

Final Report

# Heritage Assessment: Proposed Solar Farm, 538 & 752 Yarranlea Road, Yarranlea, Queensland

Prepared for:

**Yarranlea Solar Pty Ltd**

**17 February 2017**



**Ecology and Heritage Partners Pty Ltd**

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- Nick Canto (i<sup>3</sup> consulting Pty Ltd) for project information and review;
- Department of Aboriginal and Torres Strait Islander Partnerships (DATSIP) for access to the Aboriginal Cultural Heritage Register and Aboriginal Cultural Heritage Database; and

**Cover Photo:** Study area

(Photo by Ecology & Heritage Partners)

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## EXECUTIVE SUMMARY

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### Introduction

Ecology and Heritage Partners was commissioned by Yarranlea Solar Pty Ltd, on behalf of i<sup>3</sup> consulting Pty Ltd, to prepare this Heritage Assessment for a proposed Solar Farm at 538 and 752 Yarranlea Road, Yarranlea (Toowoomba Regional Council), approximately 45 kilometres west of Toowoomba on the Darling Downs. The purpose of the assessment was to identify Aboriginal and historical cultural heritage values that may be present within the study area. Information gathered throughout the assessment was used to determine potential legislative implications (associated with cultural heritage values) for the proposed Solar Farm.

### Aboriginal Cultural Heritage Act 2003 (QLD)

#### Implications for the project

With regard to Aboriginal archaeological heritage, the assessment indicates that a Cultural Heritage Management Plan (CHMP) is not required under the *Aboriginal Cultural Heritage Act 2003* as an Environmental Impact Statement will not be conducted.

### Aboriginal Cultural Heritage Act 2003 – Duty of Care Guidelines

The Duty of Care Guidelines state that the Act requires that a proponent must exercise due diligence and reasonable precaution prior to undertaking an activity which may cause harm to Aboriginal cultural heritage. In exercising due diligence or complying with the cultural heritage 'Duty of Care' the following may be considered:

- The nature of the activity, and the likelihood of it causing harm to Aboriginal cultural heritage;
- The nature of the Aboriginal cultural heritage likely to be harmed by the activity;
- The extent to which the person consulted with Aboriginal parties about the carrying out of the activity, and the results of the consultation;
- Whether the proponent carried out a study or survey, of any type, of the area affected by the activity to find out the location and extent of the Aboriginal cultural heritage, and the extent of the study or survey;
- Whether the proponent searched the database and register for information about the area affected by the activity;
- The extent to which the proponent complied with the Duty of Care Guidelines; and
- The nature and extent of past uses in the area affected by the activity.

Although the proposed activity will involve ground disturbance works associated with the development of a solar farm, review of the previous land use history of the study area has indicated that the entire area has been subject to native vegetation clearing and agricultural activities associated with ploughing and deep

ploughing/ripping for the cultivation and subsequent plantation of crops. These practices have significantly altered the original landscape of the study area as deep ploughing and/or ripping can impact on soils from the ground surface up to 50 cm depth. Based on this the study area is assessed as being previously subject to significant ground disturbance and therefore no longer retains any landform features typically considered to have cultural or archaeological sensitivity.

The Duty of Care Guidelines defines Significant Ground Disturbance as:

*“disturbance by machinery of the topsoil or surface rock layer of the ground, such as by ploughing, drilling or dredging; the removal of native vegetation by disturbing root systems and exposing underlying soil”.*

Given the above, the proposed activity is assessed as comprising a Category 4 activity under Section 5.0 of the Duty of Care Guidelines: *5.0 The nature and extent of past uses in the area affected by the activity – Section 23(2)(g).*

Section 5.4 of the Duty of Care Guidelines specifies the following:

*Where an activity is proposed in an area which has been previously subject to Significant Ground Disturbance it is generally unlikely that the activity will harm Aboriginal cultural heritage and the activity will comply with these guidelines.*

Section 5.5 also states:

*In these circumstances, subject to the measures set out in paragraphs 5.6 – 5.12, it is reasonable and practicable that the activity proceeds without further cultural heritage assessment.*

In this instance the measures set out in paragraphs 5.6 – 5.12 do not apply as a search of the appropriate Aboriginal Cultural Heritage Register and Aboriginal Cultural Heritage Database did not identify any previously recorded Aboriginal cultural heritage as being situated within the study area or within 1 km of its boundaries. Furthermore, this Heritage Assessment did not identify the study area as retaining any landform features typically considered to have any residual cultural or archaeological sensitivity.

Given the results of this Heritage Assessment, the proposed activity is unlikely to harm Aboriginal cultural heritage and it is reasonable and practicable that the activity proceed without any further cultural heritage assessment.

This Heritage Assessment demonstrates that the proponent of the activity has exercised due diligence and reasonable precaution prior to undertaking the proposed activity. It has complied with the Duty of Care Guidelines by:

- Assessing the nature of the activity, and the likelihood of its causing harm to Aboriginal cultural heritage;
- Assessing the nature of the Aboriginal cultural heritage present within the study area and the likelihood of it being harmed by the activity;
- Documenting the extent to which the proponent consulted with Aboriginal parties about the carrying out of the activity, and the results of the consultation;

- Producing a Heritage Assessment report which reviewed the area to be affected by the activity to find out the location and extent of any Aboriginal cultural heritage present, and provide the extent of the study;
- Providing information on the database and register search undertaken for the area affected by the proposed activity;
- Clearly outlining the extent to which the proponent complied with the Duty of Care Guidelines; and
- Providing a comprehensive description of the nature and extent of past uses in the area affected by the activity.

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

### **Implications for the project**

There are no sites listed on the NHL or CHL within the study area. There are no implications for the project.

## **Toowoomba Regional Council Planning Scheme**

### **Implications for the project**

There are no implications for the project under the Toowoomba Planning Scheme.

## **Recommendations**

As there are no Aboriginal cultural heritage or historic implications for the project no further assessment or recommendations are required.

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# 1 INTRODUCTION

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## 1.1 Preamble

Ecology and Heritage Partners was commissioned by Yarranlea Solar Pty Ltd, on behalf of i<sup>3</sup> consulting Pty Ltd, to prepare this Heritage Assessment for a proposed Solar Farm at 538 and 752 Yarranlea Road, Yarranlea (Toowoomba Regional Council), approximately 45 kilometres west of Toowoomba on the Darling Downs, hereafter referred to as the 'study area'.

The purpose of the assessment was to identify Aboriginal and historical cultural heritage values that may be present within the study area. Information gathered throughout the assessment was used to determine potential legislative implications (associated with cultural heritage values) for the proposed development works.

## 1.2 The Study Area

The study area comprises agricultural land situated at 538 and 752 Yarranlea Road, Yarranlea and described as Lot 3347 on A341649, Lot 2 on RP18249, Lot 2 on RP7475 and Lot 2 on A34925. Stage 1 is proposed to be constructed within 3347A341649, 2RP18249 and 2RP7475 (approximately 100 hectares in area) and Stages 2, 3 and 4 will be progressively developed across 2A34925 (approximately 200 hectares in area). A Development Application for the combined MCU and RAL Renewable Energy Facility has now been approved for the study area.

The study area is located within intensive cropping areas on the fertile plains of the Condamine River Floodplain, and is currently used to grow crops (e.g. sorghum), which is the primary land use across the broader region (i.e. historically been farmed). This has resulted in the loss of remnant native vegetation across the study area. However, remnant and regrowth vegetation exists in small patches on hills and rises in the east and along road reserves. Most natural waterways have been cleared of riparian vegetation and exist as channelized drainage lines.

The study area is flat to gently sloping towards the west, and contains several buildings and infrastructure, including a homestead and sheds. A small patch of remnant native vegetation is located within the central southern portion of the study area.

## 1.3 The Activity

Yarranlea Solar Pty Ltd is proposing to construct a Utility Scale Photovoltaic (PV) Solar farm at Yarranlea. The PV Facility is estimated to generate up to 100 megawatts (MW) of energy and have an operational life of 30 years. The project will have a connection to the Queensland Electricity Market through an Ergon substation and will have on-site battery storage. The PV Facility is proposed to eventually cover up to 250 hectares of land and will be developed over four stages:

- Stage 1 – Installation of Solar PV panels to generate approximately 40MW over 100 ha. A Battery Storage Building, and Operations and Maintenance Building will also be constructed to support the operation. Connection to Ergon Substation will be completed at this stage via a new 1.5 kilometre powerline. Located in the southern half of the study area;
- Stage 2 – Generate approximately 20MW. Site coverage of 50 hectares. Located in the north-east portion of the study area;
- Stage 3 – Generate approximately 20MW. Site coverage of 50 hectares. Located in the northern portion of the study area; and
- Stage 4 – Generate approximately 20MW. Site coverage of 50 hectares. Located in the north-western portion of the study area.

