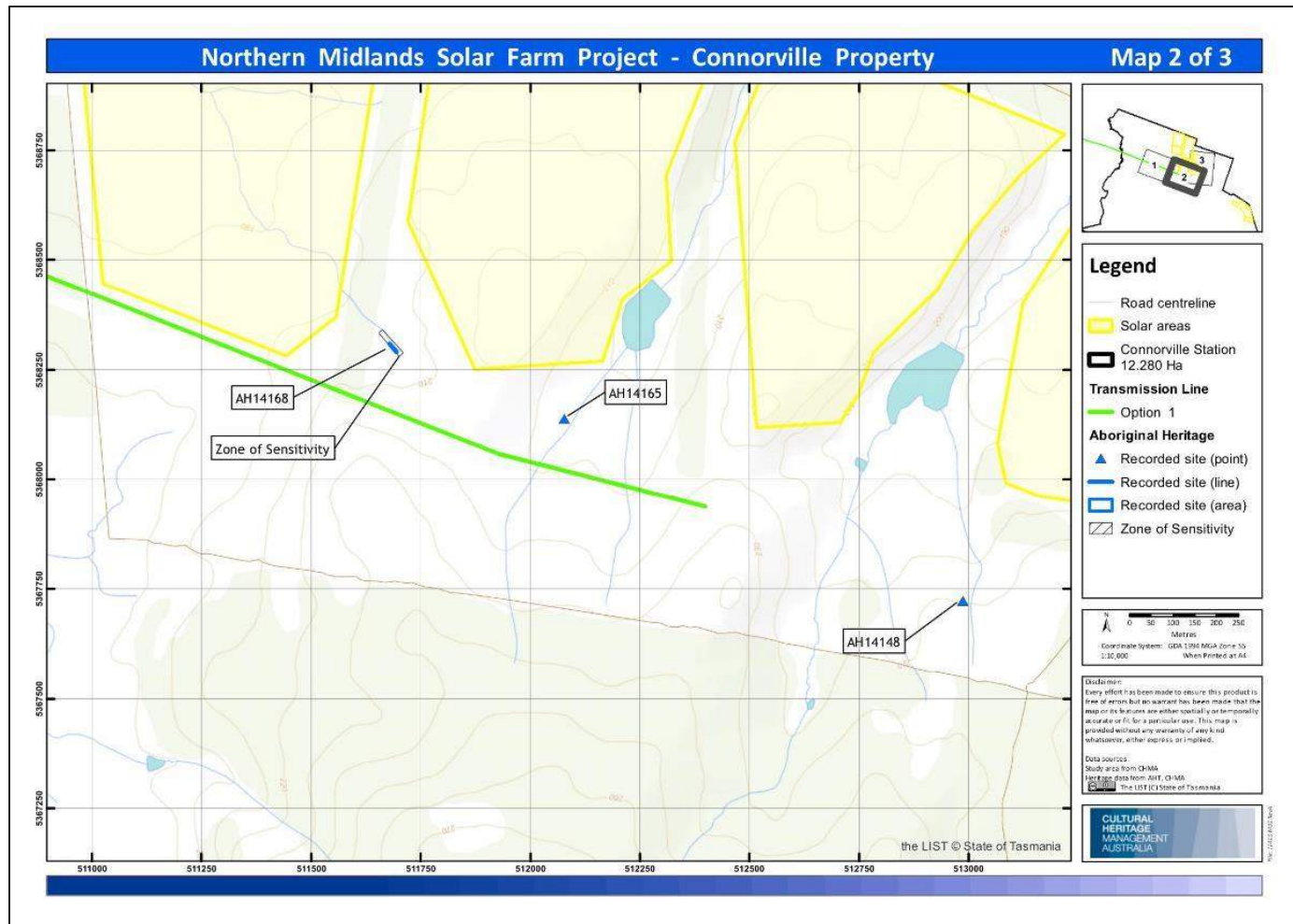


Figure iii: Topographic map showing the location of AH14148, AH14165 and AH14168 in relation to the revised NMSF Project Footprint

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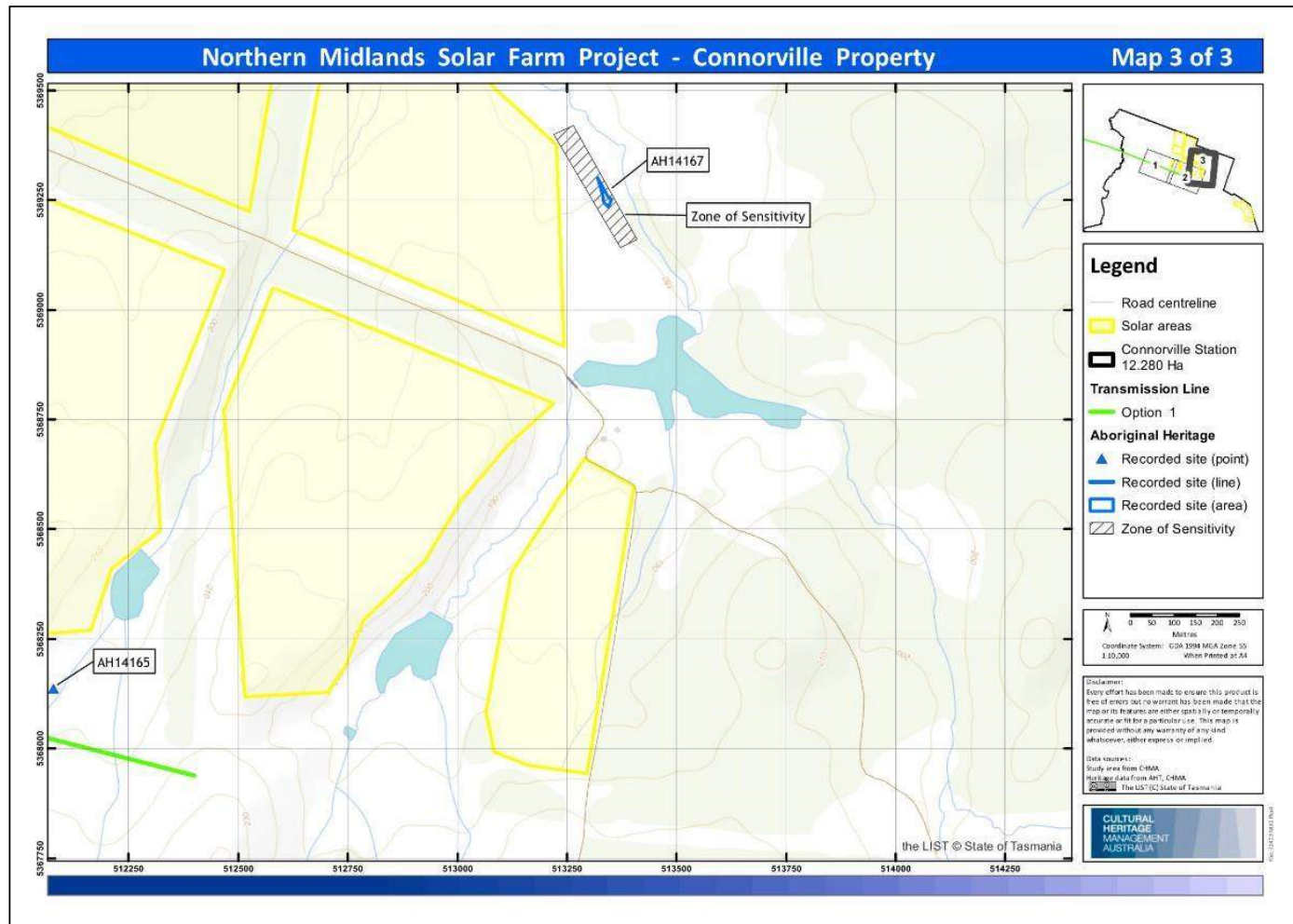


Figure iv: Topographic image showing the location of AH14167 in relation to the revised NMSF Project Footprint

1.0 Project Outline

1.1 Project Details

Connorville Estates Pty Ltd (Connorville), the proponent, is seeking development approval to establish a solar farm on the Connorville Station property which is at 394 Connorville Rd, Cressy, in the Northern Midlands Region of Tasmania (see Figure 1). The project is known as the Northern Midlands Solar Farm Project (NMSF).

The proposed Northern Midlands Solar Farm will be situated on approximately 543ha of private rural land currently used for cropping and grazing livestock. The development area will be split into Solar West which encompasses approximately 369.2ha and Solar East which encompasses approximately 63.1ha.

The solar farm will be connected to the existing Palmerston Substation by a 220kV double circuit overhead transmission line. The proposed transmission line easement runs adjacent to the existing 110kV line (which does not have the capacity to accommodate this project). The proposed 220kV line is 15.4km in length and the easement is 35m in width (the easement width is narrow as it is proposed to utilise some of the existing 110kV easement). The width of the transmission easement increases as the line approaches Palmerston Substation, to allow for additional infrastructure. It should be noted that three 220kV transmission line route options were explored as part of the planning and technical assessment of the Northern Midlands Solar Farm proposal (Option 1, Option 2.1 and Option 2.2). In addition, there will be an internal 33kV transmission line which connects Solar East and Solar West and runs overhead along an existing access track. The proposed 33kV line is 4.0 km in length and the easement is expected to be 12m in width.

The entire "Development Area" for the project is approximately 543 Ha (This includes all the Proposal elements, i.e. Solar East & Solar West, access tracks, 220kV transmission line, main infrastructure area (including the switchyard, BESS, and O&M compound), construction areas/car parking, and internal 33kV line). Figure 2 shows the study area footprint for the Northern Midlands Solar Farm (NMSF).

CHMA Pty Ltd and Vernon Graham (SAHO) have been engaged by the proponent to undertake an Aboriginal heritage assessment for the proposed Northern Midlands Solar Farm Project study area (as shown in Figure 2), 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. Based on the findings of the assessments and advice from Watts Advisory and TasNetworks, Option 1 was selected as the preferred route for the new 220kV transmission line. The footprint for the solar farm was also slightly adjusted to avoid identified Aboriginal heritage values. Figure 3 shows the revised NMSF project development footprint. The detailed Masterplan design for the final NMSF Project Footprint is provided in Appendix 5. The Aboriginal heritage management recommendations presented in section 11 of this report are based on this revised NMSF Project Footprint.

1.2 Aims of the Investigation

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

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- To undertake an Aboriginal cultural heritage assessment for the proposed NMSF project footprint (the study area, as shown in Figure 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 2018)*.
- 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 NMSF 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 Northern Midlands Solar Farm. 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 12-9-2022).

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 NMSF.
- Relevant reports documenting the outcomes of previous Aboriginal heritage studies in the vicinity of the study area.
- Ethno-historic literature for the region.

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- References to the land-use history of 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 and Stuart Huys (CHMA archaeologists), Vernon Graham (Senior Aboriginal Heritage Officer) and Kieran Graham (Trainee Aboriginal Heritage Officer), over a period of six days (24-11-2022 – 28-11-2022, then a final survey 30-3-2023).

The field team walked a total of 91.9km of survey transects across the proposed NMSF study area footprint and associated infrastructure, with the average width of each transect being 10m. The survey covered the three transmission line options described in section 1.1. 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, the significance of recorded Aboriginal cultural heritage sites and possible management options.

Stage 3 (Report Preparation)

Stage three 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.

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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.

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 Northern Midlands 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.

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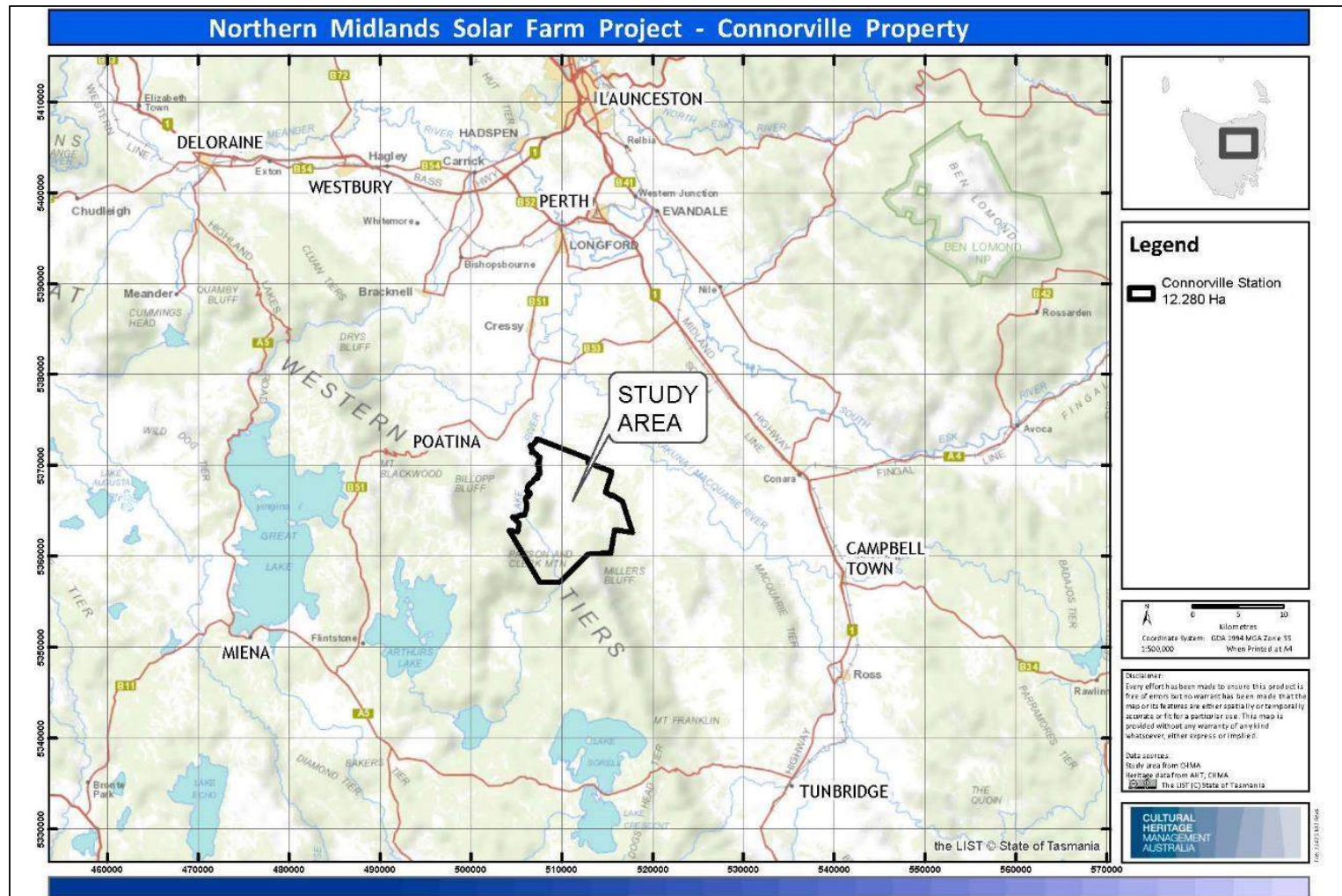


Figure 1: Topographic map showing the general location of the study area at Cressy in the Midlands Region of Tasmania.