The proposed layout of the PV facility is shown of Maps 1 to 4.

The PV Facility comprises several interlinked and integral components for the operation of the equipment and generation of electricity from solar radiation. These components include: solar modules, steel mounts for the modules, electrical transformers and inverters, electrical wiring, telecommunication equipment and electrical control enclosures. It is also likely that the PV Facility will include a battery/electrical storage enclosure, which would include batteries.

The panels utilised in the facility are similar to those used for domestic power generation purposes and will be supported on steel frames. The frames may operate under a solar tracking system to increase power generation through tracking the movement of the sun. An underground reticulation system will be used to collect the power to an internal substation which will transform the power voltage to 110 kV, compatible with the nearby Ergon Energy transmission infrastructure. Power will be connected to the grid, approximately 600 m from the southern boundary of the development area using either an underground or overhead transmission line within the Yarranlea Road reserve and terminating at the existing Ergon Substation.

The solar panel arrays will be surrounded by informal grassed internal access ways which are designed to provide access to the inverter/transformer equipment pads located at the centre of the array blocks. A gravel access track shall be provided to the perimeter of the Stage 1 block and the block comprising Stages 2 to 4. This will act as a fire break and will be accessed from the western end of Yarranlea-Murlaggen Road. This track is proposed to be located inside of a 2.4 metre high chain wire security fence. Project site, substation, and other areas requiring controlled access will be appropriately restricted to private access during construction and operations.

The facility will be managed from a control building, located adjacent to the substation which will include formalised staff and visitor parking, and this will be accessed off Yarranlea-Murlaggen Road. The compound will also house an electrical switchroom and battery storage building. The access driveway and parking will comprise a bitumen sealed surface. Permanent motion sensitive, directional security lights will also to be installed to provide adequate illumination around the substation area and points of ingress/egress. All lighting will be directed downward to minimise the potential for glare or spill-over onto adjacent properties. Lighting is proposed to be used from dusk to dawn once the facility is operational.

Stage 4 will require the removal of three existing farm buildings and these are to be replaced by a farm storage shed, located opposite the Operations and Maintenance facility on the northern side of Yarranlea-Murlaggen Road.

Appropriate landscaping is to be provided along the western boundary of the site, using native shrub species with a mature height of 4 – 5 metres, to assist in reducing any potential visual impacts of the PV Facility. The proposed landscaping treatment will be intensified in the vicinity of the Operations and Maintenance facility due to the taller structures which will be required in this part of the development.

The PV Facility has been designed in such a manner as to minimise the extent of civil works required to occur on the site. All existing overland drainage flow paths are intended to be maintained where practical so as to minimise the impact on the surrounding land uses. No formalised internal roads are envisaged to be provided between panels and the level of sealing required has been kept to a minimum. The existing soil will be retained and re-seeded with an appropriate blend of pasture grass and legume species, to provide vegetation coverage over the site. Grasses will be maintained through periodic slashing and potential grazing opportunities. Accordingly, it is intended that the facility will have minimal impact when decommissioned as the development components do not require substantial disturbance to the landscape.

### **Construction Phase Schedule**

For each stage of the project, construction is to proceed in the manner outlined below. However, it should be noted that the Substation and 110 kV connection installation components will only occur as part of Stage 1, and will not be required in subsequent stages.

- Site Preparation, Substation and Grid Connection Installation (52 to 60 weeks in duration).
- Photovoltaic Panel System Installation (26 to 30 weeks in duration, beginning mid-way through the site preparation phase).
- Inverters, Transformers, and Electrical Collector System Installation (12 to 20 weeks, beginning mid-way through the PV System Installation Phase).

### Site Preparation, Substation and Grid Connection Installation

A construction laydown area is to be established near the main site entrance and a second area to the east of the site, and equipment mobilised to the site. The site is then cleared, grubbed, graded, and compacted, with the on-site informal roadway system staked and established. Roads would be treated to create a durable, dust minimising surface to ensure minimisation of dust emissions, and security fencing would be installed around the site perimeter.

The substation facility would incorporate a number of concrete foundations for the electrical plant including the main transformer, Neutral Earth Transformer, Reactive Plant, Switchroom, Operations and Maintenance Building and Battery Storage Building. Following construction of these foundations, the plant and structures would be installed in readiness for commissioning when the first of the PV modules have been installed in readiness for first power. During the construction of the substation facility the 110kV connection to the existing ergon substation will be installed as will the connection works by Ergon at the Yarranlea Substation. This 110kV line will be either buried underground, or alternately installed via a traditional overhead line connecting the development to the existing Ergon infrastructure.

It is expected that the Site Preparation, Substation and Grid Connection Phases will require the use of heavy equipment including: bulldozers, water trucks, graders, flatbed trucks, skid steers, front end loaders, roller compactors, trenchers, backhoes, gravel trucks, water buffaloes, cranes, and aerial lifts. However, it should be noted that the design of the facility is such that where possible and practicable, on-site levelling and grading will be minimised.

#### Photovoltaic Panel System Installation

Approximately 401,500 solar panels are to be installed in the development arranged in solar arrays consisting of linear strings of mounted modules organised into blocks of approximately two megawatts capacity. The solar panels are to be positioned 1.2 metres above ground level and mounted on monopole structures. These monopole structures are approximately 1.5 metres long and 1.5 metres high, and are connected in strings of 100 metres, with a seven metre gap between centres. The monopole structures will be supported on either steel screw piles, steel driven piles or FRP Composite Drive Piles, to a depth of between 2 – 3 metres below the existing ground surface level. These foundations will be readily removable at the end of life of the facility to enable the land to be restored to cultivated agricultural activities.

#### Inverters, Transformers, and Electrical Collector System Installation

Each power block is to include a central skid mounted inverter/transformer station that will convert the direct current (DC) energy into grid-compatible alternating current (AC) energy. Foundations for the inverter stations shall be similar screw pile or driven pile technology to the solar panel supports and removable at the end of the life of the project. The Medium Voltage, (33kV), collector system will be installed by direct burying to a depth of 1.0 metre below ground level. At the end of the project the cable metals will be recovered for recycling.

## **1.4 Details of the Author**

### **1.4.1 Ecology and Heritage Partners Pty Ltd Cultural Heritage Division**

Ecology and Heritage Partners is a professional cultural heritage and ecological consultancy providing high quality technical services in the field of Aboriginal and historical cultural heritage assessment, Cultural Heritage Management Plans (CHMPs), ecological assessment, research and management. The business provides effective and innovative cultural and natural heritage advice to a range of state and local government authorities/agencies, corporate and private clients.

Ecology and Heritage Partners has an established heritage team of ten people led by Oona Nicolson (Director and Principal Heritage Advisor). All of the team are qualified Cultural Heritage Advisors, specialising in Australian archaeology (including Aboriginal, Historical and Maritime). Three members of the team are based in our Geelong office.

### **1.4.2 Author**

The author and Heritage Advisor of this Heritage Assessment is Stacey Kennedy. The quality assurance review was undertaken by Oona Nicolson (Director/Principal Heritage Advisor). The field inspection was

undertaken by Stacey Kennedy (Archaeologist/Heritage Advisor). Mapping was provided by Monique Elsley (GIS Coordinator) and Louisa Roy (GIS Officers).

Details of the project team are provided in Appendix 1.

## 1.5 Heritage Legislation

The assessment conforms to the requirements of the *Queensland Aboriginal Cultural Heritage Act 2003*, *Queensland Heritage Act 1992*, the *Queensland Heritage and Other Legislation Amendment Act 2003*, and the *Sustainable Planning Act 2009*. This legislation is subordinate to the *Coroners Act 2003* in relation to the discovery of human remains.

The assessment has been prepared with reference to the following guidelines:

- *The Aboriginal Cultural Heritage Act Cultural Heritage Management Plan Guidelines* (DATSMA 2005);
- *Aboriginal Cultural Heritage Act 2003 Duty of Care Guidelines* (DATSMA 2004);
- *The Guideline for Archaeological Investigations* (DEHP 2013a);
- *Assessing Cultural Heritage Significance: Using the Cultural Heritage Criteria* (DEHP 2013b); and
- *Carrying Out a Heritage Survey* (DEHP 2013c).

## 2 PROJECT METHODS

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### 2.1 Scope of Works

The following tasks were undertaken as part of the Heritage Assessment:

1. A desktop study providing a review of all relevant cultural heritage databases and literature was undertaken and examined the following:
  - Toowoomba Regional Planning Scheme 2012 and overlay maps and policies;
  - EPBC Act Protected Matters Search Tool (Department of the Environment and Energy (DoEE) 2016), The National Heritage List (NHL) and Commonwealth Heritage List (CHL), as well as the Register of the National Estate (RNE) via the Australian Heritage Database;
  - National Native Title tribunal (NNTT) database of Native Title Claims and Determinations, and Indigenous Land Use Agreements (ILUA);
  - Heritage Registers, including the Queensland Heritage Register (QHR; Department of Environment and Heritage Protection [DEHP] 2015), and the Aboriginal Heritage Register;
  - Any historical mapping available;
  - Topographic maps and aerial photographs; and
  - Other relevant earlier studies for the study area and surrounds.
2. Provide a brief review of land use for the study area;
3. Provide information in relation to any implications of Commonwealth and State environmental legislation and Government policy associated with the proposed development;
4. Discuss any opportunities and constraints associated with the study area; and
5. Presentation of the results in this Heritage Assessment report.

### 2.2 Limitations

The cultural heritage information used to inform this Heritage Assessment is limited to that obtained through desktop assessment.

This report is an opportunity to provide a context for understanding the study area and to identify potential areas that may contain Aboriginal or historical sites in order to determine the relevant legislative implications for the proposed activity (Section 6). Aboriginal cultural heritage may occur anywhere in the landscape and it is important to note that the assessment of likelihood is based on the balance of probability; it is our opinion based on an assessment of landforms and the extent of previous ground disturbance, compared to the general archaeological character of the region as assessed via desktop review. It is not a categorical statement that Aboriginal cultural heritage will or will not be present.

## 3 ENVIRONMENTAL CONTEXT

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### 3.1 Bioregion

The study area is situated within the Brigalow Belt South bioregion and the Eastern Darling Downs subregion.

The Brigalow Belt South bioregion is situated within southern Queensland and also incorporates a small portion of northern NSW. Overall it covers an area of approximately 56,796 km<sup>2</sup>. There are various different land types occurring within the region including: undulating hilly areas with low ridges and deep valleys, as well as flat alluvial plains. Vegetation within the region comprises primarily mixed eucalypt woodland with areas of brigalow scrubs and open Mitchell grasslands. Land use within rural areas is primarily cattle grazing (Rangelands 2008).

The climate of the Brigalow Belt South bioregion is hot to warm subhumid climate with summer dominate rainfall. The spatially averaged median rainfall for the area is 489 mm (1890-2005) (Rangelands 2008).

### 3.2 Geology, Geomorphology and Soils

Landscapes within the Brigalow Belt South bioregion are derived from extensive basalt flows and quartz sandstones which have subsequently formed very variable soils and vegetation types dependant on the local rock type or sediment source (OEH 2016a).

The bedrock of the bioregion comprises horizontally bedded Jurassic and Triassic quartz sandstone and shale with smaller limited portions of conglomerate or basalts. Sandstone present at the heads of streams often form a low but rugged topography of cliffs and small plateaus. Streams within the bioregion follow the direction of major joint planes within narrow sandstone gorges and deposit colluvial fans of gravels and coarse sands within wider valleys (OEH 2016a).

Soils throughout the bioregion vary across topography. The sandstone ridge tops are characterised by thin, discontinuous soils with stony, sandy profiles and a low nutrient status. Further downslope, texture contrast soils (sharp increase in texture, increase in clay content and on passing from surface layers to subsoil layers) are common and within the valley floors sediments are characterised by deep sands with yellow earthy profiles, grey clays and more texture contrast soils with greater concentrations of soluble salts. In areas dominated by basalts the hill tops display stony, red or brown, well-structured clays with high nutrient values. Thicker, but similar soils are found on the slopes and valley floors (OEH 2016a).

### 3.3 Vegetation

The following plant communities are present within the bioregion. Various forests and woodlands are supported within the sandstone areas of the bioregion and are characterised by: broad-leaved ironbark (*Eucalyptus fibrosa*), black cypress pine (*Callitris endlicheri*), whitewood (*Atalaya hemiglauca*) and, found upon stoney sandstone plateaus and stream; rough-barked apple (*Angophora floribunda*) (OEH 2016b).



Vegetation occurring on the northern basalts is characterised by brigalow (*Acacia harpophylla*), belah (*Casuarina critata*), whitewood, wilga (*Geijera parviflora*), and poplar box (*Eucalyptus populnea*) (on hills) with river red gum (*E. camaldulensis*), belah, myall (*Acacia pendula*) and poplar box on flat landforms. River red gum occurs within close proximity to all streams (OEH 2016b).

## 4 ABORIGINAL CONTEXT

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

### 4.1 Ethnohistory

A large number of ethno historical accounts detailing encounters between early explorers/settlers and Aboriginal people exist for the Darling Downs region. These accounts, along with supporting archaeological evidence, indicate that the Darling Downs region was widely utilised by Aboriginal people over a long period of time.

The Darling Downs area was inhabited by various clans of the *Wakka Wakka* language speakers: the *Keinjan* around Warwick, the *Giabal* around Toowoomba, the *Barunggam* to the west of Dalby and the *Jarowair* around the Bunya mountains. The *Bigambal* and *Kambuwal* of the *Kamilaroi* speakers were situated to the south and west and to the east were the *Jagara* of the *Turubul* speakers. Aboriginal people of the Darling Downs were also known as the *Gormaingguru* ‘men of the Condamine’ or *Gooneburra* ‘fire blacks’ due to their habit of firing the grasslands (Queensland Art Gallery NA).

Alan Cunningham was associated with several exploring expeditions around the Morton Bay region during the 1820’s and it was during this time that he discovered the Darling Downs region and realised its potential for pastoral purposes. He is also believed to be one of the first Europeans to provide first-hand written accounts of Aboriginal people from the area. While situated near Swan Creek (10 km east of Warwick) he recorded the following:

*“Although very recent traces of natives were remarked in different parts of the vale in which we remained encamped about a week, only a solitary aborigine (a man of ordinary stature) was seen, who, in wandering forth from his retreat in quest of food, chanced to pass the tents. Immediately, however, on an attempt made by my people to approach him, he retired in great alarm to the adjacent brushes at the foot of the boundary hills, and instantly disappeared.”* (Coffey Environments 2012: 23-10).

Ludwig Leichardt also noted the activities of the local Aboriginal people during his expeditions:

*“The natives seemed to have burned the grass systematically along every watercourse, and round every waterhole, in order to have them surrounded by young grass as soon as the rain sets in...It is no doubt connected with a systematic management of their runs, to attract game to particular spots, in the same way stockholders burn parts of theirs in proper seasons”* (Johnston 1988: 5).

Leichardt also provided descriptions on the type of resources consumed by Aboriginal people of the Darling Downs area whilst visiting camps near the Comet River area (near Emerald) and at the Lynd in Carpentaria:

*“When we rode up to the camp, and found their dinner ready, consisting of two eggs of brush turkey, roasted opossums, bandicoots, and iguanas. In their “dillis”, (small baskets) were several roots or tubers of an oblong form, about an inch in length, and half an inch broad, of a sweet taste, and of an agreeable flavour, even when uncooked; there were also balls of pipe-clay to ornament their persons for corroborris” (Johnston 1988: 6-7).*

Following on from the initial exploration expeditions into the Darling Downs region, pastoral expansion began in earnest from the 1840’s onwards. This expansion inevitably created conflict between European settlers/squatters and the Aboriginal people of the area as access to important food and ceremonial resources became restricted. As traditional resources became restricted Aboriginal people began to raid the livestock of the squatters and the squatters had very little tolerance toward this behaviour. This led too intermittent conflicts and in some cases across the Burnett, Auburn, Condamine, Dawson and Maranoa river districts open warfare (Converge 2008: 16-18).