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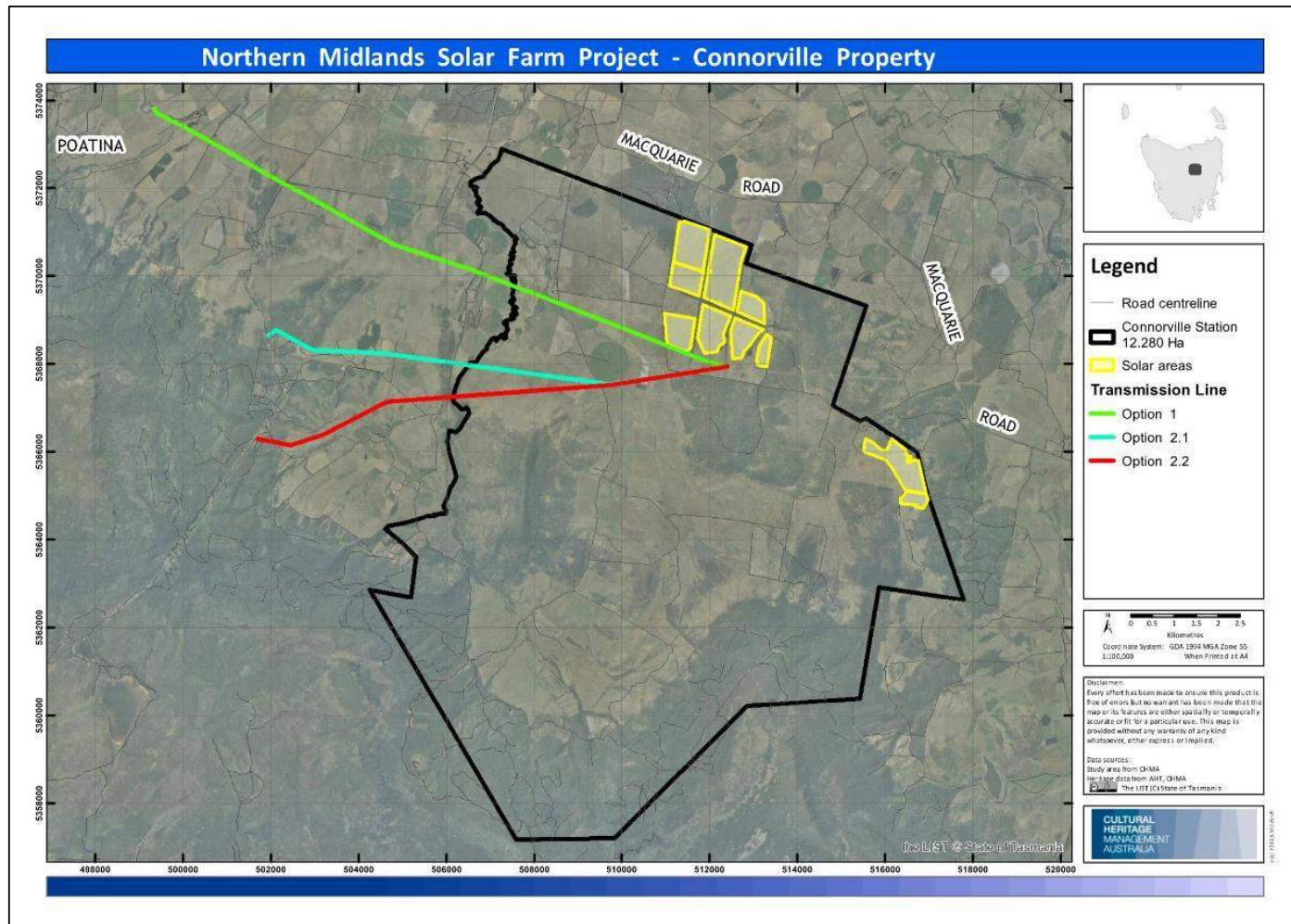


Figure 2: Aerial image showing the NMSF study area footprint.

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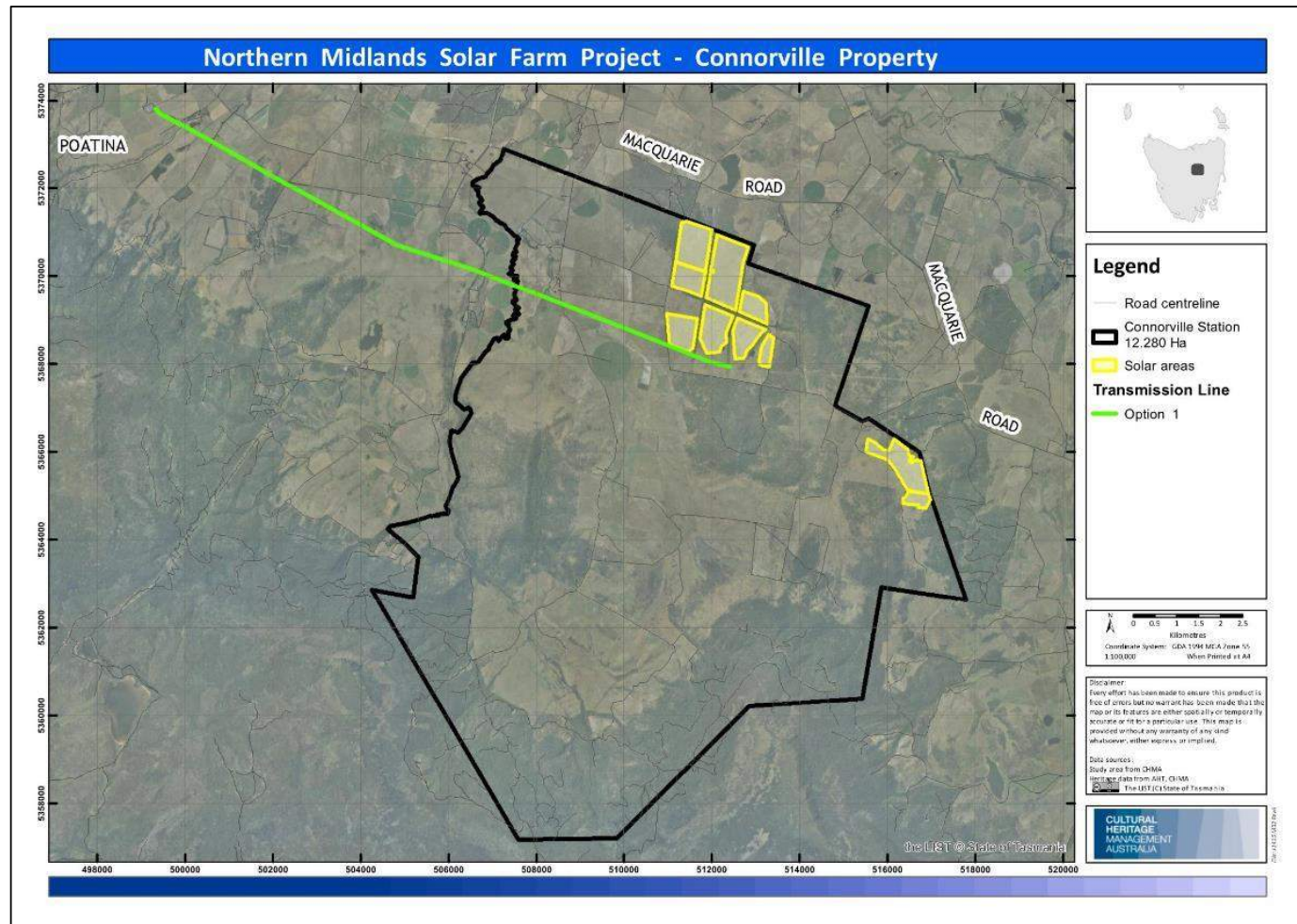


Figure 3: Aerial image showing the revised NMSF Project development footprint.

2.0 Environmental Setting of the Study Area

2.1 Introduction

Before 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 Northern Midlands Solar Farm (the study area) will be situated on the Connorville Station property which encompasses approximately 17 600ha. The project footprint for the solar farm itself will encompass approximately 543ha. The property is situated between the Western Tiers and the Macquarie River. This forms the western rim of the Northern Tasmanian Midlands.

The landscape within the study area is gentle to moderately undulating pastureland with slopes varying from 5°– 40° and some sections of lowland floodplains surrounding watercourses such as Lake River and Dairy Creek, as well as unnamed watercourses and drainage lines (see Plate 1 and Plate 2). The more gentle slopes occur within the northwest sections of the study area, where gradients ranged between 5°– 15° (see Plate 7). In the

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southern and western sections of the study area, gradients increased to between 10°– 40° (see Plate 5).

To the south of the study area are the Mitford Hills and Millers Bluff, leading into the rugged slopes of the Western Tiers that mark the western boundary of the midlands. Immediately west of the study area are the slopes of O'Connor's Peak. North of the study area is the Macquarie River valley, with gentle, undulating land extending through to the southern point of the Tamar Valley. To the east are the low, rolling plains of the Macquarie River valley that characterise the Tasmanian midlands.

The underlying geology of the study area is a variable patchwork. The majority of the northern and western sections of the study area are Cenozoic cover sequences consisting of undifferentiated sediments. The eastern and southern sections of the study area feature Cenozoic cover sequences of sand gravel and mud of alluvial, lacustrine and littoral origin. There is also a small section of the Palaeozoic Upper Parmeener Supergroup predominately consisting of quartz sandstone, Mesozoic – Cenozoic dominantly non-marine sequences of gravel, sand, silt, clay and regolith and Jurassic Dolerite (tholeiitic) with locally developed granophyre (List 2023). Soils present within the northern, north-western and western sections consisted primarily of dark red-brown loam soils, in the southern and eastern sections the soils are dark brown sandy loam and patches of light grey-coloured sandy soils (see Plate 9).

Four named watercourses run through the western section of the study area. The largest of these watercourses is Lake River, which starts at Paradise Hill and merges into the Macquarie River. Lake River runs in a southwest-to-northeast direction for approximately 57.9km. Woodside Rivulet runs through the western section of the study area and runs in a northeast-to-southwest direction. Dairy Creek is also situated within the study area and runs in the northeast-to-southwest direction. Both of these watercourses are semi-permanent and tributaries associated with Brumby's Creek which is situated 4.1km northeast of the western boundary of the study area. Numerous drainage lines and unnamed watercourses are also present throughout the study area (see Plate 1).

The vegetation within the study area primarily consisted of native and introduced grasses such as Prairie Grass (*Bromus catharticus*), Yorkshire Fog (*Holcus lanatus*) and Annual ryegrass (*Lolium rigidum*) (Lane et al. 2015:26–102). Weed species, notably Gorse and Cape Weed are also present throughout the study area (see Plate 2 and Plate 5). Within the study area are stands of eucalypts and native vegetation, notably vegetation corridors that act as paddock borders or vehicle tracks. Bracken Fern (*Pteridium esculentum*), eucalypts, Sagg (*Lomandra longifolia*), Black Wattle trees/saplings (*Acacia mearnsii*) and other native species are present within these vegetation corridors (see Plate 3). In the middle of the northern section of the study area is a Radiata Pine (*Pinus radiata*) plantation (currently being removed) and in the southwest of the study area are eucalypt plantations (see Plates 9 and Plate 11). Stands of eucalypt reforestation are present within the southern, north-eastern and western sections of the study area. Surrounding the various drainage lines, unnamed and named watercourses are species of vegetation such as native rushes including Austral Rush (*Juncus australis*), Silver Tussock Grass (*Poa labillardierei*), native ground covers and introduced grass species such as Yorkshire Fog (Lane et al. 2015:26–102).

The entire study area has been intensively disturbed, primarily due to past clearing and continuous agricultural activity. The southwest and northern sections of the study area have been subject to past clearing and plantation activity. There are numerous gazetted, main access tracks and general access tracks leading into all sections of the study area (see

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Figures 1–2). The gazetted roads present within the north-western, western and south-western sections of the study area are primarily graded with bitumen, however, two gazetted roads are graded with local and introduced gravel. There are also numerous graded and ungraded main and general access tracks throughout the entire Northern Midlands Solar Farm study area footprint, the most notable of these is an access track graded with bitumen to facilitate access to the Palmerston Substation. The construction and ongoing maintenance and development of these gazetted roads and access tracks throughout the study area have been a source of disturbance to the study area. This is also true of the Palmerston Substation in the western section of the study area. Any Aboriginal sites that may be present within these more highly disturbed infrastructure/agricultural 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 west showing one of the unnamed watercourses within the study area.

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Plate 2: View north showing Vernon Graham (SAHO) surveying a drainage line within the study area.



Plate 3: View northeast showing a vegetation corridor and ungraded access track.

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Plate 4: View west showing Kieran Graham (Trainee Aboriginal Heritage Officer) overlooking an area where the 5°– 40° slopes present within the study area could be observed.



Plate 5: View east showing an ungraded access track overlooking the 40° slopes present within the study area.

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Plate 6: View northwest showing 40° slopes and existing transmission line within the study area.



Plate 7: View northwest showing a graded access track present within the study area.

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Plate 8: View north showing a graded access track present within the study area.



Plate 9: View southeast showing the eucalypt plantation located within the southwest section of the study area.

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Plate 10: View southeast showing the light grey sand present within the study area.



Plate 11: View southeast overlooking the Radiata Pine plantation.

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).

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The study area is located on the western boundary of the North Midlands Nation (see Figure 4). 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 of 6,750km² and incorporated around 160km of coastline (Ryan 2012:29).

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 50-80 people, with the overall population of the North Midlands nation estimated at between 300-400 people (Ryan 2012:29). The study area was most likely occupied by the Tyerrernotepanner clan (see Figure 4), who had country centred on modern-day Campbell Town (Ryan 2012:13). However, if as Ryan (2012:29) suggest, there was a clan whose territory focused around the Isis River, then these are the most likely traditional occupants of the study area.

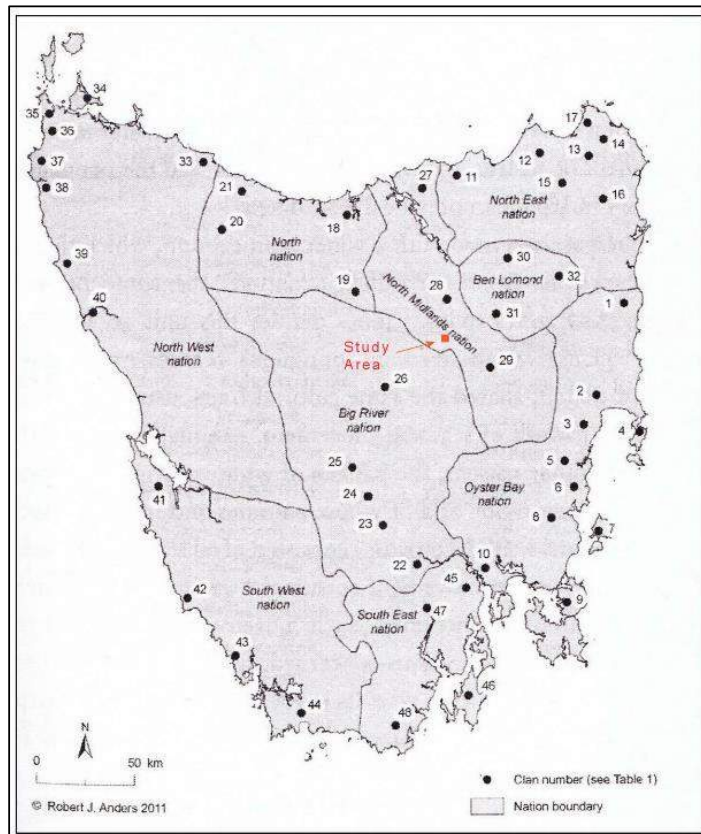


Figure 2: The Aboriginal Nations of Tasmania in relation to the study area (Ryan 2012:13).