This frontier violence led to the formation of the Native Mounted Police in 1848. This involved Aboriginal troopers, under the command of white leaders, moving around new settlements to punish Aboriginal people who were involved in violence (violence to either life and/or property). The force was seen as having a reputation of undue brutality and violence. Many complaints were made about the inefficiency of the force and these inefficiencies were further highlighted through the occurrence of massacres. One such massacre occurred on the Hornet Bank station in the Dawson River district where a party of armed warriors killed eleven Europeans. This event led to many other instances of intermittent violence in the region (Converge 2008: 18; Johnston 1988: 76-77).

### **Previous Aboriginal Archaeological Investigations**

Limited previous Aboriginal archaeological investigations are readily available in regards to the study area; however, two regional studies have been completed within the wider area which provides information on the general character of Aboriginal sites located within the same bioregion as the study area.

A study of excavations undertaken at Mt Moffat Station (approximately 590 km north west of the study area) indicate that the Darling Downs region has been utilised by Aboriginal people for approximately 22, 000 BP. Physical evidence of this occupation was found in the form of stone artefacts (Coffey Environments 2012: 23-6).

Ceremonial sites are also known to occur within the greater study area bioregion. The *Gummingurru* Aboriginal stone arrangement lies north of Toowoomba close to the township of Meringandan on the Darling Downs (inland southern QLD), approximately 62 km north-east of the study area. The area is home of the *Jarowair* Aboriginal people one of many Aboriginal groups associated with the Bunya Mountains (or *Boobarran Ngummin*). The site is one of a series of ceremonial and other associated places in the cultural landscape that is the social catchment of the Bunya Mountains. Other places include Maidenwell Rock Shelter (Morwood 1986), Gatton Rock Art site (Morwood 1986, 1992), and the Kogan stone arrangement (Bartholomai and Breeden 1961) and various other Dreaming tracks, increase sites, pathways, burials, ochre and stone quarries, art sites and occupation sites (Rowlings-Jensen 2004; Thompson 2004).

Prior to European settlement of the area in 1877, Aboriginal people travelling to the Bunya Mountains from the areas subsequently named Moreton Bay, the Gold Coast, the Brisbane and Lockyer valleys and the

Darling Downs would have come to the *Gummingurru* stone arrangement to participate in initiation ceremonies to ensure that young men were able to take part in the major social activities that were associated with the Bunya feasts (Ross 2008).

## **4.2 Register Searches**

### **4.2.1 Lot on Plan Search (DATSIP)**

A search of DATSIP was conducted on 10 February 2017 for sites within the study area. Searching this area ensured that a relevant and representative sample of information was obtained. No Aboriginal cultural heritage site points or polygons were identified within the study area or within 1 km of its boundaries.

According to the Lot on Plan search provided by DATSIP, the cultural heritage party relevant to the study area are the Western Wakka Wakka People. The search also specified that there is no cultural heritage body, recorded for the study area.

There are no Designated Landscape Areas (DLA), registered Study Cultural Heritage Areas or cultural heritage management plans (CHMP) recorded within the study area.

### **4.2.2 National Native Title tribunal (NNTT) database of Native Title Claims and Determinations, and Indigenous Land Use Agreements (ILUA)**

The Western Wakka Wakka People currently hold a Native Title claim which incorporates the study area (QC1999/004 PRC; QUD6004/99). As the activity area comprises privately owned land, any Native Title relating to the activity area has been extinguished (see Appendix 2, for a summary of the Commonwealth Native Title Act 1993).

### **4.2.3 Local Council**

The study area is located within the Toowoomba Regional Council and is governed by the Toowoomba Planning Scheme (2017). Planning schemes set out policies and provisions for the use, development and protection of land.

The Heritage Overlay of the Toowoomba Planning Scheme was examined. No Aboriginal heritage places listed on the Heritage Overlay are present within the study area.

### **4.2.4 Consultation**

Section 1.16 of the Duty of Care Guidelines states: the Act expressly recognises that the views of the relevant Aboriginal party for a study area are key in assessing and managing an activity which is likely to impact on Aboriginal cultural heritage.

As no Aboriginal cultural heritage is situated within the study area and this Heritage Assessment has not identified any landform features typically considered to have cultural or archaeological sensitivity to be present within the study area, consultation with the relevant Aboriginal party (being the Western Wakka Wakka People) has not been undertaken as part of this assessment.

It is considered unlikely that any Aboriginal cultural heritage will be present within the study area. However, if any Aboriginal cultural heritage is identified during the proposed activity the activity should cease immediately and the Aboriginal Party for the area (Western Wakka Wakka People) be notified in order to seek their advice and agreement as to how the Aboriginal cultural heritage should be managed (Duty of Care Guidelines: 5.8).

## 5 HISTORICAL CONTEXT

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The section reviews the historical (non-Aboriginal) context of the study area and includes an examination of historical sources, previously recorded heritage places and historical archaeological site types and locations in the bioregion of the study area.

### 5.1 Historical Background

#### *Exploration*

The first Europeans to explore the region relevant to the study area were Allan Cunningham and Ludwig Leichardt. Allan Cunningham was associated with several exploring expeditions around the Morton Bay region during the 1820's and it was during this time that he discovered the Darling Downs region in 1827 and realised its potential for pastoral purposes (Converge 2008: 15).

*"These extensive tracks of clear pastoral country, which was subsequently named Darling Downs, in honor of His Excellency the Governor, are situated in, or about, the mean parallel of 28°S., along which they stretch east, eighteen statute miles to the meridian of 152°. Deep ponds, supported by streams from the highlands, immediately to the eastward, extend along their central lower flats; and these, when united, in a wet season, become an auxiliary to Condamine's river – a stream which winds its course along their south-western margin."* (Johnston 1988: 18).

Ludwig Leichardt and his exploration party were determined to find a route between the Darling Downs and Port Essington (Darwin). It was during 1844 then the party set out from Jimbour Station and passed through the study area region. The party also encountered the Dawson River near the current position of Taroom and provided a description of the area (Converge 2008: 16).

*"One of the most beautifully picturesque and extensive scenes met our anxious gaze...the high ranges rose up and formed a beautiful background to the most pleasing natural picture we have seen"* (Fox 1959: 14).

#### *Early Settlement and Pastoralism*

It wasn't until 13 years after the Darling Downs was discovered by Allan Cunningham that squatters began to make their way into the area. During 1840, brothers Patrick, Walter and George Leslie, led hordes of squatters sheep and cattle into the Darling Downs in order to establish runs. Although it was easy to choose a large run making it viable was difficult. The markets were quite a distance away at Maitland and prices were unreliable and low, particularly after New South Wales was plunged into economic crises in 1843. Transport was also quite difficult which in turn made freight costs high. Labour was also scarce.

There were 49 pastoral stations on the Darling Downs by 1848 and some of these covered up to 10,000 acres. The most well known stations included Jondaryan and Jimbour (Converge 2008: 16-17).

### *Pastoral Development*

Most of the land suitable for pastoral purposes throughout the Darling Downs region was occupied by the mid 1860's. Although during this period several properties were foreclosed due to financial difficulties resulting from a run of droughts and financial depression.

The free selection law of 1861 also threatened the superior holdings of large lease-holding pastoralists as it allowed people, with the ability to afford one pound per acre, to select 320 acres of Crown land wherever they fancied. Another complication for land holders arose from the Lands Act of 1868 in which the government acquired half the acreage of stations in settled districts and downsized resumed portions into farming blocks. This began the transformation of a purely grazing economy to one comprising mixed grazing and farming, which was also combined with closer settlement. Closer settlement gained momentum at the beginning of the twentieth century (Converge 2008: 18-19).

### *Townships*

Yarranlea is a small regional centre associated with the larger township of Pittsworth. The area of Pittsworth, when first settled, incorporated the Beauaraba pastoral station and the township first began as a wayside hotel known as the Beauaraba. The town's name was officially changed to Pittsworth in 1915. A branch railway line from Toowoomba to Pittsworth was completed and opened in 1887. Toward the end of the nineteenth and beginning of the twentieth centuries Pittsworth was noted as containing many well-appointed shops, tradespeople and churches. The Pittsworth Dairy Co (1896) was also the largest cheese maker throughout Queensland up until 1946. Yarranlea and Pittsworth was largely characterised by pastoral and agricultural activities (CGQ 2015).

## **5.1.1 Land Use History of the Study Area**

The study area has been used for agricultural purposes for over 50 years. This has involved ploughing and deep ploughing/ripping practices for the cultivation and subsequent plantation of crops. These practices have significantly altered the original landscape of the study area as deep ploughing and/or ripping can impact on soils from the ground surface up to 50 cm depth. Much of the remnant native vegetation across the study area and wider locality has been removed. Natural waterways have been cleared of riparian vegetation and exist as channelized drainage lines or altered so much that they no longer exist.