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Overall, the economy of the North Midlands Nation was based on a pattern of seasonal migration directed towards specialised resources. This necessitated relations with neighbouring nations, namely the Oyster Bay, Ben Lomond, North and Big River Nations. The North Midlands people had access to a small section of coastline in the north, around the Tamar River estuary. They also had seasonal access to the east coast at Oyster Bay through negotiations with the Oyster Bay Nation (Ryan 2012:31). Other seasonal travel routes existed 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) had highly developed relations with both the North and Big River Nations that facilitated this seasonal travel (Ryan 2012:31).

The Tyerrernotepanner are known from ethnographic records to have spent the winter on the eastern coast, with exchange systems with the Oyster Bay Nation. In spring, the Tyerrernotepanner moved back to the plains around Campbell Town that held extensive kangaroo hunting grounds. Indeed, Ryan (2012:31) claims that these were the largest kangaroo hunting grounds in Tasmania. The Tyerrernotepanner tended to move inland to the Western Tiers during the warmer summer months. The highland country provided the chance to obtain important ochre supplies, as access to the eucalyptus *gurii* forests, a tree confined to the highlands that produces an intoxicating gum (Ryan 2012:31). By autumn the Tyerrernotepanner returned to the Campbell Town district and the reliable kangaroo populations (Ryan 2012:31). Figure 5 illustrates these seasonal movement patterns. It appears from this map that one of the favoured travelling routes of the Tyerrernotepanner people was along the Macquarie River valley.

There is ethnographic evidence to suggest that the Campbell Town area may have been a focal point of activity for the Tyerrernotepanner people. In a journal entry dated 17/10/1831, Robinson writes:

'The country around Campbell Town was formerly a favourite place of resort for the natives. Near to where I was camped there was evident indications that the natives had at one time made their rendezvous: numerous trees had been barked for the purpose of constructing their huts, and sharp stones with which they had sharpened their spears were frequently picked up in the course of my journey' (Plomley 1966: p485).

Just how friendly the relationship was between the Tyerrernotepanner and neighbouring groups is debatable. For example, in his journals, Robinson reports that the Tyerrernotepanner had been at war with the Oyster Bay Nation 'for a length of time' (Plomley 1966:416). Robinson also records that there were hostilities at various times between the Tyerrernotepanner and the Big River Nations (Plomley 1966:494). Journal entries by Gilbert Robertson in 1828 report that the Leterremairrener (Port Dalrymple) clan and the Tyerrernotepanner people were not on friendly terms, even though they are both believed to have belonged to the North Midlands Nation (Jones 1974).

Based on this evidence, it would appear that the social relationships between neighbouring Aboriginal groups in the region were fluid and changeable, oscillating between amicable and hostile over time. Unfortunately, there are only a few available ethnohistoric accounts that relate to aspects of the material culture of the North Midlands Nation.

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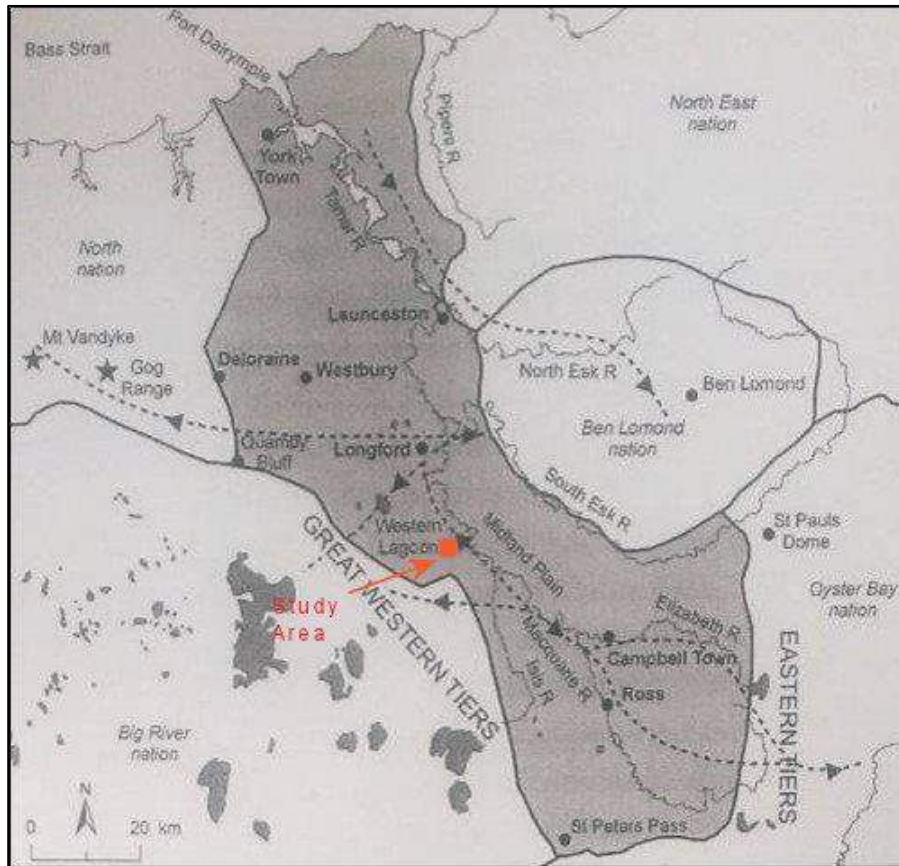


Figure 3: Settlement and movement patterns of the Northern Midlands Nation clans (Ryan 2012:27).

One of the very few descriptions for 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

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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).

As mentioned previously, the Tyerrernotepanner often spent the summer months in the Western Tiers, where they would access known ochre sources located in the vicinity of Mount Vandyke. It is likely that the ochre used by the Aboriginals in this account of Robinson was sourced from this area.

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 is 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.

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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). In 1800 Matthew Flinders also 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 a British party comprising soldiers, convicts, women and children led by Colonel William Paterson arrived at the Tamar estuary near modern-day George Town (Breen and Summers 2006:24). The British settlers were instructed to obtain the north of the island for the British and contact with the Leterremairrener people was initiated (Breen and Summers 2006:24). After having been camped on shore for six days the British were approached by a group of 80 Aboriginal men and women. After making unsuccessful attempts to exchange gifts a tussle ensued in which an Aboriginal man tried to push a soldier into the sea. A musket was fired, and one Aboriginal person was killed and another wounded (Breen and Summers 2006:24).

Contact throughout these early periods seems characterised by violence and mistrust in the north (Breen and Summers 2006:25). In January 1804 William Collins met a group of Aboriginal people at Port Dalrymple who made signs to him to leave (Breen and Summers 2006:25). This is somewhat in contrast to the experiences documented in the south where an initial period of friendly relations was superseded by violence (see CHMA 2011). The violence on the northern frontier continued till the 1830s when Robinson reported meeting sealers on the Tamar who told him that in Launceston 'nothing was heard or thought of than shooting the natives' (in Breen and Summers 2006:27).

By this time sealers and whalers had been hunting in the Bass Strait islands and along the Tasmanian coast for several years. In 1816 James Kelly met as many as 300 people at George Rocks. Kelly was a sealer who traded culled seals with the Aboriginal people of the coast in exchange for kangaroo meat and skins (Kee 1987:19).

While there are some suggestions that initial contact between Aboriginal people and the whalers and sealers may have been friendly, 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 were known to have abducted women to use as wives and to work on the sealers camps. 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 north and east coasts had disastrous implications for the North Midlands people. Apart from the individual, and emotional devastation, the loss of large numbers of women disrupted social organisation, as well as impacting 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 Midlands Region of Tasmania. Many regional archaeological investigations have been undertaken in these regions over the past three decades. The most comprehensive, and pertinent investigations are those of Kee (1990), Entura (2011) and CHMA (2014, 2023). 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

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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 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 the 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.

Entura (2011)

Jackman (Entura archaeologist) undertook a comprehensive survey of the Midlands for the Midlands Water Scheme (2011). The survey by Entura (2011) covered an extensive area, with over 130km of survey transects across the Central Highlands and Midlands. The survey recorded 136 Aboriginal heritage sites that demonstrate the nature of past Aboriginal use of these regions.

Based on an analysis of the 48 sites recorded by Jackman in the Midlands as part of the Midlands Water Scheme survey, Entura archaeologist Greg Jackman suggested several potential site distribution patterns (Entura 2011:43). In the Midlands, Jackman argues that the dominant site type will be artefact scatters and isolated artefacts. Open artefact scatters may be large and there is potential for stratified sites to occur. Other site types include quarries and stone procurement sites and rock shelters and rock overhangs with associated archaeological deposits (Entura 2011:49).

Jackman suggests that open sites are likely to be closely correlated with permanent watercourses, with the majority of open sites recorded by Jackman situated within 500m of water. Moreover, large artefact scatters are most likely to be located along the margins of lakes, lagoons and floodplains where a range of other plant and terrestrial resources were available (Entura 2011:49). Occupation sites, such as artefact scatters, were often found to be located on benched terraces or low rises. Aeolian sand banks bordering lagoons and

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rivers have increased potential to contain archaeological deposits, as these provide elevated, well-drained campsites with close proximity to fresh water (Entura 2011:49).

Jackman noted that concentrations of sites also often occur in small, sheltered valleys at the foot of the various ranges, including Black Tier, south of Tunbridge (Entura 2011:50). This reflects the choice of sheltered campsites along pathways used by groups of Aboriginal people moving between seasonal resource zones along ethnographically documented pathways.

One such clustering of sites occurs at the Salt Pan Plains and Kitty's Creek area at the foot of the Black Tier. At the gap between Salt Pan Plains and Kitty's Creek, there are a series of small artefact scatters and isolated artefacts. Jackman suggests that this may indicate that people regularly passed through this gap when travelling between the Central Tiers and the Midlands (Entura 2011:43). Jackman records this area as being of high archaeological sensitivity (Entura 2011:53). Jackman also suggests that the name Black Tier may be a reference to Aboriginal people living in this area at the time of European settlement, however, there is no documented historical basis to this tempting assertion (Entura 2011:43).

Quarry sites in the Midlands tend to target chert and hornfels outcrops occurring at the contact points of Jurassic dolerite and Permo-Triassic mudstone and siltstone deposits (Entura 2011:49). Chert quarries occur in outcrops of Tertiary claystone (Entura 2011:50).

CHMA (2014)

CHMA (2014) was engaged by AK Consultants to undertake an Aboriginal heritage assessment of a proposed new dam construction on the Connorville property (the same property as the current study area). The proposed dam was situated along an unnamed tributary creek line of the Lake River and was a 525ML in-stream dam, with a maximum surface area of 15.6 hectares (CHMA 2014:iv).

The 15.6ha of maximum surface area was the focus of the field survey. The field survey was undertaken on foot by walking a series of transects within the designated bounds of the proposed dam inundation area and the alignment of the proposed dam wall. In total, 4.9km of transects were walked within the bounds of the study area. In the course of the field assessment, any areas of improved surface visibility (such as vehicle tracks and erosion areas) were subject to a detailed inspection (CHMA 2014:iv).

An initial desktop investigation revealed that there were no previously registered sites within the bounds of the study area. The field survey team did identify one Aboriginal heritage site (AH11983). The site was classified as a small artefact scatter comprising two surface artefacts. The site was positioned outside (to the northwest) of the proposed dam footprint and therefore was deemed not under direct threat of impact through the dam construction. The site was found to have a very limited potential to comprise additional undetected artefact material. No Aboriginal heritage sites were identified within the actual footprint of the proposed dam inundation area (including the dam wall alignment) (CHMA 2014:iv–vi). These negative survey results yielded by the field survey team were assessed as being a reasonable indication that site and artefact densities within the dam inundation area was

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likely to be very low. It was assessed that there was a very low potential for the proposed dam construction works to impact on the recorded Aboriginal heritage site.

CHMA (2023)

CHMA (2023) was engaged by Tasmanian Irrigation Pty Ltd (TI) to conduct an Aboriginal heritage assessment of the Northern Midlands Irrigation Scheme (NMIS). This is part of the Pipeline to Prosperity (Tranche 3), a suite of schemes proposed by TI. The scheme covers the regions of Cressy, Powranna, Barton, Conara, Epping Forest, the Lower Macquarie and Isis Rivers, Campbell Town, and Ross. The NMIS proposed to distribute 25,500 ML of water annually to 40 landholders in the NMIS project area (CHMA 2023:1–2).

The field survey assessment was undertaken over a period of 13 months, between November 2021 and November 2022. The field survey program initially focused on the original network of proposed pipeline corridors (approximately 157km in length). TI subsequently made a series of realignments to sections of the pipeline corridors. The second phase of the field survey program was focused on the subsequent pipeline corridor realignment options (approximately 30km of realignments) (CHMA 2023:47). The field survey also looked at the Poatina or Valleyfield balance tank footprints and the Valleyfield, Epping Forest pump station footprint. It should be noted that a section of the pipeline easement was situated in very close proximity to the Connorville property.

An initial desktop survey revealed that there are a total of 166 registered Aboriginal heritage sites that are located within an approximate 5km radius of the pipeline corridors study area, including the subsequent realignments. Of the 166 sites, 83 are classified as artefact scatters, 78 are classified as isolated artefacts, five are classified as stone quarries and three are classified as stone quarries/artefact scatters (CHMA 2023:1). None of the sites were found to be situated within the project footprint.

The survey conducted by the field team identified 30 previously unrecorded Aboriginal heritage sites, of which 29 did not correlate with any previously recorded sites. One site did correlate with the previously registered site AH1424. All of the newly recorded sites were identified within the pipeline easements. The majority of the recorded Aboriginal sites are classified as isolated artefacts (22 sites). One of these isolated artefact sites (AH14038) was associated with an area defined as a Potential Archaeological Deposit (PAD1). This is an area where it was assessed that there was an elevated archaeological potential for additional sub-surface artefact deposits to be present. The site was located on a sand lunette fringing the Macquarie River. The other 21 isolated artefacts are assessed as having a low potential for additional surface or sub-surface artefact deposits to be present.

Seven of the recorded sites were classified as low-density artefact scatters (each comprising 10 or less artefacts). Site AH14054 was the largest of the artefact scatters, comprising 10 surface artefacts). The other six artefact scatters each comprised two or three artefacts. Two of these artefact scatters (AH14055 and AH1424) were associated with PAD areas (PADs 2 and 3). Both sites are situated on a sandy Aeolian rise, fringing a natural wetland lagoon. For the other four artefact scatters it is assessed that there is low potential for additional surface or sub-surface artefact deposits to be present.

In addition, there was one recorded Aboriginal stone procurement site (AH14039).

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The stone procurement site is located approximately 3.7km to the northwest of Campbell Town. The stone procurement site comprised 30+ artefacts and was observed to extend across an area measuring 90m (southeast to the northwest) x 25m. The artefacts were all manufactured from chalcedony. No procurement activity was observed beyond the recorded bounds of the site, where the stone materials transition to a more coarse-grained, less siliceous material.

Besides the sites identified by CHMA (2023), no other Aboriginal heritage sites, suspected features, or specific areas of elevated archaeological potential were identified during the survey of the Northern Midlands Irrigation Scheme (NMIS) footprint. None of the sites recorded by CHMA (2023) were situated within or in the immediate vicinity of the Connorville property.

4.2 Registered Aboriginal Sites in the Vicinity of the Study Area

As part of Stage 1 of the 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 Northern Midlands Solar Farm Project study area.

The search shows that there are a total of 38 registered Aboriginal sites that are situated within an approximate 5km radius of the NMSF project footprint (search results provided by Joel Williams from AHT on 10-10-2022). Thirteen (13) of these sites are classified as artefact scatters, 24 sites are classified as isolated artefacts and one site is classified as an Aboriginal stone quarry with an associated artefact scatter. The majority of these sites are clustered around the Macquarie River, to the north of the study area. Table 1 provides the summary details for these 38 registered Aboriginal sites, with Figure 6 showing the location of these sites in relation to NMSF project footprint.

None of these 38 registered Aboriginal sites are located within or in the immediate vicinity of the NMSF project footprint. The closest registered site is AH11983 which is situated around 2km to the south. The site is a small artefact scatter that was identified by CHMA (2014) as part of the assessment of a proposed farm dam on the Connorville Station property. Figure 7 shows the closest registered Aboriginal sites in relation to the study area.

Table 1: Registered Aboriginal sites in a 5km radius of the Northern Midlands Solar Farm study area (based on the results of the AHR search dated 10-10-2022).

AH Number	Site Type	Locality	Grid Reference Easting (GDA94)	Grid Reference Northing (GDA94)
688	Artefact Scatter, Stone Quarry	Cressy	507612	5373883
10213	Isolated Artefact	Cressy	515160	5373927
10697	Isolated Artefact	Cressy	514681	5375085
10743	Artefact Scatter	Cressy	505650	5373357
10744	Isolated Artefact	Cressy	507566	5373091
10745	Isolated Artefact	Cressy	510312	5372718
10746	Isolated Artefact	Cressy	510476	5372654
10747	Artefact Scatter	Cressy	517988	5372100
10907	Isolated Artefact	Cressy	516268	5372160
10908	Isolated Artefact	Cressy	515647	5372279
10909	Isolated Artefact	Cressy	512623	5372802

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AH Number	Site Type	Locality	Grid Reference Easting (GDA94)	Grid Reference Northing (GDA94)
10910	Isolated Artefact	Cressy	516120	5372173
10911	Isolated Artefact	Cressy	518029	5371953
10912	Isolated Artefact	Cressy	518462	5372453
10913	Isolated Artefact	Cressy	517679	5372041
11983	Artefact Scatter	Cressy	511448	5364352
3972	Isolated Artefact	Cressy	510612	5376483
3973	Isolated Artefact	Cressy	510512	5376283
3974	Artefact Scatter	Cressy	510212	5376583
3975	Artefact Scatter	Cressy	510059	5376445
3978	Artefact Scatter	Cressy	516412	5372883
3979	Artefact Scatter	Cressy	516312	5372583
3982	Artefact Scatter	Epping Forest	516512	5373083
3983	Isolated Artefact	Epping Forest	517312	5373083
3984	Isolated Artefact	Epping Forest	517012	5372983
3985	Artefact Scatter	Epping Forest	517412	5372983
3986	Artefact Scatter	Epping Forest	517412	5372883
3987	Isolated Artefact	Epping Forest	517912	5373083
3988	Isolated Artefact	Epping Forest	517712	5373083
9107	Artefact Scatter		518862	5372780
9108	Artefact Scatter		518624	5372240
9109	Isolated Artefact	Campbell Town	518664	5370435
9110	Isolated Artefact	Campbell Town	518964	5369999
9246	Artefact Scatter	Cressy	514950	5375111
13592	Isolated Artefact	Cressy	515308	5372504
13593	Isolated Artefact	Cressy	515768	5372814
14030	Isolated Artefact	Cressy	514229	5373922
14041	Isolated Artefact	Cressy	506219	5371612

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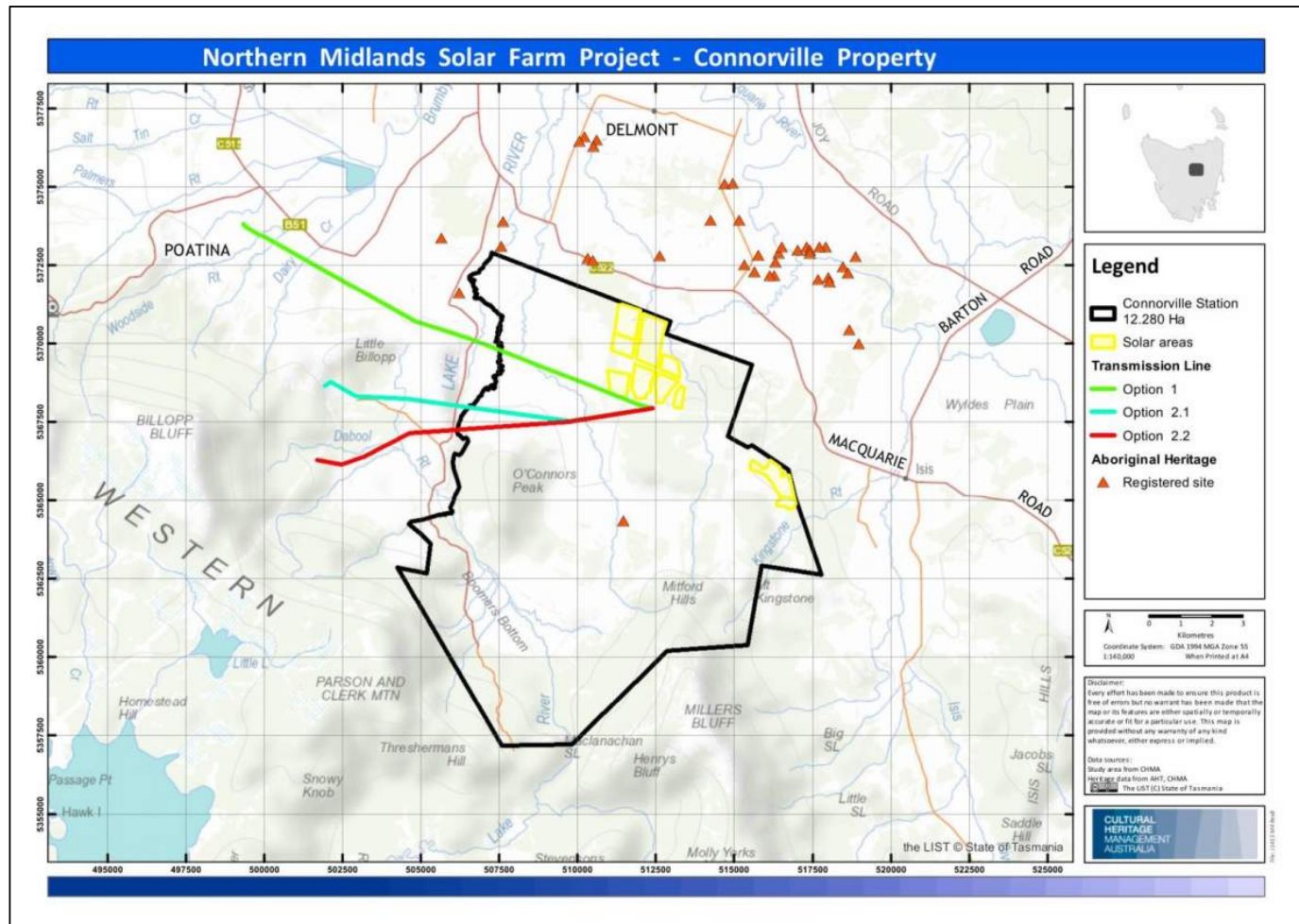


Figure 4: Topographic map showing the location of registered Aboriginal sites that are situated within an approximate 5km radius of the study area (based on the results of the AHR search dated 10-10-2022).

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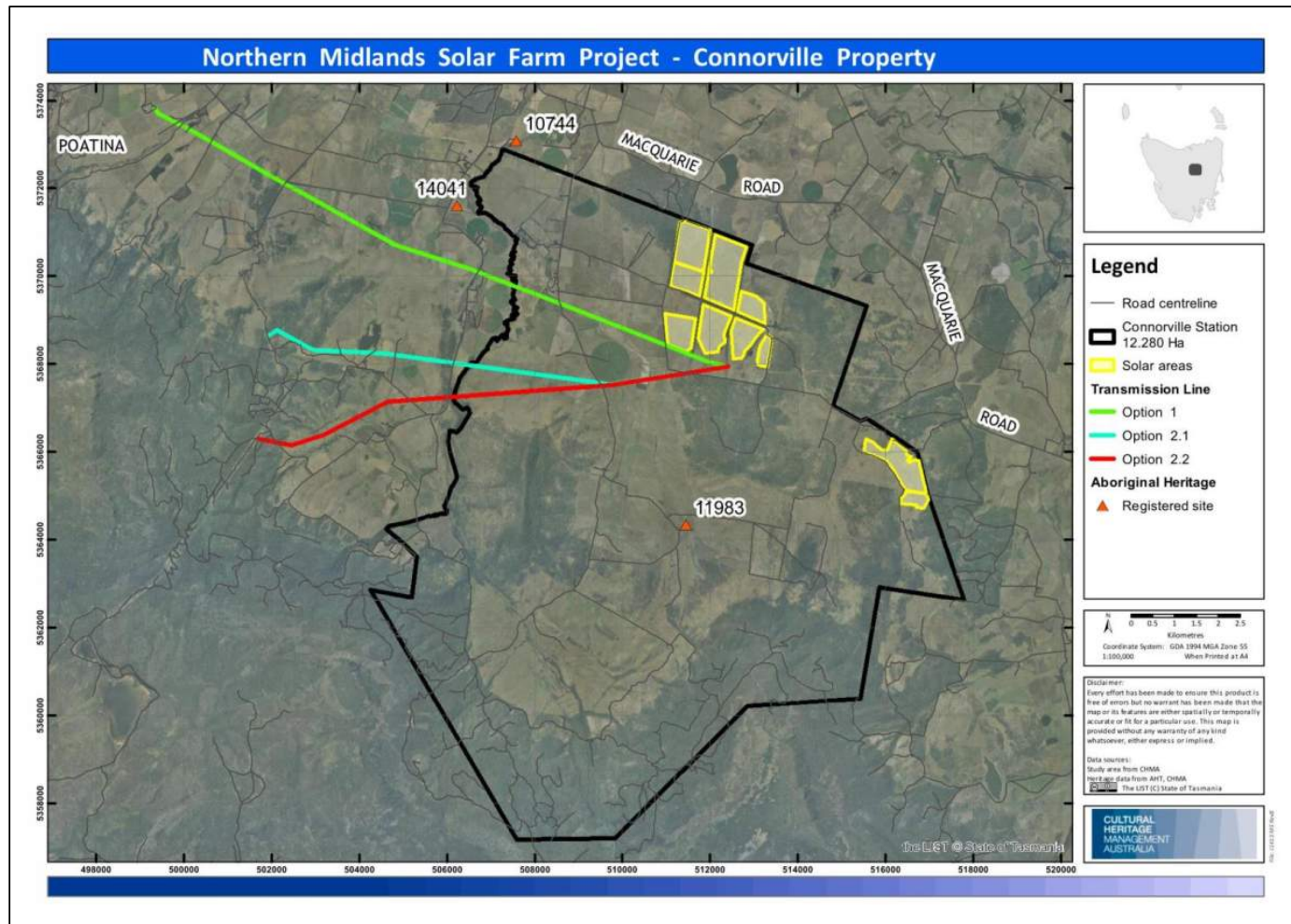


Figure 5: Aerial map showing the location of the closest registered Aboriginal sites to the study area (based on the results of the AHR search dated 10-10-2022).

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

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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 Midlands Region, in the general surrounds of the study area. These include Aboriginal stone quarries and Aboriginal rock shelters. The underlying geology of the study area consists of Cenozoic cover sequences which consist of sand gravel and mud of alluvial, lacustrine and littoral origin (List 2022). The stone material present in the study area was generally not well suited for Aboriginal artefact manufacturing and as such it is highly unlikely that Aboriginal stone quarries or Aboriginal rock shelters will be present in the study area.

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 through 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

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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 Northern Midlands Solar Farm study area is situated within terrain that is characteristically flat to moderately undulating pastureland, with some sections of lowland floodplains surrounding the existing drainage lines and watercourses. The more gentle slopes occur within the northwest sections of the study area, where gradients ranged between 5°– 15°. In the southern and western sections of the study area, gradients increased to between 10°– 40°. The closest named watercourses are located within the western section of the study area. The largest is Lake River, which is a semi-permanent watercourse, then there is Dabool Rivulet, Woodside Rivulet and Dairy Creek are semi-permanent and tributaries associated with Brumby's Creek which is situated 4.1km northeast of the western boundary of the study area.

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 moderate. 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. This is based on the fact that the NMSF project study area footprint is situated away from the major riverine valleys of the Macquarie and Lake Rivers.

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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 8 provides a useful guide for estimating surface visibility.

The field survey was undertaken by Stuart Huys and Shay Hannah (CHMA archaeologists), Vernon Graham (Senior Aboriginal Heritage Officer) and Kieran Graham (Trainee Aboriginal Heritage Officer), over a period of 6 days (24-11-2022 – 28-11-2022 and then a final survey 30-03-2023). The field team walked a total of 91.9km of survey transects across the proposed Northern Midlands Solar Farm footprint, with the average width of each transect being 10m. Table 2 provides the total transects walked for each section and Figure 9 shows the alignment of the survey transects walked by the field team.

The survey transects were predominately focussed on the Northern Midlands Solar Farm footprint, including the associated transmission line corridor options and access tracks. 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. Surface visibility across the study area was variable, ranging between <10% to 90%, averaging at 25% which is in the low range. Improved surface visibility was found within erosion scalds which ranged from 50% and 100%, averaging at 70%. Vegetation cover was the main impediment to visibility.

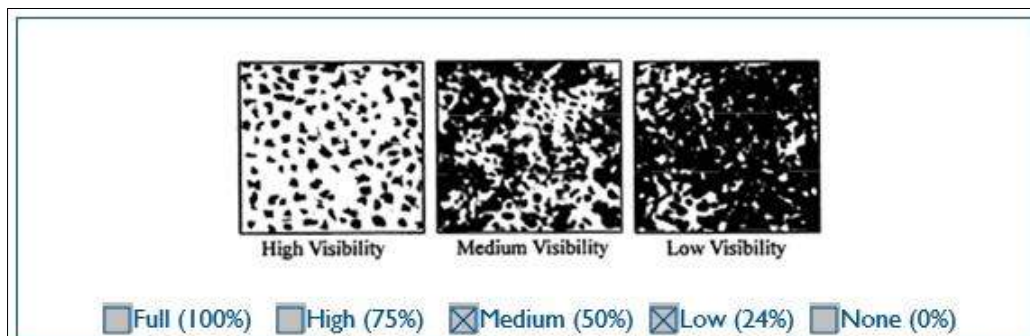


Figure 8: Guidelines for the estimation of surface visibility.

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 2 presents the estimated effective survey coverage achieved during the course of the survey assessment. The effective coverage is estimated to have been around 231,337.5m². This level of effective coverage is assessed as being adequate for the

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purposes of determining the potential extent, nature and distribution of Aboriginal cultural heritage sites in the study area.

Table 2: Effective Survey Coverage achieved across the surveyed areas.