A series of historic aerials provide pictorial evidence on how the study area has been impacted by these land use practices from the 1950's up until the present day.

Plate 1 shows that by the late 1950's all native vegetation across the study area had been removed and the land used for agricultural purposes.





**Plate 1** – Film: QAP793, Frame: 67, Run 7: 1 October 1958



**Plate 2** – Film: QAP2839, Frame 31, Run 5: 6 June 1975

The 1975 aerial shows (Plate 2) that a small patch of vegetation is situated within the southern portion and north eastern portion of study area. However, given that the majority of the land had been previously cleared it is most likely that the vegetation comprises regrowth. The aerial also shows that approximately 98 per cent of the study area was under crop.

A more recent aerial dated to 2005 (Plate 3) shows that the majority of the small patch of vegetation within the southern portion of the study area has subsequently been removed and almost 100 per cent of the study area is under crop.

The configuration of the study area shown in Plate 3 is consistent with most recent aerials (c 2016) and the study area is currently being used for the same purposes.



Plate 3 – Film: QAP6173, Frame: 181, Run 11TIE: 6 October 2005

## 5.2 Register Searches

### 5.2.1 Queensland Heritage Register

The Queensland Heritage Register (QHR), established by the Queensland *Heritage Act 1992*, provides the highest level of statutory protection for historical sites in Queensland. Only the State's most significant historical sites are listed on the QHR. A search of the register for information relating to the study area was undertaken. The study area and the surrounding 1 km of land were investigated.

No registered heritage places were identified on the QHR within the study area or within 1 km of its boundaries.

### 5.2.2 Local Heritage Register (Toowoomba Planning Scheme 2017).

The study area lies within the Toowoomba Regional Council area and is subject to the Toowoomba Planning Scheme.

Planning Schemes set out policies and provisions for the use, development and protection of land. Sections relating specifically to any Heritage Overlays for the study area were examined.

The study area is not subject to any heritage places or Heritage Overlays in the Planning Scheme, nor is there any situated within a 1 km radius of the study area's boundaries.

### 5.2.3 National Trust of Australia (Queensland) Register

The National Trust of Australia (Queensland) is an independent, not-for-profit organisation that classifies a number of heritage places. Listing by the National Trust does not impose any statutory protection, however often National Trust Register listings are supported by the local council Planning Scheme.

No heritage places were listed in the National Trust Register within a 1 km radius of the study area. No heritage places were located within the study area.

### 5.2.4 National, Commonwealth and International Heritage Lists

The Australian Government Department of the Environment and Energy (DoEE) maintains the National Heritage List (NHL), a register of exceptional natural, Aboriginal and historical heritage places which contribute to Australia's national identity. The DoEE also maintains the Commonwealth Heritage List (CHL), a Register of natural, Aboriginal or historical heritage places located on Commonwealth land which have Commonwealth heritage values.

A place can be listed on one or both lists, and placement on either list gives the place statutory protection under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act 1999).

The World Heritage List (WHL) lists cultural and natural heritage places which are considered by the World Heritage Council to have outstanding universal value. In addition, the DoE also maintains the Register of the National Estate (RNE) which is a list of natural, Indigenous and historic heritage places throughout Australia. Following amendments to the *Australian Heritage Council Act 2003*, the RNE was frozen on 19 February 2007 and no new places were added or removed. In February 2012 the RNE ceased statutory operation and sites listed on the RNE no longer have statutory protection, however items listed on the RNE may continue to be considered during approvals processes.

Listings on the NHL, CHL, WHL and RNE are accessed via the Australian Heritage Database (AHD), managed by DoE.

No registered heritage places were identified within the study area or within 1 km of its boundaries.



## 6 LEGISLATIVE AND POLICY IMPLICATIONS

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### 6.1 Aboriginal Cultural Heritage Act 2003 (QLD)

A Cultural Heritage Management Plan is required to be developed and approved under Part 7 of the *Aboriginal Cultural Heritage Act 2003* where an Environmental Impact Statement is required for a project under other legislation. The CHMP process involves a statutory one-month notification of an intention to develop a plan, followed by a maximum three month negotiation/consultation with the Aboriginal party on the terms of the plan.

The sponsor may voluntarily develop and gain approval of a plan under Part 7. The ability to voluntarily develop a plan allows any activities undertaken in accordance with an approved plan meet the cultural heritage duty of care established by the legislation.

A cultural heritage management plan is a State-approved agreement between the sponsor of the plan and an Aboriginal party about how a project is to be managed to avoid harm to Aboriginal cultural heritage and to the extent that harm cannot reasonably be avoided, to minimise harm to Aboriginal cultural heritage. Importantly, an agreement can only receive State approval as a cultural heritage management plan if it has complied with the statutory process contained in Part 7 of the legislation. The legislation requires each party to negotiate and make every reasonable effort to reach agreement about the provisions of the plan.

The plan can have any form or structure agreed between the parties. A plan is intended to address the assessment and management of Aboriginal cultural heritage in relation to land use activities of the sponsor (SCT Logistics).

#### Implications for the project

With regard to Aboriginal archaeological heritage, the assessment indicates that a Cultural Heritage Management Plan (CHMP) is not required under the *Aboriginal Cultural Heritage Act 2003* as an Environmental Impact Statement will not be conducted.

However, cultural heritage values are identified and protected under Section 28 of the Act as outlined below.

#### Section 28 Cultural heritage duty of care guidelines

(1) The Minister may by gazette notice notify guidelines (cultural heritage duty of care guidelines) identifying reasonable and practicable measures for ensuring activities are managed to avoid or minimise harm to Aboriginal cultural heritage.

(2) In formulating cultural heritage duty of care guidelines, the Minister may consult with the following—

- (a) Aboriginal groups;
- (b) industry groups;
- (c) local governments;
- (d) other persons the Minister considers appropriate.

The Duty of Care Guidelines state that the Act requires that a proponent must exercise due diligence and reasonable precaution prior to undertaking an activity which may cause harm to Aboriginal cultural heritage. In exercising due diligence or complying with the cultural heritage 'Duty of Care' the following may be considered:

- The nature of the activity, and the likelihood of its causing harm to Aboriginal cultural heritage;
- The nature of the Aboriginal cultural heritage likely to be harmed by the activity;
- The extent to which the person consulted with Aboriginal parties about the carrying out of the activity, and the results of the consultation;
- Whether the proponent carried out a study or survey, of any type, of the area affected by the activity to find out the location and extent of the Aboriginal cultural heritage, and the extent of the study or survey;
- Whether the proponent searched the database and register for information about the area affected by the activity;
- The extent to which the proponent complied with the Duty of Care Guidelines; and
- The nature and extent of past uses in the area affected by the activity.

Although the proposed activity will involve ground disturbance works associated with the development of a solar farm, review of the previous land use history of the study area has indicated that the entire area has been subject to native vegetation clearing and agricultural activities associated with deep ploughing and/or ripping for the cultivation and subsequent plantation of crops such as chick peas and cotton. These practices have significantly altered the original landscape of the study area as deep ploughing and/or ripping can impact soils from the ground surface up to 50cm depth. Based on this the study area is assessed as being previously subject to significant ground disturbance and therefore no longer retains any landform features typically considered to have cultural or archaeological sensitivity.

The Duty of Care Guidelines defines Significant Ground Disturbance as:

*"disturbance by machinery of the topsoil or surface rock layer of the ground, such as by ploughing, drilling or dredging; the removal of native vegetation by disturbing root systems and exposing underlying soil".*

Given the above, the proposed activity is assessed as comprising a Category 4 activity under Section 5.0 of the Duty of Care Guidelines: *5.0 The nature and extent of past uses in the area affected by the activity – Section 23(2)(g).*

Section 5.4 of the Duty of Care Guidelines specifies the following:

*Where an activity is proposed in an area, which has been previously subject to Significant Ground Disturbance it is generally unlikely that the activity will harm Aboriginal cultural heritage and the activity will comply with these guidelines.*

Section 5.5 also states:

*In these circumstances, subject to the measures set out in paragraphs 5.6 – 5.12, it is reasonable and practicable that the activity proceeds without further cultural heritage assessment.*

In this instance the measures set out in paragraphs 5.6 – 5.12 do not apply as a search of the appropriate Aboriginal Cultural Heritage Register and Aboriginal Cultural Heritage Database did not identify any previously recorded Aboriginal cultural heritage as being situated within the study area or within 1 km of its boundaries. Furthermore this Heritage Assessment did not identify the study area as retaining any landform features typically considered to have any residual cultural or archaeological sensitivity.