Area Surveyed	Survey Transects	Estimated Surface Visibility	Effective Survey Coverage
Northern Midlands Solar Farm	19 400m x 10m= 194000m ²	25%	48,500m ²
Transmission Lines	34 405m x 10m= 344 050m ²	25%	86,012.5m ²
Access Tracks	38 730m x 10m= 387 300m ²	25%	96,825m ²
Total	925 350m²		231 337.5m²



Plate 12: View northeast showing surface visibility at <10% due to native vegetation cover.

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Plate 13: View northwest showing the average surface visibility of an access track within the study area.



Plate 14: View north showing surface visibility at <10% within the Northern Midlands Solar Farm study area.

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Plate 15: View southeast showing an erosion scald within the study area where surface visibility is increased to 100%.

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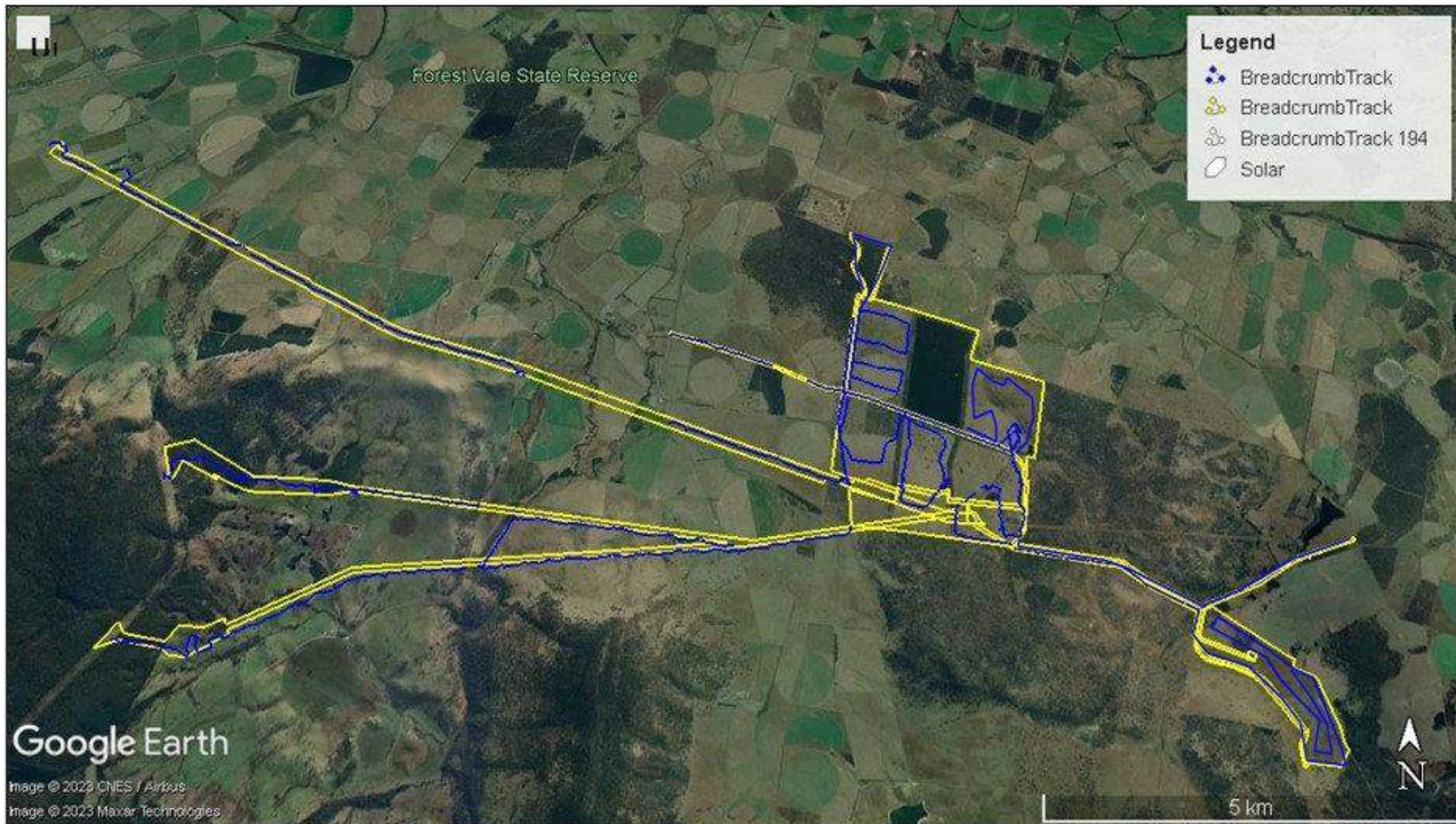


Figure 9: Aerial image showing survey transects (shown in blue) walked by the field team across the study area (shown in yellow).

7.0 Survey Results and Discussion

7.1 Summary Survey Results

The field survey assessment of the NMSF project footprint resulted in the identification and recording of five Aboriginal heritage sites. Two of these sites are classified as artefact scatters (AH14167 and AH14168), with the other three sites classified as Isolated artefacts (AH14148, AH14165, AH14166). Table 3 provides the summary details for these five recorded sites, with Figures 10-13 showing the location of these five recorded sites in relation to the project footprint. The detailed site descriptions are presented in Appendix 2. The following provides a summary description for the five recorded sites.

Site AH14167 is the largest of the recorded sites and is a high-density artefact scatter comprising 90+ artefacts. The site is located approximately 50m west of an unnamed watercourse and was observed to extend across an area of around 72m x 21m, which incorporates three sand ditches along a sandy ridge. The soil deposits in this area are loosely consolidated sands. It is assessed that there is a high likelihood for additional surface and sub-surface artefact deposits to be associated with this site. The site is also likely to extend beyond the current recorded spatial boundaries, along the sand ridge that borders the ephemeral creek. This zone of archaeological sensitivity incorporates an area measuring around 300m x 50m. Figure 13 shows the current recorded extent of the site and the zone of sensitivity that incorporates the likely extent of the site. AH14167 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.

Site AH14168 is low-density artefact scatter comprising four artefacts. The site is located within a drainage line across an area measuring a 24m x 1m. 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 AH14168. However, all indications are that artefact densities are likely to be low. If artefacts are present, they are likely to be confined to the margins of the drainage line, along an area measuring around 70m x 20m. The soils in this zone of sensitivity are loosely consolidated sands which have some potential for sub-surface deposits to be present. AH14168 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.

Site AH14148 is an isolated artefact that is located within an erosion scald on a hill with a 15° slope. The site is located approximately 5.7km southeast of Lake River and approximately 1.5km south of an unnamed watercourse. 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. 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 AH14148. However, all indications are that artefact densities are likely to be low to very low.

Site AH14165 is an isolated artefact that is located in an erosion scald on a 5° within a drainage line surrounded by pastureland. AH14165 is situated in a heavily disturbed context, with the site having been impacted by the clearing and ploughing of surrounding paddocks.

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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 AH4165. However, all indications are that artefact densities are likely to be low to very low.

Any additional undetected artefact deposits associated with the site are expected to have been impacted to some extent.

Site AH14166 is located in an erosion scald on the 15° slope of a dam wall surrounded by pastureland. The site is located approximately 1.4km southwest of Lake River. 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 AH14165. However, all indications are that artefact densities are likely to be low to very low.

Table 3: Summary details for Aboriginal sites AH14167, AH14168, AH14148, AH14165 and AH14166.

Site Name	Grid References (GDA 94)	Site Type	Site Description
AH14167	E 513344 N 5369234 E 513334 N 5369244 E 513319 N 5369301 E 513331 N 5369261 E 513344 N 5369256 E 513351 N 5369251	Artefact Scatter	Artefact scatter (90+ artefacts) located within three sand ditches with 10°–20° slopes, approximately 50m west of an unnamed watercourse. The site has a medium to high potential for additional surface or sub-surface artefacts to be present. The artefacts are likely to be confined to the PAS area defined in this report.
AH14168	E 511694 N 5368290 E 511678 N 5368308	Artefact Scatter	Artefact scatter (4 artefacts) located within a drainage line with slopes of 30°–90°. The site is located 3.8km southeast of Lake River. The site has some potential for additional surface or sub-surface artefacts to be present. Densities are likely to be low and confined to the PAS area defined in this report.
AH14148	E 512987 N 5367723	Isolated Artefact	A cream quartzite blade core located within an erosion scald on a hill with a 15° slope. Site is located 5.7km southeast of Lake River and 1.5km south of an unnamed watercourse. 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.
AH14165	E 512078 N 5368137	Isolated Artefact	An orange banded chert flake located in an erosion scald on a 5° within a drainage line surrounded by pastureland. Site is located 4.1km southeast of Lake River and 1.7km southwest of an unnamed watercourse. 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.
AH14166	E 509517 N 5368980	Isolated Artefact	A white quartz flake located in an erosion scald on the 15° slope of a dam wall surrounded by pastureland. Site is located 1.4km southwest of Lake River. 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.

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7.2 Further Discussion

The assessment of the NMSF project footprint has resulted in the recording of five Aboriginal sites. Site AH14167 is the largest of the Aboriginal sites recorded within the study area, both in terms of spatial extent and artefact densities. The site is likely to be representative of a favoured interim camp site location, which was utilised on a regular basis by the people of the Northern Midlands Nation as part of their seasonal movement through their territory. The well drained sand deposits across the area would have afforded comfortable camping conditions, with easy access to a nearby water source. The other four recorded Aboriginal sites are all likely to be representative of more sporadic hunting and foraging activity.

Besides the five 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 NMSF project footprint. As noted in section 4.2 of this report, the AHR search results show that there are no registered Aboriginal sites that are located within or in the immediate vicinity of the NMSF project footprint. 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 25% to 70%. Whilst the survey coverage for the field program was an estimated 925,350m², effective coverage was decreased to around 231,337.5m². 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.

The results of the present assessment are generally consistent with the findings of previous archaeological investigations in the general area. The most notable of these investigations are those by Kee (1990), Entura (2011) and CHMA (2014;2023). In her discussion of lowland hills and plains sites, Kee (1990) noted that the majority of identified Aboriginal heritage sites were artefact scatters and isolated artefacts, predominately located on flat to gently undulating landscapes such as midslope benches and the crests of low rises which provide dry campsites within easy access to freshwater (Kee 1990:56–57). Kee (1990) also discussed riverine sites, where it was noted that the majority of Aboriginal heritage sites identified were isolated artefacts or artefact scatters located on floodplains or alluvial terraces of the riverine system up to 1km away (Kee 1990:58). Entura (2011) and CHMA (2023) reported similar findings to those by Kee (1990) for the Midlands region, with the dominant site types being artefact scatters, open artefact scatters and isolated artefacts. Both CHMA (2023) and Entura (2011) identified these sites as being in close correlation with the existence of permanent watercourses, lagoons and floodplains, with the majority of sites recorded situated within 500m of water (Entura 2011:49). These sites were predominately found on benched terraces or low rises, similar to those noted by Kee (1990) (Entura 2011:49; CHMA 2023). This site pattern of higher site and artefact densities was observed and summarised by Kee (1990) in her study of the Midlands region, where 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

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decreased resource availability, resulting in shorter, less frequent occupation of these areas by small groups of people.

The NMSF study area is situated to the south of the Macquarie River valley and to the east of the Lake River. The terrain across the study area is typically quite gently undulating and is drained by a series of ephemeral water courses. Being outside the main river valleys, site and artefact densities across the study area would reasonably be expected to be lower compared with the main river valleys. The findings of the field survey assessment of the NMSF project footprint are reasonably consistent with this regional pattern of site distribution. However, site AH14167 is somewhat of an anomaly. As noted previously, the densities of artefact associated with this site is consistent with more intensive activity, with the site likely to be representative of a favoured interim camp site. Such sites would typically be expected to be positioned close to the major riverine systems. However, site AH14167 is positioned is situated over 2km from both the lake River and the Macquarie River. The site may have been specifically utilised during the wetter periods when the main river valleys were inundated by flood waters.

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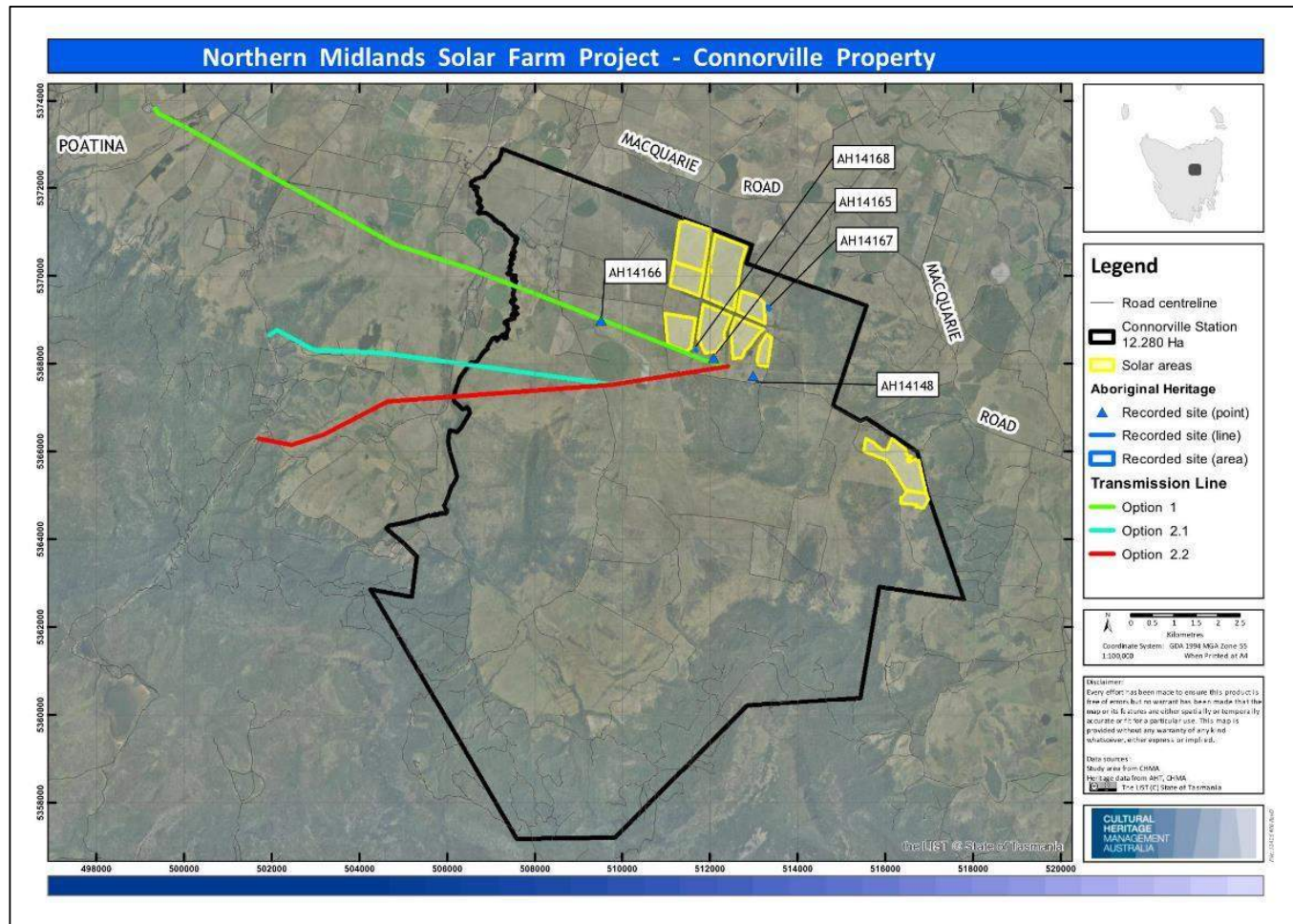


Figure 10: Aerial image showing the location of the five Aboriginal heritage sites recorded during the survey assessment of the study area.