Given the results of this Heritage Assessment, the proposed activity is unlikely to harm Aboriginal cultural heritage and it is reasonable and practicable that the activity proceed without any further cultural heritage assessment.

Furthermore this Heritage Assessment demonstrates that the proponent of the activity has exercised due diligence and reasonable precaution prior to undertaking the proposed activity. It has complied with the Duty of Care Guidelines by:

- Assessing the nature of the activity, and the likelihood of its causing harm to Aboriginal cultural heritage;
- Assessing the nature of the Aboriginal cultural heritage present within the study area and the likelihood of it being harmed by the activity;
- Documenting the extent to which the proponent consulted with Aboriginal parties about the carrying out of the activity, and the results of the consultation;
- Producing a Heritage Assessment report which reviewed the area to be affected by the activity to find out the location and extent of any Aboriginal cultural heritage present, and provide the extent of the study;
- Providing information on the database and register search undertaken for the area affected by the proposed activity;
- Clearly outlining the extent to which the proponent complied with the Duty of Care Guidelines; and
- Providing a comprehensive description of the nature and extent of past uses in the area affected by the activity.

## **6.2 Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)**

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides a national framework for the protection of heritage and the environment and the conservation of biodiversity. The EPBC Act is administered by the Australian Government Department of the Environment and Energy (DoEE). The EPBC Act established the National Heritage List (NHL), the Commonwealth Heritage List (CHL) and the World Heritage List (WHL) for statutory protection of heritage places of national or international significance. Where Matters of National Environmental Significance (NES), including National Heritage Places, will or may



be impacted by a development, then a referral to the Minister will be required to determine whether an approval under the EPBC Act is required.

DoE also administers the Register of the National Estate (RNE). The RNE is no longer a statutory register and listed sites are no longer protected (unless registered on another statutory register).

#### **Implications for the project**

There are no sites listed on the NHL or CHL within the study area. There are no implications for the project.

### **6.3 Toowoomba Regional Planning Scheme**

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

The Heritage Overlay of the Toowoomba Planning Scheme was examined. No Aboriginal or historic heritage places listed on the Heritage Overlay are present within the study area.

#### **Implications for the project**

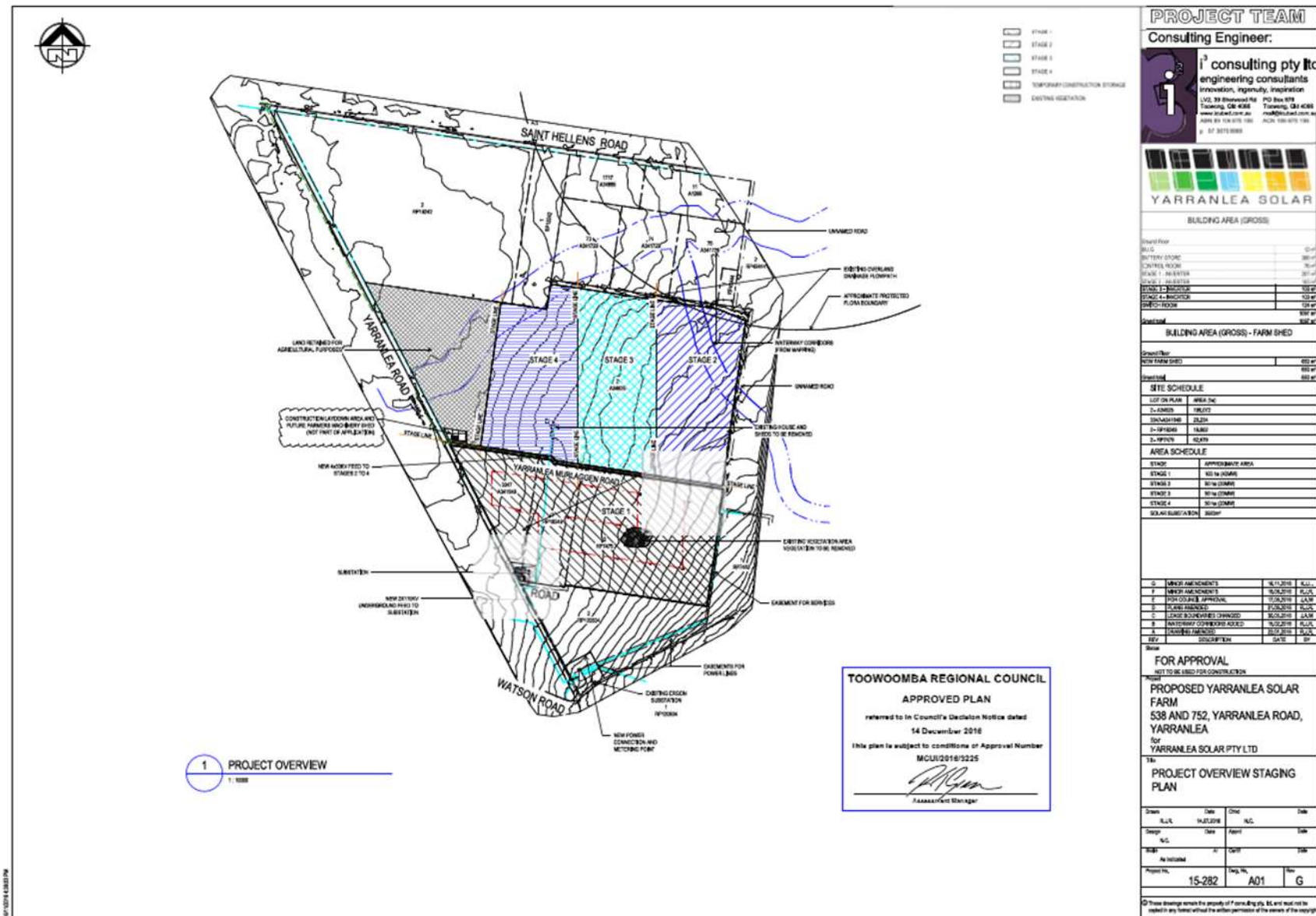
There are no implications for the project under the Planning Scheme.