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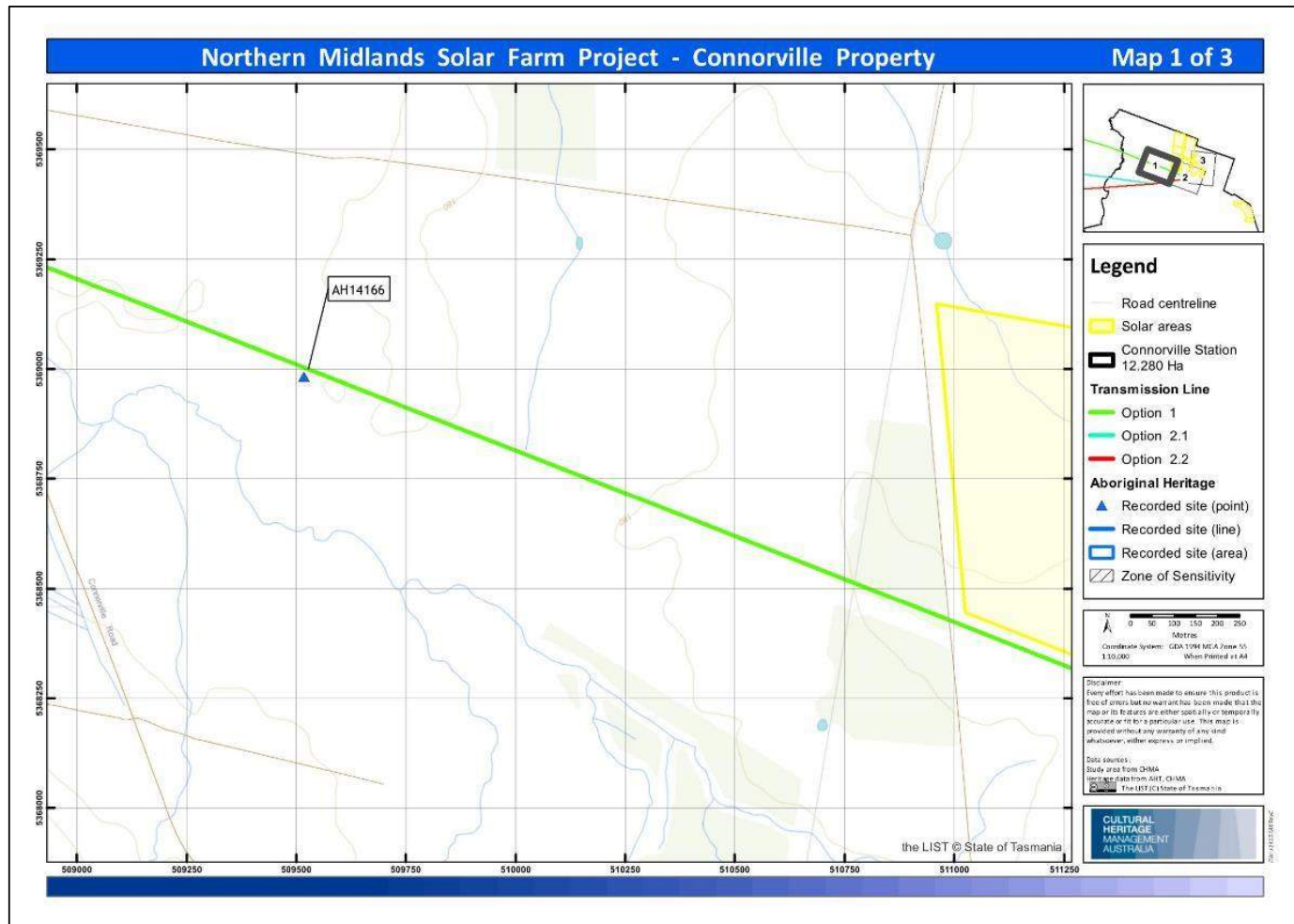


Figure 11: Topographic image showing the location of AH14166.

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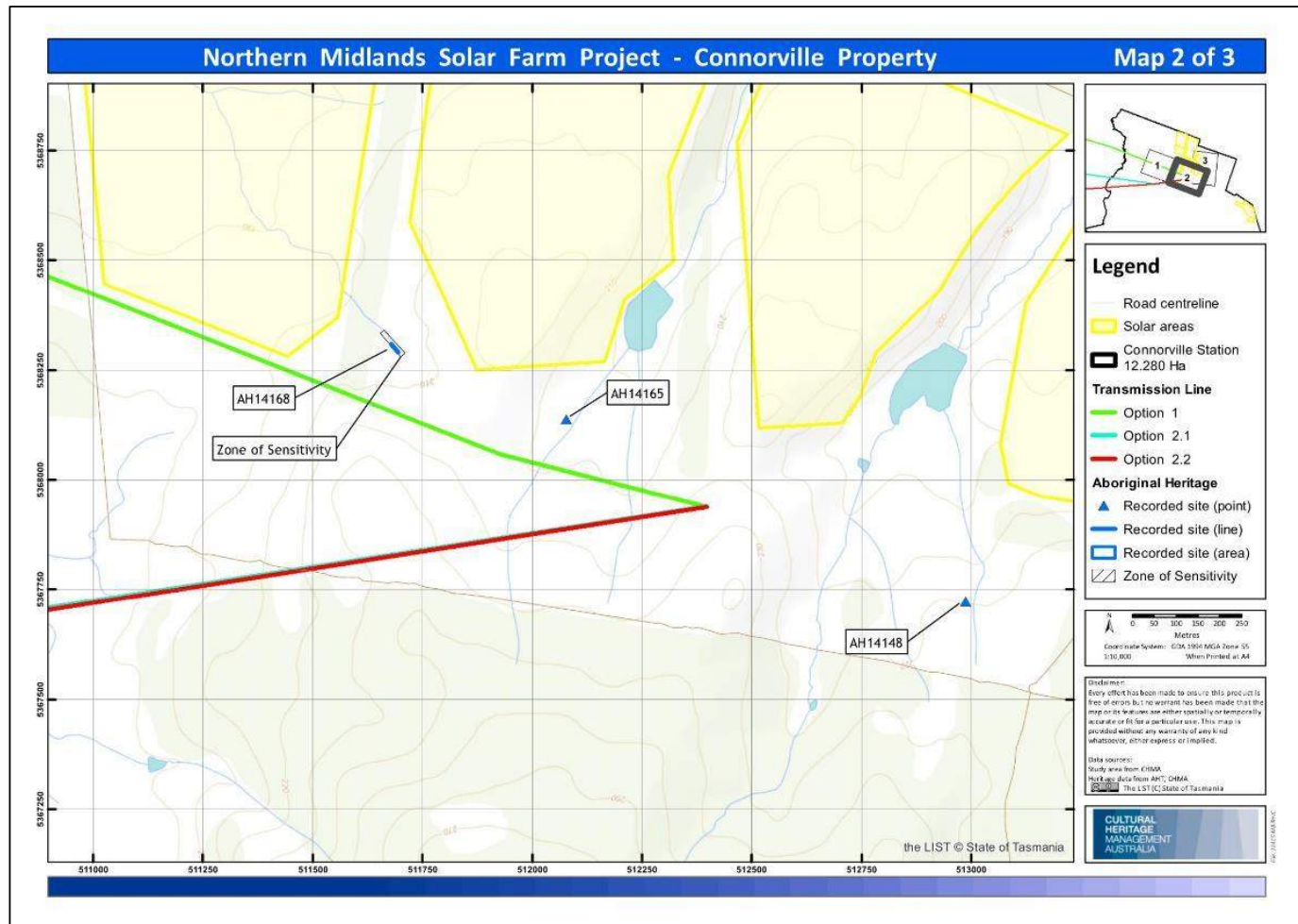


Figure 12: Topographic image showing the location of AH14148, AH14165 and AH14168 with surrounding zone of sensitivity.

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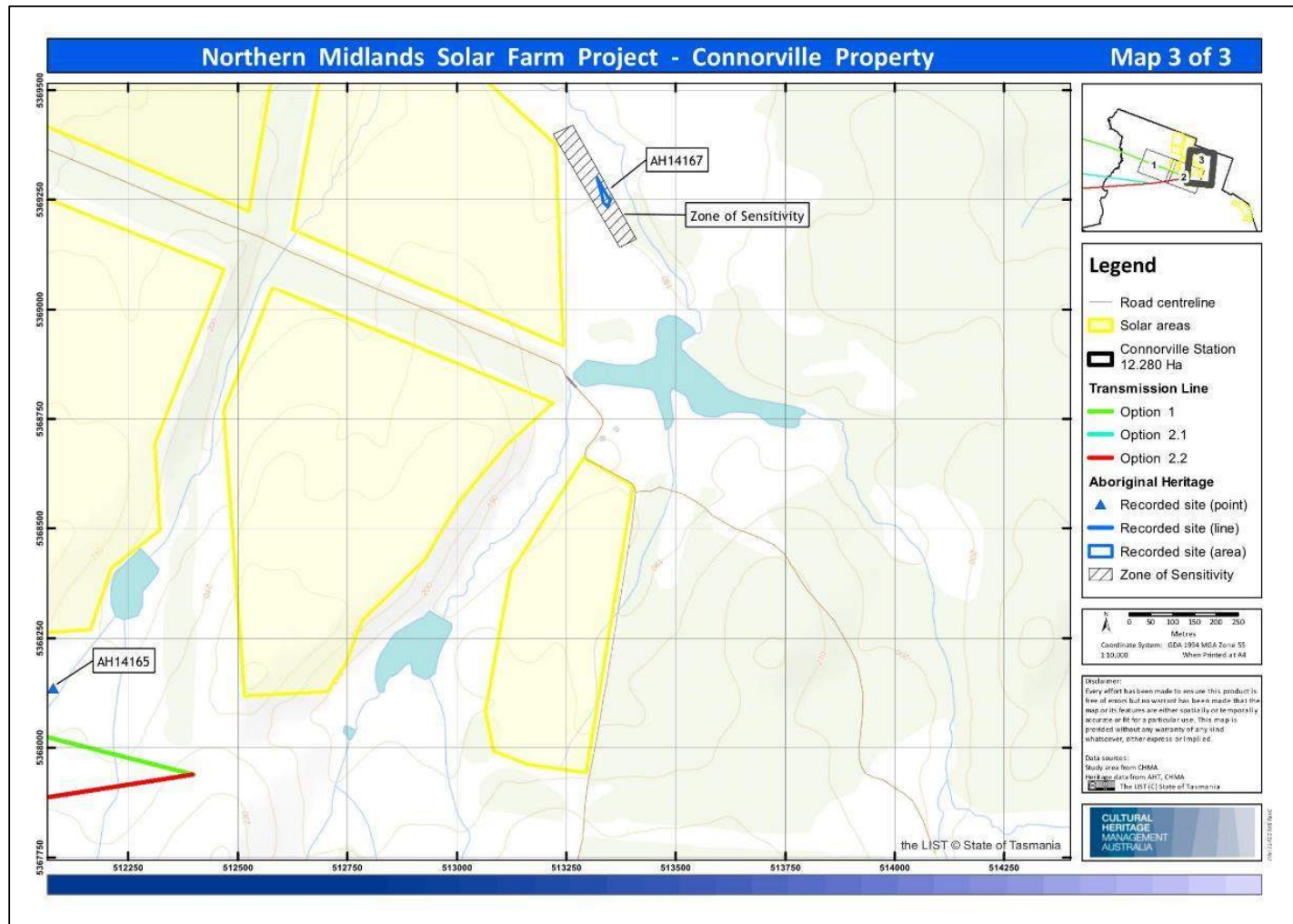


Figure 13: Topographic image showing the location of AH14167 and the surround zone of sensitivity.

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).

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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.

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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 AH14167, AH14168, AH14148, AH14165 and AH14166 which were recorded during the survey assessment of the proposed Northern Midlands Solar Farm Project footprint 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 4 provides the summary details for the significance ratings of sites AH14167, AH14168, AH14148, AH14165 and AH14166. 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.

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Table 4: Summary significance ratings for Aboriginal heritage sites AH14167, AH14168, AH14148, AH14165 and AH14166.

AH Number	Site Type	Scientific Significance	Aesthetic Significance	Historic Significance	Social Significance
AH14167	Artefact Scatter	Medium	Low-medium	N/A	High
AH14168	Artefact Scatter	Low-Medium	Low-medium	N/A	High
AH14148	Isolated Artefact	Low	Low-medium	N/A	Medium–High
AH14165	Isolated Artefact	Low	Low-medium	N/A	Medium–High
AH14166	Isolated Artefact	Low	Low-medium	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 AH14167 and AH14168 are classified as artefact scatters, with sites AH14148, AH14165 and AH14166 being classified as Isolated artefacts. Isolated artefacts and artefact scatters are two of the most common site types recorded in the Northern Midlands 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 AH14148, AH14165 and AH14166 are assessed as being of low scientific significance. Site AH14168 is assessed as being of low-medium scientific significance and site AH14167 is assessed as being of 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 five sites are comprised of stone material types (quartz, chert, Hornfel and quartzite) and stone tool types (flakes, hammerstones and cores) that are commonly represented in artefact assemblages across the region. As such, rarity is again not a consideration.
- 3) Sites AH14148, AH14165 and AH14166 are assessed as having a very limited potential to comprise additional undetected surface and sub-surface artefact

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deposits. These three sites are also situated in moderate to heavily disturbed contexts, being situated in pastureland and on dam sites in areas where the vegetation surrounding the sites has 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 AH14167 is a high density artefact scatter that is assessed as having a high-level potential to comprise additional undetected surface and sub-surface artefact deposits. Despite being in a moderate to heavily disturbed context (being situated within three sand ditches adjacent to an unnamed watercourse), it is in immediate proximity to a natural elevation in the landscape and the depth of the surrounding soils is approximately 1m. This means that there is potential for intact artefact deposits to be present, which increases the research potential of the site.
- 5) Site AH14168 is a low density artefact scatter. Despite being in a moderate to heavily disturbed context (being situated within a drainage ditch) its immediate proximity to a natural elevation in the landscape and the depth of the surrounding soils is approximately 30cm. This means that there is some potential for intact artefact deposits to be present, which increases the research potential of the site. However densities are expected to be low, in line with the observed surface expression.

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 AH14167, AH14168, AH14148, AH14165 and AH14166 are situated around the gentle to moderate undulations of pastureland within the study area. The sites are all quite heavily disturbed contexts, being situated in 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 AH14167, AH14168, AH14148, AH14165 and AH14166 is assessed as being of low-medium 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 AH14167, AH14168, AH14148, AH14165 and AH14166. As such the concept of historic significance is not applicable to these sites.

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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 AH14167, AH14168, AH14148, AH14165 and AH14166, 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 five 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

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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 4.