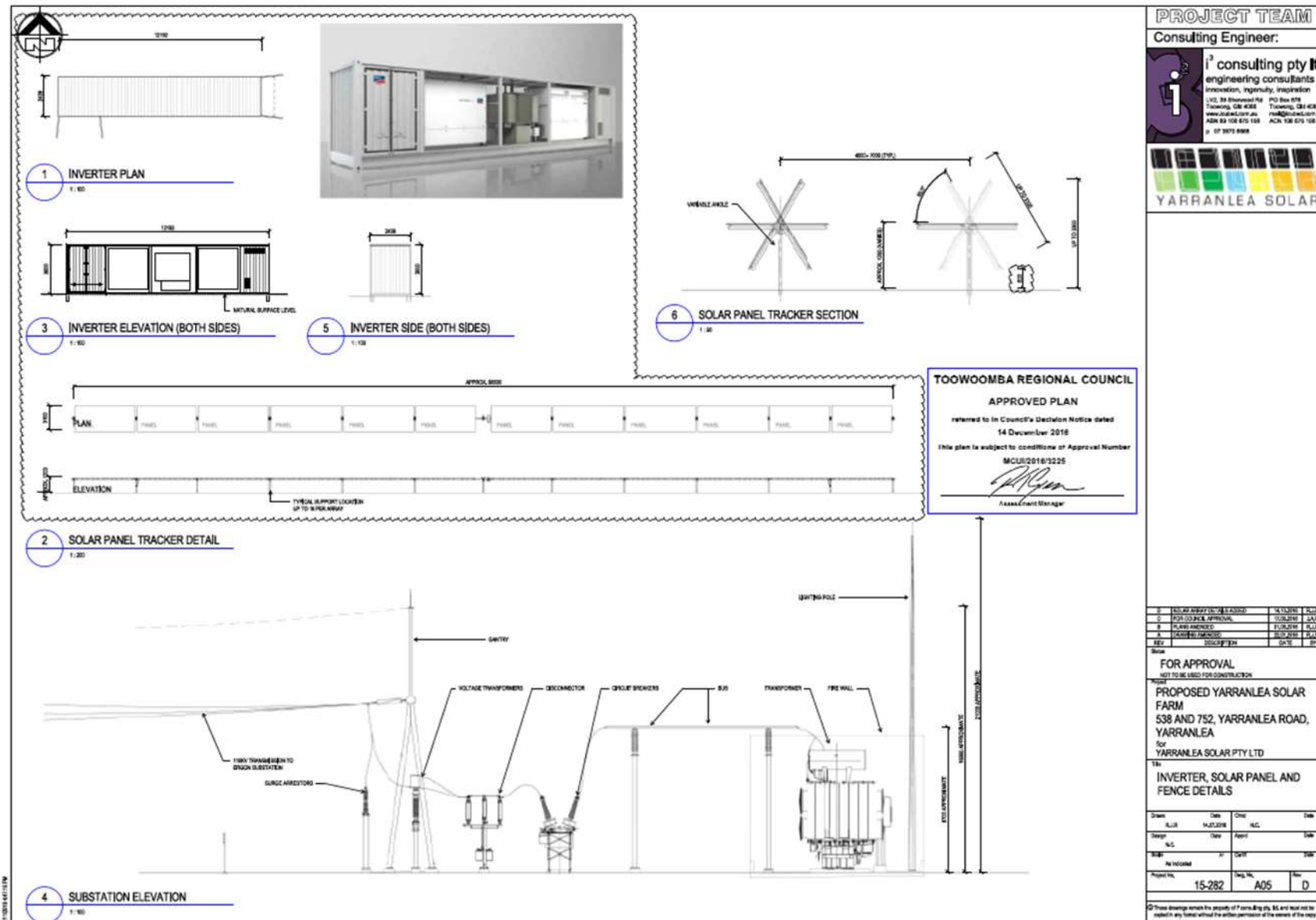
### **6.4 Recommendations**

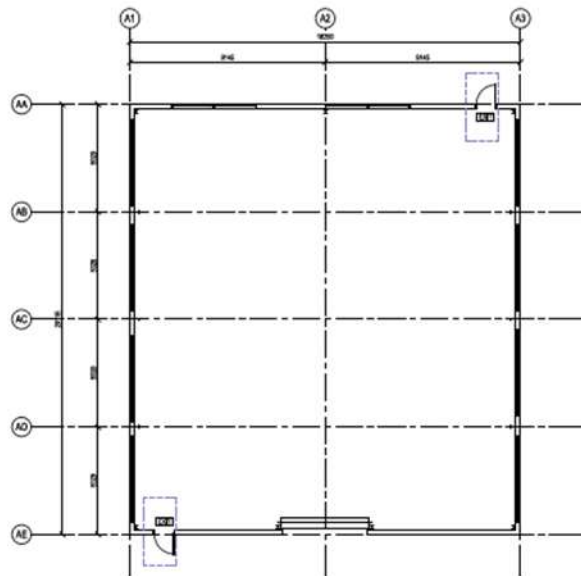
As there are no Aboriginal cultural heritage or historic implications for the project no further assessment or recommendations are required.

## MAPS

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1 BATTERY STORE  
A07 1:100



2 CONTROL ROOM  
A07 1:100

**TOOWOOMBA REGIONAL COUNCIL**  
**APPROVED PLAN**  
referred to in Council's Decision Notice dated  
14 December 2016  
This plan is subject to conditions of Approval Number  
MCU/2016/3225  
*[Signature]*  
Mayor/Council Manager

**PROJECT TEAM**

Consulting Engineer:

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FOR COUNCIL APPROVAL	FOR COUNCIL APPROVAL
DATE	DATE

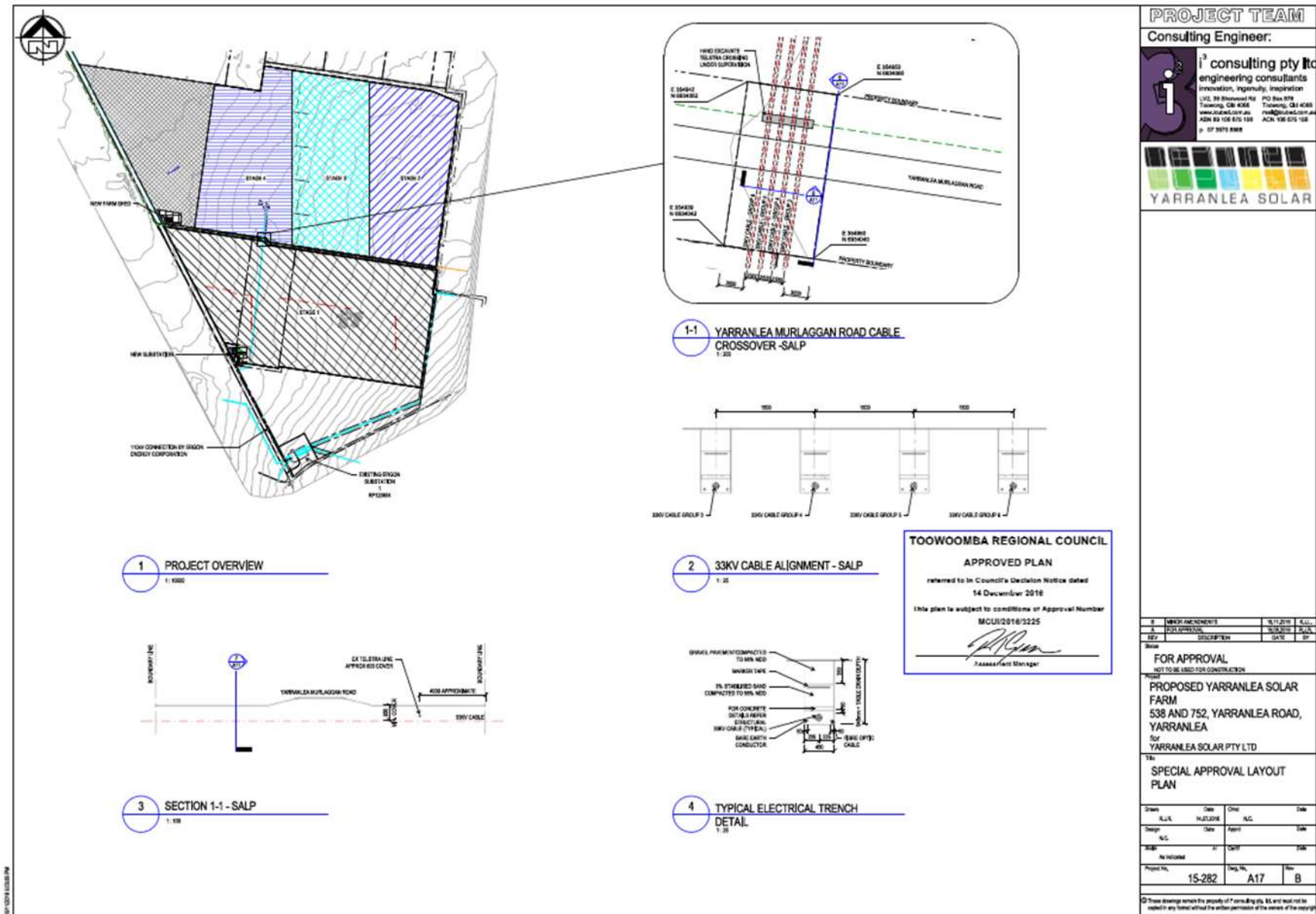
FOR APPROVAL  
NOT TO BE USED FOR CONSTRUCTION

**PROPOSED YARRANLEA SOLAR FARM**  
538 AND 752, YARRANLEA ROAD,  
YARRANLEA  
for  
YARRANLEA SOLAR PTY LTD

**BATTERY STORE AND CONTROL ROOM FLOOR PLAN**

Drawn	Date	Check	Date
Author	07.12.2016	Checker	
Design	Date	Revised	Date
Designer			
Scale	As	Scale	Date
1:100			
Project No.	15-282	Dep. No.	A06
		Rev	A

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## APPENDICES

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## Appendix 1: Author Details

### Stacey Kennedy

Stacey has more than ten years of consulting experience working in Victoria, New South Wales, ACT, Queensland and Western Australia. Stacey completed her archaeology degree with Honours at La Trobe University in 2008, and has been involved in Aboriginal and historic excavations since 2006. Stacey's thesis focused on Aboriginal archaeology, with particular emphasis on the distribution of silcrete sources and stone artefacts across the greater Melbourne region. Stacey was trained in stone artefact analysis during her undergraduate studies at La Trobe University and further refined these skills during extensive field work undertaken at Lake Mungo National Park.

Stacey is an experienced senior field supervisor and has overseen the investigation and salvage of large and complex archaeological sites. She has managed numerous Aboriginal heritage projects for a variety of Agents and developments within Victoria, New South Wales, ACT, and Queensland. Projects have included heritage assessments and excavations for utility construction projects such as: pipelines, sewerage lines, footpaths and wind/solar farms, and large area urban growth heritage assessments for residential and industrial developments. In regards to Aboriginal Cultural Heritage Management Plans, Stacey has currently authored over 40 plans, which have focussed on large residential / industrial subdivisions across the outer Melbourne metropolitan area. Stacey has also authored many: due diligence assessments, desktop assessments, survey and excavation reports, including comprehensive analysis and subsequent reporting on Aboriginal stone tools. In addition, she has built professional relationships working with Heritage Victoria and Aboriginal Victoria as well as consulting with various clients. Stacey has a positive history of consulting with Registered Aboriginal Parties and Traditional Owner groups in Victoria, New South Wales, ACT and Queensland.

Stacey has shown commitment to the profession through her involvement in the La Trobe University Colloquium where she has presented the results of her excavations at 44 First Avenue, Chelsea Heights in 2012. Stacey has also co-authored a paper for the Excavation, Surveys and Heritage Management in Victoria journal (La Trobe University) regarding the results of the Chelsea Heights excavations which detailed evidence for Pleistocene Aboriginal occupation below the Carrum Swamp (Wheeler, J., Alan N. Williams, Stacey Kennedy, Phillip S. Toms and Peter Mitchel 2014 'A Pleistocene date at Chelsea Heights, Victoria: evidence for Aboriginal occupation beneath the Carrum Swamp' in Excavations, Surveys and Heritage Management in Victoria (Vol 3). La Trobe University: Bundoora.

### Oona Nicolson

Oona Nicolson is a Director and the Principal Heritage Advisor at Ecology and Heritage Partners Pty Ltd. She is a heritage specialist with over 18 years of experience in the archaeological consulting sector, working in Victoria, South Australia, New South Wales and Tasmania. Oona regularly appears before VCAT and independent panels as an Expert Witness in the areas of Aboriginal and historical heritage. Oona has extensive experience in over 800 projects with a wide variety of Agents.

Oona's skills include project management, peer reviews, background research and due diligence assessments, archaeological survey, subsurface testing and salvage excavation, Aboriginal and non-Aboriginal site identification, recording and photography, site significance assessment, development of

recommendations to mitigate the impact of development upon Aboriginal and non-Aboriginal historical heritage, flaked stone artefact and historical artefact recording and interpretation, communication and consultation with regulatory bodies (OAAV and HV), Agents, landowners, RAPs and community representatives, preparation of conservation management plans, expert witness statements, Permits and Consents to Disturb for Heritage Victoria, Historical Heritage Assessments and, desktop, standard and complex Aboriginal CHMPs. Her formal qualifications and memberships include:

- Bachelor of Arts (Honours in Archaeology; First Class), Flinders University (1996);
- Bachelor of Arts (Australian Archaeology and Australian Studies), Flinders University (1995);
- Current Archaeology (Alternate) Member of the Victorian Heritage Council;
- Maritime Archaeology Certificate: Part 1 (Part 2 pending), AIMA and NAS (U.K.);
- Australian Association of Consulting Archaeologists Inc. AACAI (Full Member and current Treasurer of Victorian Chapter; Current National Secretary and Current Membership Committee);
- Member, Australian Archaeological Association (AAA);
- Victorian Planning and Environmental Law Association;
- Accredited UDIA EnviroDevelopment Professional (Accredited August 2012)
- UDIA Sustainability Committee; and
- Heritage member of the South Australian Chamber of Mines and Energy (SACOME) Sustainability and Development Committee.

## Appendix 2: Heritage Legislation

### Commonwealth *Native Title Act 1993*

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

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

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

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

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

Indigenous people can apply to have their native title rights recognised by Australian law by filing a native title application (native title claim) with the Federal Court. Applications are required to pass a test to gain certain rights over the area covered in the application. The Native Title Tribunal (NNTT) was established to administer application processes. Once applications are registered, the NNTT will notify other people about the application and will invite them to become involved so all parties can try to reach an agreement that

respects everyone's rights and interests. If the parties cannot agree, the NNTT refers the application to the Federal Court and the parties argue their cases before the Court.

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

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<sup>1</sup> The information in this section was taken from the Department of Sustainability and Environment, Fact Sheet on Native Title, 2008

## REFERENCES

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- Bartholomai, A. and S. Breeden. 1961. Stone ceremonial grounds of the Aborigines in the Darling Downs area, Queensland. *Memoirs of the Queensland Museum* 13(6): 231-237.
- Coffey Environments 2012. Environmental Impact Statement. Unpublished report to Arrow Energy Pty Ltd.
- Centre for the Government of Queensland (CGQ). 2015. *Pittsworth*. <http://queenslandplaces.com.au/pittsworth>. Accessed 15 February 2017.
- Converge Heritage and Community 2008. Historic Heritage Management Plan Nathan Dam. Unpublished report to MWH.
- DATSIP Database 2016. *ACHRIS search*. <https://culturalheritage.datsip.qld.gov.au/achris/public/public-registry/home>. Accessed 15 February 2017.
- DATSIP 2016. *Cultural Heritage Management Plans*. <https://www.datsip.qld.gov.au/people-communities/aboriginal-and-torres-strait-islander-cultural-heritage/cultural-heritage-management-plans>. Accessed 15 February 2017.
- Department of Aboriginal Torres Strait Islander Multicultural Affairs. 2015. *The Aboriginal Cultural Heritage Act Cultural Heritage Management Plan Guidelines*.
- Fox, G. 1959. *Pioneers of the Taroom and Wandoan District. Historical Notes on the Shire of Taroom*. Taroom Shire Council, Queensland.
- Johnston, W.R 1988. *A Documentary History of Queensland: from reminiscences, diaries, parliamentary papers, newspapers, letters and photographs*. University of Queensland Press: St Lucia.
- Moorwood, M. J. 1986. Archaeology of Art: Excavations at Maidenwell and Gatton Rock Shelters, Southeast Queensland. *Queensland Archaeological Research* 3: 88-132.
- Moorwood, M.J 1992. *Gatton Rock Art site (KB:A01): Its Conservation and Management*. Report to [Queensland] Department of Environment and Heritage [now Environmental Protection Agency]. Department of Archaeology and Palaeoanthropology. University of New England, Armidale.
- Office of Environment and Heritage (OEH) 2016a. *Brigalow South Landform*. <http://www.environment.nsw.gov.au/bioregions/BrigalowBeltSouth-Landform.htm>. Accessed 9 February 2017.
- Office of Environment and Heritage (OEH) 2016b *Brigalow Belt South – biodiversity*. <http://www.environment.nsw.gov.au/bioregions/BrigalowBeltSouth-Biodiversity.htm>. Accessed 9 February 2017.
- Queensland Art Gallery NA. The Indigenous Peoples of the Darling Downs. [http://www.visualarts.qld.gov.au/content/martens\\_standard.asp?name=Martens\\_context\\_indigenous](http://www.visualarts.qld.gov.au/content/martens_standard.asp?name=Martens_context_indigenous)). Accessed 25 January 2017.

Rangelands 2008. *Taking the Pulse*. <https://www.environment.gov.au/system/files/resources/a8015c25-4aa2-4833-ad9c-e98d09e2ab52/files/bioregion-brigalow-belt-north.pdf>. Accessed 20 January 2017.

Ross, A. 2008. Managing Meaning at an Ancient Site in the 21<sup>st</sup> Century: the Gummingurru Aboriginal Stone Arrangement on the Darling Downs, Southern Queensland. *Oceania* Vol 78(1): 91-108.

Rowlings-Jensen, E. 2004. *Nuts, Mountains and Islands: a cultural landscapes approach to managing the Bunya Mountains*. Unpublished BSocSci Honours thesis, University of Queensland, St Lucia.

Thompson, B. 2004. *Gummingurru Stone Arrangement Cultural Heritage Management Plan*. Unpublished document to the Gummingurru Trust.