As described in section 3 of this report, the available ethnographic information indicates that the Northern Midlands Solar Farm Project study area is within land traditionally occupied by the Tyerrernotepanner (Campbell Town or Stoney Creek people) of the Northern Midlands Nation. Sites AH14167, AH14168, AH14148, AH14165 and AH14166 provide tangible evidence for the occupation of this area by the Tyerrernotepanner 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.

Aboriginal Community Consultation is a crucial component of the Project and is being coordinated by Vernon Graham who is the designated AHO for this project. As part of the consultation process, copies of this draft report has been sent out to a range of Tasmanian Aboriginal organisations in the north of the State. These are as follows:

- Aboriginal Land Council of Tasmania;
- Tasmanian Aboriginal Centre.
- Kooporoona Niara Aboriginal Mob Representing the Aboriginal community of Deloraine;
- Circular Head Aboriginal Corporation;
- Six Rivers Aboriginal Corporation;

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- Aboriginal Elders Council of Tasmania;
- Melythina tiakana warrana (Heart of Country) Aboriginal Corporation (MTWAC).

Vernon Graham has provided a statement of the Aboriginal cultural values attributed to the sites recorded during this assessment and 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 identified five Aboriginal heritage sites, AH14167, AH14168, AH14148, AH14165 and AH14166, during the survey of the proposed Northern Midlands Solar Farm area. These sites are significant to the contemporary Tasmanian Aboriginal community as they provide a tangible physical link with our ancestors. The Northern Midlands plains around Campbell Town and the Macquarie River Valley were important seasonal resource zones for our ancestors. The plains and river valleys provided important seasonal hunting grounds and the gently undulating terrain provided an important travelling route between the inland hills and the coast. The travelling route and hunting grounds were maintained through regular firing of the landscape.

The Aboriginal community would support adjusting the final layout of the solar farm to avoid impacting these sites where possible. This is our preferred option. I note that following the completion of our survey assessment, the proponent has agreed to amend the NMSF project footprint so as to avoid all five sites. This is greatly appreciated by both myself and the Tasmanian Aboriginal organisations that have been consulted for this project. We support the recommendations made in this report to protect these sites during construction.

Based on my observations made during the field survey, I am satisfied that there is generally quite a low potential for other Aboriginal sites to be present in the study area. As long as sites AH14167, AH14168, AH14148, AH14165 and AH14166 can be avoided and protected, I am satisfied that this proposal poses a minimal risk of impacting Aboriginal heritage values.

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.

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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 1987* 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 1987.

This 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;

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- 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 has been amended, partially in an effort to avoid Aboriginal heritage values that were identified during the Aboriginal heritage assessment. All five identified Aboriginal heritage sites and associated areas of Potential Archaeological Sensitivity are now avoided. The following recommendations are based on the revised NMSF Project Footprint.

Recommendation 1 (AH14167)

Site AH14167 is classified as an artefact scatter and is located in the north-western portion of the study area and incorporates an area of Potential Archaeological Sensitivity (PAS) measuring 300m x 50m. The revised NMSF Project Footprint avoids the identified boundaries of the site and associated PAS (see Figures 14 and 17). It is recommended that the following measures should be implemented to protect the site during construction.

- The site and PAS area should be plotted onto project design plans and noted that the site is to be avoided.
- Prior to construction works commencing, high visibility protective barricading to be placed around the defined boundaries of the site and PAS area with a 2m buffer radius applied. Barricading is to be removed once construction works have been completed.
- Construction crews are to be made aware of the location of the site and instructed 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 three sites.
- Barricading is to be removed on completion of construction works for the solar farm.

Recommendation 2 (AH14168)

Site AH14168 is classified as an artefact scatter and is located in the southwestern portion of the study area. The site is situated within a broader PAS measuring around 70m x 20m. The revised NMSF Project Footprint avoids the identified boundaries of the site and associated PAS (see Figures 14 and 16). It is recommended that the following measures should be implemented to protect the site during construction.

- The site and PAS area should be plotted onto project design plans and noted that the site is to be avoided.

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- Prior to construction works commencing, high visibility protective barricading to be placed around the defined boundaries of the site and PAS area with a 2m buffer radius applied. Barricading is to be removed once construction works have been completed.
- Construction crews are to be made aware of the location of the site and instructed 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 three sites.
- Barricading is to be removed on completion of construction works for the solar farm.

Recommendation 3 (AH14148, AH14165 and AH14166)

Sites AH14148, AH14165 and AH14166 are all classified as Isolated artefacts. All three sites are confirmed as being located outside the revised NMSF Project Footprint (see Figures 14-16). The following recommendations apply to these three sites.

- The location of the sites is to be plotted on the design plans for the Northern Midlands Solar Farm 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 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 three sites.
- Barricading is to be removed on completion of construction works for the solar farm.

Recommendation 4 (Remainder of the study area)

Besides the sites dealt with in the recommendations above, no other Aboriginal heritage sites, suspected features, or specific areas of elevated archaeological potential were recorded during the survey assessment of the NMSF project footprint. It is advised that there are no further archaeological investigations warranted, and no additional Aboriginal heritage constraints to works proceeding.

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 Northern Midlands Solar Farm 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

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

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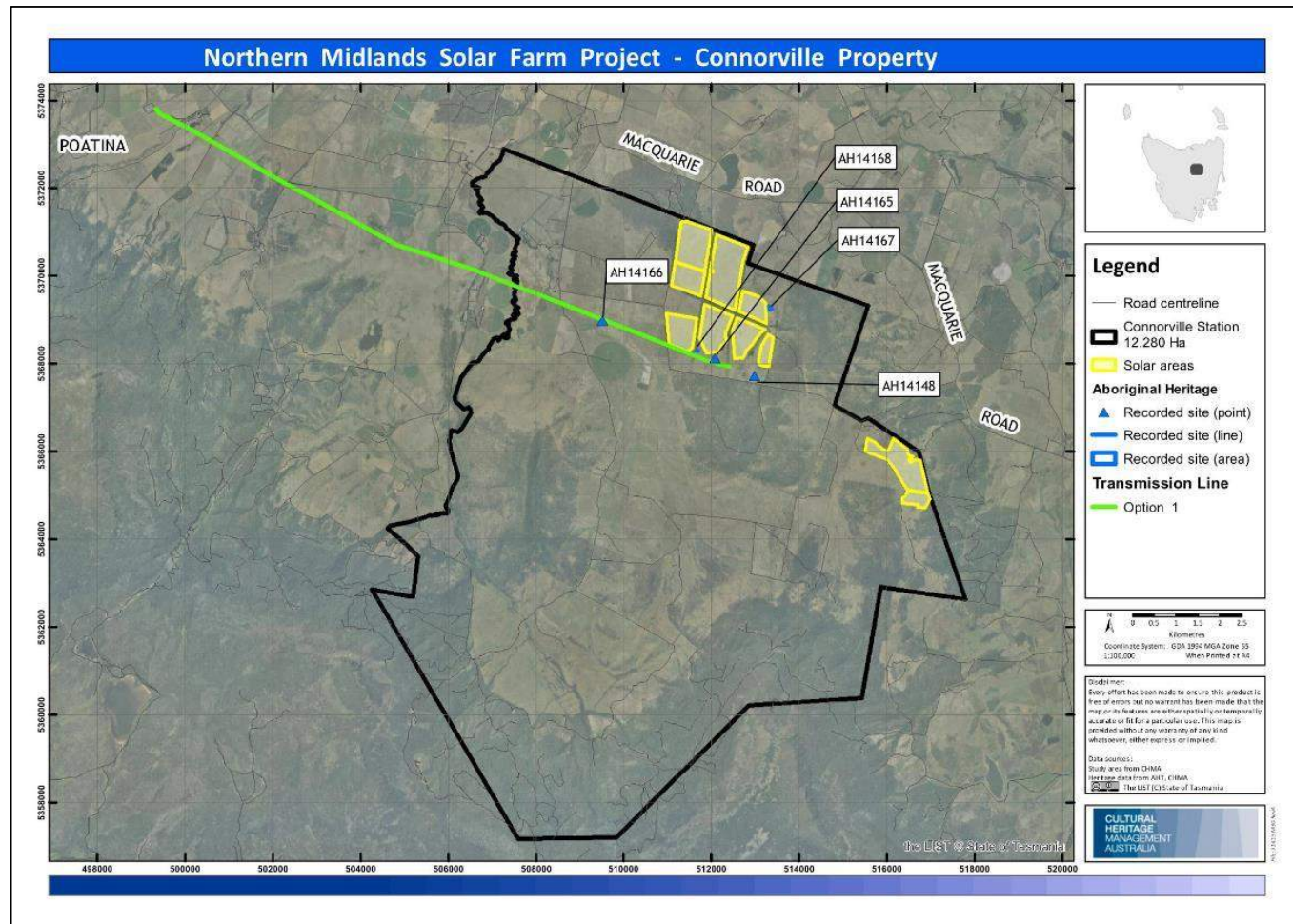


Figure 14: Aerial image showing the location of the five recorded Aboriginal heritage sites in relation to the revised NMSF Project Footprint

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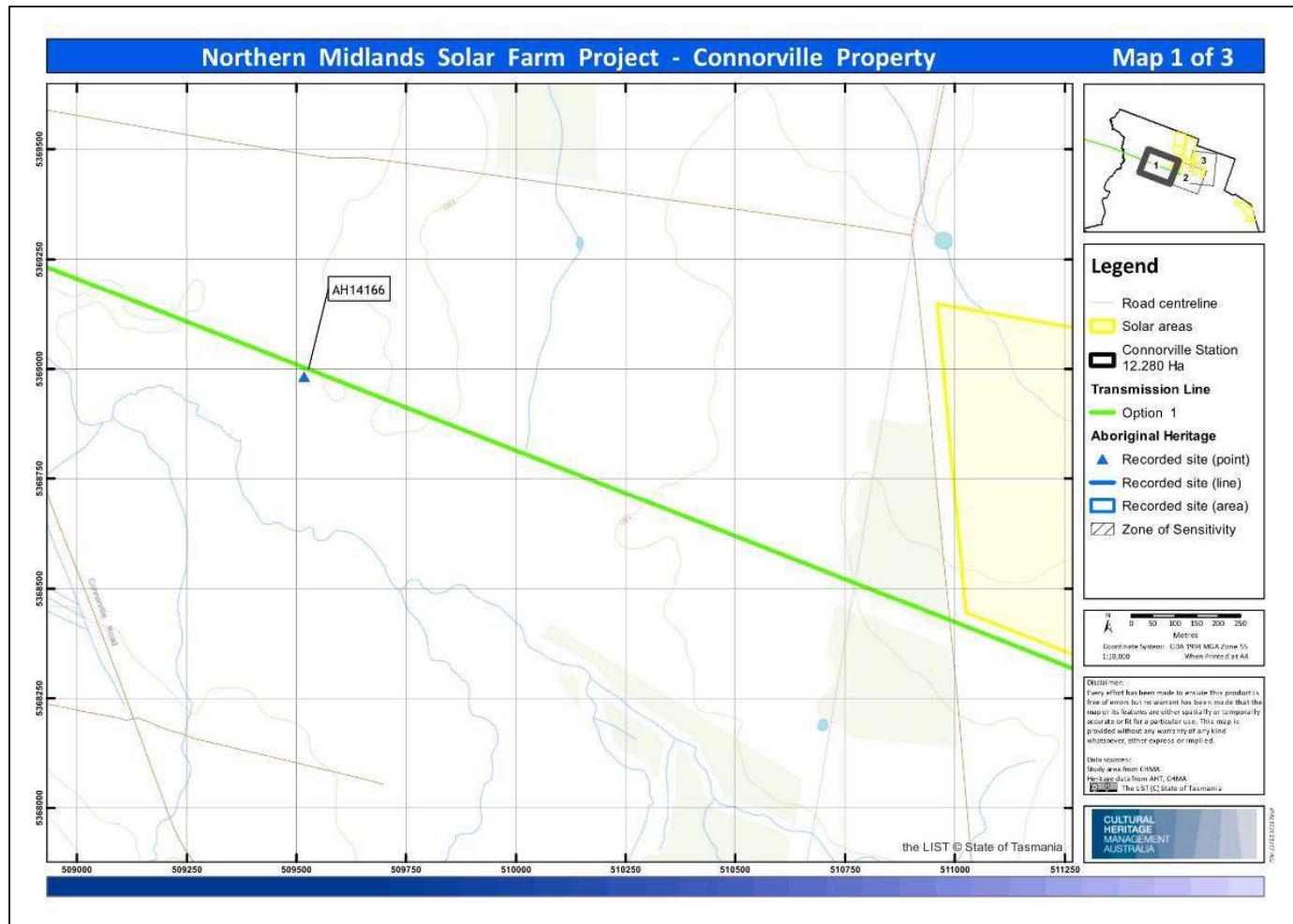


Figure 15: Topographic map showing the location of site AH14166 in relation to the revised NMSF Project Footprint

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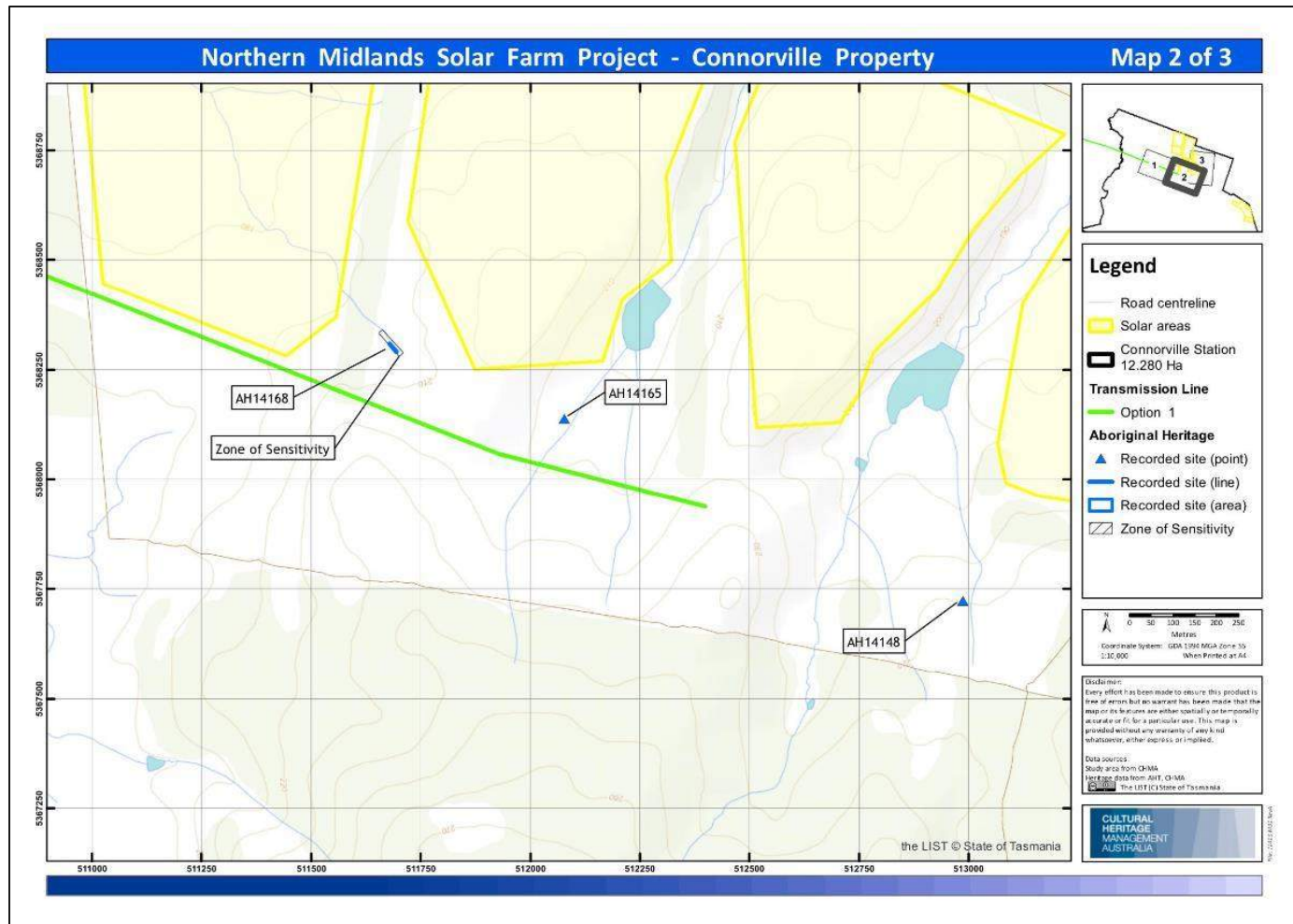


Figure 16: Topographic map showing the location of AH14148, AH14165 and AH14168 in relation to the revised NMSF Project Footprint

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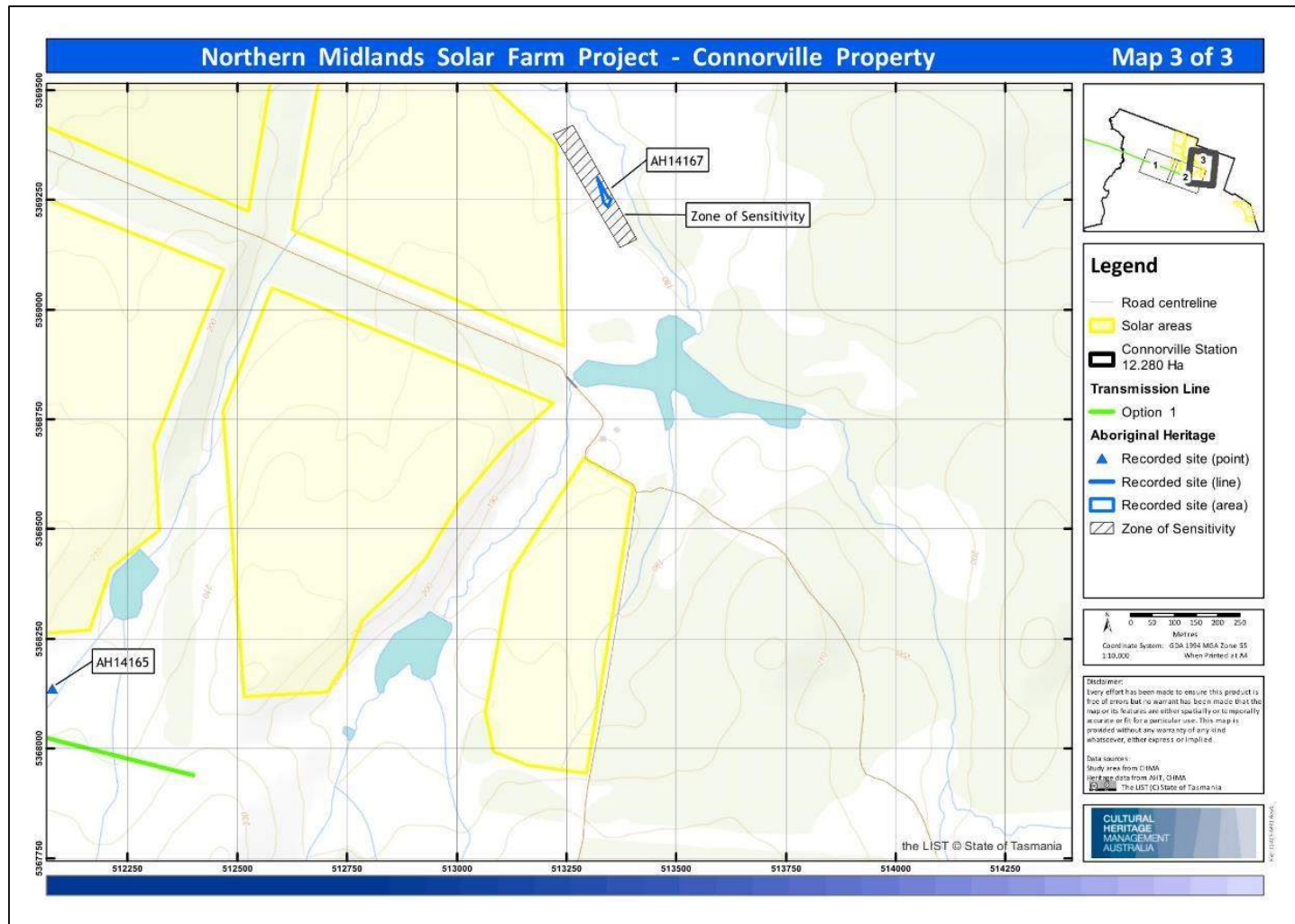


Figure 17: Topographic image showing the location of AH14167 in relation to the revised NMSF Project Footprint

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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.

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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

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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 Physicochemical 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 are 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.

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Appendix 1
Gazetteer of Recorded Sites

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Summary Details for AH14167, AH14168, AH14148, AH14165 and AH14166..

Site Name	Grid Reference	Site Type	Site Description
AH14167	E 513344 N 5369234 E 513334 N 5369244 E 513319 N 5369301 E 513331 N 5369261 E 513344 N 5369256 E 513351 N 5369251	Artefact Scatter	90+ artefacts located within three sand ditches with 10°–20° slopes, approximately 50m west of an unnamed watercourse. The site has a medium to high potential for additional surface or sub-surface artefacts to be present. This site has been heavily disturbed.
AH14168	E 511694 N 5368290 E 511678 N 5368308	Artefact Scatter	4 artefacts located within a drainage line with slopes of 30°–90°. The site is located 3.8km southeast of Lake River. 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.
AH14148	E 512987 N 5367723	Isolated Artefact	A cream quartzite blade core located within an erosion scald on a hill with a 15° slope. Isolated Artefact 1 is located 5.7km southeast of Lake River and 1.5km south of an unnamed watercourse. 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.
AH14165	E 512078 N 5368137	Isolated Artefact	An orange banded chert flake located in an erosion scald on a 5° within a drainage line surrounded by pastureland. Isolated Artefact 2 is located 4.1km southeast of Lake River and 1.7km southwest of an unnamed watercourse. 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.
AH14166	E 509517 N 5368980	Isolated Artefact	A white quartz flake located in an erosion scald on the 15° slope of a dam wall surrounded by pastureland. Isolated Artefact 3 is located 1.4km southwest of Lake River. 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.

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Appendix 2
Detailed Descriptions for Aboriginal Heritage Sites

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Site Name: AH14167

Site Type: Artefact Scatter

Grid Reference:

- E 513344 N 5369234
- E 513334 N 5369244
- E 513319 N 5369301
- E 513331 N 5369261
- E 513344 N 5369256
- E 513351 N 5369251

Site Description:

AH14167 is a 72m x 21m high-density artefact scatter located within three sand ditches with 10°–20° slopes. The soils within and immediately surrounding the three ditches consist of light grey-coloured sandy 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 50m west of an unnamed watercourse. Surface visibility within the three sand ditches is 100% and surface visibility outside of these sand ditches is poor, averaging 25%.

The artefacts recorded at AH14167 consist of 100+ artefacts of primarily Hornfel stone, but also chert, quartzite, white quartz, silcrete and chalcedony. There are also the following typologies present; flakes, cores, hammerstones, a plinth stone and debitage artefacts. Besides the artefacts noted above, no additional artefacts were identified.

Given some constraints in surface visibility (particularly outside of the three sand ditches), it cannot be stated with certainty that there are no additional undetected artefacts associated with site AH14167. However, all indications are that artefact densities are likely to be high.

Artefact Details:

- A cross-section of artefact types within AH14167

Plinth Stone: 105mm x 105mm

Hornfel Core: 85mm x 60mm x 55mm

Black Chert Flake: 20mm x 15mm x 3mm

Light Grey Silcrete Flake: Flake 31mm x 30mm x 10mm

Chalcedony Core with Cortex: 40mm x 35mm x 15mm

White Quartz Flake: 15mm x 10mm x 6mm

Grey Quartzite Flake: 45mm x 25mm x 10mm

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Plate 16: View north showing the quartzite plinth stone present within Artefact Scatter 1.



Plate 17: View north showing the quartzite plinth stone present within Artefact Scatter 1.

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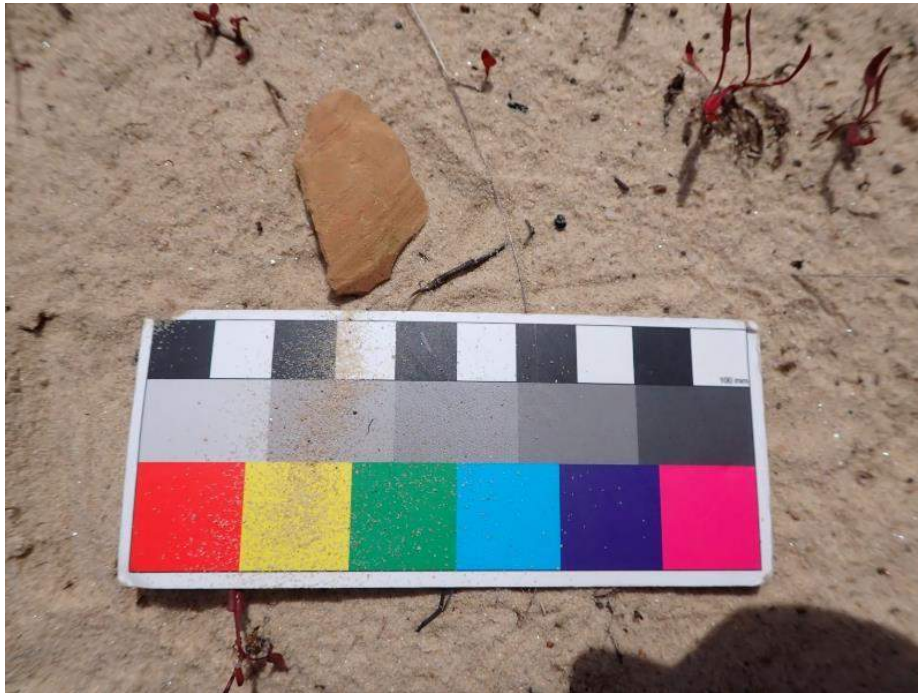


Plate 18: View west showing an orange-coloured Hornfel flake present within AH14167.



Plate 19: View west showing a pink and white quartzite flake present within AH14167.

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Plate 20: View north showing an orange-coloured Hornfel flake present within AH14167.

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Site Name: AH14168

Site Type: Artefact Scatter

Grid Reference:

— E 511694 N 5368290

— E 511678 N 5368308

Site Description:

AH14168 is a 24m x 1m low-density artefact located within a drainage line with slopes of 30°–90°. The soils within the drainage line consist of beige and light grey sandy soils. 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 3.8km southeast of Lake River.

Surface visibility within the drainage line was 100% and surface visibility outside of the drainage line is poor, averaging 25%.

AH14168 consists of three quartzite artefacts and one white quartz artefact located within the aforementioned drainage ditch. Besides the four 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 AH14168. However, all indications are that artefact densities are likely to be low. If additional artefacts are present, they are likely to be confined to the margins of the drainage line, along an area measuring around 40m x 5m.



Plate 21: View southwest showing a red quartzite flake present within AH14168.

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Plate 22: View southwest showing a red quartzite flake present within AH14168.



Plate 23: View southwest showing the white quartz flake present within AH14168.

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Plate 24: View southwest showing the white quartz flake present within AH14168.

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Site Name: AH14148

Site Type: Isolated Artefact

Grid Reference:

— E 512987, N 5367723

Site Description:

AH14148 is located within an erosion scald on a hill with a 15° slope. The site is located within pastureland with dark grey sandy loam soils. 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. AH14148 is located 5.7km southeast of Lake River and 1.5km south of an unnamed watercourse.

Surface visibility within the erosion scald is 100% and surface visibility immediately surrounding the erosion scald is medium at 45%.

The artefact recorded at AH14148 consists of a cream quartzite blade core with one bulb scar and one negative scar. The artefact has potentially been modified, possibly a former point tool. Besides the isolated quartzite artefact noted above, no additional artefacts were identified.

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 AH14148. However, all indications are that artefact densities are likely to be low to very low.

Artefact Details:

— Cream quartzite blade core 70mm x 35mm x 20mm

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Plate 25: View south showing the cream quartzite artefact blade core associated with AH14148.



Plate 26: View south showing the cream quartzite blade core artefact associated with AH14148.

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Plate 27: View southeast showing AH14148 on a 15° slope.

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Site Name: AH14165

Site Type: Isolated Artefact

Grid Reference:

— E 512078 N 5368137

Site Description:

AH14165 is located in an erosion scald on a 5° within a drainage line surrounded by pastureland. Soils within the site consist of dark grey sandy loam soils. The site is immediately surrounded by flat to moderately undulating pasture land, covered with introduced grass species and stands of eucalypt trees. AH14165 is located 4.1km southeast of Lake River and 1.7km southwest of an unnamed watercourse.

Surface visibility within the erosion scald is 100% and surface visibility immediately outside of the erosion scald is poor, averaging at 25%.

The artefact recorded at AH14165 consists of an orange banded chert flake, located in the aforementioned erosion scald. The artefact appears to have been retouched, with the presence of two bulbs and platforms (see plate 4). Besides the isolated orange banded chert artefact noted above, no additional artefacts were identified.

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 AH14165. However, all indications are that artefact densities are likely to be low to very low.

Artefact Details:

— Orange banded chert flake 44mm x 30mm x 20mm



Plate 28: View southeast showing the orange banded chert flake associated with AH14165.

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Plate 29: View southeast showing the orange banded chert flake associated with AH14165.



Plate 30: View southeast showing the drainage line location of AH14165.

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Site Name: AH14166

Site Type: Isolated Artefact

Grid Reference:

— E 509517 N 5368980

Site Description:

AH14166 is located in an erosion scald on the 15° slope of a dam wall surrounded by pastureland. The soils within the erosion scald and immediate surrounds consist of dark brown sandy loam. The site is immediately surrounded by flat to moderately undulating pasture land, covered with introduced grass species and weed species. AH14166 is located 1.4km southwest of Lake River.

Surface visibility within the erosion scald is 100% and surface visibility immediately outside of the erosion scald is poor, averaging at 25%.

The artefact recorded at AH14166 consists of a white quartz flake, located in the aforementioned erosion scald. Besides the isolated white quartz artefact noted above, no additional artefacts were identified.

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 AH14166. However, all indications are that artefact densities are likely to be low to very low.

Artefact Details:

— White quartz flake 57mm x 30mm x 20mm



Plate 31: View east showing the white quartz flake artefact associated with AH14166.

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Plate 32: View east showing the white quartz flake artefact associated with AH14166.



Plate 33: View north showing the location and immediate surrounds of AH14166.

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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 aboriginal@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, warrener 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

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.

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: **1 300 487 045**

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

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

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Appendix 4
Aboriginal Community Consultation Outcomes

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